



---

# System Management and Monitoring Feature Guide for Switches



---

Modified: 2018-09-25

Juniper Networks, Inc.  
1133 Innovation Way  
Sunnyvale, California 94089  
USA  
408-745-2000  
[www.juniper.net](http://www.juniper.net)

Juniper Networks, the Juniper Networks logo, Juniper, and Junos are registered trademarks of Juniper Networks, Inc. and/or its affiliates in the United States and other countries. All other trademarks may be property of their respective owners.

Juniper Networks assumes no responsibility for any inaccuracies in this document. Juniper Networks reserves the right to change, modify, transfer, or otherwise revise this publication without notice.

*System Management and Monitoring Feature Guide for Switches*  
Copyright © 2018 Juniper Networks, Inc. All rights reserved.

The information in this document is current as of the date on the title page.

#### YEAR 2000 NOTICE

Juniper Networks hardware and software products are Year 2000 compliant. Junos OS has no known time-related limitations through the year 2038. However, the NTP application is known to have some difficulty in the year 2036.

#### END USER LICENSE AGREEMENT

The Juniper Networks product that is the subject of this technical documentation consists of (or is intended for use with) Juniper Networks software. Use of such software is subject to the terms and conditions of the End User License Agreement ("EULA") posted at <https://www.juniper.net/support/eula/>. By downloading, installing or using such software, you agree to the terms and conditions of that EULA.

# Table of Contents

	About the Documentation . . . . .	xi
	Documentation and Release Notes . . . . .	xi
	Using the Examples in This Manual . . . . .	xi
	Merging a Full Example . . . . .	xii
	Merging a Snippet . . . . .	xii
	Documentation Conventions . . . . .	xiii
	Documentation Feedback . . . . .	xv
	Requesting Technical Support . . . . .	xv
	Self-Help Online Tools and Resources . . . . .	xvi
	Opening a Case with JTAC . . . . .	xvi
<b>Chapter 1</b>	<b>System Management . . . . .</b>	<b>17</b>
	Specifying the Physical Location of the Switch . . . . .	18
	Mapping the Hostname of the Switch to IP Addresses . . . . .	19
	Configuring a DNS Name Server for Resolving a Hostname into Addresses . . . . .	19
	Example: Configuring the Name of the Switch, IP Address, and System ID . . . . .	20
	Rebooting and Halting a Device . . . . .	20
	Reaching a Domain Name System Server . . . . .	22
	Configuring the Console Port Type (CLI Procedure) . . . . .	24
	Configuring the LCD Panel on EX Series Switches (CLI Procedure) . . . . .	25
	Disabling or Enabling Menus and Menu Options on the LCD Panel . . . . .	25
	Configuring a Custom Display Message . . . . .	26
	Configuring the Hostname of a Router or Switch by Using a Configuration Group . . . . .	27
	Modifying the Default Time Zone for a Router or Switch Running Junos OS . . . . .	29
	System Utilization Alarms . . . . .	30
	Configuring the Junos OS to Determine Conditions That Trigger Alarms on Different Interface Types . . . . .	30
	Understanding the Protocol Redirect Mechanism on EX Series Switches . . . . .	31
	Configuring the Junos OS to Select a Fixed Source Address for Locally Generated TCP/IP Packets . . . . .	32
	Configuring Junos OS to Extend the Default Port Address Range . . . . .	32
	Configuring Junos OS to Disable the Routing Engine Response to Multicast Ping Packets . . . . .	33
	Configuring Junos OS to Disable the Reporting of IP Address and Timestamps in Ping Responses . . . . .	33
	Configuring Junos OS to Disable Sending Protocol Redirect Messages on EX Series Switches (CLI Procedure) . . . . .	34

	Configuring Junos OS to Disable Protocol Redirect Messages on the Router or Switch . . . . .	34
	Saving Core Files Generated by Junos OS Processes . . . . .	35
	Example: Configuring User Permissions with Access Privileges for Operational Mode Commands . . . . .	35
	Viewing Core Files from Junos OS Processes . . . . .	47
	Configuring the Junos OS ICMPv4 Rate Limit for ICMPv4 Routing Engine Messages . . . . .	48
<b>Chapter 2</b>	<b>System Monitoring . . . . .</b>	<b>49</b>
	Monitoring System Process Information . . . . .	49
	Monitoring System Properties . . . . .	50
	Monitoring Interface Status and Traffic . . . . .	51
	Monitoring Switch Control Traffic . . . . .	52
	Other Tools to Configure and Monitor Devices Running Junos OS . . . . .	54
<b>Chapter 3</b>	<b>Configuration Statements . . . . .</b>	<b>57</b>
	arp (Interfaces) . . . . .	59
	auxiliary . . . . .	61
	checksum . . . . .	62
	compress-configuration-files (System) . . . . .	63
	console (Physical Port) . . . . .	64
	default-address-selection . . . . .	65
	domain-name . . . . .	66
	domain-search . . . . .	66
	ethernet (Alarm) . . . . .	67
	hardware-timestamp . . . . .	67
	host-name . . . . .	68
	icmpv4-rate-limit . . . . .	69
	inet6-backup-router . . . . .	70
	internet-options . . . . .	71
	internet-options . . . . .	72
	ipv6-path-mtu-discovery . . . . .	73
	ipv6-path-mtu-discovery-timeout . . . . .	74
	ipv6-reject-zero-hop-limit . . . . .	74
	lcd-menu . . . . .	75
	location . . . . .	77
	location (System) . . . . .	79
	max-configurations-on-flash . . . . .	80
	menu-item . . . . .	81
	name-server . . . . .	84
	no-multicast-echo . . . . .	84
	no-ping-record-route . . . . .	85
	no-ping-time-stamp . . . . .	85
	no-redirects (IPv4 Traffic) . . . . .	86
	no-tcp-rfc1323 . . . . .	87
	no-tcp-rfc1323-paws . . . . .	87
	optional . . . . .	88
	path-mtu-discovery . . . . .	88
	ports . . . . .	89

	ports . . . . .	90
	port-type . . . . .	91
	power . . . . .	92
	processes . . . . .	93
	saved-core-context . . . . .	94
	saved-core-files . . . . .	95
	static-host-mapping . . . . .	96
	tcp-drop-synfin-set . . . . .	97
	time-format . . . . .	98
	time-zone . . . . .	99
	traceoptions (Layer 2 Learning) . . . . .	102
	traceoptions (SBC Configuration Process) . . . . .	104
	use-imported-time-zones . . . . .	106
<b>Chapter 4</b>	<b>Operational Commands . . . . .</b>	<b>107</b>
	clear log . . . . .	109
	clear chassis display message . . . . .	110
	clear system commit . . . . .	113
	clear system reboot . . . . .	114
	request chassis beacon . . . . .	118
	request chassis cb . . . . .	120
	request chassis fabric plane . . . . .	124
	request chassis fpc . . . . .	127
	request chassis pic . . . . .	133
	request chassis routing-engine master . . . . .	139
	request system halt . . . . .	144
	request system logout . . . . .	150
	request system power-off . . . . .	151
	request system reboot . . . . .	156
	set chassis display message . . . . .	163
	set date . . . . .	166
	show chassis alarms . . . . .	167
	show chassis beacon . . . . .	186
	show chassis environment . . . . .	188
	show chassis environment fpc . . . . .	270
	show chassis environment pem . . . . .	319
	show chassis environment power-supply-unit . . . . .	333
	show chassis environment psu . . . . .	334
	show chassis environment routing-engine . . . . .	336
	show chassis ethernet-switch . . . . .	344
	show chassis fan . . . . .	391
	show chassis firmware . . . . .	408
	show chassis fpc . . . . .	424
	show chassis fabric fpcs . . . . .	474
	show chassis fabric map . . . . .	529
	show chassis fabric plane . . . . .	536
	show chassis fabric plane-location . . . . .	590
	show chassis fabric sibs . . . . .	600
	show chassis fabric summary . . . . .	614

show chassis hardware . . . . .	624
show chassis lcd . . . . .	883
show chassis led . . . . .	897
show chassis location . . . . .	908
show chassis mac-addresses . . . . .	912
show chassis pic . . . . .	920
show chassis routing-engine . . . . .	947
show chassis temperature-thresholds . . . . .	976
show chassis zones . . . . .	1016
show host . . . . .	1023
show interfaces diagnostics optics . . . . .	1024
show subscribers . . . . .	1030
show system alarms . . . . .	1061
show system audit . . . . .	1064
show system buffers . . . . .	1072
show system certificate . . . . .	1079
show system commit . . . . .	1081
show system connections . . . . .	1084
show system core-dumps . . . . .	1101
show system directory-usage . . . . .	1114
show system firmware . . . . .	1118
show system reboot . . . . .	1121
show system software . . . . .	1125
show system statistics . . . . .	1133
show system storage . . . . .	1172
show system uptime . . . . .	1181
show system virtual-memory . . . . .	1186
show version . . . . .	1248
start shell . . . . .	1262
test configuration . . . . .	1264

# List of Figures

Chapter 1	System Management .....	17
	Figure 1: Configuring TACACS+ Server Authentication .....	39





# List of Tables

	<b>About the Documentation</b> . . . . .	<b>xi</b>
	Table 1: Notice Icons . . . . .	xiii
	Table 2: Text and Syntax Conventions . . . . .	xiii
<b>Chapter 2</b>	<b>System Monitoring</b> . . . . .	<b>49</b>
	Table 3: Summary of System Process Information Output Fields . . . . .	49
	Table 4: Summary of Key System Properties Output Fields . . . . .	50
	Table 5: Packet Capture Field Summary . . . . .	52
<b>Chapter 3</b>	<b>Configuration Statements</b> . . . . .	<b>57</b>
	Table 6: Menu Options of the LCD Menus Supported on the Switches . . . . .	82
<b>Chapter 4</b>	<b>Operational Commands</b> . . . . .	<b>107</b>
	Table 7: show chassis alarms Output Fields . . . . .	174
	Table 8: show chassis led Output Fields . . . . .	187
	Table 9: show chassis environment Output Fields . . . . .	196
	Table 10: show chassis environment fpc Output Fields . . . . .	274
	Table 11: show chassis environment pem Output Fields . . . . .	322
	Table 12: show chassis environment power-supply-unit Output Fields . . . . .	333
	Table 13: show chassis environment psu Output Fields . . . . .	334
	Table 14: show chassis environment routing-engine Output Fields . . . . .	339
	Table 15: show chassis ethernet-switch Output Fields . . . . .	347
	Table 16: show chassis fan Output Fields . . . . .	394
	Table 17: show chassis firmware Output Fields . . . . .	412
	Table 18: show chassis fpc Output Fields . . . . .	434
	Table 19: show chassis fabric fpcs Output Fields . . . . .	477
	Table 20: show chassis fabric map Output Fields . . . . .	530
	Table 21: show chassis fabric plane Output Fields . . . . .	538
	Table 22: show chassis fabric plane-location Output Fields . . . . .	592
	Table 23: show chassis fabric sibs Output Fields . . . . .	601
	Table 24: show chassis fabric summary Output Fields . . . . .	615
	Table 25: Routing Engines Displaying DIMM Information . . . . .	628
	Table 26: show chassis hardware Output Fields . . . . .	633
	Table 27: show chassis lcd Output Fields . . . . .	885
	Table 28: show chassis led Output Fields . . . . .	899
	Table 29: show chassis location Output Fields . . . . .	910
	Table 30: show chassis mac-addresses Output Fields . . . . .	915
	Table 31: show chassis pic Output Fields . . . . .	925
	Table 32: show chassis routing-engine Output Fields . . . . .	951
	Table 33: show chassis temperature-thresholds Output Fields . . . . .	979
	Table 34: show chassis zones Output Fields . . . . .	1017

Table 35: show interfaces diagnostics optics Output Fields . . . . .	1024
Table 36: show subscribers Output Fields . . . . .	1034
Table 37: show system alarms Output Fields . . . . .	1062
Table 38: show system buffers Output Fields . . . . .	1075
Table 39: show system certificate Output Fields . . . . .	1079
Table 40: show system commit Output Fields . . . . .	1082
Table 41: show system connections Output Fields . . . . .	1087
Table 42: show system core-dumps Output Fields . . . . .	1104
Table 43: show system directory-usage Output Fields . . . . .	1116
Table 44: show system firmware Output Fields . . . . .	1118
Table 45: show system storage Output Fields . . . . .	1175
Table 46: show system uptime Output Fields . . . . .	1183
Table 47: show system virtual-memory Output Fields . . . . .	1189

# About the Documentation

- Documentation and Release Notes on page xi
- Using the Examples in This Manual on page xi
- Documentation Conventions on page xiii
- Documentation Feedback on page xv
- Requesting Technical Support on page xv

## Documentation and Release Notes

---

To obtain the most current version of all Juniper Networks® technical documentation, see the product documentation page on the Juniper Networks website at <https://www.juniper.net/documentation/>.

If the information in the latest release notes differs from the information in the documentation, follow the product Release Notes.

Juniper Networks Books publishes books by Juniper Networks engineers and subject matter experts. These books go beyond the technical documentation to explore the nuances of network architecture, deployment, and administration. The current list can be viewed at <https://www.juniper.net/books>.

## Using the Examples in This Manual

---

If you want to use the examples in this manual, you can use the **load merge** or the **load merge relative** command. These commands cause the software to merge the incoming configuration into the current candidate configuration. The example does not become active until you commit the candidate configuration.

If the example configuration contains the top level of the hierarchy (or multiple hierarchies), the example is a *full example*. In this case, use the **load merge** command.

If the example configuration does not start at the top level of the hierarchy, the example is a *snippet*. In this case, use the **load merge relative** command. These procedures are described in the following sections.

## Merging a Full Example

To merge a full example, follow these steps:

1. From the HTML or PDF version of the manual, copy a configuration example into a text file, save the file with a name, and copy the file to a directory on your routing platform.

For example, copy the following configuration to a file and name the file **ex-script.conf**. Copy the **ex-script.conf** file to the **/var/tmp** directory on your routing platform.

```
system {
  scripts {
    commit {
      file ex-script.xml;
    }
  }
}
interfaces {
  fxp0 {
    disable;
    unit 0 {
      family inet {
        address 10.0.0.1/24;
      }
    }
  }
}
```

2. Merge the contents of the file into your routing platform configuration by issuing the **load merge** configuration mode command:

```
[edit]
user@host# load merge /var/tmp/ex-script.conf
load complete
```

## Merging a Snippet

To merge a snippet, follow these steps:

1. From the HTML or PDF version of the manual, copy a configuration snippet into a text file, save the file with a name, and copy the file to a directory on your routing platform.

For example, copy the following snippet to a file and name the file **ex-script-snippet.conf**. Copy the **ex-script-snippet.conf** file to the **/var/tmp** directory on your routing platform.

```
commit {
  file ex-script-snippet.xml; }
```

2. Move to the hierarchy level that is relevant for this snippet by issuing the following configuration mode command:

```
[edit]
```

```
user@host# edit system scripts
[edit system scripts]
```

3. Merge the contents of the file into your routing platform configuration by issuing the **load merge relative** configuration mode command:

```
[edit system scripts]
user@host# load merge relative /var/tmp/ex-script-snippet.conf
load complete
```

For more information about the **load** command, see [CLI Explorer](#).

## Documentation Conventions

Table 1 on page xiii defines notice icons used in this guide.

Table 1: Notice Icons







Icon	Meaning	Description
	Informational note	Indicates important features or instructions.
	Caution	Indicates a situation that might result in loss of data or hardware damage.
	Warning	Alerts you to the risk of personal injury or death.
	Laser warning	Alerts you to the risk of personal injury from a laser.
	Tip	Indicates helpful information.
	Best practice	Alerts you to a recommended use or implementation.

Table 2 on page xiii defines the text and syntax conventions used in this guide.

Table 2: Text and Syntax Conventions

Convention	Description	Examples
<b>Bold text like this</b>	Represents text that you type.	To enter configuration mode, type the <b>configure</b> command:  user@host> <b>configure</b>

Table 2: Text and Syntax Conventions (continued)

Convention	Description	Examples
Fixed-width text like this	Represents output that appears on the terminal screen.	<code>user@host&gt; show chassis alarms</code> <code>No alarms currently active</code>
<i>Italic text like this</i>	<ul style="list-style-type: none"> <li>Introduces or emphasizes important new terms.</li> <li>Identifies guide names.</li> <li>Identifies RFC and Internet draft titles.</li> </ul>	<ul style="list-style-type: none"> <li>A policy <i>term</i> is a named structure that defines match conditions and actions.</li> <li><i>Junos OS CLI User Guide</i></li> <li>RFC 1997, <i>BGP Communities Attribute</i></li> </ul>
<i>Italic text like this</i>	Represents variables (options for which you substitute a value) in commands or configuration statements.	Configure the machine's domain name: <code>[edit]</code> <code>root@# set system domain-name domain-name</code>
Text like this	Represents names of configuration statements, commands, files, and directories; configuration hierarchy levels; or labels on routing platform components.	<ul style="list-style-type: none"> <li>To configure a stub area, include the <b>stub</b> statement at the <code>[edit protocols ospf area area-id]</code> hierarchy level.</li> <li>The console port is labeled <b>CONSOLE</b>.</li> </ul>
< > (angle brackets)	Encloses optional keywords or variables.	<code>stub &lt;default-metric metric&gt;;</code>
(pipe symbol)	Indicates a choice between the mutually exclusive keywords or variables on either side of the symbol. The set of choices is often enclosed in parentheses for clarity.	<code>broadcast   multicast</code> <code>(string1   string2   string3)</code>
# (pound sign)	Indicates a comment specified on the same line as the configuration statement to which it applies.	<code>rsvp { # Required for dynamic MPLS only</code>
[ ] (square brackets)	Encloses a variable for which you can substitute one or more values.	<code>community name members [ community-ids ]</code>
Indentation and braces ( { } )	Identifies a level in the configuration hierarchy.	<code>[edit]</code> <code>routing-options {</code> <code>  static {</code> <code>    route default {</code> <code>      nexthop address;</code> <code>      retain;</code> <code>    }</code> <code>  }</code> <code>}</code>
;(semicolon)	Identifies a leaf statement at a configuration hierarchy level.	
<b>GUI Conventions</b>		
<b>Bold text like this</b>	Represents graphical user interface (GUI) items you click or select.	<ul style="list-style-type: none"> <li>In the Logical Interfaces box, select <b>All Interfaces</b>.</li> <li>To cancel the configuration, click <b>Cancel</b>.</li> </ul>

Table 2: Text and Syntax Conventions (continued)

Convention	Description	Examples
> (bold right angle bracket)	Separates levels in a hierarchy of menu selections.	In the configuration editor hierarchy, select <b>Protocols&gt;Ospf</b> .

## Documentation Feedback

We encourage you to provide feedback so that we can improve our documentation. You can use either of the following methods:

- Online feedback system—Click TechLibrary Feedback, on the lower right of any page on the [Juniper Networks TechLibrary](#) site, and do one of the following:



- Click the thumbs-up icon if the information on the page was helpful to you.
- Click the thumbs-down icon if the information on the page was not helpful to you or if you have suggestions for improvement, and use the pop-up form to provide feedback.
- E-mail—Send your comments to [techpubs-comments@juniper.net](mailto:techpubs-comments@juniper.net). Include the document or topic name, URL or page number, and software version (if applicable).

## Requesting Technical Support

Technical product support is available through the Juniper Networks Technical Assistance Center (JTAC). If you are a customer with an active J-Care or Partner Support Service support contract, or are covered under warranty, and need post-sales technical support, you can access our tools and resources online or open a case with JTAC.

- JTAC policies—For a complete understanding of our JTAC procedures and policies, review the *JTAC User Guide* located at <https://www.juniper.net/us/en/local/pdf/resource-guides/7100059-en.pdf>.
- Product warranties—For product warranty information, visit <https://www.juniper.net/support/warranty/>.
- JTAC hours of operation—The JTAC centers have resources available 24 hours a day, 7 days a week, 365 days a year.

## Self-Help Online Tools and Resources

For quick and easy problem resolution, Juniper Networks has designed an online self-service portal called the Customer Support Center (CSC) that provides you with the following features:

- Find CSC offerings: <https://www.juniper.net/customers/support/>
- Search for known bugs: <https://prsearch.juniper.net/>
- Find product documentation: <https://www.juniper.net/documentation/>
- Find solutions and answer questions using our Knowledge Base: <https://kb.juniper.net/>
- Download the latest versions of software and review release notes: <https://www.juniper.net/customers/csc/software/>
- Search technical bulletins for relevant hardware and software notifications: <https://kb.juniper.net/InfoCenter/>
- Join and participate in the Juniper Networks Community Forum: <https://www.juniper.net/company/communities/>
- Open a case online in the CSC Case Management tool: <https://www.juniper.net/cm/>

To verify service entitlement by product serial number, use our Serial Number Entitlement (SNE) Tool: <https://entitlementsearch.juniper.net/entitlementsearch/>

## Opening a Case with JTAC

You can open a case with JTAC on the Web or by telephone.

- Use the Case Management tool in the CSC at <https://www.juniper.net/cm/>.
- Call 1-888-314-JTAC (1-888-314-5822 toll-free in the USA, Canada, and Mexico).

For international or direct-dial options in countries without toll-free numbers, see <https://www.juniper.net/support/requesting-support.html>.



## CHAPTER 1

# System Management

- [Specifying the Physical Location of the Switch on page 18](#)
- [Mapping the Hostname of the Switch to IP Addresses on page 19](#)
- [Configuring a DNS Name Server for Resolving a Hostname into Addresses on page 19](#)
- [Example: Configuring the Name of the Switch, IP Address, and System ID on page 20](#)
- [Rebooting and Halting a Device on page 20](#)
- [Reaching a Domain Name System Server on page 22](#)
- [Configuring the Console Port Type \(CLI Procedure\) on page 24](#)
- [Configuring the LCD Panel on EX Series Switches \(CLI Procedure\) on page 25](#)
- [Configuring the Hostname of a Router or Switch by Using a Configuration Group on page 27](#)
- [Modifying the Default Time Zone for a Router or Switch Running Junos OS on page 29](#)
- [System Utilization Alarms on page 30](#)
- [Configuring the Junos OS to Determine Conditions That Trigger Alarms on Different Interface Types on page 30](#)
- [Understanding the Protocol Redirect Mechanism on EX Series Switches on page 31](#)
- [Configuring the Junos OS to Select a Fixed Source Address for Locally Generated TCP/IP Packets on page 32](#)
- [Configuring Junos OS to Extend the Default Port Address Range on page 32](#)
- [Configuring Junos OS to Disable the Routing Engine Response to Multicast Ping Packets on page 33](#)
- [Configuring Junos OS to Disable the Reporting of IP Address and Timestamps in Ping Responses on page 33](#)
- [Configuring Junos OS to Disable Sending Protocol Redirect Messages on EX Series Switches \(CLI Procedure\) on page 34](#)
- [Configuring Junos OS to Disable Protocol Redirect Messages on the Router or Switch on page 34](#)
- [Saving Core Files Generated by Junos OS Processes on page 35](#)
- [Example: Configuring User Permissions with Access Privileges for Operational Mode Commands on page 35](#)

- [Viewing Core Files from Junos OS Processes on page 47](#)
- [Configuring the Junos OS ICMPv4 Rate Limit for ICMPv4 Routing Engine Messages on page 48](#)

## Specifying the Physical Location of the Switch

---

To specify the physical location of the switch, specify the following options for the **location** statement at the **[edit system]** hierarchy level:

- **altitude *feet***—Number of feet above sea level.
- **building *name***—Name of the building, 1 to 28 characters in length. If the string contains spaces, enclose it in quotation marks (" ").
- **country-code *code***—Two-letter country code.
- **floor *number***—Floor in the building.
- **hcoord *horizontal-coordinate***—Bellcore Horizontal Coordinate.
- **lata *service-area***—Long-distance service area.
- **latitude *degrees***—Latitude in degree format.
- **longitude *degrees***—Longitude in degree format.
- **npa-nxx *number***—First six digits of the phone number (area code and exchange).
- **postal-code *postal-code***—Postal code.
- **rack *number***—Rack number.
- **vcoord *vertical-coordinate***—Bellcore Vertical Coordinate.

The following example shows how to specify the physical location of the switch:

```
[edit system]
location {
  altitude feet;
  building name;
  country-code code;
  floor number;
  hcoord horizontal-coordinate;
  lata service-area;
  latitude degrees;
  longitude degrees;
  npa-nxx number;
  postal-code postal-code;
  rack number;
  vcoord vertical-coordinate;
}
```

### Related Documentation

- [Example: Configuring the Name of the Switch, IP Address, and System ID on page 20](#)

## Mapping the Hostname of the Switch to IP Addresses

To map a hostname of a switch to one or more IP addresses, include the **inet** statement at the **[edit system static-host-mapping hostname]** hierarchy level:

```
[edit system]
static-host-mapping {
  hostname {
    inet [ addresses ];
    alias [ aliases ];
  }
}
```

**hostname** is the name specified by the **host-name** statement at the **[edit system]** hierarchy level.

For each host, you can specify one or more aliases.

### Related Documentation

- [Reaching a Domain Name System Server on page 22](#)
- *Example: Configuring the Unique Identity of a Router for Making it Accessible on the Network*
- [static-host-mapping on page 96](#)

## Configuring a DNS Name Server for Resolving a Hostname into Addresses

To have the router or switch resolve hostnames into addresses, you must configure one or more Domain Name System (DNS) name servers by including the **name-server** statement at the **[edit system]** hierarchy level:

```
[edit system]
name-server {
  address;
}
```

The following example shows how to configure two DNS name servers:

```
[edit]
user@switch# set system name-server 192.168.1.253
[edit]
user@switch# set system name-server 192.168.1.254
[edit]
user@switch# show
system {
  name server {
    192.168.1.253;
    192.168.1.254;
  }
}
```

### Related Documentation

- [name-server on page 84](#)

## Example: Configuring the Name of the Switch, IP Address, and System ID

---

The following example shows how to configure the switch name, map the name to an IP address and alias, and configure a system identifier:

```
[edit]
user@switch# set system host-name switch1
[edit]
user@switch# set system static-host-mapping switch1 inet 192.168.1.77
[edit]
user@switch# set system static-host-mapping switch1 alias sj1
[edit]
user@switch# set system static-host-mapping switch1 sysid 1921.6800.1077
[edit]
user@switch# show
system {
    host-name switch-sj1;
    static-host-mapping {
        switch-sj1 {
            inet 192.168.1.77;
            alias sj1;
            sysid 1921.6800.1077;
        }
    }
}
```

**Related Documentation** • [Getting Started Guide for Routing Devices](#)

## Rebooting and Halting a Device

---

To reboot the switch, issue the **request system reboot** command.

```
user@switch> request system reboot ?
Possible completions:
<[Enter]>          Execute this command
all-members        Reboot all virtual chassis members
at                 Time at which to perform the operation
both-routing-engines Reboot both the Routing Engines
fast-boot          Enable fast reboot
hypervisor         Reboot Junos OS, host OS, and Hypervisor
in                 Number of minutes to delay before operation
local              Reboot local virtual chassis member
member             Reboot specific virtual chassis member (0..9)
message            Message to display to all users
other-routing-engine Reboot the other Routing Engine
|                 Pipe through a command
{master:0}
```

```
user@switch> request system reboot
Reboot the system ? [yes,no] (no) yes
Rebooting switch
```



**NOTE:** Not all options shown in the preceding command output are available on all QFX Series, OCX Series, and EX4600 switches. See the documentation for the [request system reboot](#) command for details about options.



**NOTE:** When you issue the `request system reboot hypervisor` command on QFX10000 switches, the reboot takes longer than a standard Junos OS reboot.

Similarly, to halt the switch, issue the `request system halt` command.



**CAUTION:** Before entering this command, you must have access to the switch's console port in order to bring up the Routing Engine.

```
user@switch> request system halt ?
Possible completions:
<[Enter]>      Execute this command
all-members    Halt all virtual chassis members
at             Time at which to perform the operation
backup-routing-engine  Halt backup Routing Engine
both-routing-engines  Halt both Routing Engines
in            Number of minutes to delay before operation
local         Halt local virtual chassis member
member        Halt specific virtual chassis member (0..9)
message       Message to display to all users
other-routing-engine  Halt other Routing Engine
|            Pipe through a command
```



**NOTE:** When you issue this command on an individual component in a QFabric system, you will receive a warning that says “Hardware-based members will halt, Virtual Junos Routing Engines will reboot.” If you want to halt only one member, use the `member` option. You cannot issue this command from the QFabric CLI.

Issuing the `request system halt` command on the switch halts the Routing Engine. To reboot a Routing Engine that has been halted, you must connect through the console.

#### Related Documentation

- [clear system reboot on page 114](#)
- [request system reboot on page 156](#)
- [request system halt on page 144](#)
- [request system power-off on page 151](#)
- [Connecting a QFX Series Device to a Management Console](#)

## Reaching a Domain Name System Server

---

Domain name system (DNS) servers are used for resolving hostnames to IP addresses.

For redundancy, it is a best practice to configure access to multiple DNS servers. You can configure a maximum of three DNS servers. The approach is similar to the way Web browsers resolve the names of a Web site to its network address. Additionally, Junos OS enables you to configure one or more domain names, which it uses to resolve hostnames that are not fully qualified (in other words, the domain name is missing). This is convenient because you can use a hostname in configuring and operating Junos OS without the need to reference the full domain name. After adding DNS server addresses and domain names to your Junos OS configuration, you can use DNS resolvable hostnames in your configuration and commands instead of IP addresses.

Optionally, instead of configuring the name server at the **[edit system]** hierarchy level, you can use a configuration group, as shown in this procedure. This is a recommended best practice for configuring the name server. This procedure uses a group called **global** as an example.

Before you begin, configure your DNS servers with the hostname and an IP address for your Junos OS device. It does not matter which IP address you assign as the address of your Junos OS device in the DNS server, as long as it is an address that reaches your device. Normally, you would use the management interface IP address, but you can choose the loopback interface IP address, or a network interface IP address, or even configure multiple addresses on the DNS server.

To configure the router or switch to resolve hostnames into addresses:

1. Reference the IP addresses of your DNS servers.

```
[edit groups group-name system]
name-server {
  address;
}
```

The following example shows how to reference two DNS servers:

```
[edit groups global system]
user@host# set name-server 192.168.1.253
user@host# set name-server 192.168.1.254
```

```
user@host# show
name server {
  192.168.1.253;
  192.168.1.254;
}
```

2. (Optional) Configure the name of the domain in which the device itself is located.

This is a good practice. Junos OS then uses this configured domain name as the default domain name to append to hostnames that are not fully qualified.

```
[edit system]
```

```
domain-name domain-name;
```

The following example shows how to configure the domain name:

```
[edit groups global system]
user@host# set domain-name company.net

user@host# show
domain-name company.net;
```

3. (Optional) Configure a list of domains to be searched.

If your device can reach several different domains, you can configure these as a list of domains to be searched. Junos OS then uses this list to set an order in which it appends domain names when searching for the IP address of a host.

```
[edit groups global system]
domain-search [ domain-list ];
```

The domain list can contain up to six domain names, with a total of up to 256 characters.

The following example shows how to configure two domains to be searched. This example configures Junos OS to search the company.net domain and then the domainone.net domain and then the domainonealternate.com domain when attempting to resolve unqualified hosts.

```
[edit groups global system]
domain-search [ company.net domainone.net domainonealternate.com ]
```

4. If you used a configuration group, apply the configuration group, substituting **global** with the appropriate group name.

```
[edit]
user@host# set apply-groups global
```

5. Commit the configuration.

```
user@host# commit
```

6. Verify the configuration.

If you have configured your DNS server with the hostname and an IP address for your Junos OS device, you can issue the following commands to confirm that DNS is working and reachable. You can either use the configured hostname to confirm resolution to the IP address or use the IP address of your device to confirm resolution to the configured hostname.

```
user@host> show host host-name
user@host> show host host-ip-address
```

For example:

```
user@host> show host device.example.net
device.example.net
device.example.net has address 192.168.187.1
```

```
user@host> show host 192.168.187.1
10.187.168.192.in-addr.arpa domain name pointer device.example.net.
```

**Related Documentation** • *DNS Overview*

---

## Configuring the Console Port Type (CLI Procedure)

EX2200-C, EX2300, EX3400, EX4300, EX4550, and OCX1100 switches provide two console ports: an RJ-45 console port that accepts a cable with an RJ-45 connector and a Mini-USB Type-B console port that accepts a cable with a Mini-USB Type-B plug (5-pin) connector. You can configure and manage the switch using RJ-45 console port as well as Mini-USB Type-B console port.

However, on EX2200-C, EX4550, and OCX1100 switches, only one console port is active at a time and the console input is active only on that port. By default, the RJ-45 console port is the active port on EX2200-C, EX4550, and OCX1100 switches and the Mini USB Type-B console port is the passive. That is, to make a connection on the RJ-45 console port you need not configure it as the active port while to make a connection to the Mini-USB Type-B console port, you must first explicitly configure this port as the active port. You can make either port the active port by using the [port-type](#) configuration statement.

On EX2300, EX3400, and EX4300 switches, both the RJ-45 console port and the Mini-USB Type-B console port are active at the same time.

The active console port can display all the early boot and low-level message output and you can access the switch through this port in the debugger prompt.

To configure the RJ-45 or the Mini-USB Type-B console port as an active console port:

1. Connect the host machine to the switch using the management console port you want to activate.
2. Configure the port type:

```
[edit]
```

```
user@switch# set system ports auxiliary port-type type
```

For example, to activate the Mini USB Type-B console port:

```
user@switch# set system ports auxiliary port-type mini-usb
```

3. Commit the configuration and Exit.
4. Reboot the switch. The control and the boot log will appear on the activated console.





**NOTE:** Do not use the `Delete system ports auxiliary port-type` command to delete the port-type configuration. Always use `set system ports auxiliary port-type type` command to change the active management console port type.

**Related Documentation**

- [Connecting an EX Series Switch to a Management Console by Using the Mini-USB Type-B Console Port](#)

## Configuring the LCD Panel on EX Series Switches (CLI Procedure)

This topic applies to hardware devices in the EX Series product family, which includes switches and the XRE200 External Routing Engine, that support the LCD panel interface.

The LCD panel on the front panel of EX Series switches displays a variety of information about the switch in the Status menu and provides the Maintenance menu to enable you to perform basic operations such as initial setup and reboot. You can disable these menus or individual menu options if you do not want switch users to use them. You can also set a custom message that will be displayed on the panel.

This topic describes:

- [Disabling or Enabling Menus and Menu Options on the LCD Panel on page 25](#)
- [Configuring a Custom Display Message on page 26](#)

### Disabling or Enabling Menus and Menu Options on the LCD Panel

By default, the Maintenance menu, the Status menu, and the options in those menus in the LCD panel are enabled. Users can configure and troubleshoot the switch by using the Maintenance menu and view certain details about the switch by using the Status menu.

If you do not want users to be able to use those menus or some of the menu options, you can disable the menus or individual menu options. You can reenable the menus or menu options.

Issue the **show chassis lcd menu** operational mode command to see the menus or menu options that are currently enabled.



**NOTE:** On some platforms, you must specify an FPC slot number in these commands. See the [lcd-menu](#) statement for details.

To disable a menu:

```
[edit]
user@switch# set chassis lcd-menu menu-item menu-name disable
```

To enable a menu:

```
[edit]
user@switch# delete chassis lcd-menu menu-item menu-name disable
```

To disable a menu option:

```
[edit]
user@switch# set chassis lcd-menu menu-item menu-option disable
```

To enable a menu option:

```
[edit]
user@switch# delete chassis lcd-menu menu-item menu-option disable
```

## Configuring a Custom Display Message

You can configure the second line of the LCD to display a custom message temporarily for 5 minutes or permanently.

To display a custom message temporarily:

- On an EX3200 switch, a standalone EX3300 switch, a standalone EX4200 switch, a standalone EX4300 switch except EX4300-48MP and EX4300-48MP-S switches, a standalone EX4500 switch, a standalone EX4550 switch, an EX6200 switch, an EX8200 switch, or an XRE200 External Routing Engine:

```
user@switch> set chassis display message message
```

- On an EX3300, EX4200, EX4300, EX4500, or EX4550 switch in a Virtual Chassis configuration:

```
user@switch> set chassis display message message fpc-slot slot-number
```

To display a custom message permanently:

- On an EX3200 switch, a standalone EX3300 switch, a standalone EX4200 switch, a standalone EX4300 switch except EX4300-48MP and EX4300-48MP-S switches, a standalone EX4500 switch, a standalone EX4550 switch, an EX6200 switch, an EX8200 switch, or an XRE200 External Routing Engine:

```
user@switch> set chassis display message message permanent
```

- On an EX3300, EX4200, EX4300 except EX4300-48MP and EX4300-48MP-S, EX4500, or EX4550 switch in a Virtual Chassis configuration:

```
user@switch> set chassis display message message fpc-slot slot-number permanent
```



**NOTE:** The buttons on the LCD panel are disabled when the LCD is configured to display a custom message.

---

To disable the display of the custom message:

```
user@switch> clear chassis display message
```

You can view the custom message by issuing the `show chassis lcd` command.

**Related  
Documentation**

- *LCD Panel in EX3200 Switches*
- *LCD Panel in EX3300 Switches*
- *LCD Panel in EX4200 Switches*
- *LCD Panel in EX4300 Switches*
- *LCD Panel in EX4500 Switches*
- *LCD Panel in EX4550 Switches*
- *LCD Panel in an EX6200 Switch*
- *LCD Panel in an EX8200 Switch*
- *LCD Panel in an XRE200 External Routing Engine*

---

## Configuring the Hostname of a Router or Switch by Using a Configuration Group

The hostname of a device is its identification. A router or switch must have its identity established to be accessible on the network to other devices. That is perhaps the most important reason to have a hostname, but a hostname has other purposes: Junos OS uses the configured hostname as part of the command prompt, to prepend log files and other accounting information, as well as in other places where knowing the device identity is useful. We recommend that the hostname be descriptive and memorable.

You can configure the hostname at the **[edit system]** hierarchy level, a procedure shown in *Example: Configuring the Unique Identity of a Router for Making it Accessible on the Network*. Optionally, instead of configuring the hostname at the **[edit system]** hierarchy level, you can use a configuration group, as shown in this procedure. This is a recommended best practice for configuring the hostname, especially if the device has dual Routing Engines. This procedure uses groups called **re0** and **re1** as an example.



**NOTE:** Starting with Junos OS Release 13.2R3, if you configure hostnames that are longer than the CLI screen width, regardless of the terminal screen width setting, the commit operation occurs successfully. Even if the terminal screen width is less than the hostname length, commit is successful. In Junos OS releases earlier than Release 13.2R3, if you configured such hostnames by using the `host-name hostname` statement at the `[edit system]` hierarchy level and the terminal screen width was less than the length of the hostname by using the `set cli screen-width` statement, a foreign file propagation (ffp) failure error message is displayed when you attempt to commit the configuration. In such a case, because of the ffp failure, the commit operation does not complete and you cannot recover the router unless you make the modification in the backend in the `juniper.conf.gz` file and commit the change from the shell prompt.

To set the hostname using a configuration group:

1. Include the **host-name** statement in the configuration at the `[edit groups group-name system]` hierarchy level.

The name value must be less than 256 characters.

```
[edit groups group-name system]
host-name hostname;
```

For example:

```
[edit groups re0 system]
root@# set host-name san-jose-router0

[edit groups re1 system]
root@# set host-name san-jose-router1
```

2. If you used one or more configuration groups, apply the configuration groups, substituting the appropriate group names.

For example:

```
[edit]
user@host# set apply-groups [re0 re1]
```

3. Commit the changes.

```
[edit]
root@# commit
```

The hostname subsequently appears in the device CLI prompt.

```
san-jose-router0#
```

## Release History Table

Release	Description
13.2R3	Starting with Junos OS Release 13.2R3, if you configure hostnames that are longer than the CLI screen width, regardless of the terminal screen width setting, the commit operation occurs successfully.

## Related Documentation

- [Understanding Hostnames](#)

## Modifying the Default Time Zone for a Router or Switch Running Junos OS

The default local time zone on the router or switch is UTC (Coordinated Universal Time, formerly known as Greenwich Mean Time, or GMT).

- To modify the local time zone, include the **time-zone** statement at the **[edit system]** hierarchy level:

```
[edit system]
time-zone (GMT hour-offset | time-zone);
```

You can use the **GMT hour-offset** option to set the time zone relative to UTC (GMT) time. By default, **hour-offset** is **0**. You can configure this to be a value from **-14** to **+12**.

You can also specify the **time-zone** value as a string such as PDT (Pacific Daylight Time) or WET (Western European Time), or specify the continent and major city.



**NOTE:** Junos OS complies with the POSIX time-zone standard, which is counter-intuitive to the way time zones are generally indicated relative to UTC. A time zone ahead of UTC (east of the Greenwich meridian) is commonly indicated as GMT +*n*; for example, the Central European Time (CET) zone is indicated as GMT +1. However, this is not true for POSIX time zone designations. POSIX indicates CET as GMT-1. If you include the **set system time-zone GMT+1** statement for a router in the CET zone, your router time will be set to one hour behind GMT, or two hours behind the actual CET time. For this reason, you might find it easier to use the POSIX time-zone strings, which you can list by entering **set system time-zone ?**.

For the time zone change to take effect for all processes running on the router or switch, you must reboot the router or switch.

The following example shows how to change the current time zone to **America/New\_York**:

```
[edit]
user@host# set system time-zone America/New_York
[edit]
user@host# show
system {
    time-zone America/New_York;
}
```

- Related Documentation**
- *Understanding NTP Time Servers*
  - *Updating the IANA Time Zone Database on Junos OS Devices*

## System Utilization Alarms ---

QFX Series devices provide system alarms that alert you when disk usage in the `/var` partition exceeds acceptable levels.

You can display the messages for these alarms by issuing the **show system alarms** operational mode command if the `/var` partition usage exceeds 75 percent. A usage level between 76 and 90 percent indicates high usage and raises a minor alarm condition, whereas a usage level above 90 percent indicates that the partition is full and raises a major alarm condition.

The following sample output from the **show system alarms** command shows system alarm messages that are displayed when disk usage is exceeded on the switch.

```
user@host> show system alarms
4 alarms currently active
Alarm time           Class  Description
2013-10-08 20:08:20 UTC Minor  RE 0 /var partition usage is high
2013-10-08 20:08:20 UTC Major  RE 0 /var partition is full
2013-10-08 20:08:08 UTC Minor  FPC 1 /var partition usage is high
2013-10-08 20:08:08 UTC Major  FPC 1 /var partition is full
```



**BEST PRACTICE:** We recommend that you regularly request a system file storage cleanup to optimize the performance of the switch and prevent generating system alarms.

---

- Related Documentation**
- *Freeing Up System Storage Space*
  - *Understanding Alarms*
  - [show system alarms on page 1061](#)

## Configuring the Junos OS to Determine Conditions That Trigger Alarms on Different Interface Types ---

For the different types of PICs, you can configure which conditions trigger alarms and whether they trigger a red or yellow alarm. Red alarm conditions light the **RED ALARM** LED and trigger an audible alarm if one is connected. Yellow alarm conditions light the **YELLOW ALARM** LED and trigger an audible alarm if one is connected.



**NOTE:** By default, any failure condition on the integrated-services interface (Adaptive Services PIC) triggers a red alarm.

---

To configure conditions that trigger alarms and that can occur on any interface of the specified type, include the **alarm** statement at the **[edit chassis]** hierarchy level.

```
[edit chassis]
alarm {
  interface-type {
    alarm-name (red | yellow | ignore);
  }
}
```

**alarm-name** is the name of an alarm.

#### Related Documentation

- [System-Wide Alarms and Alarms for Each Interface Type](#)
- [Chassis Conditions That Trigger Alarms](#)
- [Silencing External Devices Connected to Alarm Relay Contacts](#)

## Understanding the Protocol Redirect Mechanism on EX Series Switches

Internet Control Message Protocol (ICMP) redirect, also known as protocol redirect, is a mechanism used by switches and routers to convey routing information to hosts. ICMP redirect messages are used by switches and routers to notify the hosts on the same data link of the best route available for a given destination. All EX series switches support sending ICMP redirect messages for both IPv4 and IPv6 traffic.



**NOTE:** EX series switches do not send ICMP redirect messages if the data packet contains routing information.

The ICMP redirect messages inform a host to update its routing information and to send packets on an alternate route. Suppose a host tries to send a data packet through a switch (say, S1) and S1 sends the data packet to another switch (say, S2). Also, suppose that a direct path from the host to S2 is available (that is, the host and S2 are on the same Ethernet segment). S1 then sends a protocol redirect message to inform the host that the best route for the destination is the direct route to S2. The host should then send packets directly to S2 instead of sending them through S1. S2 still sends the original packet that it received from S1 to the intended destination. Refer to RFC-1122 and RFC-4861 for more details on ICMP redirecting.

By default, the switch sends protocol redirect messages. For security reasons, you might want to disable the switch from sending protocol redirect messages.

#### Related Documentation

- [Configuring Junos OS to Disable Sending Protocol Redirect Messages on EX Series Switches \(CLI Procedure\) on page 34](#)

## Configuring the Junos OS to Select a Fixed Source Address for Locally Generated TCP/IP Packets

---

By default, the source address included in locally generated Transmission Control Protocol/IP (TCP/IP) packets, such as FTP traffic, and in User Datagram Protocol (UDP) and IP packets, such as Network Time Protocol (NTP) requests, is chosen as the local address for the interface on which the traffic is transmitted. This means that the local address chosen for packets to a particular destination might change from connection to connection based on the interface that the routing protocol has chosen to reach the destination when the connection is established. If multiple equal-cost next hops are present for a destination, locally generated packets use the **lo0** address as a source.

- To configure the software to select a fixed address to use as the source for locally generated IP packets, include the **default-address-selection** statement at the **[edit system]** hierarchy level:

```
[edit system]
  default-address-selection;
```

If you include the **default-address-selection** statement in the configuration, the Junos OS chooses the system default address as the source for most locally generated IP packets. The default address is usually an address configured on the **lo0** loopback interface. For example, if you specified that SSH and telnet use a particular address, but you also have **default-address selection** configured, the system default address is used.

### Related Documentation

- [Configuring Junos OS to Disable Protocol Redirect Messages on the Router or Switch on page 34](#)
- [default-address-selection on page 65](#)

## Configuring Junos OS to Extend the Default Port Address Range

---

By default, the upper range of a port address is 5000. You can increase the range from which the port number can be selected to decrease the probability that someone can determine your port number.

- To configure the Junos OS to extend the default port address range, include the **source-port** statement at the **[edit system internet-options]** hierarchy level:

```
[edit system internet-options]
  source-port upper-limit upper-limit;
```

**upper-limit *upper-limit*** is the upper limit of a source port address and can be a value from 5000 through 65,355.

### Related Documentation

- [Configuring Junos OS to Disable TCP RFC 1323 Extensions](#)
- [Configuring Junos OS ARP Learning and Aging Options for Mapping IPv4 Network Addresses to MAC Addresses](#)
- [source-port](#)



## Configuring Junos OS to Disable the Routing Engine Response to Multicast Ping Packets

By default, the Routing Engine responds to Internet Control Message Protocol (ICMP) echo requests sent to multicast group addresses. To disable the Routing Engine from responding to ICMP echo requests sent to multicast group addresses, include the **no-multicast-echo** statement at the **[edit system]** hierarchy level:

```
[edit system]
no-multicast-echo;
```

By configuring the Routing Engine to ignore multicast ping packets, you can prevent unauthorized persons from discovering the list of provider edge (PE) routers or switches in the network.

- Related Documentation**
- [Configuring Junos OS to Disable the Reporting of IP Address and Timestamps in Ping Responses on page 33](#)

## Configuring Junos OS to Disable the Reporting of IP Address and Timestamps in Ping Responses

When you issue the **ping** command with the **record-route** option, the Routing Engine displays the path of the ICMP echo request packets and timestamps in the ICMP echo responses by default.

You can configure the Routing Engine to disable the setting of the **record-route** option in the IP header of the ping request packets. Disabling the **record-route** option prevents the Routing Engine from recording and displaying the path of the ICMP echo request packets in the response.

- To configure the Routing Engine to disable the setting of the **record route** option, include the **no-ping-record-route** statement at the **[edit system]** hierarchy level:

```
[edit system]
no-ping-record-route;
```

- To disable the reporting of timestamps in the ICMP echo responses, include the **no-ping-time-stamp** option at the **[edit system]** hierarchy level:

```
[edit system]
no-ping-time-stamp;
```

By configuring the **no-ping-record-route** and **no-ping-timestamp** options, you can prevent unauthorized persons from discovering information about the provider edge (PE) router or switch and its loopback address.

- Related Documentation**
- [Configuring Junos OS to Disable the Routing Engine Response to Multicast Ping Packets on page 33](#)

## Configuring Junos OS to Disable Sending Protocol Redirect Messages on EX Series Switches (CLI Procedure)

---

EX series switches support sending ICMP redirect messages for both IPv4 and IPv6 traffic. By default, the switch sends protocol redirect messages. For security reasons, you may want to disable the switch from sending protocol redirect messages.

To disable the sending of redirect messages by the switch:

- Disable sending protocol redirect messages for the entire switch:

For IPv4 traffic:

```
[edit system]
user@switch# set no-redirects
```

For IPv6 traffic:

```
[edit system]
user@switch# set no-redirects-ipv6
```

- Disable sending the protocol redirect messages on a specific interface:

For IPv4 traffic:

```
[edit interfaces interface-name unit logical-unit-number family family]
user@switch# set no-redirects
```

For IPv6 traffic:

```
[edit interfaces interface-name unit logical-unit-number family family]
user@switch# set no-redirects-ipv6
```

To re-enable the sending of redirect messages on the switch, delete the **no-redirects** statement (for IPv4 traffic) or the **no-redirects-ipv6** statement (for IPv6 traffic) from the configuration.

### Related Documentation

- [Understanding the Protocol Redirect Mechanism on EX Series Switches on page 31](#)
- [Junos OS Network Interfaces Library for Routing Devices](#)

## Configuring Junos OS to Disable Protocol Redirect Messages on the Router or Switch

---

By default, the router or switch sends protocol redirect messages. To disable the sending of redirect messages by the router or switch, include the **no-redirects** statement at the **[edit system]** hierarchy level:

```
[edit system]
no-redirects;
```

To reenabling the sending of redirect messages on the router or switch, delete the **no-redirects** statement from the configuration.

To disable the sending of redirect messages on a per-interface basis, include the **no-redirects** statement at the **[edit interfaces *interface-name* unit *logical-unit-number* family *family*]** hierarchy level.

**Related  
Documentation**

- [Configuring Junos OS to Ignore ICMP Source Quench Messages](#)
- [Configuring Junos OS to Select a Fixed Source Address for Locally Generated TCP/IP Packets](#)
- [Junos OS Network Interfaces Library for Routing Devices](#)

---

## Saving Core Files Generated by Junos OS Processes

By default, when an internal Junos OS process generates a core file, the file and associated context information are saved for debugging purposes in a compressed tar file named **/var/tmp/process-name.core.core-number.tgz**. The contextual information includes the configuration and system log message files.

- To disable the saving of core files and associated context information:

```
[edit system]
no-saved-core-context;
```

- To save the core files only:

```
[edit system]
saved-core-files number;
```

Where ***number*** is the number of core files to save and can be a value from 1 through 10.

- To save the core files along with the contextual information:

```
[edit system]
saved-core-context;
```

**Related  
Documentation**

- [Viewing Core Files from Junos OS Processes on page 47](#)

---

## Example: Configuring User Permissions with Access Privileges for Operational Mode Commands

This example shows how to configure custom login classes and assign access privileges for operational mode commands. This enables users of the customized login class to execute only those operational commands for which access privileges have been specified. This prevents unauthorized users from executing sensitive commands that could potentially cause damage to the network.

- [Requirements on page 36](#)
- [Overview and Topology on page 36](#)
- [Configuration on page 40](#)
- [Verification on page 45](#)

## Requirements

This example uses the following hardware and software components:

- One Juniper Networks device
- One TACACS+ (or RADIUS) server
- Junos OS build running on the Juniper Networks device

Before you begin:

- Establish a TCP connection between the device and the TACACS+ server. In the case of the RADIUS server, establish a UDP connection between the device and the RADIUS server.

For information on configuring a TACACS+ server, see *Configuring TACACS+ Authentication*.

- Configure at least one user assigned to a login class on the Juniper Networks device. There can be more than one login class, each with varying permission configurations, and more than one user on the device.

## Overview and Topology

Each top-level command-line interface (CLI) command and each configuration statement in Junos OS has an access privilege level associated with it. For each login class, you can explicitly deny or allow the use of operational and configuration mode commands that would otherwise be permitted or not allowed by a privilege level. Users can execute only those commands and configure and view only those statements for which they have access privileges. To configure access privilege levels, include the **permissions** statement at the **[edit system login class class-name]** hierarchy level.

The access privileges for each login class are defined by one or more permission flags specified in the **permissions** statement. In addition to this, you can specify extended regular expressions with the following statements:

- **allow-commands** and **deny-commands**—Allow or deny access to operational mode commands only.
- **allow-configuration** and **deny-configuration**—Allow or deny access to a particular configuration hierarchy only.
- **allow-configuration-regexps** and **deny-configuration-regexps**—Allow or deny access to a particular configuration hierarchy using strings of regular expressions.
- **allow-commands-regexps** and **deny-commands-regexps**—(TACACS+ authorization only) Allow or deny access to a particular command using strings of regular expressions.

The above statements define a user's access privileges to individual operational mode commands, configuration statements, and hierarchies. These statements take precedence over the login class permissions set for a user.

### Configuration Notes

When configuring the **allow-commands**, **deny-commands**, **allow-configuration**, and **deny-configuration** statements with access privileges, take the following into consideration:

- You can include the allow/deny statement only once in each login class.
- If the exact same command is configured under both **allow-commands** and **deny-commands** statements, or both **allow-configuration** and **deny-configuration** statements, then the allow operation takes precedence over the deny statement.

For instance, with the following configuration, a user assigned to login class test is allowed to install software using the **request system software add** command, although the **deny-commands** statement also includes it:

```
[edit system login]
user@host# set class test permissions allow-commands "request system software
add"
user@host# set class test permissions deny-commands "request system software add"
```

For instance, with the following configuration, a user assigned to login class test is allowed to access the **[edit system services]** configuration hierarchy, although the **deny-configuration** statement also includes it:

```
[edit system login]
user@host# set class test permissions allow-configuration "system services"
user@host# set class test permissions deny-configuration "system services"
```

- If you specify a regular expression for **allow-commands** and **deny-commands** statements with two different variants of a command, the longest match is always executed.

For instance, for the following configuration, a user assigned to test login class is allowed to execute the **commit synchronize** command and not the **commit** command. This is because **commit-synchronize** is the longest match between **commit** and **commit-synchronize**, and it is specified for **allow-commands**.

```
[edit system login]
user@host# set class test allow-commands "commit-synchronize"
user@host# set class test deny-commands commit
```

- Regular expressions for **allow-commands** and **deny-commands** statements can also include the **commit**, **load**, **rollback**, **save**, **status**, and **update** commands.
- Explicitly allowing configuration mode hierarchies or regular expressions using the **allow-configuration** statement adds to the regular permissions set using the **permissions** statement. Likewise, explicitly denying configuration mode hierarchies or regular expressions using the **deny-configuration** statement removes permissions for the specified configuration mode hierarchy, from the default permissions provided by the **permissions** statement.

For example, for the following configuration, the login class user can edit the configuration at the **[edit system services]** hierarchy level and issue configuration mode commands (such as **commit**), in addition to just entering the configuration mode using the **configure** command, which is the permission specified by the configure permission flag:

```
[edit system login]
user@host# set class test permissions configure allow-configuration "system services"
```

Likewise, for the following configuration, the login class user can perform all operations allowed by the *all* permissions flag, except issuing configuration mode commands (such as **commit**) or modifying the configuration at the **[edit system services]** hierarchy level:

```
[edit system login]
user@host# set class test permissions all deny-configuration "system services"
```

- The **allow/deny-configuration** statements are mutually exclusive with the **allow/deny-configuration-regexps** statements, and the **allow-deny-commands** statements are mutually exclusive with the **allow/deny-commands-regexps** statements. For example, you cannot configure both **allow-configuration** and **allow-configuration-regexps** in the same login class.
- If you have existing configurations using the **allow/deny-configuration** or **allow/deny-commands** statements, using the same configuration options with the **allow/deny-configuration-regexps** or **allow/deny-commands-regexps** statements might not produce the same results, as the search and match methods differ in the two forms of these statements.
- To define access privileges to parts of the configuration hierarchy, specify the full paths in the extended regular expressions with the **allow-configuration** and **deny-configuration** statements. Use parentheses around an extended regular expression that connects two or more expressions with the pipe (|) symbol.

For example:

```
[edit system login]
user@host# set class test deny-configuration "(system login class) | (system services)"
```

- If the regular expression contains any spaces, operators, or wildcard characters, enclose the expression in quotation marks. Regular expressions are not case-sensitive; for example, **allow-commands "show interfaces"**.
- Modifiers such as *set*, *log*, and *count* are not supported within the regular expression string to be matched. If a modifier is used, then nothing is matched.

Incorrect configuration:

```
[edit system login]
user@host# set class test permission deny-commands "set protocols"
```

Correct configuration:

```
[edit system login]
user@host# set class test permission deny-commands protocols
```

- Anchors are required when specifying complex regular expressions with the **allow-commands** statement.

For example:

```
[edit system login]
user@host# set class test permissions allow-commands "(^monitor) | (^ping) | (^show) | (^exit)"
```

OR

```
set class test permissions allow-commands "allow-commands = "^(monitor | ping |
show | exit)"
```

- When specifying extended regular expressions using the **allow/deny-commands** and **allow/deny-configuration** statements, each expression separated by a pipe (|) symbol must be a complete standalone expression, and must be enclosed in parentheses ( ). Do not use spaces between regular expressions separated with parentheses and connected with the pipe (|) symbol.

For example:

```
[edit system login]
user@host# set class test allow-commands "(ping .*)|(traceroute .*)|(show
.*)"|(configure .*)|(edit)|(exit)|(commit)|(rollback .*)"
user@host# set class test deny-configuration "(system login class)|(system services)"
```

- When specifying extended regular expressions using the **allow/deny-configuration-regexps** or **allow/deny-commands-regexps** statement, each expression enclosed within quotes (") and separated by a space must be enclosed in angular brackets [ ].

For example:

```
[edit system login]
user@host# set class test allow-configuration-regexps [ "interfaces.* description.*"
"interfaces.* unit.* description.*" "interfaces.* unit.* family inet address.*"
"interfaces.* disable" ]
```

- You can use the \* wildcard character when denoting regular expressions. However, it must be used as a portion of a regular expression. You cannot use [ \* ] or [ .\* ] alone.
- You cannot configure the **allow-configuration** statement with the (interfaces (description (|.\*) regular expression, as this evaluates to **allow-configuration = .\*** regular expression.
- You can configure as many regular expressions as needed to be allowed or denied. Regular expressions to be denied take precedence over configurations to be allowed.

## Topology

Figure 1: Configuring TACACS+ Server Authentication



Figure 1 on page 39 illustrates a simple topology, where Router R1 is a Juniper Networks device and has a TCP connection established with a TACACS+ server.

In this example, R1 is configured with three customized login classes—Class1, Class2, and Class3—for specifying access privileges with extended regular expressions using the **allow-commands** and **deny-commands** statements differently.

The purpose of each login class is as follows:

- **Class1**—Defines access privileges for the user with the **allow-commands** statement only. This login class provides operator-level user permissions, and should provide authorization for only rebooting the device.
- **Class2**—Defines access privileges for the user with the **deny-commands** statement only. This login class provides operator-level user permissions, and should deny access to **set** commands.
- **Class3**—Defines access privileges for the user with both the **allow-commands** and **deny-commands** statements. This login class provides superuser-level user permissions, and should provide authorization for accessing interfaces and viewing device information. It should also deny access to **edit** and **configure** commands.

Router R1 has three different users, User1, User2, and User3, assigned to Class1, Class2, and Class3 login classes, respectively.

## Configuration

**CLI Quick Configuration** To quickly configure this example, copy the following commands, paste them into a text file, remove any line breaks, change any details necessary to match your network configuration, copy and paste the commands into the CLI at the **[edit]** hierarchy level, and then enter **commit** from configuration mode.

```
R1  set system authentication-order tacplus
    set system authentication-order radius
    set system authentication-order password
    set system radius-server 10.209.1.66 secret "$ABC123"
    set system tacplus-server 10.209.1.66
    set system radius-options enhanced-accounting
    set system tacplus-options enhanced-accounting
    set system accounting events login
    set system accounting events change-log
    set system accounting events interactive-commands
    set system accounting traceoptions file auditlog
    set system accounting traceoptions flag all
    set system accounting destination tacplus server 10.209.1.66
    set system login class Class1 permissions clear
    set system login class Class1 permissions network
    set system login class Class1 permissions reset
    set system login class Class1 permissions trace
    set system login class Class1 permissions view
    set system login class Class1 allow-commands "request system reboot"
    set system login class Class2 permissions clear
    set system login class Class2 permissions network
    set system login class Class2 permissions reset
    set system login class Class2 permissions trace
    set system login class Class2 permissions view
    set system login class Class2 deny-commands set
    set system login class Class3 permissions all
    set system login class Class3 allow-commands configure
    set system login class Class3 deny-commands .*
    set system login user User1 uid 2001
```



```

set system login user User1 class Class1
set system login user User1 authentication encrypted-password "$ABC123"
set system login user User2 uid 2002
set system login user User2 class Class2
set system login user User2 authentication encrypted-password "$ABC123"
set system login user User3 uid 2003
set system login user User3 class Class3
set system login user User3 authentication encrypted-password "$ABC123"
set system syslog file messages any any

```

### Configuring Authentication Parameters for Router R1

#### Step-by-Step Procedure

The following example requires that you navigate various levels in the configuration hierarchy. For information about navigating the CLI, see *Using the CLI Editor in Configuration Mode* in the *CLI User Guide*.

To configure Router R1 authentication:

1. Configure the order in which authentication should take place for R1. In this example, TACACS+ server authentication is first, followed by RADIUS server authentication, and then the local password.

```

[edit system]
user@R1# set authentication-order tacplus
user@R1# set authentication-order radius
user@R1# set authentication-order password

```

2. Establish R1 connection with the TACACS+ server.

```

[edit system]
user@R1# set tacplus-server 10.209.1.66
user@R1# set tacplus-options enhanced-accounting
user@R1# set accounting destination tacplus server 10.209.1.66

```

3. Configure RADIUS server authentication parameters.

```

[edit system]
user@R1# set radius-server 10.209.1.66 secret "$ABC123"
user@R1# set radius-options enhanced-accounting

```

4. Configure R1 accounting configuration parameters.

```

[edit system]
user@R1# set accounting events login
user@R1# set accounting events change-log
user@R1# set accounting events interactive-commands
user@R1# set accounting traceoptions file auditlog
user@R1# set accounting traceoptions flag all

```

### Configuring Access Privileges with `allow-commands` Statement Only (Class1)

#### Step-by-Step Procedure

To specify regular expressions using the **allow-commands** statement only:

1. Configure Class1 custom login class and assign operator-level user permissions. For information on the predefined system login classes, see the *Junos OS Login Classes Overview*.

```
[edit system login]
user@R1# set class Class1 permissions clear
user@R1# set class Class1 permissions network
user@R1# set class Class1 permissions reset
user@R1# set class Class1 permissions trace
user@R1# set class Class1 permissions view
```

2. Specify the command to enable rebooting of R1 in the **allow-commands** statement.

```
[edit system login]
user@R1# set class Class1 allow-commands "request system reboot"
```

3. Configure the user account for the Class1 login class.

```
[edit system login]
user@R1# set user User1 uid 2001
user@R1# set user User1 class Class1
user@R1# set user User1 authentication encrypted-password "$ABC123"
```

### Configuring Access Privileges with `deny-commands` Statement Only (Class2)

#### Step-by-Step Procedure

To specify regular expressions using the **deny-commands** statement only:

1. Configure the Class2 custom login class and assign operator-level user permissions. For information on the predefined system login classes, see the *Junos OS Login Classes Overview*.

```
[edit system login]
user@R1# set class Class1 permissions clear
user@R1# set class Class1 permissions network
user@R1# set class Class1 permissions reset
user@R1# set class Class1 permissions trace
user@R1# set class Class1 permissions view
```

2. Disable execution of any set commands in the **deny-commands** statement.

```
[edit system login]
user@R1# set class Class1 deny-commands "set"
```

3. Configure the user account for the Class2 login class.

```
user@R1# set login user User2 uid 2002
user@R1# set login user User2 class Class2
user@R1# set login user User2 authentication encrypted-password "$ABC123"
```

## Configuring Access Privileges with Both `allow-commands` and `deny-commands` Statements (Class3)

### Step-by-Step Procedure

To specify regular expressions using both the **allow-commands** and **deny-commands** statements:

1. Configure the Class3 custom login class and assign superuser-level user permissions. For information on the predefined system login classes, see the *Junos OS Login Classes Overview*.

```
[edit system login]
user@R1# set class Class3 permissions all
```

2. Specify the commands to enable only configure commands in the **allow-commands** statement.

```
[edit system login]
user@R1# set class Class3 allow-commands configure
```

3. Disable execution of all commands in the **deny-commands** statement.

```
[edit system login]
user@R1# set class Class3 deny-commands *
```

4. Configure the user account for the Class1 login class.

```
[edit system login]
user@R1# set login user User3 uid 2003
user@R1# set login user User3 class Class3
user@R1# set login user User3 authentication encrypted-password "$ABC123"
```

## Results

From configuration mode, confirm your configuration by entering the **show system** command. If the output does not display the intended configuration, repeat the instructions in this example to correct the configuration.

```
user@R1# show system
authentication-order [ tacplus radius password ];
radius-server {
    10.209.1.66 secret "$ABC123";
}
tacplus-server {
    10.209.1.66;
}
radius-options {
    enhanced-accounting;
}
tacplus-options {
    enhanced-accounting;
}
accounting {
```

```
events [ login change-log interactive-commands ];
traceoptions {
  file auditlog;
  flag all;
}
destination {
  tacplus {
    server {
      10.209.1.66;
    }
  }
}
login {
  class Class1 {
    permissions [ clear network reset trace view ];
    allow-commands "request system reboot";
  }
  class Class2 {
    permissions [ clear network reset trace view ];
    deny-commands set;
  }
  class Class3 {
    permissions all;
    allow-commands configure;
    deny-commands .*;
  }
  user User1 {
    uid 2001;
    class Class1;
    authentication {
      encrypted-password "$ABC123";
    }
  }
  user User2 {
    uid 2002;
    class Class2;
    authentication {
      encrypted-password "$ABC123";
    }
  }
  user User3 {
    uid 2003;
    class Class3;
    authentication {
      encrypted-password "$ABC123";
    }
  }
}
syslog {
  file messages {
    any any;
  }
}
```

## Verification

Log in as the username assigned with the new login class, and confirm that the configuration is working properly.

- [Verifying Class1 Configuration on page 45](#)
- [Verifying Class2 Configuration on page 46](#)
- [Verifying Class3 Configuration on page 47](#)

### Verifying Class1 Configuration

**Purpose** Verify that the permissions and commands allowed in the Class1 login class are working.

**Action** From operational mode, run the **show system users** command.

```
User1@R1> show system users
12:39PM up 6 days, 23 mins, 6 users, load averages: 0.00, 0.01, 0.00
USER      TTY      FROM          LOGIN@  IDLE WHAT
User1    p0        abc.example.net 12:34AM 12:04 cli
User2    p1        abc.example.net 12:36AM 12:02 -cli (cli)
User3    p2        abc.example.net 10:41AM 11 -cli (cli)
```

From operational mode, run the **request system reboot** command.

```
User1@R1> request system ?
Possible completions:
  reboot                Reboot the system
```

**Meaning** The Class1 login class to which User1 is assigned has the operator-level user permissions, and is allowed to execute the **request system reboot** command.

The predefined operator login class has the following permission flags specified:

- **clear**—Can clear (delete) information learned from the network that is stored in various network databases by using the **clear** commands.
- **network**—Can access the network by using the **ping**, **ssh**, **telnet**, and **traceroute** commands.
- **reset**—Can restart software processes by using the **restart** command and can configure whether software processes are enabled or disabled at the **[edit system processes]** hierarchy level.
- **trace**—Can view trace file settings and configure trace file properties.
- **view**—Can use various commands to display current system-wide, routing table, and protocol-specific values and statistics. Cannot view the secret configuration.

For the Class1 login class, in addition to the above-mentioned user permissions, User1 can execute the **request system reboot** command. The first output displays the view

permissions as an operator, and the second output shows that the only **request** command that User1 can execute as an operator is the **request system reboot** command.

### Verifying Class2 Configuration

---

**Purpose** Verify that the permissions and commands allowed for the Class2 login class are working.

**Action** From the operational mode, run the **ping** command.

```
User2@R1> ping 10.209.1.66
ping 10.209.1.66
PING 10.209.1.66 (10.209.1.66): 56 data bytes
64 bytes from 10.209.1.66: icmp_seq=0 ttl=52 time=212.521 ms
64 bytes from 10.209.1.66: icmp_seq=1 ttl=52 time=212.844 ms
64 bytes from 10.209.1.66: icmp_seq=2 ttl=52 time=211.304 ms
64 bytes from 10.209.1.66: icmp_seq=3 ttl=52 time=210.963 ms
^C
--- 10.209.1.66 ping statistics ---
4 packets transmitted, 4 packets received, 0% packet loss
round-trip min/avg/max/stddev = 210.963/211.908/212.844/0.792 ms
```

From the CLI prompt, check the available permissions.

```
User2@R1> ?
Possible completions:
clear          Clear information in the system
file           Perform file operations
help           Provide help information
load           Load information from file
monitor        Show real-time debugging information
mtrace         Trace multicast path from source to receiver
op             Invoke an operation script
ping           Ping remote target
quit           Exit the management session
request        Make system-level requests
restart        Restart software process
save           Save information to file
show           Show system information
ssh            Start secure shell on another host
start          Start shell
telnet         Telnet to another host
test           Perform diagnostic debugging
traceroute     Trace route to remote host
```

From the CLI prompt, execute any set command.

```
User2@R1> set
^
unknown command.
```

**Meaning** The Class2 login class to which User2 is assigned has the operator-level user permissions, and is denied access to all **set** commands. This is displayed in the command outputs.

The permission flags specified for the predefined operator login class are the same as that of Class1.

### Verifying Class3 Configuration

**Purpose** Verify that the permissions and commands allowed for the Class3 login class are working.

**Action** From the CLI prompt, check the available permissions.

```
User3@R1> ?
Possible completions:
  configure          Manipulate software configuration information
```

From the operational mode, enter configuration mode.

```
User3@R1> configure
Entering configuration mode
```

```
[edit]
User3@R1#
```

**Meaning** The Class3 login class to which User3 is assigned has the superuser (all) user permissions, but is allowed to execute the **configure** command only, and is denied access to all other operational mode commands. Because the regular expressions specified in the **allow/deny-commands** statements take precedence over the user permissions, User3 on R1 has access only to configuration mode, and is denied access to all other operational mode commands.

**Related Documentation**

- *Understanding Junos OS Access Privilege Levels*
- *Regular Expressions for Allowing and Denying Junos OS Operational Mode Commands, Configuration Statements, and Hierarchies*
- *Example: Configuring User Permissions with Access Privileges for Configuration Statements and Hierarchies*
- [Example: Configuring User Permissions with Access Privileges for Operational Mode Commands on page 35](#)

### Viewing Core Files from Junos OS Processes

When an internal Junos OS process generates a core file, the output found at **/var/crash/** and **/var/tmp/** can now be viewed. This provides a quick method of finding core issues across large networks.

Use the CLI command **show system core-dumps** to view core files.

```
root@host> show system core-dumps
```

```
-rw----- 1 root wheel 268369920 Jun 18 17:59 /var/crash/vmcore.0
-rw-rw---- 1 root field 3371008 Jun 18 17:53 /var/tmp/rpd.core.0
-rw-r--r-- 1 root wheel 27775914 Jun 18 17:59 /var/crash/kernel.0
```

**Related Documentation**

- [Saving Core Files from Junos OS Processes](#)

---

## Configuring the Junos OS ICMPv4 Rate Limit for ICMPv4 Routing Engine Messages

---

To limit the rate at which ICMPv4 messages can be generated and received by the Routing Engine, include the `icmpv4-rate-limit` statement at the `[edit system internet-options]` hierarchy level:

```
icmpv4-rate-limit bucket-size bucket-size packet-rate packet-rate;
```

The bucket size is the number of seconds in the rate-limiting bucket. The packet rate is the rate-limiting packets earned per second. Specify a **bucket-size** from 0 through 4294967295 seconds. The default value is 5 seconds. Specify a **packet-rate** from 0 through 4,294,967,295. The default value is 1000.

**Related Documentation**

- [icmpv4-rate-limit on page 69](#)



## CHAPTER 2

# System Monitoring

- [Monitoring System Process Information on page 49](#)
- [Monitoring System Properties on page 50](#)
- [Monitoring Interface Status and Traffic on page 51](#)
- [Monitoring Switch Control Traffic on page 52](#)
- [Other Tools to Configure and Monitor Devices Running Junos OS on page 54](#)

### Monitoring System Process Information

---

**Purpose** View the processes running on the device.

**Action** To view the software processes running on the device:

[edit system]

user@switch> ***show system processes***

**Meaning** [Table 3 on page 49](#) summarizes the output fields in the system process information display.

The display includes the total CPU load and total memory utilization.

*Table 3: Summary of System Process Information Output Fields*

Field	Values
PID	Identifier of the process.
Name	Owner of the process.
State	Current state of the process.
CPU Load	Percentage of the CPU that is being used by the process.
Memory Utilization	Amount of memory that is being used by the process.

Table 3: Summary of System Process Information Output Fields (continued)

Field	Values
Start Time	Time of day when the process started.

- Related Documentation**
- [Monitoring System Properties on page 50](#)
  - [show system uptime on page 1181](#)

## Monitoring System Properties

**Purpose** View system properties such as the name, IP address, and resource usage.

**Action** To monitor system properties in the CLI, enter the following commands:

- [show system uptime](#)
- [show system users](#)
- [show system storage](#)

**Meaning** [Table 4 on page 50](#) summarizes key output fields in the system properties display.

Table 4: Summary of Key System Properties Output Fields

Field	Values	Additional Information
<b>General Information</b>		
Serial Number	Serial number of device.	
Junos OS Version	Version of Junos OS active on the switch, including whether the software is for domestic or export use.	Export software is for use outside the USA and Canada.
Hostname	Name of the device.	
IP Address	IP address of the device.	
Loopback Address	Loopback address.	
Domain Name Server	Address of the domain name server.	
Time Zone	Time zone on the device.	
<b>Time</b>		
Current Time	Current system time, in Coordinated Universal Time (UTC).	

Table 4: Summary of Key System Properties Output Fields (continued)

Field	Values	Additional Information
System Booted Time	Date and time when the device was last booted and how long it has been running.	
Protocol Started Time	Date and time when the protocols were last started and how long they have been running.	
Last Configured Time	Date and time when a configuration was last committed. This field also shows the name of the user who issued the last <b>commit</b> command.	
Load Average	CPU load average for 1, 5, and 15 minutes.	
<b>Storage Media</b>		
Internal Flash Memory	Usage details of internal flash memory.	
External Flash Memory	Usage details of external USB flash memory.	
<b>Logged in Users Details</b>		
User	Username of any user logged in to the switch.	
Terminal	Terminal through which the user is logged in.	
From	System from which the user has logged in. A hyphen indicates that the user is logged in through the console.	
Login Time	Time when the user logged in.	This is the <b>user@switch</b> field in <b>show system users</b> command output.
Idle Time	How long the user has been idle.	

- Related Documentation**
- [Monitoring System Process Information on page 49](#)
  - *show system processes*

## Monitoring Interface Status and Traffic

**Purpose** View interface status to monitor interface bandwidth utilization and traffic statistics.

- Action**
- To view interface status for all the interfaces, enter **show interfaces xe**.
  - To view status and statistics for a specific interface, enter **show interfaces xe interface-name**.

- To view status and traffic statistics for all interfaces, enter either ***show interfaces xe detail*** or ***show interfaces xe extensive***.

**Meaning** For details about output from the CLI commands, see *show interfaces xe*.

## Monitoring Switch Control Traffic

### Purpose



**NOTE:** This topic applies only to the J-Web Application package.

Use the packet capture feature when you need to quickly capture and analyze switch control traffic on a switch. The packet capture feature allows you to capture traffic destined for or originating from the Routing Engine.

**Action** To use the packet capture feature in the J-Web interface, select **Troubleshoot > Packet Capture**.

To use the packet capture feature in the CLI, enter the following CLI command:

**monitor traffic**

**Meaning** You can use the packet capture feature to compose expressions with various matching criteria to specify the packets that you want to capture. You can decode and view the captured packets in the J-Web interface as they are captured. The packet capture feature does not capture transient traffic.

*Table 5: Packet Capture Field Summary*

Field	Function	Your Action
Interface	Specifies the interface on which the packets are captured. If you select default, packets on the Ethernet management port 0, are captured.	From the list, select an interface—for example, <b>ge-0/0/0</b> .
Detail level	Specifies the extent of details to be displayed for the packet headers. <ul style="list-style-type: none"> <li>• Brief—Displays the minimum packet header information. This is the default.</li> <li>• Detail—Displays packet header information in moderate detail.</li> <li>• Extensive—Displays the maximum packet header information.</li> </ul>	From the list, select <b>Detail</b> .
Packets	Specifies the number of packets to be captured. Values range from 1 to <b>1000</b> . Default is <b>10</b> . Packet capture stops capturing packets after this number is reached.	From the list, select the number of packets to be captured—for example, <b>10</b> .

Table 5: Packet Capture Field Summary (continued)

Field	Function	Your Action
Addresses	<p>Specifies the addresses to be matched for capturing the packets using a combination of the following parameters:</p> <ul style="list-style-type: none"> <li>• Direction—Matches the packet headers for IP address, hostname, or network address of the source, destination or both.</li> <li>• Type—Specifies if packet headers are matched for host address or network address.</li> </ul> <p>You can add multiple entries to refine the match criteria for addresses.</p>	<p>Select address-matching criteria. For example:</p> <ol style="list-style-type: none"> <li>1. From the Direction list, select <b>source</b>.</li> <li>2. From the Type list, select <b>host</b>.</li> <li>3. In the Address box, type <b>10.1.40.48</b>.</li> <li>4. Click <b>Add</b>.</li> </ol>
Protocols	Matches the protocol for which packets are captured. You can choose to capture TCP, UDP, or ICMP packets or a combination of TCP, UDP, and ICMP packets.	From the list, select a protocol—for example, <b>tcp</b> .
Ports	Matches packet headers containing the specified source or destination TCP or UDP port number or port name.	<p>Select a direction and a port. For example:</p> <ul style="list-style-type: none"> <li>• From the Type list, select <b>src</b>.</li> <li>• In the Port box, type <b>23</b>.</li> </ul>
Advanced Options		
Absolute TCP Sequence	Specifies that absolute TCP sequence numbers are to be displayed for the packet headers.	To display absolute TCP sequence numbers in the packet headers, select this check box.
Layer 2 Headers	Specifies that link-layer packet headers are to be displayed.	To include link-layer packet headers while capturing packets, select this check box.
Non-Promiscuous	Specifies not to place the interface in promiscuous mode, so that the interface reads only packets addressed to it. In promiscuous mode, the interface reads every packet that reaches it.	To read all packets that reach the interface, select this check box.
Display Hex	Specifies that packet headers, except link-layer headers, are to be displayed in hexadecimal format.	To display the packet headers in hexadecimal format, select this check box.
Display ASCII and Hex	Specifies that packet headers are to be displayed in hexadecimal and ASCII format.	To display the packet headers in ASCII and hexadecimal formats, select this check box.
Header Expression	Specifies the match condition for the packets to be captured. The match conditions you specify for Addresses, Protocols, and Ports are displayed in expression format in this field.	You can enter match conditions directly in this field in expression format or modify the expression composed from the match conditions you specified for Addresses, Protocols, and Ports. If you change the match conditions specified for Addresses, Protocols, and Ports again, packet capture overwrites your changes with the new match conditions.

Table 5: Packet Capture Field Summary (continued)

Field	Function	Your Action
Packet Size	Specifies the number of bytes to be displayed for each packet. If a packet header exceeds this size, the display is truncated for the packet header. The default value is 96 bytes.	Type the number of bytes you want to capture for each packet header—for example, <b>256</b> .
Don't Resolve Addresses	Specifies that IP addresses are not to be resolved into hostnames in the packet headers displayed.	To prevent packet capture from resolving IP addresses to hostnames, select this check box.
No Timestamp	Suppresses the display of packet header timestamps.	To stop displaying timestamps in the captured packet headers, select this check box.
Write Packet Capture File	Writes the captured packets to a file in PCAP format in /var/tmp. The files are named with the prefix jweb-pcap and the extension .pcap. If you select this option, the decoded packet headers are not displayed on the packet capture page.	To decode and display the packet headers on the J-Web page, clear this check box.

**Related Documentation** • [Using the J-Web CLI Terminal](#)

## Other Tools to Configure and Monitor Devices Running Junos OS

Starting in Junos OS Release 15.1, apart from the command-line interface, Junos OS also supports the following applications, scripts, and utilities that enable you to configure and monitor devices running Junos OS:

- Junos XML Management Protocol Application Programming Interface (API)—Application programmers can use the Junos XML Management Protocol API to monitor and configure Juniper Networks devices. Juniper Networks provides a Perl module with the API to help you more quickly and easily develop custom Perl scripts for configuring and monitoring the devices.
- NETCONF Application Programming Interface (API)—Application programmers can also use the NETCONF API to monitor and configure Juniper Networks devices.
- Junos OS commit scripts—You can define scripts to enforce custom configuration tasks, enforce consistency, prevent common mistakes, and more. Every time you commit a new candidate configuration, the active commit scripts are called to inspect the new candidate configuration. If a configuration violates your custom rules, the script can instruct the Junos OS to perform various actions, including making changes to the configuration and generating custom, warning, and system log messages.
- Junos OS Op scripts—You can add your own commands to the operation-mode CLI. You can use these scripts to automate troubleshooting of known network problems and correct them.

- Junos OS event scripts—You can use event scripts to diagnose and fix issues, monitor the overall status of the system, and examine errors periodically. Event scripts are similar to op scripts except that certain events on the switch will trigger these scripts.
- CHEF—You can use CHEF automate the provisioning and management of compute, networking, and storage resources. Chef for Junos OS provides support for Chef on selected Junos OS devices, allowing you to automate common switching network configurations.
- Puppet—You can use PUPPET for configuration management. Puppet provides an efficient and scalable solution for managing the configurations of large numbers of devices. System administrators take advantage of Puppet to manage compute resources such as physical and virtual servers.

Release History Table

Release	Description
15.1	Starting in Junos OS Release 15.1, apart from the command-line interface, Junos OS also supports the following applications, scripts, and utilities that enable you to configure and monitor devices running Junos OS:

**Related  
Documentation**

- *CLI User Interface Overview*
- *NETCONF XML Management Protocol Developer Guide*
- *Understanding Device and Network Management Features*





## CHAPTER 3

# Configuration Statements

- [arp \(Interfaces\) on page 59](#)
- [auxiliary on page 61](#)
- [checksum on page 62](#)
- [compress-configuration-files \(System\) on page 63](#)
- [console \(Physical Port\) on page 64](#)
- [default-address-selection on page 65](#)
- [domain-name on page 66](#)
- [domain-search on page 66](#)
- [ethernet \(Alarm\) on page 67](#)
- [hardware-timestamp on page 67](#)
- [host-name on page 68](#)
- [icmpv4-rate-limit on page 69](#)
- [inet6-backup-router on page 70](#)
- [internet-options on page 71](#)
- [internet-options on page 72](#)
- [ipv6-path-mtu-discovery on page 73](#)
- [ipv6-path-mtu-discovery-timeout on page 74](#)
- [ipv6-reject-zero-hop-limit on page 74](#)
- [lcd-menu on page 75](#)
- [location on page 77](#)
- [location \(System\) on page 79](#)
- [max-configurations-on-flash on page 80](#)
- [menu-item on page 81](#)
- [name-server on page 84](#)
- [no-multicast-echo on page 84](#)
- [no-ping-record-route on page 85](#)
- [no-ping-time-stamp on page 85](#)
- [no-redirects \(IPv4 Traffic\) on page 86](#)

- [no-tcp-rfc1323](#) on page 87
- [no-tcp-rfc1323-paws](#) on page 87
- [optional](#) on page 88
- [path-mtu-discovery](#) on page 88
- [ports](#) on page 89
- [ports](#) on page 90
- [port-type](#) on page 91
- [power](#) on page 92
- [processes](#) on page 93
- [saved-core-context](#) on page 94
- [saved-core-files](#) on page 95
- [static-host-mapping](#) on page 96
- [tcp-drop-synfin-set](#) on page 97
- [time-format](#) on page 98
- [time-zone](#) on page 99
- [traceoptions \(Layer 2 Learning\)](#) on page 102
- [traceoptions \(SBC Configuration Process\)](#) on page 104
- [use-imported-time-zones](#) on page 106

## arp (Interfaces)

**Syntax** `arp ip-address (mac | multicast-mac) mac-address publish;`

```
arp {
  aging-timer minutes;
  gratuitous-arp-delay seconds;
  gratuitous-arp-on-ifup;
  interfaces {
    interface-name {
      aging-timer minutes;
    }
  }
  passive-learning;
  purging;
}
```

**Syntax (EX Series)** `arp {
 aging-timer minutes;
}`

**Hierarchy Level** [edit system]  
 [edit interfaces *interface-name* unit *logical-unit-number* family inet address *address*],  
 [edit logical-systems *logical-system-name* interfaces *interface-name* unit *logical-unit-number* family inet address *address*]



**NOTE:** The edit logical-systems hierarchy is not available on QFabric systems.

**Release Information** Statement introduced before Junos OS Release 7.4.  
 Statement introduced in Junos OS Release 9.0 for EX Series switches.  
 Statement introduced in Junos OS Release 11.1 for the QFX Series.  
 Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

**Description** For Ethernet, Fast Ethernet, and Gigabit Ethernet interfaces only, configure Address Resolution Protocol (ARP) table entries, mapping IP addresses to MAC addresses. You can enable backup VRRP routers to learn ARP requests for VRRP-IP to VRRP-MAC address translation. You can also set the time interval between ARP updates.



**NOTE:** By default, an ARP policer is installed that is shared among all the Ethernet interfaces on which you have configured the family inet statement. By including the arp statement at the [edit interfaces *interface-name* unit *logical-unit-number* family inet policer] hierarchy level, you can apply a specific ARP-packet policer to an interface. This feature is not available on EX Series switches.

When you need to conserve IP addresses, you can configure an Ethernet interface to be unnumbered by including the `unnumbered-address` statement at the [edit interfaces *interface-name* unit *logical-unit-number* family inet] hierarchy level.



**NOTE:** For EX-Series switches, set only the time interval between ARP updates.

**Options** **ip-address**—IP address to map to the MAC address. The IP address specified must be part of the subnet defined in the enclosing **address** statement.

**mac mac-address**—MAC address to map to the IP address. Specify the MAC address as six hexadecimal bytes in one of the following formats: *nnnn.nnnn.nnnn* or *nn:nn:nn:nn:nn:nn*. For example, **0000.5e00.5355** or **00:00:5e:00:53:55**.

**multicast-mac mac-address**—Multicast MAC address to map to the IP address. Specify the multicast MAC address as six hexadecimal bytes in one of the following formats: *nnnn.nnnn.nnnn* or *nn:nn:nn:nn:nn:nn*. For example, **0000.5e00.5355** or **00:00:5e:00:53:55**.

**publish**—(Optional) Have the router or switch reply to ARP requests for the specified IP address. If you omit this option, the router or switch uses the entry to reach the destination but does not reply to ARP requests.



**NOTE:** For unicast MAC addresses only, if you include the **publish** option, the router or switch replies to proxy ARP requests.

**aging-timer**—Time interval in minutes between ARP updates. In environments where the number of ARP entries to update is high (for example, on routers only, metro Ethernet environments), increasing the time between updates can improve system performance.

**passive-learning** (QFX-Series only)—Configure backup VRRP routers or switches to learn the ARP mappings (IP-to-MAC address) for hosts sending the requests. By default, the backup VRRP router drops these requests; therefore, if the master router fails, the backup router must learn all entries present in the ARP cache of the master router. Configuring passive learning reduces transition delay when the backup router is activated.

<b>Required Privilege Level</b>	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration. system—To view this statement in the configuration. system-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"> <li>• <i>Configuring Static ARP Table Entries For Mapping IP Addresses to MAC Addresses</i></li> <li>• <i>Configuring Junos OS ARP Learning and Aging Options for Mapping IPv4 Network Addresses to MAC Addresses</i></li> <li>• <i>Junos OS Network Interfaces Library for Routing Devices</i></li> <li>• <a href="#">Junos OS System Basics Configuration Guide</a> .</li> </ul>

## auxiliary


<b>Syntax</b>	<pre> auxiliary {   disable;   insecure;   type <i>terminal-type</i>; } </pre>
<b>Hierarchy Level</b>	[edit system ports]
<b>Release Information</b>	Statement introduced in Junos OS Release 11.1 for the QFX Series. Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Configure the characteristics of the auxiliary port.
<b>Default</b>	The auxiliary port is disabled.
<b>Options</b>	<p><b>disable</b>—Disable the port.</p> <p><b>insecure</b>—Disable superuser access or root logins to establish a terminal connection.</p> <p><b>type <i>terminal-type</i></b>—Type of terminal that is connected to the port.</p> <p><b>Range:</b> <code>ansi</code>, <code>vt100</code>, <code>small-xterm</code>, <code>xterm</code></p> <p><b>Default:</b> The terminal type is unknown, and the user is prompted for the terminal type.</p>
<b>Required Privilege Level</b>	system—To view this statement in the configuration. system-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"> <li>• <i>Configuring Console and Auxiliary Port Properties</i></li> </ul>

## checksum

---

<b>Syntax</b>	<code>checksum (md5   sha-256   sha1) <i>hash</i>;</code>
<b>Hierarchy Level</b>	[edit event-options event-script file <i>filename</i> ], [edit system scripts commit file <i>filename</i> ],
<b>Release Information</b>	Statement introduced in Junos OS Release 11.1 for the QFX Series. Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	For Junos commit scripts and op scripts, specify the MD5, SHA-1, or SHA-256 checksum hash. When it executes a local event or commit script, the Junos OS verifies the authenticity of the script by using the configured checksum hash.
<b>Options</b>	<b>md5 <i>hash</i></b> —MD5 checksum of this script.  <b>sha-256 <i>hash</i></b> —SHA-256 checksum of this script.  <b>sha1 <i>hash</i></b> —SHA-1 checksum of this script.
<b>Required Privilege Level</b>	<b>maintenance</b> —To view this statement in the configuration. <b>maintenance-control</b> —To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <i>Configuring Checksum Hashes for a Commit Script</i></li><li>• <i>Configuring Checksum Hashes for an Event Script</i></li><li>• <i>Configuring Checksum Hashes for an Op Script</i></li><li>• <i>file checksum md5</i></li><li>• <i>file checksum sha-256</i></li><li>• <i>file checksum sha1</i></li></ul>

## compress-configuration-files (System)

<b>Syntax</b>	(compress-configuration-files   no-compress-configuration-files);
<b>Hierarchy Level</b>	[edit system]
<b>Release Information</b>	Statement introduced in Junos OS Release 11.1 for the QFX Series. Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Compress the current operational configuration file. The file is stored in the file <b>juniper.conf</b> , in the <b>/config</b> file system, along with the last three committed versions of the configuration. However, with large networks, the current configuration file might exceed the available space in the <b>/config</b> file system. Compressing the current configuration file allows the file to fit in the file system, typically reducing the size of the file by 90 percent. The current configuration file is compressed on the second commit of the configuration after the first commit is made to include the <b>compress-configuration-files</b> statement.
	<div>  <b>NOTE:</b> We recommend that you enable compression of the configuration files to minimize the amount of disk space that they require. </div>
<b>Default</b>	The current operational configuration file is uncompressed.
<b>Required Privilege Level</b>	system—To view this statement in the configuration. system-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"> <li><i>Compressing the Current Configuration File</i></li> </ul>

## console (Physical Port)

---

<b>Syntax</b>	<pre>console {   disable;   insecure;   log-out-on-disconnect;   type <i>terminal-type</i>; }</pre>
<b>Hierarchy Level</b>	[edit system ports]
<b>Release Information</b>	Statement introduced in Junos OS Release 11.1 for the QFX Series. Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Configure the characteristics of the console port.
<b>Default</b>	The console port is enabled and its speed is 9600 baud.
<b>Options</b>	<p><b>disable</b>—Disable console login connections.</p> <p><b>insecure</b>—Disable root login connections to the console and auxiliary ports. Configuring the console port as insecure also prevents superusers and anyone with a user identifier (UID) of 0 from establishing terminal connections in multiuser mode. This option can be used to prevent a user from attempting password recovery by booting into single-user mode, if the user does not know the root password.</p> <p><b>log-out-on-disconnect</b>—Log out the session when the data carrier on the console port is lost.</p> <p><b>type <i>terminal-type</i></b>—Type of terminal that is connected to the port: <b>ansi</b>, <b>vt100</b>, <b>small-xterm</b>, or <b>xterm</b>.</p>
<b>Required Privilege Level</b>	<p><b>system</b>—To view this statement in the configuration.</p> <p><b>system-control</b>—To add this statement to the configuration.</p>
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <i>Configuring Console and Auxiliary Port Properties</i></li></ul>



## default-address-selection

<b>Syntax</b>	default-address-selection;
<b>Hierarchy Level</b>	[edit system]
<b>Release Information</b>	Statement introduced in Junos OS Release 11.1 for the QFX Series. Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Use the loopback interface, <b>lo0</b> , as the source address for all locally generated IP packets when the packet is sent through a routed interface, but not when the packet is sent through a local interface such as <b>fxp0</b> . The <b>lo0</b> interface is the interface to the switch's Routing Engine.
<b>Default</b>	<p>The default address is used as the source address for all locally generated IP packets on outgoing interfaces that are unnumbered. If an outgoing interface is numbered, the default address is chosen using the following sequence:</p> <ul style="list-style-type: none"> <li>• The primary address on the loopback interface <b>lo0</b> that is <i>not</i> <b>127.0.0.1</b> is used.</li> <li>• The primary address for the primary interface or the preferred address (if configured) for the primary interface is used.</li> </ul> <p>By default, the primary address on an interface is selected as the numerically lowest local address configured on the interface.</p> <p>An interface's <i>primary address</i> is used by default as the local address for broadcast and multicast packets sourced locally and sent out through the interface. An interface's <i>preferred address</i> is the default local address used for packets sourced by the local switch to destinations on the subnet. By default, the numerically lowest local address configured for the interface is chosen as the preferred address on the subnet.</p> <p>To configure a different primary address or preferred address, include the <b>primary</b> or <b>preferred</b> statement at the [edit interfaces <i>interface-name</i> unit <i>logical-unit-number</i> family <i>family</i> address <i>address</i>] or [edit logical-systems <i>logical-system-name</i> interfaces <i>interface-name</i> unit <i>logical-unit-number</i> family <i>family</i> address <i>address</i>] hierarchy levels.</p>
<b>Required Privilege Level</b>	<p>system—To view this statement in the configuration.</p> <p>system-control—To add this statement to the configuration.</p>
<b>Related Documentation</b>	<ul style="list-style-type: none"> <li>• <a href="#">Configuring the Junos OS to Select a Fixed Source Address for Locally Generated TCP/IP Packets on page 32</a></li> <li>• <i>Junos OS Network Interfaces Library for Routing Devices</i></li> </ul>

## domain-name

---

<b>Syntax</b>	<code>domain-name <i>domain-name</i>;</code>
<b>Hierarchy Level</b>	[edit system]
<b>Release Information</b>	Statement introduced in Junos OS Release 11.1 for the QFX Series. Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Configure the name of the domain in which the switch is located. This is the default domain name that is appended to hostnames that are not fully qualified.
<b>Options</b>	<i>domain-name</i> —Name of the domain.
<b>Required Privilege Level</b>	system—To view this statement in the configuration. system-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <a href="#">Reaching a Domain Name System Server on page 22</a></li></ul>

## domain-search

---

<b>Syntax</b>	<code>domain-search <i>domain-list</i>;</code>
<b>Hierarchy Level</b>	[edit system]
<b>Release Information</b>	Statement introduced in Junos OS Release 11.1 for the QFX Series. Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Configure a list of domains to be searched.
<b>Options</b>	<i>domain-list</i> —List of domain names to search. The list can contain up to 6 domain names, with a total of up to 256 characters.
<b>Required Privilege Level</b>	system—To view this statement in the configuration. system-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <a href="#">Reaching a Domain Name System Server on page 22</a></li></ul>

## ethernet (Alarm)

<b>Syntax</b>	ethernet { link-down (red   yellow   ignore); }
<b>Hierarchy Level</b>	[edit chassis alarm], [edit chassis interconnect-device <i>name</i> alarm], [edit chassis node-group <i>name</i> alarm]
<b>Release Information</b>	Statement introduced in Junos OS Release 11.1 for the QFX Series. Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Configure alarms for an Ethernet interface.
<b>Options</b>	The remaining statements are explained separately. Search for a statement in <a href="#">CLI Explorer</a> or click a linked statement in the Syntax section for details.
<b>Required Privilege Level</b>	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

## hardware-timestamp

<b>Syntax</b>	hardware-timestamp;
<b>Hierarchy Level</b>	[edit services rpm probe <i>owner</i> test <i>test-name</i> ]
<b>Release Information</b>	Statement introduced in Junos OS Release 8.1. Statement applied to MX Series routers in Junos OS Release 10.0. Statement introduced in Junos OS Release 10.3 for EX Series switches.
<b>Description</b>	Enable timestamping of RPM probe messages in the Packet Forwarding Engine host processor. This feature is supported only with <b>icmp-ping</b> , <b>icmp-ping-timestamp</b> , <b>udp-ping</b> , and <b>udp-ping-timestamp</b> probe types.
<b>Required Privilege Level</b>	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

## host-name

---

<b>Syntax</b>	<code>host-name <i>hostname</i>;</code>
<b>Hierarchy Level</b>	[edit system]
<b>Release Information</b>	Statement introduced in Junos OS Release 11.1 for the QFX Series. Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Set the hostname of the switch.
<b>Options</b>	<i>hostname</i> —Name of the switch.
<b>Required Privilege Level</b>	system—To view this statement in the configuration. system-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <a href="#">Configuring the Hostname of a Router or Switch by Using a Configuration Group on page 27</a></li></ul>

## icmpv4-rate-limit

---

<b>Syntax</b>	icmpv4-rate-limit { bucket-size <i>seconds</i> ; packet-rate <i>pps</i> ; }
<b>Hierarchy Level</b>	[edit system internet-options]
<b>Release Information</b>	Statement introduced in Junos OS Release 11.1 for the QFX Series. Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Configure rate-limiting parameters for ICMPv4 messages sent.
<b>Options</b>	<p><b>bucket-size <i>seconds</i></b>—Number of seconds in the rate-limiting bucket.  <b>Range:</b> 0 through 4294967295 seconds  <b>Default:</b> 5</p> <p><b>packet-rate <i>pps</i></b>—Rate-limiting packets earned per second.  <b>Range:</b> 0 through 4294967295 pps  <b>Default:</b> 1000</p>
<b>Required Privilege Level</b>	admin—To view this statement in the configuration. admin-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"> <li>• <i>Configuring Junos OS ICMPv4 Rate Limit for ICMPv4 Routing Engine Messages</i></li> <li>• <i>Configuring Junos OS ICMPv6 Rate Limit for ICMPv6 Routing Engine Messages</i></li> </ul>

## inet6-backup-router

---

<b>Syntax</b>	<code>inet6-backup-router <i>address</i> &lt;destination <i>destination-address</i>&gt;;</code>
<b>Hierarchy Level</b>	[edit system]
<b>Release Information</b>	Statement introduced before Junos OS Release 7.4. Statement introduced in Junos OS Release 9.0 for EX Series switches.
<b>Description</b>	Set a default router (running IP version 6 [IPv6]) to use while the local router or switch (running IPv6) is booting and if the routing protocol processes fail to start. The Junos OS removes the route to this router or switch as soon as the software starts.
<b>Options</b>	<p><b><i>address</i></b>—Address of the default router.</p> <p><b><i>destination destination-address</i></b>—(Optional) Destination address that is reachable through the backup router. You can include this option to achieve network reachability while loading, configuring, and recovering the router or switch, but without the risk of installing a default route in the forwarding table.</p> <p><b>Default:</b> All hosts (default route) are reachable through the backup router.</p>
<b>Required Privilege Level</b>	<p>system—To view this statement in the configuration.</p> <p>system-control—To add this statement to the configuration.</p>
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <i>Configuring a Backup Router</i></li></ul>

## internet-options

---

<b>Syntax</b>	internet-options { <a href="#">icmpv4-rate-limit</a> bucket-size <i>bucket-size</i> packet-rate <i>packet-rate</i> ; source-port upper-limit <i>upper-limit</i> ; }
<b>Hierarchy Level</b>	[edit system]
<b>Release Information</b>	Statement introduced in Junos OS Release 11.1 for the QFX Series. Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Configure system IP options to protect against certain types of denial-of-service (DoS) attacks.  The remaining statements are explained separately. See <a href="#">CLI Explorer</a> .
<b>Required Privilege Level</b>	admin—To view this statement in the configuration. admin-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"> <li>• <a href="#">Configuring the Junos OS ICMPv4 Rate Limit for ICMPv4 Routing Engine Messages on page 48</a></li> <li>• <a href="#">Configuring Junos OS to Extend the Default Port Address Range on page 32</a></li> </ul>

## internet-options

<b>Syntax</b>	<pre> internet-options {   (gre-path-mtu-discovery   no-gre-path-mtu-discovery);   icmpv4-rate-limit bucket-size <i>bucket-size</i> packet-rate <i>packet-rate</i>;   icmpv6-rate-limit bucket-size <i>bucket-size</i> packet-rate <i>packet-rate</i>;   (ipip-path-mtu-discovery   no-ipip-path-mtu-discovery);   ipv6-duplicate-addr-detection-transmits;   (ipv6-reject-zero-hop-limit   no-ipv6-reject-zero-hop-limit);   (ipv6-path-mtu-discovery   no-ipv6-path-mtu-discovery);   ipv6-path-mtu-discovery-timeout;   no-tcp-reset   no-tcp-rfc1323;   no-tcp-rfc1323-paws;   (path-mtu-discovery   no-path-mtu-discovery);   source-port upper-limit &lt;<i>upper-limit</i>&gt;;   (source-quench   no-source-quench);   tcp-drop-synfin-set;   tcp-mss <i>mss-value</i>; } </pre>
<b>Hierarchy Level</b>	[edit system]
<b>Release Information</b>	<p>Statement introduced before Junos OS Release 7.4.</p> <p>Statement introduced in Junos OS Release 9.0 for EX Series switches.</p> <p>Statement introduced in Junos OS Release 11.1 for SRX Series devices.</p>
<b>Description</b>	<p>Configure system IP options to protect against certain types of DoS attacks.</p> <p>The remaining statements are explained separately. See <a href="#">CLI Explorer</a>.</p>
<b>Required Privilege Level</b>	<p>admin—To view this statement in the configuration.</p> <p>admin-control—To add this statement to the configuration.</p>
<b>Related Documentation</b>	<ul style="list-style-type: none"> <li>• <i>Configuring the Junos OS ICMPv4 Rate Limit for ICMPv4 Routing Engine Messages</i></li> <li>• <i>Configuring the Junos OS ICMPv6 Rate Limit for ICMPv6 Routing Engine Messages</i></li> <li>• <i>Configuring the Junos OS for IP-IP Path MTU Discovery on IP-IP Tunnel Connections</i></li> <li>• <i>Configuring the Junos OS for Path MTU Discovery on Outgoing GRE Tunnel Connections</i></li> <li>• <i>Configuring the Junos OS for Path MTU Discovery on Outgoing TCP Connections</i></li> <li>• <i>Configuring the Junos OS for IPv6 Duplicate Address Detection Attempts</i></li> <li>• <i>Configuring the Junos OS for Acceptance of IPv6 Packets with a Zero Hop Limit</i></li> <li>• <i>Configuring the Junos OS to Ignore ICMP Source Quench Messages</i></li> <li>• <i>Configuring the Junos OS to Enable the Router or Switch to Drop Packets with the SYN and FIN Bits Set</i></li> <li>• <i>Configuring the Junos OS to Disable TCP RFC 1323 Extensions</i></li> </ul>



- *Configuring the Junos OS to Disable the TCP RFC 1323 PAWS Extension*
- [Configuring the Junos OS to Extend the Default Port Address Range on page 32](#)
- *Configuring TCP MSS for Session Negotiation*

## [ipv6-path-mtu-discovery](#)

---

<b>Syntax</b>	(ipv6-path-mtu-discovery   no-ipv6-path-mtu-discovery);
<b>Hierarchy Level</b>	[edit system <a href="#">internet-options</a> ]
<b>Release Information</b>	Statement introduced in Junos OS Release 9.2. Statement introduced in Junos OS Release 9.2 for EX Series switches.
<b>Description</b>	Configure path MTU discovery for IPv6 packets: <ul style="list-style-type: none"><li>• <b>ipv6-path-mtu-discovery</b>—IPv6 path MTU discovery is enabled.</li><li>• <b>no-ipv6-path-mtu-discovery</b>—IPv6 path MTU discovery is disabled.</li></ul>
<b>Default</b>	IPv6 path MTU discovery is enabled.
<b>Required Privilege Level</b>	system—To view this statement in the configuration. system-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <i>Configuring Junos OS for IPv6 Path MTU Discovery</i></li></ul>

## ipv6-path-mtu-discovery-timeout

---

<b>Syntax</b>	ipv6-path-mtu-discovery-timeout <i>minutes</i> ;
<b>Hierarchy Level</b>	[edit system <a href="#">internet-options</a> ]
<b>Release Information</b>	Statement introduced in Junos OS Release 9.2. Statement introduced in Junos OS Release 9.2 for EX Series switches.
<b>Description</b>	Set the IPv6 path MTU discovery timeout interval.
<b>Options</b>	<i>minutes</i> —IPv6 path MTU discovery timeout. <b>Default:</b> 10 minutes
<b>Required Privilege Level</b>	system—To view this statement in the configuration. system-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <i>Configuring Junos OS for IPv6 Path MTU Discovery</i></li></ul>

## ipv6-reject-zero-hop-limit

---

<b>Syntax</b>	(ipv6-reject-zero-hop-limit   no-ipv6-reject-zero-hop-limit);
<b>Hierarchy Level</b>	[edit system <a href="#">internet-options</a> ]
<b>Release Information</b>	Statement introduced in Junos OS Release 9.1. Statement introduced in Junos OS Release 9.1 for EX Series switches.
<b>Description</b>	Enable and disable rejecting incoming IPv6 packets with a zero hop limit value in their header.
<b>Required Privilege Level</b>	system—To view this statement in the configuration. system-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <i>Configuring the Junos OS for Acceptance of IPv6 Packets with a Zero Hop Limit</i></li></ul>

## lcd-menu

**Syntax** EX3200, EX3300, EX4200, or EX4500 switch:

```
lcd-menu fpc slot-number {
  menu-item (menu-name | menu-option) <disable>;
}
```

EX6200 or EX8200 switch or XRE200 External Routing Engine:

```
lcd-menu {
  menu-item (menu-name | menu-option) <disable>;
}
```

**Hierarchy Level** [edit chassis]

**Release Information** Statement introduced in Junos OS Release 10.2 for EX Series switches.

**Description** Disable or enable the Maintenance menu or the Status menu in the LCD panel.

**Options** none—(EX6200 and EX8200 switches and XRE200 External Routing Engines only)  
Disable or enable the specified menu or menu options.

**fpc slot-number**—(EX3200, EX3300, EX4200, and EX4500 switches only) Disable or enable the specified menu or menu options, where **slot-number** is:

- 0—On standalone switches.
- 0–9—On a device in a Virtual Chassis. The value is the member ID of the device.



**NOTE:** This option is not available on an EX8200 Virtual Chassis. The LCD panel on an XRE200 External Routing Engine provides information for the XRE200 External Routing Engine only.

**disable**—(Optional) Disable the specified menu.

The remaining statement is explained separately. See [CLI Explorer](#).

**Required Privilege Level** interface—To view this statement in the configuration.  
interface-level—To add this statement to the configuration.

**Related Documentation**

- [Configuring the LCD Panel on EX Series Switches \(CLI Procedure\) on page 25](#)
- [LCD Panel in EX3200 Switches](#)
- [LCD Panel in EX3300 Switches](#)
- [LCD Panel in EX4200 Switches](#)

- *LCD Panel in EX4500 Switches*
- *LCD Panel in an EX6200 Switch*
- *LCD Panel in an EX8200 Switch*
- *LCD Panel in an XRE200 External Routing Engine*

## location

<b>Syntax</b>	<pre>location {   altitude <i>feet</i>;   building <i>name</i>;   country-code <i>code</i>;   floor <i>number</i>;   hcoord <i>horizontal-coordinate</i>;   lata <i>service-area</i>;   latitude <i>degrees</i>;   longitude <i>degrees</i>;   npa-nxx <i>number</i>;   postal-code <i>postal-code</i>;   rack <i>number</i>;   vcoord <i>vertical-coordinate</i>; }</pre>
<b>Hierarchy Level</b>	[edit system]
<b>Release Information</b>	<p>Statement introduced in Junos OS Release 11.1 for the QFX Series.</p> <p>Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.</p>
<b>Description</b>	Configure the system location.
<b>Options</b>	<p><b>altitude <i>feet</i></b>—Number of feet above sea level.</p> <p><b>building <i>name</i></b>—Name of the building. The name of the building can be 1 to 28 characters in length. If the string contains spaces, enclose it in quotation marks (" ").</p> <p><b>country-code <i>code</i></b>—Two-letter country code.</p> <p><b>floor <i>number</i></b>—Floor in the building.</p> <p><b>hcoord <i>horizontal-coordinate</i></b>—Bellcore Horizontal Coordinate.</p> <p><b>lata <i>service-area</i></b>—Long-distance service area.</p> <p><b>latitude <i>degrees</i></b>—Latitude in degree format.</p> <p><b>longitude <i>degrees</i></b>—Longitude in degree format.</p> <p><b>npa-nxx <i>number</i></b>—First six digits of the phone number (area code and exchange).</p> <p><b>postal-code <i>postal-code</i></b>—Postal code.</p> <p><b>rack <i>number</i></b>—Rack number.</p> <p><b>vcoord <i>vertical-coordinate</i></b>—Bellcore Vertical Coordinate.</p>
<b>Required Privilege Level</b>	<p>system—To view this statement in the configuration.</p> <p>system-control—To add this statement to the configuration.</p>

- Related Documentation**
- [Specifying the Physical Location of the Switch on page 18](#)

## location (System)

<b>Syntax</b>	<pre>location {   altitude <i>feet</i>;   building <i>name</i>;   country-code <i>code</i>;   floor <i>number</i>;   hcoord <i>horizontal-coordinate</i>;   lata <i>transport-area</i>;   latitude <i>degrees</i>;   longitude <i>degrees</i>;   npa-nxx <i>number</i>;   postal-code <i>postal-code</i>;   rack <i>number</i>;   vcoord <i>vertical-coordinate</i>; }</pre>
<b>Hierarchy Level</b>	[edit system]
<b>Release Information</b>	Statement introduced before Junos OS Release 7.4. Statement introduced in Junos OS Release 9.0 for EX Series switches.
<b>Description</b>	Configure the system location in various formats.
<b>Options</b>	<p><b>altitude <i>feet</i></b>—Number of feet above sea level.</p> <p><b>building <i>name</i></b>—Name of building. The name of the building can be 1 to 28 characters in length. If the string contains spaces, enclose it in quotation marks (" ").</p> <p><b>country-code <i>code</i></b>—Two-letter country code.</p> <p><b>floor <i>number</i></b>—Floor in the building.</p> <p><b>hcoord <i>horizontal-coordinate</i></b>—Bellcore Horizontal Coordinate.</p> <p><b>lata <i>transport-area</i></b>—Local Access Transport Area.</p> <p><b>latitude <i>degrees</i></b>—Latitude in degree format.</p> <p><b>longitude <i>degrees</i></b>—Longitude in degree format.</p> <p><b>npa-nxx <i>number</i></b>—First six digits of the phone number (area code and exchange).</p> <p><b>postal-code <i>postal-code</i></b>—Postal code.</p> <p><b>rack <i>number</i></b>—Rack number.</p> <p><b>vcoord <i>vertical-coordinate</i></b>—Bellcore Vertical Coordinate.</p>
<b>Required Privilege Level</b>	<p>system—To view this statement in the configuration.</p> <p>system-control—To add this statement to the configuration.</p>

**Related Documentation** • *Specifying the Physical Location of the Router or Switch*

---

## max-configurations-on-flash

---

<b>Syntax</b>	max-configurations-on-flash <i>number</i> ;
<b>Hierarchy Level</b>	[edit system]
<b>Release Information</b>	Statement introduced in Junos OS Release 11.1 for the QFX Series. Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Specify the number of configurations stored on the internal fixed media storage (for example, USB device).
<b>Options</b>	<i>number</i> —The number of configurations stored on the CompactFlash card. <b>Range:</b> 0 through 49. The most recently saved configuration is number 0, and the oldest saved configuration is number 49.
<b>Required Privilege Level</b>	system—To view this statement in the configuration. system-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <i>Saving a Configuration to a File</i></li><li>• <i>Setting or Deleting the Rescue Configuration</i></li><li>• <i>Uploading a Configuration File</i></li><li>• <i>Uploading a Configuration File</i></li></ul>



## menu-item

---

<b>Syntax</b>	<code>menu-item (<i>menu-name</i>   <i>menu-option</i>) &lt;disable&gt;;</code>
<b>Hierarchy Level</b>	<code>[edit chassis <b>lcd-menu</b>],</code> <code>[edit chassis <b>lcd-menu</b> fpc <i>slot-number</i>]</code>
<b>Release Information</b>	Statement introduced in Junos OS Release 10.2 for EX Series switches.
<b>Description</b>	<p>Disable or enable the Maintenance menu, the Status menu, or an individual option in one of those menus in the LCD panel.</p> <p>On EX3200, EX3300, EX4200, and EX4500 switches, you use <b>menu-item</b> at the <code>[edit chassis <b>lcd-menu</b> fpc <i>slot-number</i>]</code> hierarchy level.</p> <p>On EX6200 and EX8200 switches, and on XRE200 External Routing Engines, you use <b>menu-item</b> at the <code>[edit chassis <b>lcd-menu</b>]</code> hierarchy level.</p>
<b>Options</b>	<p><b><i>menu-name</i></b>—Name of the LCD menu:</p> <ul style="list-style-type: none"> <li>• <b>maintenance-menu</b></li> <li>• <b>status-menu</b></li> </ul> <p><b><i>menu-option</i></b>—Specific option on one of the LCD menus. You must include the quotation marks when you type the option. <a href="#">Table 6 on page 82</a> describes the different menu options of the LCD menus supported on the switches.</p>

Table 6: Menu Options of the LCD Menus Supported on the Switches

Menu	Menu Options	Option Descriptions	Platforms Supported
maintenance-menu	"maintenance-menu halt-menu"	System halt option	All switches except EX2200
	"maintenance-menu system-reboot"	System reboot option	All switches except EX2200
	"maintenance-menu rescue-config"	Load rescue option	All switches except EX2200
	"maintenance-menu vc-uplink-config"	Request VC port option for a device in a Virtual Chassis configuration	EX3300, EX4200, and EX4500 switches and XRE200 External Routing Engines only
	"maintenance-menu factory-default"	Factory default option	All switches except EX2200
status-menu	"status-menu vcp-status"	Virtual Chassis port (VCP) status for a device in a Virtual Chassis configuration	EX3300, EX4200, and EX4500 switches and XRE200 External Routing Engines only
	"status-menu sf-status1-menu"	Status of the switch fabric on the Switch Fabric and Routing Engine (SRE) module in slot SRE0 on EX8208 switches	EX8208 and EX8216 switches only
		Status of the switch fabric on the Switch Fabric (SF) modules in slots SF0 and SF1 on EX8216 switches	
	"status-menu sf-status2-menu"	Status of the switch fabric on the SRE module in slot SRE1 on EX8208 switches	EX8208 and EX8216 switches only
		Status of the switch fabric on the SF modules in slots SF2–SF5 on EX8216 switches	
	"status-menu sf-status3-menu"	Status of the switch fabric on the SF modules in slots SF6 and SF7 on EX8216 switches	EX8216 switches only
	"status-menu power-status"	Status of the power supply or power supplies	EX3200, EX3300, EX4200, and EX4500 switches

Table 6: Menu Options of the LCD Menus Supported on the Switches (continued)

Menu	Menu Options	Option Descriptions	Platforms Supported
			and XRE200 External Routing Engines only
	"status-menu psu-status1-menu"	Status of the power supplies in slots P0 and P1	EX8208 and EX8216 switches only
	"status-menu psu-status2-menu"	Status of the power supplies in slots P2–P5	EX8208 and EX8216 switches only
	"status-menu environ-menu"	Status of the fan; current chassis temperature	All switches (except EX2200) and XRE200 External Routing Engine
	"status-menu show-version"	The version of Junos OS loaded on the switch	All switches except EX2200

**disable**—(Optional) Disable the specified menu.

**Required Privilege Level** view-level—To view this statement in the configuration.  
control-level—To add this statement to the configuration.

**Related Documentation**

- [Configuring the LCD Panel on EX Series Switches \(CLI Procedure\) on page 25](#)
- *LCD Panel in EX3200 Switches*
- *LCD Panel in EX3300 Switches*
- *LCD Panel in EX4200 Switches*
- *LCD Panel in EX4500 Switches*
- *LCD Panel in EX4550 Switches*
- *LCD Panel in an EX6200 Switch*
- *LCD Panel in an EX8200 Switch*
- *LCD Panel in an XRE200 External Routing Engine*

## name-server

---

<b>Syntax</b>	<code>name-server {     <i>address</i>; }</code>
<b>Hierarchy Level</b>	[edit system]
<b>Release Information</b>	Statement introduced in Junos OS Release 11.1 for the QFX Series. Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Configure one or more Domain Name System (DNS) name servers.
<b>Options</b>	<i>address</i> —Address of the name server. To configure multiple name servers, include multiple <i>address</i> options.
<b>Required Privilege Level</b>	system—To view this statement in the configuration. system-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <a href="#">Configuring a DNS Name Server for Resolving a Hostname into Addresses on page 19</a></li></ul>

## no-multicast-echo

---

<b>Syntax</b>	<code>no-multicast-echo</code>
<b>Hierarchy Level</b>	[edit system]
<b>Release Information</b>	Statement introduced in Junos OS Release 8.1.
<b>Description</b>	Disable the Routing Engine from responding to ICMP echo requests sent to multicast group addresses.
<b>Default</b>	The Routing Engine responds to ICMP echo requests sent to multicast group addresses.
<b>Required Privilege Level</b>	system—To view this statement in the configuration. system-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <a href="#">Configuring Junos OS to Disable the Routing Engine Response to Multicast Ping Packets on page 33</a></li></ul>

## no-ping-record-route

---

<b>Syntax</b>	no-ping-record-route;
<b>Hierarchy Level</b>	[edit system]
<b>Release Information</b>	Statement introduced in Junos OS Release 9.4. Statement introduced in Junos OS Release 9.4 for EX Series switches. Statement introduced in Junos OS Release 11.1 for the QFX Series. Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Configure the Junos OS to disable the reporting of the IP address in ping responses.
<b>Required Privilege Level</b>	system—To view this statement in the configuration. system-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"> <li>• <a href="#">Configuring Junos OS to Disable the Reporting of IP Address and Timestamps in Ping Responses on page 33</a></li> </ul>

## no-ping-time-stamp

---

<b>Syntax</b>	no-ping-time-stamp;
<b>Hierarchy Level</b>	[edit system]
<b>Release Information</b>	Statement introduced in Junos OS Release 9.4. Statement introduced in Junos OS Release 9.4 for EX Series switches. Statement introduced in Junos OS Release 11.1 for the QFX Series. Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Configure the Junos OS to disable the recording of timestamps in ping responses.
<b>Required Privilege Level</b>	system—To view this statement in the configuration. system-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"> <li>• <a href="#">Configuring Junos OS to Disable the Reporting of IP Address and Timestamps in Ping Responses on page 33</a></li> </ul>

## no-redirects (IPv4 Traffic)

---

<b>Syntax</b>	no-redirects;
<b>Hierarchy Level</b>	[edit system], [edit interfaces <i>interface-name</i> unit <i>logical-unit-number</i> family <i>family</i> ]
<b>Release Information</b>	Statement introduced before Junos OS Release 7.4. Statement introduced in Junos OS Release 11.1 for the QFX Series. Statement introduced in Junos OS Release 12.3 for EX Series switches. Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	<p>Stop protocol redirect messages for IPv4 traffic from being sent on the entire switch or on an interface on the router or switch.</p> <p>To disable the sending of protocol redirect messages for the entire router or switch, include the <b>no-redirects</b> statement at the [edit system] hierarchy level.</p> <p>To disable the sending of protocol redirect messages on a specific interface, include the <b>no-redirects</b> statement at the [edit interfaces <i>interface-name</i> unit <i>logical-unit-number</i> family <i>family</i>] hierarchy level.</p>
<b>Default</b>	The router or switch sends redirect messages.
<b>Required Privilege Level</b>	system—To view this statement in the configuration. system-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <a href="#">Configuring Junos OS to Disable Protocol Redirect Messages on the Router or Switch on page 34</a></li><li>• <a href="#">Understanding the Protocol Redirect Mechanism on EX Series Switches on page 31</a></li><li>• <a href="#">Configuring Junos OS to Disable Sending Protocol Redirect Messages on EX Series Switches (CLI Procedure) on page 34</a></li><li>• <a href="#">Junos OS Network Interfaces Library for Routing Devices</a></li></ul>

## no-tcp-rfc1323

---

<b>Syntax</b>	no-tcp-rfc1323;
<b>Hierarchy Level</b>	[edit system internet-options]
<b>Release Information</b>	Statement introduced before Junos OS Release 7.4. Statement introduced in Junos OS Release 9.0 for EX Series switches.
<b>Description</b>	Configure the Junos OS to disable RFC 1323 TCP extensions.
<b>Required Privilege Level</b>	system—To view this statement in the configuration. system-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <i>Configuring Junos OS to Disable TCP RFC 1323 Extensions</i></li></ul>

## no-tcp-rfc1323-paws

---

<b>Syntax</b>	no-tcp-rfc1323-paws;
<b>Hierarchy Level</b>	[edit system internet-options]
<b>Release Information</b>	Statement introduced before Junos OS Release 7.4. Statement introduced in Junos OS Release 9.0 for EX Series switches.
<b>Description</b>	Configure the Junos OS to disable the RFC 1323 Protection Against Wrapped Sequence (PAWS) number extension.
<b>Required Privilege Level</b>	system—To view this statement in the configuration. system-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <i>Configuring Junos OS to Disable the TCP RFC 1323 PAWS Extension</i></li></ul>

## optional

---

<b>Syntax</b>	optional;
<b>Hierarchy Level</b>	[edit system scripts commit file <i>filename</i> ]
<b>Release Information</b>	Statement introduced in Junos OS Release 11.1 for the QFX Series. Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	For Junos OS commit scripts, allow a commit operation to succeed even if the script specified in the <b>file</b> statement is missing from the <b>/var/db/scripts/commit</b> directory on the router.
<b>Required Privilege Level</b>	maintenance—To view this statement in the configuration. maintenance-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <i>Controlling Execution of Commit Scripts During Commit Operations</i></li></ul>

## path-mtu-discovery

---

<b>Syntax</b>	(path-mtu-discovery   no-path-mtu-discovery);
<b>Hierarchy Level</b>	[edit system <a href="#">internet-options</a> ]
<b>Release Information</b>	Statement introduced before Junos OS Release 7.4. Statement introduced in Junos OS Release 9.0 for EX Series switches.
<b>Description</b>	Configure path MTU discovery for outgoing Transmission Control Protocol (TCP) connections: <ul style="list-style-type: none"><li>• <b>path-mtu-discovery</b>—Path MTU discovery is enabled.</li><li>• <b>no-path-mtu-discovery</b>—Path MTU discovery is disabled.</li></ul>
<b>Default</b>	Path MTU discovery is enabled.
<b>Required Privilege Level</b>	system—To view this statement in the configuration. system-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <i>Configuring Junos OS for Path MTU Discovery on Outgoing TCP Connections</i></li></ul>



## ports

<b>Syntax</b>	<pre> ports {   auxiliary {     disable;     insecure;     type <i>terminal-type</i>;     port-type (mini-usb   rj45);   }   console {     disable;     insecure;     log-out-on-disconnect;     type <i>terminal-type</i>;   } }</pre>
<b>Hierarchy Level</b>	[edit system]
<b>Release Information</b>	<p>Statement introduced before Junos OS Release 7.4.</p> <p>Statement introduced in Junos OS Release 9.0 for EX Series switches.</p>
<b>Description</b>	<p>Configure the properties of the console and auxiliary ports. The ports are located on the router's craft interface.</p> <p>See the switch's hardware documentation for port locations.</p> <p>The remaining statements are explained separately.</p>
<b>Required Privilege Level</b>	<p>system—To view this statement in the configuration.</p> <p>system-control—To add this statement to the configuration.</p>
<b>Related Documentation</b>	<ul style="list-style-type: none"> <li><i>Configuring Junos OS to Set Console and Auxiliary Port Properties</i></li> </ul>

## ports

---

<b>Syntax</b>	<pre>ports {   auxiliary {     disable;     insecure;     type <i>terminal-type</i>;   }   console {     disable;     insecure;     log-out-on-disconnect;     type <i>terminal-type</i>;   } }</pre>
<b>Hierarchy Level</b>	[edit system]
<b>Release Information</b>	Statement introduced in Junos OS Release 11.1 for the QFX Series. Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	<p>Configure the properties of the console and auxiliary ports. The ports are located on the craft interface.</p> <p>See the switch hardware documentation for port locations.</p> <p>The remaining statements are explained separately.</p>
<b>Required Privilege Level</b>	system—To view this statement in the configuration. system-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"><li><i>Configuring Console and Auxiliary Port Properties</i></li></ul>

## port-type

---

<b>Syntax</b>	port-type (mini-usb   rj45);
<b>Hierarchy Level</b>	[edit system ports auxiliary]
<b>Release Information</b>	Statement introduced in Junos OS Release 11.3 for EX Series switches.
<b>Description</b>	(EX2200-C and EX4550 switch only) Set the RJ-45 console port or the Mini-USB console port as the active console port.
<b>Default</b>	The RJ-45 console port is the active port.
<b>Options</b>	<b>mini-usb</b> —Set the Mini USB type-B console port as the active console port. <b>rj45</b> —Set the RJ-45 console port as the active console port.
<b>Required Privilege Level</b>	system—To view this statement in the configuration. system-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <a href="#">Configuring the Console Port Type (CLI Procedure) on page 24</a></li></ul>

## power

---

**Syntax**    power (off | on);

**Hierarchy Level**    [edit chassis (EX Series) fpc slot]

**Release Information**    Statement introduced in Junos OS Release 9.4 for EX Series switches.

**Description**    On an EX6200 or EX8200 switch, turn a specified Flexible PIC Concentrator (FPC) on or off.



**NOTE:** On an EX6200 switch, the power statement has no effect when you configure it for an uplink port FPC on the Switch Fabric and Routing Engine (SRE) module. If you configure the statement for those FPCs, the configuration will be committed, but a message that informs you that the configuration has no effect is logged in the system log. You cannot turn the power on and off for these FPCs.

---

- Options**
- on—Turn on the specified FPC.
  - off—Turn off the specified FPC.

**Required Privilege Level**    interface—To view this statement in the configuration.  
   interface-control—To add this statement to the configuration.

- Related Documentation**
- *Removing a Line Card from an EX6200 Switch*
  - *EX8208 Switch Hardware and CLI Terminology Mapping*
  - *EX8216 Switch Hardware and CLI Terminology Mapping*
  - *EX6210 Switch Hardware and CLI Terminology Mapping*

## processes

**Syntax** `processes {  
    process-name (enable | disable) failover (alternate-media | other-routing-engine);  
    timeout seconds;  
}`

**Hierarchy Level** [edit system]

**Release Information** Statement introduced before Junos OS Release 7.4.  
Statement introduced in Junos OS Release 9.0 for EX Series switches.

**Description** Configure which Junos OS processes are running on the router or switch.



**CAUTION:** Never disable any of the software processes unless instructed to do so by a customer support engineer.

**Default** All processes are enabled by default.

**Options** (enable | disable)—(Optional) Enable or disable a specified process.

**failover (alternate-media | other-routing-engine)**—(Optional) For routers or switches with redundant Routing Engines only, switch to backup media if a process fails repeatedly. If a process fails four times within 30 seconds, the router or switch reboots from the alternate media or the other Routing Engine.

**process-name**—One of the valid process names. You can obtain a complete list of process names by using the CLI command completion feature. After specifying a process name, command completion also indicates any additional options for that process.

**timeout seconds**—(Optional) How often the system checks the watchdog timer, in seconds. If the watchdog timer has not been checked in the specified number of seconds, the system reloads. If you set the time value too low, it is possible for the system to reboot immediately after it loads.

**Values:** 15, 60, or 180

**Default:** 180 seconds (rounded up to 291 seconds by the Junos kernel)

**Required Privilege Level** system—To view this statement in the configuration.  
system-control—To add this statement to the configuration.

**Related Documentation**

- *Disabling Junos OS Processes*

## saved-core-context

---

<b>Syntax</b>	(saved-core-context   no-saved-core-context);
<b>Hierarchy Level</b>	[edit system]
<b>Release Information</b>	Statement introduced in Junos OS Release 11.1 for the QFX Series. Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	<p>Configure whether the switch saves core files generated by internal Junos OS processes, along with contextual information (system log files and a copy of the current configuration):</p> <ul style="list-style-type: none"><li>• <b>saved-core-context</b>—The switch saves each core file and its associated context in a compressed tar file named <code>/var/tmp/process-name.core.core-number.tgz</code>.</li><li>• <b>no-saved-core-context</b>—The switch does not save core files and their associated context.</li></ul>
<b>Default</b>	The switch saves core files.
<b>Required Privilege Level</b>	admin—To view this statement in the configuration. admin-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <i>Saving Core Files from Junos OS Processes</i></li><li>• <a href="#">saved-core-files on page 95</a></li></ul>

## saved-core-files

---

<b>Syntax</b>	<code>saved-core-files <i>number</i>;</code>
<b>Hierarchy Level</b>	[edit system]
<b>Release Information</b>	Statement introduced in Junos OS Release 11.1 for the QFX Series. Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Save core files generated by internal Junos OS processes, but not the associated contextual information (configuration and system log files).
<b>Options</b>	<i>number</i> —Maximum number of core files to save. <b>Range:</b> 1 through 10
<b>Required Privilege Level</b>	admin—To view this statement in the configuration. admin-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <i>Saving Core Files from Junos OS Processes</i></li><li>• <a href="#">saved-core-context on page 94</a></li></ul>

## static-host-mapping

---

<b>Syntax</b>	<pre>static-host-mapping {     hostname {         alias [ <i>alias</i> ];         inet [ <i>address</i> ];         sysid <i>system-identifier</i>;     } }</pre>
<b>Hierarchy Level</b>	[edit system]
<b>Release Information</b>	Statement introduced in Junos OS Release 11.1 for the QFX Series. Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Map a hostname to one or more IP addresses and aliases, and configure an International Organization for Standardization (ISO) system identifier (system ID).
<b>Options</b>	<p><b>alias <i>alias</i></b>—Alias for the hostname.</p> <p><b>hostname</b>—Fully qualified hostname.</p> <p><b>inet <i>address</i></b>—IP address. You can specify one or more IP addresses for the host.</p> <p><b>sysid <i>system-identifier</i></b>—ISO system identifier (system ID). This is the 6-byte portion of the Intermediate System-to-Intermediate System (IS-IS) network service access point (NSAP). We recommend that you use the host's IP address represented in binary-coded decimal (BCD) format.</p>
<b>Required Privilege Level</b>	<p>system—To view this statement in the configuration.</p> <p>system-control—To add this statement to the configuration.</p>
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <a href="#">Configuring the Hostname of a Router or Switch by Using a Configuration Group on page 27</a></li></ul>




## tcp-drop-synfin-set

---

<b>Syntax</b>	tcp-drop-synfin-set;
<b>Hierarchy Level</b>	[edit system internet-options]
<b>Release Information</b>	Statement introduced before Junos OS Release 7.4. Statement introduced in Junos OS Release 9.0 for EX Series switches.
<b>Description</b>	Configure the router or switch to drop packets that have both the SYN and FIN bits set.
<b>Required Privilege Level</b>	admin—To view this statement in the configuration. admin-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <i>Configuring Junos OS to Enable the Router or Switch to Drop Packets with the SYN and FIN Bits Set</i></li><li>• <i>TCP Headers with SYN and FIN Flags Set</i></li></ul>

## time-format

---

<b>Syntax</b>	time-format (year   millisecond   year millisecond);
<b>Hierarchy Level</b>	[edit system syslog]
<b>Release Information</b>	Statement introduced in Junos OS Release 11.1 for the QFX Series. Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Include the year, the millisecond, or both, in the timestamp on every standard-format system log message. The additional information is included for messages directed to each destination configured by a <b>file</b> , <b>console</b> , or <b>user</b> statement at the [edit system syslog] hierarchy level, but not to destinations configured by a <b>host</b> statement.
<b>Default</b>	The timestamp specifies the month, date, hour, minute, and second when the message was logged—for example, <b>Aug 21 12:36:30</b> .
<div> <b>NOTE:</b> When the <b>structured-data</b> statement is included at the [edit system syslog file <i>filename</i>] hierarchy level, this statement is ignored for the file.</div>	
<b>Options</b>	<b>millisecond</b> —Include the millisecond in the timestamp. <b>year</b> —Include the year in the timestamp.
<b>Required Privilege Level</b>	<b>system</b> —To view this statement in the configuration. <b>system-control</b> —To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"><li><i>Including the Year or Millisecond in Timestamps</i></li></ul>

## time-zone

<b>Syntax</b>	<code>time-zone (GMT <i>hour-offset</i>   <i>time-zone</i>);</code>
<b>Hierarchy Level</b>	[edit system]
<b>Release Information</b>	Statement introduced in Junos OS Release 11.1 for the QFX Series. Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Set the local time zone. To have the time zone change take effect for all processes running on the switch, you must reboot the switch.
<b>Default</b>	UTC
<b>Options</b>	<p><b>GMT <i>hour-offset</i></b>—Set the time zone relative to UTC time.</p> <p><b>Range:</b> –14 through +12</p> <p><b>Default:</b> 0</p> <p><b><i>time-zone</i></b>—Specify the time zone as <b>UTC</b>, which is the default time zone, or as a string such as PDT (Pacific Daylight Time), or use one of the following continents and major cities:</p> <p>Africa/Abidjan, Africa/Accra, Africa/Addis_Ababa, Africa/Algiers, Africa/Asmera, Africa/Bamako, Africa/Bangui, Africa/Banjul, Africa/Bissau, Africa/Blantyre, Africa/Brazzaville, Africa/Bujumbura, Africa/Cairo, Africa/Casablanca, Africa/Ceuta, Africa/Conakry, Africa/Dakar, Africa/Dar_es_Salaam, Africa/Djibouti, Africa/Douala, Africa/El_Aaiun, Africa/Freetown, Africa/Gaborone, Africa/Harare, Africa/Johannesburg, Africa/Kampala, Africa/Khartoum, Africa/Kigali, Africa/Kinshasa, Africa/Lagos, Africa/Libreville, Africa/Lome, Africa/Luanda, Africa/Lubumbashi, Africa/Lusaka, Africa/Malabo, Africa/Maputo, Africa/Maseru, Africa/Mbabane, Africa/Mogadishu, Africa/Monrovia, Africa/Nairobi, Africa/Ndjamena, Africa/Niamey, Africa/Nouakchott, Africa/Ouagadougou, Africa/Porto-Novo, Africa/Sao_Tome, Africa/Timbuktu, Africa/Tripoli, Africa/Tunis, Africa/Windhoek</p> <p>America/Adak, America/Anchorage, America/Anguilla, America/Antigua, America/Aruba, America/Asuncion, America/Barbados, America/Belize, America/Bogota, America/Boise, America/Buenos_Aires, America/Caracas, America/Catamarca, America/Cayenne, America/Cayman, America/Chicago, America/Cordoba, America/Costa_Rica, America/Cuiaba, America/Curacao, America/Dawson, America/Dawson_Creek, America/Denver, America/Detroit, America/Dominica, America/Edmonton, America/El_Salvador, America/Ensenada, America/Fortaleza, America/Glace_Bay, America/Godthab, America/Goose_Bay, America/Grand_Turk, America/Grenada, America/Guadeloupe, America/Guatemala, America/Guayaquil, America/Guyana, America/Halifax, America/Havana, America/Indiana/Knox, America/Indiana/Marengo, America/Indiana/Vevay, America/Indianapolis, America/Inuvik, America/Iqaluit, America/Jamaica, America/Jujuy, America/Juneau, America/La_Paz, America/Lima, America/Los_Angeles, America/Louisville, America/Maceio, America/Managua, America/Manaus, America/Martinique, America/Mazatlan, America/Mendoza, America/Menominee, America/Mexico_City, America/Miquelon, America/Montevideo, America/Montreal, America/Montserrat, America/Nassau, America/New_York, America/Nipigon, America/Nome, America/Noronha, America/Panama,</p>

America/Pangnirtung, America/Paramaribo, America/Phoenix, America/Port-au-Prince, America/Port\_of\_Spain, America/Porto\_Acre, America/Puerto\_Rico, America/Rainy\_River, America/Rankin\_Inlet, America/Regina, America/Rosario, America/Santiago, America/Santo\_Domingo, America/Sao\_Paulo, America/Scoresbysund, America/Shiprock, America/St\_Johns, America/St\_Kitts, America/St\_Lucia, America/St\_Thomas, America/St\_Vincent, America/Swift\_Current, America/Tegucigalpa, America/Thule, America/Thunder\_Bay, America/Tijuana, America/Tortola, America/Vancouver, America/Whitehorse, America/Winnipeg, America/Yakutat, America/Yellowknife

Antarctica/Casey, Antarctica/DumontDURville, Antarctica/Mawson, Antarctica/McMurdo, Antarctica/Palmer, Antarctica/South\_Pole

Arctic/Longyearbyen

Asia/Aden, Asia/Alma-Ata, Asia/Amman, Asia/Anadyr, Asia/Aqtau, Asia/Aqtobe, Asia/Ashkhabad, Asia/Baghdad, Asia/Bahrain, Asia/Baku, Asia/Bangkok, Asia/Beirut, Asia/Bishkek, Asia/Brunei, Asia/Calcutta, Asia/Chungking, Asia/Colombo, Asia/Dacca, Asia/Damascus, Asia/Dubai, Asia/Dushanbe, Asia/Gaza, Asia/Harbin, Asia/Hong\_Kong, Asia/Irkutsk, Asia/Ishigaki, Asia/Jakarta, Asia/Jayapura, Asia/Jerusalem, Asia/Kabul, Asia/Kamchatka, Asia/Karachi, Asia/Kashgar, Asia/Katmandu, Asia/Krasnoyarsk, Asia/Kuala\_Lumpur, Asia/Kuching, Asia/Kuwait, Asia/Macao, Asia/Magadan, Asia/Manila, Asia/Muscat, Asia/Nicosia, Asia/Novosibirsk, Asia/Omsk, Asia/Phnom\_Penh, Asia/Pyongyang, Asia/Qatar, Asia/Rangoon, Asia/Riyadh, Asia/Saigon, Asia/Seoul, Asia/Shanghai, Asia/Singapore, Asia/Taipei, Asia/Tashkent, Asia/Tbilisi, Asia/Tehran, Asia/Thimbu, Asia/Tokyo, Asia/Ujung\_Pandang, Asia/Ulan\_Bator, Asia/Urumqi, Asia/Vientiane, Asia/Vladivostok, Asia/Yakutsk, Asia/Yekaterinburg, Asia/Yerevan

Atlantic/Azores, Atlantic/Bermuda, Atlantic/Canary, Atlantic/Cape\_Verde, Atlantic/Faeroe, Atlantic/Jan\_Mayen, Atlantic/Madeira, Atlantic/Reykjavik, Atlantic/South\_Georgia, Atlantic/St\_Helena, Atlantic/Stanley

Australia/Adelaide, Australia/Brisbane, Australia/Broken\_Hill, Australia/Darwin, Australia/Hobart, Australia/Lindeman, Australia/Lord\_Howe, Australia/Melbourne, Australia/Perth, Australia/Sydney

Europe/Amsterdam, Europe/Andorra, Europe/Athens, Europe/Belfast, Europe/Belgrade, Europe/Berlin, Europe/Bratislava, Europe/Brussels, Europe/Bucharest, Europe/Budapest, Europe/Chisinau, Europe/Copenhagen, Europe/Dublin, Europe/Gibraltar, Europe/Helsinki, Europe/Istanbul, Europe/Kaliningrad, Europe/Kiev, Europe/Lisbon, Europe/Ljubljana, Europe/London, Europe/Luxembourg, Europe/Madrid, Europe/Malta, Europe/Minsk, Europe/Monaco, Europe/Moscow, Europe/Oslo, Europe/Paris, Europe/Prague, Europe/Riga, Europe/Rome, Europe/Samara, Europe/San\_Marino, Europe/Sarajevo, Europe/Simferopol, Europe/Skopje, Europe/Sofia, Europe/Stockholm, Europe/Tallinn, Europe/Tirane, Europe/Vaduz, Europe/Vatican, Europe/Vienna, Europe/Vilnius, Europe/Warsaw, Europe/Zagreb, Europe/Zurich

Indian/Antananarivo, Indian/Chagos, Indian/Christmas, Indian/Cocos, Indian/Comoro, Indian/Kerguelen, Indian/Mahe, Indian/Maldives, Indian/Mauritius, Indian/Mayotte, Indian/Reunion

Pacific/Apia, Pacific/Auckland, Pacific/Chatham, Pacific/Easter, Pacific/Efate, Pacific/Enderbury, Pacific/Fakaofu, Pacific/Fiji, Pacific/Funafuti, Pacific/Galapagos, Pacific/Gambier, Pacific/Guadacanal, Pacific/Guam, Pacific/Honolulu, Pacific/Johnston, Pacific/Kiritimati, Pacific/Kosrae, Pacific/Kwajalein, Pacific/Majuro, Pacific/Marquesas, Pacific/Midway, Pacific/Nauru, Pacific/Niue, Pacific/Norfolk, Pacific/Noumea, Pacific/Pago\_Pago, Pacific/Palau, Pacific/Pitcairn, Pacific/Ponape, Pacific/Port\_Moresby, Pacific/Rarotonga, Pacific/Saipan, Pacific/Tahiti, Pacific/Tarawa, Pacific/Tongatapu, Pacific/Truk, Pacific/Wake, Pacific/Wallis, Pacific/Yap

<b>Required Privilege</b>	system—To view this statement in the configuration.
<b>Level</b>	system-control—To add this statement to the configuration.

- Related Documentation**
- [Modifying the Default Time Zone for a Router or Switch Running Junos OS on page 29](#)

## traceoptions (Layer 2 Learning)

---

<b>Syntax</b>	<pre>traceoptions {     file <i>filename</i> &lt;files <i>number</i>&gt; &lt;size <i>size</i>&gt; &lt;world-readable   no-world-readable&gt;;     flag <i>flag</i> (detail   disable   receive   send);     in-memory-debug;     level;     no-remote-trace; }</pre>
<b>Hierarchy Level</b>	[edit protocols l2-learning]
<b>Release Information</b>	Statement introduced in Junos OS Release 13.2 for the QFX Series.
<b>Description</b>	Define tracing operations for Layer 2 learning.
<b>Default</b>	The <b>traceoptions</b> feature is disabled by default.
<b>Options</b>	<p><b>file <i>filename</i></b>—Name of the file to receive the output of the tracing operation. Enclose the name within quotation marks. All files are placed in the directory <b>/var/log</b>.</p> <p>You can specify the following options:</p> <ul style="list-style-type: none"><li>• <b>no-world-readable</b>—(Optional) Restrict file access to the user who created the file.</li><li>• <b>size <i>size</i></b> —(Optional) Maximum size of each trace file, in kilobytes (KB), megabytes (MB), or gigabytes (GB). When a trace file named <b>trace-file</b> reaches its maximum size, it is renamed <b>trace-file.0</b>, then <b>trace-file.1</b>, and so on, until the maximum number of trace files is reached. Then the oldest trace file is overwritten. If you specify a maximum number of files, you also must specify a maximum file size with the <b>files</b> option. Use <b>xk</b> to specify KB, <b>xm</b> to specify MB, or <b>xg</b> to specify gigabytes.</li><li>• <b>world-readable</b>—(Optional) Enable unrestricted file access.</li></ul> <p><b>flag <i>flag</i></b> —Tracing operation to perform. To specify more than one tracing operation, include multiple flag statements. You can include the following flags:</p> <ul style="list-style-type: none"><li>• <b>all</b>—All tracing operations.</li><li>• <b>bmac-next-hop</b>—Trace backbone MAC next hop operations.</li><li>• <b>bridge-bmac-next-hop</b>—Trace backbone MAC next hop bridge operations.</li><li>• <b>bridging-interface</b>—Trace interface bridge operations.</li><li>• <b>bridging-domain</b>—Trace bridging domain operations.</li><li>• <b>configuration</b>—Trace configuration operations.</li><li>• <b>flood-next-hop</b>—Trace flood next hop operations.</li><li>• <b>initialization</b>—Trace initialization operations.</li></ul>

- **interface-device**—Trace interface device operations.
- **interface-family**—Trace interface family operations.
- **interface-logical**—Trace logical interface operations.
- **ipc**—Trace inter-process communications operations.
- **irb**—Trace integrated routing and bridging operations.
- **isid**—Trace i-tagged service ID operations.
- **kack**—Trace kernel-acknowledgment.
- **learning-domain**—Trace learning domain operations.
- **logical-system**—Trace logical system operations.
- **mac-learning**—Trace MAC address learning.
- **mc-ae**—Trace multichassis aggregated Ethernet interface operations.
- **redundant-trunk-group**—Trace redundant trunk group operations.
- **routing-instance**—Trace routing instance operations.
- **routing-socket**—Trace routing socket operations.
- **storm-control**—Trace storm control operations.
- **unknown-unicast-forwarding**—Trace unknown unicast forwarding events.
- **vpls-ping**—Trace Virtual Private VLAN Service (VPLS) ping operations.

**in-memory-debug**—Enable trace parameters in the memory.

**level**—Specify level of debugging output.

**no-remote-trace**—Disable remote tracing.

<b>Required Privilege Level</b>	<b>routing</b> —To view this statement in the configuration.
	<b>routing-control</b> —To add this statement to the configuration.

## traceoptions (SBC Configuration Process)

---

Syntax	<pre>traceoptions {     file <i>filename</i> &lt;files <i>number</i>&gt; &lt;match <i>regex</i>&gt; &lt;size <i>size</i>&gt;     &lt;world-readable   no-world-readable&gt;;     flag <i>flag</i>; }</pre>
Hierarchy Level	[edit system processes sbc-configuration-process]
Release Information	Statement introduced in Junos OS Release 9.5. Statement introduced in Junos OS Release 9.5 for EX Series switches.
Description	Configure trace options for the session border controller (SBC) process of the border signaling gateway (BSG).
Options	<p><b>file <i>filename</i></b>—Name of the file that receives the output of the tracing operation. Enclose the name in quotation marks. All files are placed in the directory <b>/var/log</b>. You can include the following file options:</p> <ul style="list-style-type: none"><li>• <b>files <i>number</i></b>—(Optional) Maximum number of trace files. When a trace file named <b>trace-file</b> reaches its maximum size, it is renamed <b>trace-file.0</b>, then <b>trace-file.1</b>, and so on, until the maximum number of trace files is reached. Then the oldest trace file is overwritten.</li></ul> <p>If you specify a maximum number of files, you must also specify a maximum file size with the <b>size</b> option and a filename.</p> <p><b>Range:</b> 2 through 1000 <b>Default:</b> 3 files</p> <ul style="list-style-type: none"><li>• <b>match <i>regex</i></b>—(Optional) Refine the output to include lines that contain the regular expression.</li><li>• <b>no-world-readable</b>—(Optional) Disable unrestricted file access.</li><li>• <b>size <i>size</i></b>—(Optional) Maximum size of each trace file, in kilobytes (KB), megabytes (MB), or gigabytes (GB). When a trace file named <b>trace-file</b> reaches this size, it is renamed <b>trace-file.0</b>. When the trace-file again reaches its maximum size, <b>trace-file.0</b> is renamed <b>trace-file.1</b> and <b>trace-file</b> is renamed <b>trace-file.0</b>. This renaming scheme continues until the maximum number of trace files is reached. Then the oldest trace file is overwritten. If you specify a maximum file size, you also must specify a maximum number of trace files with the <b>files</b> option and filename.</li></ul> <p><b>Syntax:</b> <b>xk</b> to specify KB, <b>xm</b> to specify MB, or <b>xg</b> to specify GB. <b>Range:</b> 10 KB through 1 GB <b>Default:</b> 128 KB</p> <ul style="list-style-type: none"><li>• <b>world-readable</b>—(Optional) Enable unrestricted file access.</li></ul>



**flag flag**—Tracing operation to perform. To specify more than one tracing operation, include multiple **flag** statements. You can include the following flags:

- **all trace-level**—Trace all SBC process operations.
- **common trace-level**—Trace common events.
- **configuration trace-level**—Trace configuration events.
- **device-monitor trace-level**—Trace device monitor events.
- **ipc trace-level**—Trace IPC events.
- **memory—pool trace-level**—Trace memory pool events.
- **trace-level**—Trace level options are related to the severity of the event being traced. When you choose a trace level, messages at that level and higher levels are captured. Enter one of the following trace levels as the **trace-level**:
  - **debug**—Log all code flow of control.
  - **error**—Log failures with a short-term effect.
  - **info**—Log summary for normal operations, such as the policy decisions made for a call.
  - **trace**—Log program trace START and EXIT macros.
  - **warning**—Log failure recovery events or failure of an external entity.
- **ui trace-level**—Trace user interface operations.

<b>Required Privilege</b>	system—To view this statement in the configuration.
<b>Level</b>	system-control—To add this statement to the configuration.

<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• See “Troubleshooting the IMSG” in the <i>Junos Multiplay Solutions Guide</i></li><li>• <i>System Management Configuration Statements</i></li></ul>
------------------------------	--

## use-imported-time-zones

---

<b>Syntax</b>	use-imported-time-zones;
<b>Hierarchy Level</b>	[edit system]
<b>Release Information</b>	Statement introduced in Junos OS Release 11.1 for the QFX Series. Statement introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Configure a custom time zone from a locally generated time zone database.
<b>Required Privilege Level</b>	admin—To view this statement in the configuration. admin-control—To add this statement to the configuration.
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <i>Updating the IANA Time Zone Database on Junos OS Devices</i></li></ul>

## CHAPTER 4

# Operational Commands

- clear log
- clear chassis display message
- clear system commit
- clear system reboot
- request chassis beacon
- request chassis cb
- request chassis fabric plane
- request chassis fpc
- request chassis pic
- request chassis routing-engine master
- request system halt
- request system logout
- request system power-off
- request system reboot
- set chassis display message
- set date
- show chassis alarms
- show chassis beacon
- show chassis environment
- show chassis environment fpc
- show chassis environment pem
- show chassis environment power-supply-unit
- show chassis environment psu
- show chassis environment routing-engine
- show chassis ethernet-switch
- show chassis fan
- show chassis firmware
- show chassis fpc

- [show chassis fabric fpcs](#)
- [show chassis fabric map](#)
- [show chassis fabric plane](#)
- [show chassis fabric plane-location](#)
- [show chassis fabric sibs](#)
- [show chassis fabric summary](#)
- [show chassis hardware](#)
- [show chassis lcd](#)
- [show chassis led](#)
- [show chassis location](#)
- [show chassis mac-addresses](#)
- [show chassis pic](#)
- [show chassis routing-engine](#)
- [show chassis temperature-thresholds](#)
- [show chassis zones](#)
- [show host](#)
- [show interfaces diagnostics optics](#)
- [show subscribers](#)
- [show system alarms](#)
- [show system audit](#)
- [show system buffers](#)
- [show system certificate](#)
- [show system commit](#)
- [show system connections](#)
- [show system core-dumps](#)
- [show system directory-usage](#)
- [show system firmware](#)
- [show system reboot](#)
- [show system software](#)
- [show system statistics](#)
- [show system storage](#)
- [show system uptime](#)
- [show system virtual-memory](#)
- [show version](#)
- [start shell](#)
- [test configuration](#)

## clear log

<b>Syntax</b>	<code>clear log <i>filename</i></code> <code>&lt;all&gt;</code>
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. Command introduced in Junos OS Release 9.0 for EX Series switches. Command introduced in Junos OS Release 11.1 for the QFX Series. Command introduced in Junos OS Release 14.1X53-D20 for OCX Series switches.
<b>Description</b>	Remove contents of a log file.
<b>Options</b>	<b><i>filename</i></b> —Name of the specific log file to delete.  <b>all</b> —(Optional) Delete the specified log file and all archived versions of it.
<b>Required Privilege Level</b>	clear
<b>Related Documentation</b>	<ul style="list-style-type: none"> <li><code>show log</code></li> </ul>
<b>List of Sample Output</b>	<a href="#">clear log on page 109</a>
<b>Output Fields</b>	See <i>file list</i> for an explanation of output fields.

## Sample Output

### clear log

The following sample commands list log file information, clear the contents of a log file, and then display the updated log file information:

```

user@host> file list lcc0-re0:/var/log/sampled detail
lcc0-re0:
-----
-rw-r----- 1 root  wheel      26450 Jun 23 18:47 /var/log/sampled
total 1

user@host> clear log lcc0-re0:sampled
lcc0-re0:
-----

user@host> file list lcc0-re0:/var/log/sampled detail
lcc0-re0:
-----
-rw-r----- 1 root  wheel      57 Sep 15 03:44 /var/log/sampled
total 1

```

## clear chassis display message

---

<b>List of Syntax</b>	<a href="#">Syntax on page 110</a> <a href="#">Syntax (TX Matrix Router) on page 110</a> <a href="#">Syntax (TX Matrix Plus Router) on page 110</a> <a href="#">Syntax (QFabric Systems) on page 110</a>
<b>Syntax</b>	clear chassis display message
<b>Syntax (TX Matrix Router)</b>	clear chassis display message <lcc <i>number</i>   scc>
<b>Syntax (TX Matrix Plus Router)</b>	clear chassis display message <lcc <i>number</i>   sfc <i>number</i> >
<b>Syntax (QFabric Systems)</b>	clear chassis display message <node-device <i>name</i>   interconnect-device <i>name</i> >
<b>Release Information</b>	Command introduced in Junos OS Release 7.5. Command introduced in Junos OS Release 9.0 for EX Series switches. <b>sfc</b> option for the TX Matrix Plus routers introduced in Junos OS Release 9.6. Command introduced in Junos OS Release 11.1 for the QFX Series. Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	(M40e, M160, M320, T Series routers, EX Series, and QFabric systems only) Clear or stop a text message on the craft interface display, which is on the front of the router or switch or on the LCD panel display on the router or switch. The craft interface alternates the display of text messages with standard craft interface messages, switching between messages every 2 seconds. By default, on both the router and the switch, the text message is displayed for 5 minutes. The craft interface display has four 20-character lines. The LCD panel display has two 16-character lines, and text messages appear only on the second line.
<b>Options</b>	<b>none</b> —Clear or stop a text message on the craft interface display.  <b>interconnect-device <i>name</i></b> —(QFabric systems only) (Optional) On a QFabric system, clear or stop a text message on the LCD panel display on the specified Interconnect device.  <b>lcc <i>number</i></b> —(TX Matrix router and TX Matrix Plus router only) (Optional) Line-card chassis number.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**node-device *name***—(QFabric systems only) (Optional) On a QFabric system, clear or stop a text message on the LCD panel display on the specified Node device in a Node group.

**scc**—(TX Matrix routers only) (Optional) Clear or stop a text message on the craft interface on the TX Matrix router (switch-card chassis).

**sfc *number***—(TX Matrix Plus routers only) (Optional) Clear or stop a text message on the craft interface on the TX Matrix Plus router (or switch-fabric chassis). Replace *number* with 0.

**Required Privilege Level** clear

**Related Documentation**

- [Configuring the LCD Panel on EX Series Switches \(CLI Procedure\) on page 25](#)
- [set chassis display message on page 163](#)
- [show chassis craft-interface](#)

**List of Sample Output** [clear chassis display message on page 111](#)

**Output Fields** See [show chassis craft-interface](#) for an explanation of output fields.

## Sample Output

### clear chassis display message

The following example displays and then clears the text message on the craft interface display:

```
user@host> show chassis craft-interface
Red alarm:      LED off, relay off
Yellow alarm:   LED off, relay off
Host OK LED:    On
Host fail LED:  Off
FPCs           0  1  2  3  4  5  6  7
-----
```

```
Green .. *.. * *.
Red .....
LCD screen:
+-----+
|NOC contact Dusty |
|(888) 526-1234    |
+-----+

user@host> clear chassis display message

user@host> show chassis craft-interface
Red alarm:      LED off, relay off
Yellow alarm:   LED off, relay off
Host OK LED:    On
Host fail LED:  Off
FPCs           0 1 2 3 4 5 6 7
-----
Green .. *.. * *.
Red .....
LCD screen:
+-----+
|host              |
|Up: 0+17:05:47    |
|                  |
|Temperature OK    |
+-----+
```



## clear system commit

---

<b>Syntax</b>	clear system commit
<b>Release Information</b>	<p>Command introduced before Junos OS Release 7.4.</p> <p>Command introduced in Junos OS Release 9.0 for EX Series switches.</p> <p>Command introduced in Junos OS Release 11.1 for the QFX Series.</p> <p>Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.</p>
<b>Description</b>	Clear any pending commit operation.
<b>Options</b>	This command has no options.
<b>Required Privilege Level</b>	maintenance (or the actual user who scheduled the commit)
<b>Related Documentation</b>	<ul style="list-style-type: none"> <li>• <a href="#">show system commit on page 1081</a></li> </ul>
<b>List of Sample Output</b>	<p><a href="#">clear system commit on page 113</a></p> <p><a href="#">clear system commit (None Pending) on page 113</a></p> <p><a href="#">clear system commit (User Does Not Have Required Privilege Level) on page 113</a></p>
<b>Output Fields</b>	When you enter this command, you are provided feedback on the status of your request.

## Sample Output

### clear system commit

```
user@host> clear system commit
Pending commit cleared.
```

### clear system commit (None Pending)

```
user@host> clear system commit
No commit scheduled.
```

### clear system commit (User Does Not Have Required Privilege Level)

```
user@host> clear system commit
error: Permission denied
```

## clear system reboot

---

<b>List of Syntax</b>	<a href="#">Syntax on page 114</a> <a href="#">Syntax (EX Series Switches) on page 114</a> <a href="#">Syntax (TX Matrix Router) on page 114</a> <a href="#">Syntax (TX Matrix Plus Router) on page 114</a> <a href="#">Syntax (QFX Series) on page 114</a>
<b>Syntax</b>	clear system reboot <both-routing-engines>
<b>Syntax (EX Series Switches)</b>	clear system reboot <all-members> <both-routing-engines> <local> <member <i>member-id</i> >
<b>Syntax (TX Matrix Router)</b>	clear system reboot <both-routing-engines> <all-chassis   all-lcc   lcc <i>number</i>   scc>
<b>Syntax (TX Matrix Plus Router)</b>	clear system reboot <both-routing-engines> <all-chassis   all-lcc   lcc <i>number</i>   sfc <i>number</i> >
<b>Syntax (QFX Series)</b>	clear system reboot <infrastructure <i>name</i> > <interconnect-device <i>name</i> > <node-group <i>name</i> >
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. Command introduced in Junos OS Release 9.0 for EX Series switches. <b>sfc</b> option introduced for the TX Matrix Plus router in Junos OS Release 9.6. Command introduced in Junos OS Release 11.1 for the QFX Series. Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Clear any pending system software reboots or halts. When issued on a TX Matrix router without any options, the default behavior clears all pending system software reboots or halts on all T640 routers connected to the TX Matrix router. When issued on a TX Matrix Plus router without any options, the default behavior clears all pending system software reboots or halts on all T1600 or T4000 routers connected to the TX Matrix Plus router.
<b>Options</b>	<b>none</b> —Clear all pending system software reboots or halts.  <b>all-chassis</b> —(TX Matrix routers and TX Matrix Plus routers only) (Optional) Clear all halt or reboot requests for all the Routing Engines in the chassis.

**all-lcc**—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, clear all halt or reboot requests for all T640 routers (or line-card chassis) connected to the TX Matrix router. On a TX Matrix Plus router, clear all halt or reboot requests on the l connected T1600 or T4000 LCCs.

**all-members**—(EX4200 switches only) (Optional) Clear all halt or reboot requests on all members of the Virtual Chassis configuration.

**both-routing-engines**—(Systems with multiple Routing Engines) (Optional) Clear all halt or reboot requests on both Routing Engines. On a TX Matrix router, clear both Routing Engines on all chassis connected to the TX Matrix router. Likewise, on a TX Matrix Plus router, clear both Routing Engines on all chassis connected to the TX Matrix Plus router.

**infrastructure *name***—(QFabric systems) (Optional) Clear all halt or reboot requests on the fabric control Routing Engines or fabric manager Routing Engines.

**interconnect-device *name***—(QFabric systems) (Optional) Clear all halt or reboot requests on the Interconnect device.

**lcc *number***—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, clear all halt or reboot requests for a specific T640 router that is connected to the TX Matrix router. On a TX Matrix Plus router, clear all halt or reboot requests for a specific router that is connected to the TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(EX4200 switches only) (Optional) Clear all halt or reboot requests on the local Virtual Chassis member.

**member *member-id***—(EX4200 switches only) (Optional) Clear all halt or reboot requests on the specified member of the Virtual Chassis configuration. Replace ***member-id*** with a value from 0 through 9.

**node-group *name***—(QFabric systems) (Optional) Clear all halt or reboot requests on the Node group.

**scc**—(TX Matrix routers only) (Optional) Clear all halt or reboot requests for the TX Matrix router (or switch-card chassis).

**sfc *number***—(TX Matrix Plus routers only) (Optional) Clear all halt or reboot requests for the TX Matrix Plus router. Replace *number* with 0.

**Required Privilege Level** maintenance

**Related Documentation**

- [request system reboot on page 156](#)
- [Routing Matrix with a TX Matrix Plus Router Solutions Page](#)

**List of Sample Output**

- [clear system reboot on page 117](#)
- [clear system reboot \(TX Matrix Router\) on page 117](#)
- [clear system reboot \(QFX Series\) on page 117](#)

**Output Fields** When you enter this command, you are provided feedback on the status of your request.

## Sample Output

### clear system reboot

```
user@host> clear system reboot
reboot requested by root at Sat Dec 12 19:37:34 1998
[process id 17855]
Terminating...
```

### clear system reboot (TX Matrix Router)

```
user@host> clear system reboot
scc-re0:
-----
No shutdown/reboot scheduled.
lcc0-re0:
-----
No shutdown/reboot scheduled.
lcc2-re0:
-----
No shutdown/reboot scheduled.
```

### clear system reboot (QFX Series)

```
user@switch> clear system reboot node-group node1
No shutdown/reboot scheduled.
```

## request chassis beacon

---

<b>List of Syntax</b>	<a href="#">Syntax (QFX Series) on page 118</a> <a href="#">Syntax (PTX Series) on page 118</a>
<b>Syntax (QFX Series)</b>	<pre>request chassis beacon &lt;all (off   on)&gt; &lt;fpc slot-number (off   on)&gt; &lt;interconnect-device name (cb slot-number   fpc slot-number   (off   on)&gt; &lt;node-device name (off   on)&gt;</pre>
<b>Syntax (PTX Series)</b>	<pre>request chassis beacon &lt;all (off   on)&gt; &lt;fpc slot-number (off   on)&gt; &lt;interconnect-device name (cb slot-number   fpc slot-number   (off   on)&gt; &lt;node-device name (off   on)&gt;</pre>
<b>Release Information</b>	Command introduced in Junos OS Release 11.1 for the QFX Series. Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series. Command introduced in Junos OS Release 17.2 for PTX10008 Routers.
<b>Description</b>	(QFX Series only) Enable or disable the beacon LED on a QFX Series device.
<b>Options</b>	<p><b>all</b>—Turn the beacon LED either <b>on</b> or <b>off</b> on all QFabric system Interconnect and Node devices.</p> <p><b>cb slot-number</b>—Turn the beacon LED either <b>on</b> or <b>off</b> on the Control Board of the QFX3008-I Interconnect device.</p> <p><b>fpc slot-number</b>—Turn the beacon LED either <b>on</b> or <b>off</b> on the Flexible PIC Concentrator on the standalone QFX3500 switch or the Interconnect device.</p> <p><b>interconnect-device name</b>—Turn the beacon LED either <b>on</b> or <b>off</b> on the Interconnect device.</p> <p><b>node-device name</b>—Turn the beacon LED either <b>on</b> or <b>off</b> on the Node device.</p> <p><b>off</b>—Turn the beacon LED <b>off</b>.</p> <p><b>on</b>—Turn the beacon LED <b>on</b>.</p>
<b>Required Privilege Level</b>	maintenance
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <a href="#">show chassis beacon on page 186</a></li></ul>
<b>List of Sample Output</b>	<a href="#">request chassis beacon fpc 0 on (QFX Series) on page 119</a> <a href="#">request chassis beacon node-device (QFabric System) on page 119</a>

[request chassis beacon on interconnect-device fpc \(QFabric System\) on page 119](#)  
[request chassis beacon fpc 0 on \(PTX Router\) on page 119](#)

**Output Fields** When you enter this command, you are provided feedback on the status of your request.

## Sample Output

### [request chassis beacon fpc 0 on \(QFX Series\)](#)

```
user@switch> request chassis beacon fpc 0 on
```

```
Beacon set to ON
```

### [request chassis beacon node-device \(QFabric System\)](#)

```
user@switch> request chassis beacon node-device node1 on
```

```
node1                ON
```

### [request chassis beacon on interconnect-device fpc \(QFabric System\)](#)

```
user@switch> request chassis beacon on interconnect-device fpc 2
```

```
FPC 2                ON
```

### [request chassis beacon fpc 0 on \(PTX Router\)](#)

```
user@switch> request chassis beacon fpc 0 on
```

```
FPC 0                ON
```

## request chassis cb

<b>List of Syntax</b>	<a href="#">Syntax on page 120</a> <a href="#">Syntax (TX Matrix Router) on page 120</a> <a href="#">Syntax (TX Matrix Plus Router) on page 120</a> <a href="#">Syntax (QFabric System) on page 120</a> <a href="#">Syntax (EX9253 Switches) on page 120</a>
<b>Syntax</b>	<code>request chassis cb (offline   online) slot <i>slot-number</i></code>
<b>Syntax (TX Matrix Router)</b>	<code>request chassis cb (offline   online) &lt;slot <i>slot-number</i>   lcc <i>number</i> slot <i>cb-slot-number</i>   scc <i>number</i> slot <i>cb-slot-number</i>&gt;</code>
<b>Syntax (TX Matrix Plus Router)</b>	<code>request chassis cb (offline   online) &lt;slot <i>slot-number</i>   lcc <i>number</i> slot <i>cb-slot-number</i>   sfc <i>number</i> slot <i>cb-slot-number</i>&gt;</code>
<b>Syntax (QFabric System)</b>	<code>request chassis cb (offline   online) interconnect-device <i>name</i> slot <i>slot-number</i></code> <code>&lt;interconnect-device <i>name</i> slot <i>slot-number</i> (offline   online)&gt;</code>
<b>Syntax (EX9253 Switches)</b>	<code>request chassis cb (offline   online) <i>name</i> slot <i>slot-number</i></code>
<b>Release Information</b>	<p>Command introduced before Junos OS Release 7.4.</p> <p>Command introduced in Junos OS 9.4 for EX Series switches.</p> <p>sfc option introduced for the TX Matrix Plus router in Junos OS Release 9.6.</p> <p>Command introduced in Junos OS 11.3 for QFX Series.</p> <p>Command introduced in Junos OS Release 12.3 for MX2020 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 12.3 for MX2010 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 17.2 for MX2008 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 17.3 for MX10003 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 18.2 for EX9253 Series Switches.</p>
<b>Description</b>	(M120, M320, and MX Series routers and T Series routers, QFabric systems, and EX8200 switches only) Control the operation of the Control Board (CB).
<b>Options</b>	<b>offline</b> —Take the Control Board offline.



**NOTE:** On a QFabric system, to bring the backup Control Board on a QFX3008-I Interconnect device offline, issue the `request chassis cb slot backup-slot-number offline` command.





**NOTE:** Only backup Control Board can be turned offline or online. To turn a Control Board offline or to bring it back online, the Routing Engine should be turned offline first.

**online**—Bring the Control Board online.

**interconnect-device *name***—(QFabric systems only) (Optional) Bring the QFX3008-I Interconnect device Control Board either offline or online:

**slot *slot-number***—Control Board slot number:

- (TX Matrix and TX Matrix Plus routers only) On a TX Matrix router, if you specify the number of the T640 router by using the *lcc number* option (the recommended method), replace *cb-slot-number* with a value from 0 through 1.  
  
Likewise, on a TX Matrix Plus router, if you specify the number of the T1600 or T4000 router by using the *lcc number* option (the recommended method), replace *cb-slot-number* with a value from 0 through 1.
- M320 router—Replace *slot-number* with a value from 0 through 1.
- MX480/MX240 routers—Replace *slot-number* with a value from 0 through 1.
- MX960 router—Replace *slot-number* with a value from 0 through 2.
- MX2020, MX2010, and MX2008 routers—Replace *slot-number* with 0 or 1.
- EX8208 switch—Replace *slot-number* with a value from 0 through 2.
- EX8216 switch—Replace *slot-number* with a value from 0 through 1.
- QFabric System—Replace *slot-number* with a value from 0 through 1.

**lcc *number***—(TX Matrix, TX Matrix Plus routers only) (Optional) Line-card chassis number.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**sfc *number***—(TX Matrix Plus routers only) (Optional) Change the CB status for the TX Matrix Plus router (switch-fabric chassis). Replace *number* with 0.

**Required Privilege Level** maintenance

**Related Documentation**

- *show chassis environment cb*
- *Understanding Switching Control Board Redundancy*

**List of Sample Output**

- [request chassis cb on page 122](#)
- [request chassis cb interconnect-device \(QFabric System\) on page 122](#)
- [request chassis cb \(MX2020 Router\) on page 122](#)
- [request chassis cb \(MX2010 Router\) on page 122](#)
- [request chassis cb \(MX2008 Router\) on page 122](#)
- [request chassis cb \(MX10003 Router\) on page 122](#)
- [request chassis cb \(EX9253 Switch\) on page 122](#)

**Output Fields** When you enter this command, you are provided feedback on the status of your request.

## Sample Output

### [request chassis cb](#)

```
user@host> request chassis cb offline slot 1
Backup CB 1 cannot be set offline, backup RE is online
```

### [request chassis cb interconnect-device \(QFabric System\)](#)

```
user@switch> request chassis cb interconnect-device interconnect1 offline slot 1
Backup CB 1 cannot be set offline, backup RE is online
```

### [request chassis cb \(MX2020 Router\)](#)

```
user@host> request chassis cb offline slot 1
Backup CB 1 cannot be set offline, backup RE is online
```

### [request chassis cb \(MX2010 Router\)](#)

```
user@host> request chassis cb offline slot 1
Backup CB 1 cannot be set offline, backup RE is online
```

### [request chassis cb \(MX2008 Router\)](#)

```
user@host>request chassis cb offline slot 1
Backup CB 1 cannot be set offline, backup RE is online
```

### [request chassis cb \(MX10003 Router\)](#)

```
user@host>request chassis cb online slot 1
CB 1 appears to be online already
```

### [request chassis cb \(EX9253 Switch\)](#)

```
user@switch>request chassis cb offline slot 1
Offline initiated, use "show chassis environment cb" to verify
```



## request chassis fabric plane

---

**List of Syntax**    [Syntax on page 124](#)  
                          [Syntax \(EX9253 Switches\) on page 124](#)

**Syntax**    request chassis fabric plane *plane-number* (offline | online)

**Syntax (EX9253 Switches)**    request chassis fabric plane *plane-number* (offline | online)

**Release Information**    Command introduced in Junos OS Release 8.0.  
                                Command introduced in Junos OS Release 9.4 for EX Series switches.  
                                Command introduced in Junos OS Release 12.3 for MX2020 Universal Routing Platforms.  
                                Command introduced in Junos OS Release 12.3 for MX2010 Universal Routing Platforms.  
                                Command introduced in Junos OS Release 17.2 for MX2008 Universal Routing Platforms.  
                                Command introduced in Junos OS Release 17.3 for MX10003 Universal Routing Platforms.  
                                Command introduced in Junos OS Release 18.2 for EX9253 Switches.

**Description**    (M120 and MX Series routers and EX8200 switches only) Control the operation of the specified fabric plane.

On an MX480 or MX240 series router, you can configure the active control board for redundancy mode or increased bandwidth mode. When running in increased bandwidth mode, MX series routers with Trio chips and the MPC3E will use all eight active fabric planes.

To take both plane 0 and plane 1 offline on a MX480 and MX240 series routers with one or more MPC4E MICs installed, a X86 Media Service Blade, and/or 100G PFE, and where redundancy-mode is configured for "increased-bandwidth", Juniper recommends taking plane 1 offline before plane 0. Likewise, when the router is configured for increased-bandwidth mode, taking fabric planes 0, 2, 4, and 6 offline can cause the chassis to run in a reduced fabric bandwidth mode. Plane 7 may remain in a "spare" state (as seen in the "show chassis fabric summary" command output) until plane 3 is taken offline and then brought back up.

**Options**    **offline**—Take the fabric plane offline. Use the **request chassis fabric plane *plane-number* offline** command to clear a FAULT state on a fabric plane. To bring the fabric plane back online, use the **request chassis fabric plane *plane-number* online** command.

**online**—Bring the fabric plane online.

**plane *plane-number***—Fabric plane number.

- For the M120 router, replace *plane-number* with a value from 0 through 3.
- For the MX480 and MX240 routers, replace *plane-number* with a value from 0 through 7.
- For the MX2020, MX2010, and MX2008 routers, replace *plane-number* with a value from 0 through 7.

- For the MX960 router, replace *plane-number* with a value from 0 through 5.
- For the EX8208 switch, replace *plane-number* with a value from 0 through 11.
- For the EX8216 switch, replace *plane-number* with a value from 0 through 7.

**Required Privilege Level** maintenance

**Related Documentation**

- [show chassis fabric plane on page 536](#)
- [show chassis fabric plane-location on page 590](#)
- [show chassis fabric summary on page 614](#)

**List of Sample Output**

- [request chassis fabric plane 0 online on page 125](#)
- [request chassis fabric plane 0 offline on page 125](#)
- [request chassis fabric plane 0 online \(EX8200 switch\) on page 125](#)
- [request chassis fabric plane \(MX2020 Router\) on page 125](#)
- [request chassis fabric plane \(MX2010 Router\) on page 125](#)
- [request chassis fabric plane \(MX2008 Router\) on page 126](#)
- [request chassis fabric plane \(MX10003 Router\) on page 126](#)
- [request chassis fabric plane \(EX9253 Switch\) on page 126](#)

**Output Fields** When you enter this command, you are provided feedback on the status of your request.

## Sample Output

### request chassis fabric plane 0 online

```
user@host> request chassis fabric plane 0 online
Online initiated, use "show chassis fabric plane" to verify
```

### request chassis fabric plane 0 offline

```
user@host> request chassis fabric plane 0 offline
Offline initiated, use "show chassis fabric plane" to verify
```

### request chassis fabric plane 0 online (EX8200 switch)

```
user@host> request chassis fabric plane 0 online

Plane 0 is already active
```

### request chassis fabric plane (MX2020 Router)

```
user@host> request chassis fabric plane 2 online
Plane 2 is already active
```

### request chassis fabric plane (MX2010 Router)

```
user@host> request chassis fabric plane 4 online
```

Plane 4 is already active

#### request chassis fabric plane (MX2008 Router)

```
user@host>request chassis fabric plane 4 online  
Plane 4 is already active
```

#### request chassis fabric plane (MX10003 Router)

```
user@host>request chassis fabric plane 4 online  
Plane 4 is already active
```

#### request chassis fabric plane (EX9253 Switch)

```
user@switch>request chassis fabric plane 0 online  
Plane 0 is already active
```

## request chassis fpc

<b>List of Syntax</b>	<a href="#">Syntax on page 127</a> <a href="#">Syntax (TX Matrix and TX Matrix Plus Routers) on page 127</a> <a href="#">Syntax (MX Series Routers) on page 127</a> <a href="#">Syntax (MX2020 Universal Routing Platforms) on page 127</a> <a href="#">Syntax (MX204, MX2010, MX2008, and MX10003 Universal Routing Platforms) on page 127</a> <a href="#">Syntax (EX9200, EX9251, EX9253 Switches) on page 127</a> <a href="#">Syntax (QFabric System) on page 127</a> <a href="#">Syntax (PTX Series Packet Transport Routers) on page 127</a>
<b>Syntax</b>	<code>request chassis fpc (offline   online   restart) slot <i>slot-number</i></code>
<b>Syntax (TX Matrix and TX Matrix Plus Routers)</b>	<code>request chassis fpc (offline   online   restart) slot <i>slot-number</i> &lt;lcc <i>number</i>&gt;</code>
<b>Syntax (MX Series Routers)</b>	<code>request chassis fpc (offline   online   restart) slot <i>slot-number</i></code> <code>&lt;all-members&gt;</code> <code>&lt;local&gt;</code> <code>&lt;member <i>member-id</i>&gt;</code>
<b>Syntax (MX2020 Universal Routing Platforms)</b>	<code>request chassis fpc (offline   online   restart) slot <i>slot-number</i></code>
<b>Syntax (MX204, MX2010, MX2008, and MX10003 Universal Routing Platforms)</b>	<code>request chassis fpc (offline   online   restart) slot <i>slot-number</i></code>
<b>Syntax (EX9200, EX9251, EX9253 Switches)</b>	<code>request chassis fpc (offline   online   restart) slot <i>slot-number</i></code>
<b>Syntax (QFabric System)</b>	<code>request chassis fpc</code> <code>&lt;interconnect-device <i>name</i> slot <i>slot-number</i> (offline   online)&gt;</code> <code>&lt;(offline   online) interconnect-device <i>name</i> slot <i>slot-number</i>&gt;</code> <code>&lt;slot <i>slot-number</i> interconnect-device <i>name</i> (offline   online)&gt;</code>
<b>Syntax (PTX Series Packet Transport Routers)</b>	<code>request chassis fpc (offline   online   restart) slot <i>slot-number</i></code>
<b>Release Information</b>	<p>Command introduced before Junos OS Release 7.4.</p> <p>Command introduced in Junos OS Release 9.0 for EX Series switches.</p> <p>Command introduced in Junos OS 11.3 for QFX Series.</p>

Command introduced in Junos OS Release 12.1x48 for PTX Series Packet Transport Routers.

Command introduced in Junos OS Release 12.3 for MX2020 Universal Routing Platforms.

Command introduced in Junos OS Release 12.3 for MX2010 Universal Routing Platforms.

Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

Command introduced in Junos OS Release 16.1R1 for EX9200 switches.

Command introduced in Junos OS Release 17.2 for MX2008 Universal Routing Platforms.

Command introduced in Junos OS Release 17.3 for MX10003 Universal Routing Platforms.

Command introduced in Junos OS Release 17.4 for MX204 Universal Routing Platforms.

Command introduced in Junos OS Release 18.1R1 for EX9251 Switches.

Command introduced in Junos OS Release 18.2 for EX9253 Switches.

**Description** (M20, M40, M40e, M120, M160, M320, MX Series, and T Series routers, QFabric systems, EX Series switches, and PTX Series Packet Transport Routers only) Control the operation of the Flexible PIC Concentrator (FPC).



**NOTE:** Starting with Junos OS Release 12.3, it is possible that FPCs brought offline by using the `request chassis fpc slot fpc-slot offline operational-mode` CLI command can come online during a configuration commit or power-supply replacement procedure. As an alternative, use the `set fpc fpc-slot power off configuration-mode` command at the `[edit chassis]` hierarchy level to ensure that the FPCs remain offline.



**NOTE:** In releases earlier than Junos OS Release 15.1F3 and Junos OS Release 16.1, offline FPCs in the PTX5000 router might be powered on by the router during a reboot, or when triggered by other power management events on the router, such as when you take another FPC offline.

Starting with Junos OS Release 15.1F3 and Junos OS Release 16.1, offline FPCs do not come online during reboots or other power management events. To bring such an FPC online:

1. Delete the `fpc fpc-slot power off` statement from the `[edit chassis]` hierarchy level, if that statement is configured, and commit the configuration.
2. Either issue the `request chassis fpc online slot fpc-slot operational-mode` CLI command or press and hold the FPC ONLINE/OFFLINE button for about 5 seconds until the green OK LED next to the button lights steadily.





**NOTE:** If a CLI-based firmware upgrade is in progress, the specified FPC does not restart. Starting with Junos OS Release 15.1, the following message is displayed when this occurs:

```
user@host> request chassis fpc slot 0 restart
FPC 0 Firmware update in progress. Wait!!!
```



**NOTE:** The command `request chassis fpc (offline | online) slot slot-number` is not supported on PTX1000 router. Whereas, `request chassis fpc restart slot slot-number` is supported on PTX1000 router

**Options** **offline**—Take the FPC offline.

**online**—Bring the FPC online.

**interconnect-device *name***—(QFabric systems only) Bring the FPC on the QFX3008-I Interconnect device either offline or online:

- (QFabric System) On a QFabric system, specify the name of the QFX3008-I Interconnect device containing the FPC you want to bring either offline or online.

**restart**—Restart the FPC.

**slot *slot-number***—FPC slot number:

- M20 router—0 through 3.
- M120 router—0 through 5.
- MX240 router—0 through 2. On the MX240 router, slot-number corresponds to the (DPC slot number. If an MPC is installed, slot-number corresponds to the MPC slot number.
- MX480 router—0 through 5. On the MX480 router, slot-number corresponds to the DPC slot number. If an MPC is installed, slot-number corresponds to the MPC slot number.
- MX960 router—0 through 11. On the MX960 router, slot-number corresponds to the DPC slot number. If an MPC is installed, slot-number corresponds to the MPC slot number.
- MX2020 router—0 through 19.
- MX2010 router—0 through 9.
- MX2008 router—0 through 9.

- TX Matrix and TX Matrix Plus routers only—On the TX Matrix router, if you specify the number of the T640 router by using the `lcc number` option (the recommended method), replace *slot-number* with a value from 0 through 7. Otherwise, replace *slot-number* with a value from 0 through 31.

Likewise, on a TX Matrix Plus router, if you specify the number of the T1600 or T4000 router by using the `lcc number` option (the recommended method), replace *slot-number* with a value from 0 through 7. Otherwise, replace *slot-number* with a value from 0 through 31. In case of TX Matrix Plus router with 3D SIBs, replace *slot-number* with a value from 0 through 63. For example, the following commands have the same result:

```
user@host> request chassis fpc lcc 1 slot 1 offline
user@host> request chassis fpc slot 9 offline
```

- Other routers—0 through 7.
- QFabric System—Replace *slot-number* with a value from 0 through 2.
- EX Series switches:
  - EX4200 switches in a Virtual Chassis configuration—Replace *slot-number* with a value from 0 through 9.
  - EX6210 switches—Replace *slot-number* with a value from 0 through 9.



**NOTE:** These commands are not supported for slots 4 and 5 when a Switch Fabric and Routing Engine (SRE) module is installed in those slots. These commands are supported for slots 4 and 5 only if a line card is installed in them.

---

- EX8208 switches—Replace *slot-number* with a value from 0 through 7.
- EX8216 switches—Replace *slot-number* with a value from 0 through 15.
- EX9204 switches—Replace *slot-number* with a value from 0 through 2.
- EX9208 switches—Replace *slot-number* with a value from 0 through 5.
- EX9214 switches—Replace *slot-number* with a value from 0 through 11.
- PTX5000 Packet Transport Router—Replace *slot-number* with a value from 0 through 7.

**all-members**—(MX Series routers only) (Optional) Change FPC status of all members of the Virtual Chassis configuration.

**local**—(MX Series routers only) (Optional) Change FPC status of the local Virtual Chassis member.

**member *member-id***—(MX Series routers only) (Optional) Change FPC status of the specified member of the Virtual Chassis configuration. Replace *member-id* with a value of 0 or 1.

**lcc *number***—(TX Matrix router and TX Matrix Plus router only) (Optional) Line-card chassis number.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**Required Privilege Level** maintenance

**Related Documentation**

- [show chassis fpc on page 424](#)
- *show chassis fpc-feb-connectivity*
- [show chassis fabric fpcs on page 474](#)
- *Configuring the Junos OS to Make a Flexible PIC Concentrator Stay Offline*
- *Configuring the Junos OS to Resynchronize FPC Sequence Numbers with Active FPCs when an FPC Comes Online*
- *MX960 Flexible PIC Concentrator Description*

**List of Sample Output**

[request chassis fpc on page 131](#)  
[request chassis fpc \(MX Series Routers with Media Services Blade \[MSB\]\) on page 132](#)  
[request chassis fpc \(MX2020 Router\) on page 132](#)  
[request chassis fpc \(MX2010 Router\) on page 132](#)  
[request chassis fpc \(MX2008 Router\) on page 132](#)  
[request chassis fpc \(MX10003 Router\) on page 132](#)  
[request chassis fpc \(MX204 Router\) on page 132](#)  
[request chassis fpc \(EX9200 Switch\) on page 132](#)  
[request chassis fpc \(EX9251 Switch\) on page 132](#)  
[request chassis fpc \(EX9253 Switch\) on page 132](#)

**Output Fields** When you enter this command, you are provided feedback on the status of your request.

## Sample Output

[request chassis fpc](#)

```
user@host> request chassis fpc online slot 0
FPC 0 already online
```

#### request chassis fpc (MX Series Routers with Media Services Blade [MSB])

```
user@host> request chassis fpc slot 0
Possible completions:
  offline          Take FPC offline
  online           Bring FPC online
  restart          Restart FPC
```

#### request chassis fpc (MX2020 Router)

```
user@host >request chassis fpc online slot 2
FPC 2 already online
```

#### request chassis fpc (MX2010 Router)

```
user@host >request chassis fpc offline slot 5
Offline initiated, use "show chassis fpc" to verify
```

#### request chassis fpc (MX2008 Router)

```
user@host >request chassis fpc online slot 5
FPC 5 already online
```

#### request chassis fpc (MX10003 Router)

```
user@host>request chassis fpc online slot 1
FPC 1 already online
```

#### request chassis fpc (MX204 Router)

```
user@host>request chassis fpc online slot 0
FPC 0 already online
```

#### request chassis fpc (EX9200 Switch)

```
user@host> request chassis fpc slot 0
Possible completions:
  offline          Take FPC offline
  online           Bring FPC online
  restart          Restart FPC
```

#### request chassis fpc (EX9251 Switch)

```
user@switch> request chassis fpc online slot 0
FPC 0 already online
```

#### request chassis fpc (EX9253 Switch)

```
user@switch> request chassis online fpc slot 0
FPC 0 already online
```

## request chassis pic

<b>List of Syntax</b>	<a href="#">Syntax on page 133</a> <a href="#">Syntax (ACX4000 Series Routers) on page 133</a> <a href="#">Syntax (MX Series Routers) on page 133</a> <a href="#">Syntax (TX Matrix and TX Matrix Plus Routers) on page 133</a> <a href="#">Syntax (EX9251, EX9253 Switches) on page 133</a>
<b>Syntax</b>	<code>request chassis pic (offline   online) fpc-slot <i>slot-number</i> pic-slot <i>slot-number</i></code>
<b>Syntax (ACX4000 Series Routers)</b>	<code>request chassis pic (offline   online) fpc-slot <i>slot-number</i> pic-slot <i>slot-number</i></code>
<b>Syntax (MX Series Routers)</b>	<code>request chassis pic (offline   online) fpc-slot <i>slot-number</i> pic-slot <i>slot-number</i> &lt;member <i>member-id</i>&gt;</code>
<b>Syntax (TX Matrix and TX Matrix Plus Routers)</b>	<code>request chassis pic (offline   online) fpc-slot <i>slot-number</i> pic-slot <i>slot-number</i> &lt;lcc <i>number</i>&gt;</code>
<b>Syntax (EX9251, EX9253 Switches)</b>	<code>request chassis pic (offline   online) pic-slot <i>slot-number</i> fpc--slot <i>slot-number</i> &lt;lcc <i>number</i>&gt;</code>
<b>Release Information</b>	<p>Command introduced before Junos OS Release 7.4.</p> <p>Command introduced in Junos OS Release 9.0 for EX Series switches.</p> <p>Command introduced in Junos OS Release 12.3 for ACX4000 Routers.</p> <p>Command introduced in Junos OS Release 13.2 for the QFX Series.</p> <p>Command introduced in Junos OS Release 17.2 for PTX10008 Routers.</p> <p>Option <b>member</b> introduced in Junos OS Release 14.2 for MX Series routers.</p> <p>Command introduced in Junos OS Release 17.3 for MX10003 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 18.1R1 for EX9251 Switches.</p> <p>Command introduced in Junos OS Release 18.2 for EX9253 Switches.</p>
<b>Description</b>	Control the operation of the PIC.



**NOTE:** The `request chassis pic (offline | online) fpc-slot slot number pic-slot slot-number` command is not supported for built-in PICs on MX Series routers.

To view a list of built-in PICs on the router or switch chassis, use the `show chassis hardware` command.



**NOTE:** This command is not supported on MX960 and MX2020 routers with MPC5EQ.



**NOTE:** T1600 routers and TX Matrix Plus routers with 100-Gigabit Ethernet PICs require two adjacent PIC slots, 0 and 1, for each PIC. Therefore, only online and offline command options to PIC slot 0 are allowed. Use of the online and offline command options for PIC slot 1 with the described router and PIC combination is not allowed.



**NOTE:** In T Series routers, when the PIC state is set from offline to online or vice-versa before the processing is complete for the previous command, you are provided feedback on the status of your request. The following sample messages are displayed if you try to set a PIC offline or online:

```
user@switch> request chassis pic fpc-slot 1 pic-slot 0 online
fpc 1 pic 0 online initiated, use "show chassis fpc pic-status" to verify
user@switch> request chassis pic fpc-slot 1 pic-slot 0 online
FPC 1 PIC 0 already transitioning to online
```

When the same PIC is set to a different state while the transition is in progress, you are provided feedback on the status of your request.

```
user@switch> request chassis pic fpc-slot 1 pic-slot 0 offline
FPC 1, PIC 0 already transitioning to online. Please retry later.
```



**NOTE:** If a CLI-based firmware upgrade is in progress, it prevents the specified PIC from restarting. Starting in Junos OS Release 15.1, the following message is displayed:

```
user@host> request chassis pic fpc-slot 0 pic-slot 1 offline
PIC's Firmware update in progress. Wait!!!
```



**NOTE:** The command `request chassis pic (offline | online) fpc-slot slot-number pic-slot slot-number` is not supported on PTX1000 routers.

**Options**    **offline**—Take the PIC offline.

**online**—Bring the PIC online.

**fpc-slot *slot-number***—Flexible PIC Concentrator (FPC) slot number. Replace *slot-number* with a value appropriate for your router or switch:

- ACX4000 routers—1 or 2.
- EX Series switches:
  - EX3200 switches and EX4200 standalone switches—0.
  - EX4200 switches in a Virtual Chassis configuration—0 through 9 (switch's member ID).
  - EX8208 switches—0 through 7 (line card).
  - EX8216 switches—0 through 15 (line card).
- M5, M7i, M10, and M10i routers—0 or 1.
- M20 routers—0 through 3.
- M40 and M40e routers—0 through 7.
- M120 routers—0 through 5.
- M160 routers—0 through 7.
- M320 routers—0 through 7.
- MX 5, MX10, and MX40 routers—0 or 1.
- MX80 routers—0 or 1.
- MX240 routers—0 through 2
- MX480 routers—0 through 5
- MX2020 routers—0 through 19.
- MX2010 routers—0 through 9.
- MX960 routers—0 through 11.
- MX10003 routers—0 or 1.
- MX204 routers—0.
- PTX5000 routers—0 or 1.
- T Series routers—0 through 7.
- TX Matrix and TX Matrix Plus routers only—On a TX Matrix router, if you specify the number of the T640 router by using the *lcc number* option (the recommended method), replace *slot-number* with a value from 0 through 7. Otherwise, replace *slot-number* with a value from 0 through 31.

Likewise, on a TX Matrix Plus router, if you specify the *number* of the T1600 or T4000 router by using the *lcc number* option (the recommended method), replace *slot-number* with a value from 0 through 7. Otherwise, for the FPC slot number, replace *slot-number* with a value from 0 through 31. On a TX Matrix Plus router with 3D SIBs to assign the FPC slot number, replace *slot-number* with a value from 0 through 63. For example, the following commands have the same result:

```
user@host> request chassis pic fpc-slot 1 lcc 1 pic-slot 0 offline
```

**user@host> request chassis pic fpc-slot 9 pic-slot 0 offline**

- QFX5100 standalone switches—0.

**lcc *number***—(TX Matrix router and TX Matrix Plus router only) (Optional) Line-card chassis number.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**member *member-id***—(MX Series routers only) (Optional) Change the PIC status on the specified member of the Virtual Chassis configuration. Replace *member-id* with the value that is assigned to the specified member.

**offline**—Take the PIC offline.

**online**—Bring the PIC online.

**pic-slot *slot-number***—PIC slot number.

- EX3200 and EX4200 switches—0 for built-in network interfaces and 1 for interfaces on uplink modules.
- EX8208 and EX8216 switches—0.
- M Series routers—0, 1, 2, or 3
- MX960 router—*slot-number* corresponds to the slot number of the Packet Forwarding Engine.
- MX204 router—0 or 1.
- PTX5000 routers—0 or 1.
- T320 router—0 or 1.
- T640 router—0, 1, 2, or 3.
- T1600 router—0, 1, 2, or 3.
- T4000 router—0, 1, 2, or 3.
- QFX5100 standalone switches—0, 1, or 2. PIC 0 is used for all interfaces that are not configured on expansion modules, and PIC 1 and PIC 2 are used for interfaces configured on expansion modules.



**Required Privilege Level** maintenance

**Related Documentation**

- [show chassis hardware on page 624](#)
- [show chassis pic on page 920](#)

**List of Sample Output**

- [request chassis pic on page 137](#)
- [request chassis pic online member \(MX Series Routers\) on page 137](#)
- [request chassis pic offline member \(MX Series Routers\) on page 137](#)
- [request chassis pic \(MX10003 Router\) on page 137](#)
- [request chassis pic online member \(PTX10008 Router\) on page 137](#)
- [request chassis pic online member \(EX9251 Switch\) on page 137](#)
- [request chassis pic online member \(EX9253 Switch\) on page 137](#)

**Output Fields** When you enter this command, you are provided feedback on the status of your request.

## Sample Output

### request chassis pic

```
user@host> request chassis pic pic-slot 0 online fpc-slot 0
FPC 0, PIC 0 is already online
```

### request chassis pic online member (MX Series Routers)

```
user@host> request chassis pic online member 1 fpc-slot 11 pic-slot 3
fpc 11 pic 3 online initiated
```

### request chassis pic offline member (MX Series Routers)

```
user@host> request chassis pic offline member 1 fpc-slot 11 pic-slot 3
fpc 11 pic 3 offline initiated
```

### request chassis pic (MX10003 Router)

```
user@host> request chassis pic online pic-slot 1 fpc-slot 0
FPC 0 is not online
```

### request chassis pic online member (PTX10008 Router)

```
user@host> request chassis pic online pic-slot 1 fpc-slot 0
FPC 0, PIC 1 is empty
```

### request chassis pic online member (EX9251 Switch)

```
user@switch> request chassis pic pic-slot 0 online fpc-slot 0
FPC 0, PIC 0 is already online
```

### request chassis pic online member (EX9253 Switch)

```
user@switch> request chassis pic pic-slot 0 online fpc-slot 0
FPC 0, PIC 0 is already online
```



## request chassis routing-engine master

<b>List of Syntax</b>	<a href="#">Syntax on page 139</a> <a href="#">Syntax (M Series, MX Series, T Series Routers) on page 139</a> <a href="#">Syntax (TX Matrix Routers) on page 139</a> <a href="#">Syntax (TX Matrix Plus Routers) on page 139</a> <a href="#">Syntax (MX Series Virtual Chassis) on page 139</a> <a href="#">Syntax (QFX Series) on page 139</a>
<b>Syntax</b>	request chassis routing-engine master (acquire   release   switch) <no-confirm>
<b>Syntax (M Series, MX Series, T Series Routers)</b>	request chassis routing-engine master (acquire   release   switch) <no-confirm> <check>
<b>Syntax (TX Matrix Routers)</b>	request chassis routing-engine master (acquire   release   switch) (lcc <i>number</i>   scc   all-chassis) <no-confirm>
<b>Syntax (TX Matrix Plus Routers)</b>	request chassis routing-engine master (acquire   release   switch) (lcc <i>number</i>   sfc   all-chassis   all-lcc) <no-confirm>
<b>Syntax (MX Series Virtual Chassis)</b>	request chassis routing-engine master (acquire   release   switch) <all-members> <check> <local> <member <i>member-id</i> > <no-confirm>
<b>Syntax (QFX Series)</b>	request chassis routing-engine master (release   switch) <check> <interconnect-device <i>name</i> > <node-group <i>name</i> > <no-confirm>
<b>Release Information</b>	<p>Command introduced before Junos OS Release 7.4.</p> <p><b>all-chassis</b> option added in Junos OS Release 8.0.</p> <p>Command introduced in Junos OS Release 9.0 for EX Series switches.</p> <p><b>sfc</b> option introduced for the TX Matrix Plus router in Junos OS Release 9.6.</p> <p>Command introduced in Junos OS Release 11.3 for QFX Series.</p> <p>Command introduced in Junos OS Release 12.3 for MX2020 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 12.3 for MX2010 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 13.2 for MX104 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.</p> <p>Command introduced in Junos OS Release 17.2 for MX2008 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 17.2 for PTX10008 Routers.</p>

**Description** For routers or switches with multiple Routing Engines, control which Routing Engine is the master.



**CAUTION:** (Routing matrix based on the TX Matrix or TX Matrix Plus routers only) Within the routing matrix, we recommend that all Routing Engines run the same Junos OS Release. If you run different releases on the Routing Engines and a change in mastership occurs on any backup Routing Engine in the routing matrix, one or all routers (in a routing matrix based on the TX Matrix router or in a routing matrix based on a TX Matrix Plus router) might become logically disconnected from the TX Matrix router and cause data loss. For more information, see the [TX Matrix Router Hardware Guide](#) or the [High Availability Feature Guide](#).



**NOTE:** Successive graceful Routing Engine switchover events must be a minimum of 240 seconds (4 minutes) apart after both Routing Engines have come up.

If the router or switch displays a warning message similar to “Standby Routing Engine is not ready for graceful switchover. Packet Forwarding Engines that are not ready for graceful switchover might be reset,” do not attempt switchover. If you choose to proceed with switchover, only the Packet Forwarding Engines that were not ready for graceful switchover are reset. None of the Flexible PIC concentrators (FPCs) should spontaneously restart. We recommend that you wait until the warning no longer appears and then proceed with the switchover.

You will receive an error message stating “Command aborted. Not ready for mastership switch, try after n seconds” when this command is re-entered before 240 seconds have elapsed on EX Series switches.



**NOTE:** On a QFabric system, to avoid traffic loss on the network Node group, switch mastership of the routing engine to the backup routing engine, and then reboot.

**Options**

- acquire**—Attempt to become the master Routing Engine.
- release**—Request that the other Routing Engine become the master.
- switch**—Toggle mastership between Routing Engines.



**NOTE:** The **acquire** option should be used with caution because acquiring a Routing Engine may result in a corrupted database. If possible, use the **switch** option instead.

The **acquire**, **release**, and **switch** options have the following suboptions:

**all-chassis**—(TX Matrix and TX Matrix Plus routers only) On a routing matrix composed of a TX Matrix router and the attached T640 routers, switch mastership on all the Routing Engines in the routing matrix. Likewise, on a routing matrix composed of a TX Matrix Plus router and the attached T1600 or T4000 routers, switch mastership on all the Routing Engines in the routing matrix.

**all-lcc**—(TX Matrix Plus routers only) Request to acquire mastership for all line-card chassis (LCC).

**all-members**—(MX Series routers only) (Optional) Control Routing Engine mastership on the Routing Engines in all member routers of the Virtual Chassis configuration.

**check**—(QFabric systems, MX104, MX480, MX960, MX2010, MX2020, and MX2008 routers, and PTX5000 routers only) (Optional) Available with the **switch**, **release**, and **acquire** options. Check graceful switchover status of the standby Routing Engine before toggling mastership between Routing Engines.

**interconnect-device *name***—(QFabric systems only) (Optional) Control Routing Engine mastership on the Routing Engines on an Interconnect device.

**lcc *number***—(TX Matrix router and TX Matrix Plus router only) (Optional) Line-card chassis number.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(MX Series routers only) (Optional) Control Routing Engine mastership on the Routing Engines in the local Virtual Chassis member.

**member *member-id***—(MX Series routers only) (Optional) Control Routing Engine mastership on the Routing Engines of the specified member in the Virtual Chassis configuration. Replace *member-id* with a value of 0 or 1.

**no-confirm**—(Optional) Do not request confirmation for the switch.

**node-group name**—(QFabric systems only) (Optional) Control Routing Engine mastership on the Routing Engines on a Node group.

**scc**—(TX Matrix routers only) TX Matrix (switch-card chassis).

**sfc**—(TX Matrix Plus routers only) TX Matrix Plus router (or switch-fabric chassis).

**Additional Information** Because both Routing Engines are always running, the transition from one to the other as the master Routing Engine is immediate. However, the changeover interrupts communication to the System and Switch Board (SSB). The SSB takes several seconds to reinitialize the Flexible PIC Concentrators (FPCs) and restart the PICs. Interior gateway protocol (IGP) and BGP convergence times depend on the specific network environment.

By default, the Routing Engine in slot 0 (**RE0**) is the master and the Routing Engine in slot 1 (**RE1**) is the backup. To change the default master Routing Engine, include the **routing-engine** statement at the **[edit chassis redundancy]** hierarchy level in the configuration. For more information, see the *Junos OS Administration Library*

To have the backup Routing Engine become the master Routing Engine, use the **request chassis routing-engine master switch** command. If you use this command to change the master and then restart the chassis software for any reason, the master reverts to the default setting.



**NOTE:** Although the configurations on the two Routing Engines do not have to be the same and are not automatically synchronized, we recommend making both configurations the same.

**Required Privilege Level** maintenance

**Related Documentation**

- [show chassis routing-engine on page 947](#)
- *Configuring Routing Engine Redundancy*
- *Switching the Global Master and Backup Roles in a Virtual Chassis Configuration*

**List of Sample Output**

- [request chassis routing-engine master acquire on page 143](#)
- [request chassis routing-engine master switch on page 143](#)
- [request chassis routing-engine master switch check on page 143](#)

**Output Fields** When you enter this command, you are provided feedback on the status of your request.

## Sample Output

### request chassis routing-engine master acquire

```
user@host> request chassis routing-engine master acquire

warning: Traffic will be interrupted while the PFE is re-initialized

warning: The other routing engine's file system could be corrupted

Reset other routing engine and become master ? [yes,no] (no)
```

### request chassis routing-engine master switch

```
user@host> request chassis routing-engine master switch

warning: Traffic will be interrupted while the PFE is re-initialized
Toggle mastership between Routing Engines ? [yes,no] (no) yes

Resolving mastership...
Complete. The other Routing Engine becomes the master.
```

Switch mastership back to the local Routing Engine:

```
user@host> request chassis routing-engine master switch

warning: Traffic will be interrupted while the PFE is re-initialized
Toggle mastership between routing engines ? [yes,no] (no) yes

Resolving mastership...
Complete. The local routing engine becomes the master.
```

### request chassis routing-engine master switch check

Usage shown for M Series, MX Series, and T Series routers.

```
{master}[edit]
```

```
user@host> request chassis routing-engine master switch check
```

```
warning: Standby Routing Engine is not ready for graceful switchover.
```

```
{master}[edit]
```

```
user@host> request chassis routing-engine master switch check
Switchover Ready
```

You can similarly check the backup Routing Engine.

## request system halt

---

- List of Syntax**
- [Syntax on page 144](#)
  - [Syntax \(EX Series Switches\) on page 144](#)
  - [Syntax \(PTX Series\) on page 144](#)
  - [Syntax \(TX Matrix Router\) on page 144](#)
  - [Syntax \(TX Matrix Plus Router\) on page 145](#)
  - [Syntax \(MX Series Router\) on page 145](#)
  - [Syntax \(QFX Series\) on page 145](#)

**Syntax** request system halt  
<at *time*>  
<backup-routing-engine>  
<both-routing-engines>  
<other-routing-engine>  
<in *minutes*>  
<media (compact-flash | disk | removable-compact-flash | usb)>  
<message "*text*">

**Syntax (EX Series Switches)** request system halt  
<all-members>  
<at *time*>  
<backup-routing-engine>  
<both-routing-engines>  
<in *minutes*>  
<local>  
<media (external | internal)>  
<member *member-id*>  
<message "*text*">  
<other-routing-engine>  
<slice *slice*>

**Syntax (PTX Series)** request system halt  
<at *time*>  
<backup-routing-engine>  
<both-routing-engines>  
<other-routing-engine>  
<in *minutes*>  
<media (compact-flash | disk)>  
<message "*text*">

**Syntax (TX Matrix Router)** request system halt  
<all-lcc | lcc *number* | scc>  
<at *time*>  
<backup-routing-engine>  
<both-routing-engines>  
<other-routing-engine>  
<in *minutes*>  
<media (compact-flash | disk)>  
<message "*text*">



Syntax (TX Matrix Plus Router)	<pre>request system halt &lt;all-chassis   all-lcc   lcc <i>number</i>   sfc <i>number</i>&gt; &lt;at <i>time</i>&gt; &lt;backup-routing-engine&gt; &lt;both-routing-engines&gt; &lt;other-routing-engine&gt; &lt;in <i>minutes</i>&gt; &lt;media (compact-flash   disk)&gt; &lt;message "<i>text</i>"&gt;</pre>
Syntax (MX Series Router)	<pre>request system halt &lt;all-members&gt; &lt;at <i>time</i>&gt; &lt;backup-routing-engine&gt; &lt;both-routing-engines&gt; &lt;in <i>minutes</i>&gt; &lt;local&gt; &lt;media (external   internal)&gt; &lt;member <i>member-id</i>&gt; &lt;message "<i>text</i>"&gt; &lt;other-routing-engine&gt;</pre>
Syntax (QFX Series)	<pre>request system halt &lt;all-members&gt; &lt;at <i>time</i>&gt; &lt;both-routing-engines&gt; &lt;director-device <i>director-device-id</i>&gt; &lt;in <i>minutes</i>&gt; &lt;local&gt; &lt;media &gt; &lt;member <i>member-id</i>&gt; &lt;message "<i>text</i>"&gt; &lt;other-routing-engine&gt; &lt;slice <i>slice</i>&gt;</pre>
Release Information	<p>Command introduced before Junos OS Release 7.4.</p> <p><b>other-routing-engine</b> option introduced in Junos OS Release 8.0.</p> <p>Command introduced in Junos OS Release 9.0 for EX Series switches.</p> <p><b>sfc</b> option introduced for the TX Matrix Plus router in Junos OS Release 9.6.</p> <p>Command introduced in Junos OS Release 11.1 for the QFX Series.</p> <p><b>director-device</b> option introduced for QFabric systems in Junos OS Release 12.2.</p> <p><b>backup-routing-engine</b> option introduced in Junos OS Release 13.1.</p> <p>Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.</p>
Description	Stop the router or switch software.



**NOTE:** When you issue this command on an individual component—for example, a Node device—in a QFabric system, you will receive a warning that says “Hardware-based members will halt, Virtual Junos Routing Engines will reboot.” If you want to halt only one member of a Node group, issue this command with the `member` option on the Node device CLI, because you cannot issue this command from the QFabric CLI. Also, issuing this command might cause traffic loss on an individual component.

When you issue this command on a QFX5100 switch, you are not prompted to reboot. You must power cycle the switch to reboot.



**NOTE:** For the routers with the Routing Engines RE-S-2x00x6, RE-PTX-2x00x8, and RE-S-2x00x8, this command is deprecated and might be removed completely in a future release.

On these routers, this command is replaced with the `request vmhost halt` command which provides similar functionality.

**Options** **none**—Stop the router or switch software immediately.

**all-chassis**—(TX Matrix and TX Matrix Plus routers only) (Optional) Halt all chassis.

**all-lcc**—(TX Matrix and TX Matrix Plus routers only) (Optional) On a TX Matrix router, halt all T640 routers (or line-card chassis) connected to the TX Matrix router. On a TX Matrix Plus router, halt all T1600 routers (or line-card chassis) connected to the TX Matrix Plus router.

**all-members**—(EX4200 switches and MX Series routers only) (Optional) Halt all members of the Virtual Chassis configuration.

**at time** —(Optional) Time at which to stop the software, specified in one of the following ways:

- **now**—Stop the software immediately. This is the default.
- **+minutes**—Number of minutes from now to stop the software.
- **yymmddhhmm**—Absolute time at which to stop the software, specified as year, month, day, hour, and minute.
- **hh:mm**—Absolute time on the current day at which to stop the software.

**backup-routing-engine**—(Optional) Halt the backup Routing Engine. This command halts the backup Routing Engine, regardless from which Routing Engine the command is executed. For example, if you issue the command from the master Routing Engine,

the backup Routing Engine is halted. If you issue the command from the backup Routing Engine, the backup Routing Engine is halted.

**both-routing-engines**—(Optional) Halt both Routing Engines at the same time.

**director-device *director-device-id***—(QFabric systems only) Halt a specific Director device.

**lcc *number***—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, halt a specific T640 router that is connected to the TX Matrix router. On a TX Matrix Plus router, halt a specific router that is connected to the TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(EX4200 switches and MX Series routers only) (Optional) Halt the local Virtual Chassis member.

**in *minutes***—(Optional) Number of minutes from now to stop the software. This option is an alias for the at +*minutes* option.

**media (compact-flash | disk)**—(Optional) Boot medium for the next boot.

**media (external | internal)**—(EX Series and QFX Series switches and MX Series routers only) (Optional) Halt the boot media:

- **external**—Halt the external mass storage device.
- **internal**—Halt the internal flash device.

**member *member-id***—(EX4200 switches and MX Series routers only) (Optional) Halt the specified member of the Virtual Chassis configuration. For EX4200 switches, replace *member-id* with a value from 0 through 9. For an MX Series Virtual Chassis, replace *member-id* with a value of 0 or 1.

**message "*text*"**—(Optional) Message to display to all system users before stopping the software.

**other-routing-engine**—(Optional) Halt the other Routing Engine from which the command is issued. For example, if you issue the command from the master Routing Engine, the backup Routing Engine is halted. Similarly, if you issue the command from the backup Routing Engine, the master Routing Engine is halted.

**scc**—(TX Matrix routers only) (Optional) Halt the TX Matrix router (or switch-card chassis).

**sfc *number***—(TX Matrix Plus routers only) (Optional) Halt the TX Matrix Plus router (or switch-fabric chassis). Replace *number* with 0.

**slice *slice***—(EX Series and QFX Series switches only) (Optional) Halt a partition on the boot media. This option has the following suboptions:

- 1—Halt partition 1.
- 2—Halt partition 2.
- **alternate**—Reboot from the alternate partition.

**Additional Information** On the M7i router, the **request system halt** command does not immediately power down the Packet Forwarding Engine. The power-down process can take as long as 5 minutes.

On a TX Matrix router and TX Matrix Plus router if you issue the **request system halt** command on the master Routing Engine, all the master Routing Engines connected to the routing matrix are halted. If you issue this command on the backup Routing Engine, all the backup Routing Engines connected to the routing matrix are halted.



**NOTE:** If you have a router or switch with two Routing Engines and you want to shut the power off to the router or switch or remove a Routing Engine, you must first halt the backup Routing Engine (if it has been upgraded), and then halt the master Routing Engine. To halt a Routing Engine, issue the **request system halt** command. You can also halt both Routing Engines at the same time by issuing the **request system halt both-routing-engines** command.

---

**Required Privilege Level** maintenance

**Related Documentation**

- [clear system reboot on page 114](#)
- [request system power-off on page 151](#)
- *request vmhost halt*
- [Routing Matrix with a TX Matrix Plus Router Solutions Page](#)

**List of Sample Output**

- [request system halt on page 149](#)
- [request system halt \(In 2 Hours\) on page 149](#)
- [request system halt \(Immediately\) on page 149](#)
- [request system halt \(At 1:20 AM\) on page 149](#)

**Output Fields** When you enter this command, you are provided feedback on the status of your request.

## Sample Output

### request system halt

```
user@host> request system halt
Halt the system ? [yes,no] (no) yes

*** FINAL System shutdown message from root@section2 ***
System going down IMMEDIATELY
Terminated
...
syncing disks... 11 8 done
The operating system has halted.
Please press any key to reboot.
```

### request system halt (In 2 Hours)

The following example, which assumes that the time is 5 PM (1700), illustrates three different ways to request that the system stop 2 hours from now:

```
user@host> request system halt at +120
user@host> request system halt in 120
user@host> request system halt at 19:00
```

### request system halt (Immediately)

```
user@host> request system halt at now
```

### request system halt (At 1:20 AM)

To stop the system at 1:20 AM, enter the following command. Because 1:20 AM is the next day, you must specify the absolute time.

```
user@host> request system halt at yymmdd120
request system halt at 120
Halt the system at 120? [yes,no] (no) yes
```

## request system logout

---

<b>Syntax</b>	<code>request system logout (pid <i>pid</i>   terminal <i>terminal</i>   user <i>username</i>)</code> <code>&lt;all&gt;</code>
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. Command introduced in Junos OS Release 9.0 for EX Series switches. Command introduced in Junos OS Release 11.1 for the QFX Series. Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Log out users from the router or switch and the configuration database. If a user held the <b>configure exclusive</b> lock, this command clears the exclusive lock.
<b>Options</b>	<b>all</b> —(Optional) Log out all sessions owned by a particular PID, terminal session, or user. (On a TX Matrix or TX Matrix Plus router, this command is broadcast to all chassis.)  <b>pid <i>pid</i></b> —Log out the user session using the specified management process identifier (PID). The PID type must be management process.  <b>terminal <i>terminal</i></b> —Log out the user for the specified terminal session.  <b>user <i>username</i></b> —Log out the specified user.
<b>Required Privilege Level</b>	configure
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <i>Log a User Out of the Router</i></li></ul>
<b>List of Sample Output</b>	<a href="#">request system logout on page 150</a>
<b>Output Fields</b>	When you enter this command, you are provided feedback on the status of your request.

## Sample Output

### request system logout

```
user@host> request system logout user test all
Connection closed by foreign host.
```

## request system power-off

<b>List of Syntax</b>	<a href="#">Syntax on page 151</a> <a href="#">Syntax (EX Series Switches) on page 151</a> <a href="#">Syntax (TX Matrix Router) on page 151</a> <a href="#">Syntax (TX Matrix Plus Router) on page 151</a> <a href="#">Syntax (MX Series Router) on page 151</a> <a href="#">Syntax (QFX Series) on page 152</a>
<b>Syntax</b>	<pre>request system power-off &lt;both-routing-engines&gt; &lt;other-routing-engine&gt; &lt;at <i>time</i>&gt; &lt;in <i>minutes</i>&gt; &lt;media (compact-flash   disk   removable-compact-flash   usb)&gt; &lt;message "<i>text</i>"&gt;</pre>
<b>Syntax (EX Series Switches)</b>	<pre>request system power-off &lt;all-members&gt; &lt;at <i>time</i>&gt; &lt;both-routing-engines&gt; &lt;in <i>minutes</i>&gt; &lt;local&gt; &lt;media (external   internal)&gt; &lt;member <i>member-id</i>&gt; &lt;message "<i>text</i>"&gt; &lt;other-routing-engine&gt; &lt;slice <i>slice</i>&gt;</pre>
<b>Syntax (TX Matrix Router)</b>	<pre>request system power-off &lt;all-chassis   all-lcc   lcc <i>number</i>   scc&gt; &lt;both-routing-engines&gt; &lt;other-routing-engine&gt; &lt;at <i>time</i>&gt; &lt;in <i>minutes</i>&gt; &lt;media (compact-flash   disk)&gt; &lt;message "<i>text</i>"&gt;</pre>
<b>Syntax (TX Matrix Plus Router)</b>	<pre>request system power-off &lt;all-chassis   all-lcc   lcc <i>number</i>   sfc <i>number</i>&gt; &lt;both-routing-engines&gt; &lt;other-routing-engine&gt; &lt;at <i>time</i>&gt; &lt;in <i>minutes</i>&gt; &lt;media (compact-flash   disk)&gt; &lt;message "<i>text</i>"&gt;</pre>
<b>Syntax (MX Series Router)</b>	<pre>request system power-off &lt;all-members&gt; &lt;at <i>time</i>&gt; &lt;both-routing-engines&gt;</pre>

```
<in minutes>  
<local>  
<media (external | internal)>  
<member member-id>  
<message "text">  
<other-routing-engine>
```

**Syntax (QFX Series)** request system power-off  
<at *time*>  
<in *minutes*>  
<media (external | internal)>  
<message "*text*">  
<slice *slice*>

**Release Information** Command introduced in Junos OS Release 8.0.  
Command introduced in Junos OS Release 9.0 for EX Series switches.  
Command introduced in Junos OS Release 11.1 for the QFX Series.  
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

**Description** Power off the Routing Engines.



**NOTE:** When you issue this command on an individual component in a QFabric system, you will receive a warning that says “Hardware-based members will halt, Virtual Junos Routing Engines will reboot.” If you want to halt only one member, use the member option. You cannot issue this command from the QFabric CLI.



**NOTE:** For a standalone chassis (such as MX Series, PTX Series, and T Series routers), the request to power off the system is applicable only to the Routing Engines. When you request to power off both Routing Engines, all the FPCs in the chassis shut down after approximately 10 minutes and the chassis fans run at full speed. The FPCs shut down because they no longer have communication with the Routing Engines and an Inter-Integrated Circuit (I2C) timeout occurred.



**NOTE:** For the routers with Routing Engines RE-S-2x00x6, RE-PTX-2x00x8, and RE-S-2x00x8, this command is deprecated and might be removed completely in a future release.

On these routers, this command is replaced with the request vmhost power-off command which provides similar functionality.



**Options** **none**—Power off the router or switch software immediately.

**all-chassis**—(Optional) (TX Matrix and TX Matrix Plus router only) Power off all Routing Engines in the chassis.

**all-lcc**—(Optional) (TX Matrix and TX Matrix Plus router only) On a TX Matrix router, power off all T640 routers (or line-card chassis) connected to the TX Matrix router. On a TX Matrix Plus router, power off all T1600 routers (or line-card chassis) connected to the TX Matrix Plus router.

**all-members**—(EX4200 switches and MX Series routers only) (Optional) Power off all members of the Virtual Chassis configuration.

**at *time***—(Optional) Time at which to power off the software, specified in one of the following ways:

- **now**—Power off the software immediately. This is the default.
- **+*minutes***—Number of minutes from now to power off the software.
- ***yymmddhhmm***—Absolute time at which to power off the software, specified as year, month, day, hour, and minute.
- ***hh:mm***—Absolute time on the current day at which to power off the software.

**both-routing-engines**—(Optional) Power off both Routing Engines at the same time.

**in *minutes***—(Optional) Number of minutes from now to power off the software. This option is an alias for the **at +*minutes*** option.

***lcc number***—(Optional) (TX Matrix and TX Matrix Plus router only) On a TX Matrix router, power off a T640 router that is connected to the TX Matrix router. On a TX Matrix Plus router, power off a specific router that is connected to the TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(EX4200 switches and MX Series routers only) (Optional) Power off the local Virtual Chassis member.

**media (compact-flash | disk)**—(Optional) Boot medium for the next boot.

**media (external | internal)**—(EX Series and QFX Series switches and MX Series routers only) (Optional) Power off the boot media:

- **external**—Power off the external mass storage device.
- **internal**—Power off the internal flash device.

**member *member-id***—(EX4200 switches and MX Series routers only) (Optional) Power off the specified member of the Virtual Chassis configuration. For EX4200 switches, replace ***member-id*** with a value from 0 through 9. For an MX Series Virtual Chassis, replace ***member-id*** with a value of 0 or 1.

**message "*text*"**—(Optional) Message to display to all system users before powering off the software.

**other-routing-engine**—(Optional) Power off the other Routing Engine from which the command is issued. For example, if you issue the command from the master Routing Engine, the backup Routing Engine is halted. Similarly, if you issue the command from the backup Routing Engine, the master Routing Engine is halted.

**scc**—(Optional) (TX Matrix router only) Power off only the master Routing Engine or the backup Routing Engine on the TX Matrix router (or switch-card chassis). If you issue the command from the master Routing Engine, the master SCC is powered off. If you issue the command from the backup Routing Engine, the backup SCC is powered off.

**sfc *number***—(Optional) (TX Matrix Plus router only) Power off only the master Routing Engine or the backup Routing Engine on the TX Matrix Plus router (or switch-fabric chassis). If you issue the command from the master Routing Engine, the master SFC is powered off. If you issue the command from the backup Routing Engine, the backup SFC is powered off. Replace ***number*** with zero.

**slice *slice***—(EX Series and QFX Series switches only) (Optional) Power off a partition on the boot media. This option has the following suboptions:

- **1**—Power off partition 1.
- **2**—Power off partition 2.
- **alternate**—Reboot from the alternate partition.

**Additional Information** On a routing matrix composed of a TX Matrix router and T640 routers, if you issue the **request system power-off** command on the TX Matrix master Routing Engine, all the master Routing Engines connected to the routing matrix are powered off. If you issue this command on the backup Routing Engine, all the backup Routing Engines connected to the routing matrix are powered off.

Likewise, on a routing matrix composed of a TX Matrix Plus router and T1600 routers, if you issue the **request system power-off** command on the TX Matrix Plus master Routing Engine, all the master Routing Engines connected to the routing matrix are powered off.

If you issue this command on the backup Routing Engine, all the backup Routing Engines connected to the routing matrix are powered off.

If you issue the **request system power-off both-routing-engines** command on the TX Matrix or TX Matrix Plus router, all the Routing Engines on the routing matrix are powered off.

**Required Privilege Level** maintenance

**List of Sample Output** [request system power-off on page 155](#)

**Output Fields** When you enter this command, you are provided feedback on the status of your request.

## Sample Output

### [request system power-off](#)

```
user@host> request system power-off message "This router will be powered off in 30 minutes.
Please save your data and log out immediately."
warning: This command will not halt the other routing-engine.
If planning to switch off power, use the both-routing-engines option.
Power Off the system ? [yes,no] (no) yes
```

```
*** FINAL System shutdown message from remote@nutmeg ***
System going down IMMEDIATELY
```

```
This router will be powered off in 30 minutes. Please save your data and log out
immediately.
```

```
Shutdown NOW!
[pid 5177]
```

## request system reboot

<b>List of Syntax</b>	<a href="#">Syntax on page 156</a> <a href="#">Syntax (EX Series Switches and EX Series Virtual Chassis) on page 156</a> <a href="#">Syntax (MX Series Routers and MX Series Virtual Chassis, EX9200 Switches and EX9200 Virtual Chassis) on page 156</a> <a href="#">Syntax (QFabric Systems) on page 156</a> <a href="#">Syntax (QFX Series Switches and QFX Series Virtual Chassis, Virtual Chassis Fabric) on page 157</a> <a href="#">Syntax (TX Matrix Router) on page 157</a> <a href="#">Syntax (TX Matrix Plus Router) on page 157</a>
<b>Syntax</b>	<pre>request system reboot &lt;at <i>time</i>&gt; &lt;both-routing-engines&gt; &lt;in <i>minutes</i>&gt; &lt;media (compact-flash   disk   removable-compact-flash   usb)&gt; &lt;message "<i>text</i>"&gt; &lt;other-routing-engine&gt;</pre>
<b>Syntax (EX Series Switches and EX Series Virtual Chassis)</b>	<pre>request system reboot &lt;all-members   local   member <i>member-id</i>&gt; &lt;at <i>time</i>&gt; &lt;in <i>minutes</i>&gt; &lt;media (external   internal)&gt;   &lt;media (compact-flash   disk   removable-compact-flash   usb)&gt; &lt;message "<i>text</i>"&gt; &lt;slice <i>slice</i>&gt;</pre>
<b>Syntax (MX Series Routers and MX Series Virtual Chassis, EX9200 Switches and EX9200 Virtual Chassis)</b>	<pre>request system reboot &lt;all-members   local   member <i>member-id</i>&gt; &lt;at <i>time</i>&gt; &lt;both-routing-engines&gt; &lt;in <i>minutes</i>&gt; &lt;media (external   internal)&gt;   &lt;media (compact-flash   disk   usb)&gt;   &lt;junos   network   oam   usb&gt; &lt;message "<i>text</i>"&gt; &lt;other-routing-engine&gt;</pre>
<b>Syntax (QFabric Systems)</b>	<pre>request system reboot &lt;all &lt;graceful&gt;&gt; &lt;at <i>time</i>&gt; &lt;director-device <i>name</i>&gt; &lt;director-group &lt;graceful&gt;&gt; &lt;fabric &lt;graceful&gt;&gt; &lt;in <i>minutes</i>&gt; &lt;in-service&gt; &lt;media&gt; &lt;message "<i>text</i>"&gt; &lt;node-group <i>name</i>&gt; &lt;slice <i>slice</i>&gt;</pre>

**Syntax (QFX Series Switches and QFX Series Virtual Chassis, Virtual Chassis Fabric)**

```
request system reboot
<all-members | local | member member-id>
<at time>
<in minutes>
<hypervisor>
<junos | network | oam | usb>
<message "text">
<slice slice>
```

**Syntax (TX Matrix Router)**

```
request system reboot
<all-chassis | all-lcc | lcc number | scc>
<at time>
<both-routing-engines>
<in minutes>
<media (compact-flash | disk)>
<message "text">
<other-routing-engine>
```

**Syntax (TX Matrix Plus Router)**

```
request system reboot
<all-chassis | all-lcc | lcc number | sfc number>
<at time>
<both-routing-engines>
<in minutes>
<media (compact-flash | disk)>
<message "text">
<other-routing-engine>
<partition (1 | 2 | alternate)>
```

**Release Information**

Command introduced before Junos OS Release 7.4.  
Option **other-routing-engine** introduced in Junos OS Release 8.0.  
Command introduced in Junos OS Release 9.0 for EX Series switches.  
Option **sfc** introduced for the TX Matrix Plus router in Junos OS Release 9.6.  
Option **partition** changed to **slice** in Junos OS Release 10.0 for EX Series switches.  
Command introduced in Junos OS Release 11.1 for the QFX Series.  
Option **both-routing-engines** introduced in Junos OS Release 12.1.

**Description** Reboot the software.

This command can be used on standalone devices and on devices supported in a Virtual Chassis, Virtual Chassis Fabric, or QFabric system.



**NOTE:** Starting with Junos OS Release 15.1F3, the statement **request system reboot** reboots only the guest operating system on the PTX5000 with RE-PTX-X8-64G and, MX240, MX480, and MX960 with RE-S-X6-64G.

Starting with Junos OS Release 15.1F5, the statement **request system reboot** reboots only the guest operating system on the MX2010, and MX2020 with REMX2K-X8-64G.



**NOTE:** Starting from Junos OS Release 17.2R1, PTX10008 routers do not support the `request system reboot` command. Starting from Junos OS Release 17.4R1, PTX10016 routers do not support the `request system reboot` command. Use the `request vmhost reboot` command instead of the `request system reboot` command on the PTX10008 and PTX10016 routers to reboot the Junos OS software package or bundle on the router. See *request vmhost reboot*.



**NOTE:** On a QFabric system, to avoid traffic loss on the network Node group, switch mastership of the Routing Engine to the backup Routing Engine, and then reboot.

**Options** The options described here are not all supported on every platform or release of Junos OS. Refer to the Syntax sections for the options commonly available on each type of platform.

**none**—Reboot the software immediately.

**all-chassis**—(Optional) On a TX Matrix router or TX Matrix Plus router, reboot all routers connected to the TX Matrix or TX Matrix Plus router, respectively.

**all-lcc**—(Optional) On a TX Matrix router or TX Matrix Plus router, reboot all line card chassis connected to the TX Matrix or TX Matrix Plus router, respectively.

**all-members | local | member *member-id***—(Optional) Specify which member of the Virtual Chassis to reboot:

- **all-members**—Reboots each switch that is a member of the Virtual Chassis.
- **local**—Reboots only the local switch (switch where you are logged in).
- **member *member-id***—Reboots the specified member switch of the Virtual Chassis

**at *time***—(Optional) Time at which to reboot the software, specified in one of the following ways:

- **now**—Stop or reboot the software immediately. This is the default.
- **+*minutes***—Number of minutes from now to reboot the software.
- ***yymmddhhmm***—Absolute time at which to reboot the software, specified as year, month, day, hour, and minute.
- ***hh:mm***—Absolute time on the current day at which to stop the software, specified in 24-hour time.

**both-routing-engines**—(Optional) Reboot both Routing Engines at the same time.

**hypervisor**—(Optional) Reboot Junos OS, host OS, and any installed guest VMs.

**in *minutes***—(Optional) Number of minutes from now to reboot the software. This option is an alias for the **at +*minutes*** option.

**junos**—(Optional) Reboot from the Junos OS (main) volume.

**lcc *number***—(Optional) Line-card chassis (LLC) number.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**media (compact-flash | disk | removable-compact-flash | usb)**—(Optional) Use the indicated boot medium for the next boot.

**media (external | internal)**—(Optional) Use the indicated boot medium for the next boot:

- **external**—Reboot the device using a software package stored on an external boot source, such as a USB flash drive.
- **internal**—Reboot the device using a software package stored in an internal memory source.

**message "*text*"**—(Optional) Message to display to all system users before stopping or rebooting the software.

**network**—(Optional) Reboot using the Preboot Execution Environment (PXE) boot method over the network.

**oam**—(Optional) Reboot from the maintenance volume (OAM volume, usually the compact flash drive).

**other-routing-engine**—(Optional) Reboot the other Routing Engine from which the command is issued. For example, if you issue the command from the master Routing Engine, the backup Routing Engine is rebooted. Similarly, if you issue the command from the backup Routing Engine, the master Routing Engine is rebooted.

**partition *partition***—(Optional) Reboot using the specified partition on the boot media. This option is equivalent to the **slice** option that is supported on some devices. Specify one of the following *partition* values:

- 1—Reboot from partition 1.
- 2—Reboot from partition 2.
- **alternate**—Reboot from the alternate partition.

**scc**—(Optional) Reboot the Routing Engine on the TX Matrix switch-card chassis. If you issue the command from `re0`, `re0` is rebooted. If you issue the command from `re1`, `re1` is rebooted.

**sfc *number***—(Optional) Reboot the Routing Engine on the TX Matrix Plus switch-fabric chassis. If you issue the command from `re0`, `re0` is rebooted. If you issue the command from `re1`, `re1` is rebooted. Replace *number* with 0.

**slice *slice***—(Optional) Reboot using the specified partition on the boot media. This option was originally the **partition** option but was renamed to **slice** on EX Series and QFX Series switches. Specify one of the following *slice* values:

- 1—Reboot from partition 1.
- 2—Reboot from partition 2.
- **alternate**—Reboot from the alternate partition (which did not boot the switch at the last bootup).



**NOTE:** The **slice** option is not supported on QFX Series switches that have no alternate slice when Junos OS boots as a Virtual Machine (VM). To switch to the previous version of Junos OS, issue the **request system software rollback** command.

---

**usb**—(Optional) Reboot from a USB device.

The following options are available only on QFabric Systems:

**all**—(Optional) Reboots the software on the Director group, fabric control Routing Engines, fabric manager Routing Engines, Interconnect devices, and network and server Node groups.

**director-device *name***—(Optional) Reboots the software on the Director device and the default partition (QFabric CLI).

**director-group**—(Optional) Reboots the software on the Director group and the default partition (QFabric CLI).

**fabric**—(Optional) Reboots the fabric control Routing Engines and the Interconnect devices.

**node-group *name***—(Optional) Reboots the software on a server Node group or a network Node group.



**graceful**—(Optional) Enables the QFabric component to reboot with minimal impact to network traffic. This sub-option is only available for the **all**, **fabric**, and **director-group** options.

**Additional Information** Reboot requests are recorded in the system log files, which you can view with the **show log** command (see *show log*). Also, the names of any running processes that are scheduled to be shut down are changed. You can view the process names with the **show system processes** command (see *show system processes*).

On a TX Matrix or TX Matrix Plus router, if you issue the **request system reboot** command on the master Routing Engine, all the master Routing Engines connected to the routing matrix are rebooted. If you issue this command on the backup Routing Engine, all the backup Routing Engines connected to the routing matrix are rebooted.



**NOTE:** Before issuing the **request system reboot** command on a TX Matrix Plus router with no options or the **all-chassis**, **all-lcc**, **lcc number**, or **sfc** options, verify that master Routing Engine for all routers in the routing matrix are in the same slot number. If the master Routing Engine for a line-card chassis is in a different slot number than the master Routing Engine for a TX Matrix Plus router, the line-card chassis might become logically disconnected from the routing matrix after the **request system reboot** command.



**NOTE:** To reboot a router that has two Routing Engines, reboot the backup Routing Engine (if you have upgraded it) first, and then reboot the master Routing Engine.

**Required Privilege Level** maintenance

**Related Documentation**

- [clear system reboot on page 114](#)
- [request system halt on page 144](#)
- [Routing Matrix with a TX Matrix Plus Router Solutions Page](#)
- [request vmhost reboot](#)

**List of Sample Output**

- [request system reboot on page 162](#)
- [request system reboot \(at 2300\) on page 162](#)
- [request system reboot \(in 2 Hours\) on page 162](#)
- [request system reboot \(Immediately\) on page 162](#)
- [request system reboot \(at 1:20 AM\) on page 162](#)

**Output Fields** When you enter this command, you are provided feedback on the status of your request.

## Sample Output

### request system reboot

```
user@host> request system reboot
Reboot the system ? [yes,no] (no)
```

### request system reboot (at 2300)

```
user@host> request system reboot at 2300 message ?Maintenance time!?
Reboot the system ? [yes,no] (no) yes
```

```
shutdown: [pid 186]
*** System shutdown message from root@test.example.net ***
System going down at 23:00
```

### request system reboot (in 2 Hours)

The following example, which assumes that the time is 5 PM (17:00), illustrates three different ways to request the system to reboot in two hours:

```
user@host> request system reboot at +120
user@host> request system reboot in 120
user@host> request system reboot at 19:00
```

### request system reboot (Immediately)


```
user@host> request system reboot at now
```

### request system reboot (at 1:20 AM)

To reboot the system at 1:20 AM, enter the following command. Because 1:20 AM is the next day, you must specify the absolute time.

```
user@host> request system reboot at 06060120
request system reboot at 120
Reboot the system at 120? [yes,no] (no) yes
```

## set chassis display message

<b>List of Syntax</b>	<a href="#">Syntax on page 163</a> <a href="#">Syntax (TX Matrix Router) on page 163</a> <a href="#">Syntax (TX Matrix Plus Router) on page 163</a>
<b>Syntax</b>	set chassis display message " <i>message</i> " <permanent>
<b>Syntax (TX Matrix Router)</b>	set chassis display message " <i>message</i> " ( <i>lcc number</i>   <i>scc</i> ) <permanent>
<b>Syntax (TX Matrix Plus Router)</b>	set chassis display message " <i>message</i> " ( <i>fpc-slot slot-number</i>   <i>lcc number</i>   <i>sfc number</i> ) <permanent>
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. Command introduced in Junos OS Release 9.0 for EX Series switches. <b>sfc</b> option for TX Matrix Plus router introduced in Junos OS Release 9.6.
<b>Description</b>	Display or stop a text message on the craft interface display, which is on the front of the router, or on the LCD panel display on the switch. The craft interface alternates the display of text messages with standard craft interface messages three times, switching between messages every 60 seconds.
<div>  </div>	
<p><b>NOTE:</b> On T Series routers, when this command is executed with the <b>permanent</b> option, the display of the text message alternates with that of the standard craft interface message continuously every 60 seconds.</p>	
<p>By default, on both the router and the switch, the text message is displayed for 5 minutes. The craft interface display has four 20-character lines. The LCD panel display has two 16-character lines, and text messages appear only on the second line.</p>	
<b>Options</b>	<p><b>"message"</b>—Message to display. On the craft interface display, if the message is longer than 20 characters, it wraps onto the next line. If a word does not fit on one line, the entire word moves down to the next line. Any portion of the message that does not fit on the display is truncated. An empty pair of quotation marks (" ") deletes the text message from the craft interface display. On the LCD panel display, the message is limited to 16 characters.</p> <p><b>fpc-slot slot-number</b>—(TX Matrix Plus routers and EX4200 and QFX Series only) On the router or switch, display the text message on the craft interface for a specific Flexible PIC Concentrator (FPC). Replace <b>slot-number</b> with a value from <b>0</b> through <b>31</b>. On the switch, display the text message for a specific member of a Virtual Chassis, where <b>fpc-slot slot-number</b> corresponds to the member ID. Replace <b>slot-number</b> with a value</p>

from **0** through **9**. On the QFX Series, the **slot-number** is always **0**. On a TX Matrix Plus router with 3D SIBs replace **slot-number** with a value from **0** through **63**.

**lcc number**—(TX Matrix router and TX Matrix Plus router only) (Optional) Line-card chassis number.

Replace **number** with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**permanent**—(Optional) Display a text message on the craft interface display or LCD panel display permanently.

**scc**—(TX Matrix routers only) Display the text message on the craft interface display of the TX Matrix router (switch-card chassis).

**sfc number**—(TX Matrix Plus routers only) Display the text message on the craft interface display of the TX Matrix Plus router (or switch-fabric chassis).

**Required Privilege Level** clear

**Related Documentation**

- [Configuring the LCD Panel on EX Series Switches \(CLI Procedure\) on page 25](#)
- [clear chassis display message on page 110](#)
- [show chassis craft-interface](#)

**List of Sample Output** [set chassis display message \(Creating\) on page 164](#)  
[set chassis display message \(Deleting\) on page 165](#)

**Output Fields** See [show chassis craft-interface](#) for an explanation of output fields.

## Sample Output

### set chassis display message (Creating)

The following example shows how to set the display message and verify the result:

```
user@host> set chassis display message "NOC contact Dusty (888) 555-1234"
message sent

user@host> show chassis craft-interface
```

```

Red alarm:      LED off, relay off
Yellow alarm:   LED off, relay off
Host OK LED:    On
Host fail LED:  Off
FPCs           0  1  2  3  4  5  6  7
-----
Green  ..  *..  *  *.
Red    .....
LCD screen:
+-----+
|NOC contact Dusty|
|(888) 555-1234   |
+-----+

```

### set chassis display message (Deleting)

The following example shows how to delete the display message and verify that the message is removed:

```

user@host> set chassis display message ""
message sent

```

```

user@host> show chassis craft-interface
Red alarm:      LED off, relay off
Yellow alarm:   LED off, relay off
Host OK LED:    On
Host fail LED:  Off
FPCs           0  1  2  3  4  5  6  7
-----
Green  ..  *..  *  *.
Red    .....
LCD screen:
+-----+
|host
|Up: 0+17:05:47
|
|Temperature OK
+-----+

```

## set date

---

<b>Syntax</b>	<code>set date (<i>date-time</i> ntp &lt;<i>key authentication-key number</i>&gt; &lt;<i>servers</i>&gt; &lt;<i>source-address source-address</i>&gt;)</code>
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. Command introduced in Junos OS Release 9.0 for EX Series switches. Command introduced in Junos OS Release 11.1 for the QFX Series. <b>key</b> option introduced in Junos OS Release 12.1R2
<b>Description</b>	Set the date and time.
<b>Options</b>	<p><b><i>date-time</i></b>—Date and time. Enter this string inside quotation marks.</p> <p><b>ntp</b>—Use a Network Time Protocol (NTP) server to synchronize the current date and time setting on the router or switch.</p> <p><b><i>key authentication-key number</i></b>—(Optional) Specify a key number to authenticate the NTP server used to synchronize the date and time. You must specify the same key number used to authenticate the server configured at the <b>[edit system ntp authentication-key number]</b> hierarchy level.</p> <p><b><i>servers</i></b>—(Optional) Specify the IP address of one or more NTP servers.</p> <p><b><i>source-address source-address</i></b>—Specify the source address that the router or switch uses to contact the remote NTP server.</p>
<b>Required Privilege Level</b>	view
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <i>Setting the Date and Time</i></li></ul>
<b>List of Sample Output</b>	<a href="#">set date on page 166</a>
<b>Output Fields</b>	When you enter this command, you are provided feedback on the status of your request.

## Sample Output

### set date

```
user@host> set date ntp
21 Apr 17:22:02 ntpdate[3867]: step time server 172.17.27.46 offset 8.759252 sec
```

## show chassis alarms

---

**List of Syntax**    [Syntax on page 167](#)  
                          [Syntax \(TX Matrix Routers\) on page 167](#)  
                          [Syntax \(TX Matrix Plus Routers\) on page 167](#)  
                          [Syntax \(MX Series Routers\) on page 167](#)  
                          [Syntax \(MX104, MX2010, MX2020, and MX2008 Universal Routing Platforms\) on page 167](#)  
                          [Syntax \(MX10003, MX204, and MX10008\) on page 167](#)  
                          [Syntax \(QFX Series\) on page 167](#)  
                          [Syntax \(OCX Series\) on page 167](#)  
                          [Syntax \(PTX Series Packet Transport Routers\) on page 167](#)  
                          [Syntax \(ACX Series Universal Metro Routers\) on page 168](#)  
                          [Syntax \(EX9251, EX9253 Switches\) on page 168](#)

**Syntax**    `show chassis alarms`

**Syntax (TX Matrix Routers)**    `show chassis alarms`  
    `<lcc number | scc>`

**Syntax (TX Matrix Plus Routers)**    `show chassis alarms`  
    `<lcc number | sfc number>`

**Syntax (MX Series Routers)**    `show chassis alarms`  
    `<all-members>`  
    `<local>`  
    `<member member-id>`

**Syntax (MX104, MX2010, MX2020, and MX2008 Universal Routing Platforms)**    `show chassis alarms`  
    `<satellite [slot-id slot-id]>`

**Syntax (MX10003, MX204, and MX10008)**    `show chassis alarms`

**Syntax (QFX Series)**    `show chassis alarms`  
    `<interconnect-device name>`  
    `<node-device name>`

**Syntax (OCX Series)**    `show chassis alarms`

**Syntax (PTX Series Packet Transport Routers)**    `show chassis alarms`

**Syntax (ACX Series Universal Metro Routers)**    `show chassis alarms`

**Syntax (EX9251, EX9253 Switches)**    `show chassis alarms`

**Release Information**    Command introduced before Junos OS Release 7.4.  
Command introduced in Junos OS Release 9.0 for EX Series switches.  
**sfc** option introduced in Junos OS Release 9.6 for the TX Matrix Plus router.  
Command introduced in Junos OS Release 11.1 for the QFX Series.  
Command introduced in Junos OS Release 12.1 for the PTX Series Packet Transport Routers.  
Command introduced in Junos OS Release 12.2 for the ACX Series Universal Metro Routers.  
Command introduced in Junos OS Release 12.3 for MX 2010 and MX2020 Universal Routing Platforms.  
Command introduced in Junos OS Release 13.2 for MX104 Universal Routing Platforms.  
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.  
**satellite** option introduced in Junos OS Release 14.2R3 for Junos Fusion.  
Command introduced in Junos OS Release 17.2 for MX2008 Universal Routing Platforms.  
Command introduced in Junos OS Release 17.2 for PTX10008 Routers.  
Command introduced in Junos OS Release 17.3 for MX150 Router Appliance.  
Command introduced in Junos OS Release 17.3 for MX10003 Universal Routing Platforms.  
Command introduced in Junos OS Release 17.4 for MX204 Universal Routing Platforms.  
Command introduced in Junos OS Release 18.1R1 for EX9251 Switches.  
Command introduced in Junos OS Release 18.2 for EX9253 Switches.  
Command introduced in Junos OS Release 18.2R1 for MX10008 Universal Routing Platforms.

**Description**    Display information about the conditions that have been configured to trigger alarms.

**Options**    **none**—Display information about the conditions that have been configured to trigger alarms.

**all-members**—(MX Series routers only) (Optional) Display information about alarm conditions for all the member routers of the Virtual Chassis configuration.

**interconnect-device *name***—(QFabric systems only) (Optional) Display information about alarm conditions for the Interconnect device.

**lcc *number***—(TX Matrix router and TX Matrix Plus router only) (Optional) Line-card chassis number.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.



- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(MX Series routers only) (Optional) Display information about alarm conditions for the local Virtual Chassis member.

**member *member-id***—(MX Series routers only) (Optional) Display information about alarm conditions for the specified member of the Virtual Chassis configuration. Replace *member-id* variable with a value of 0 or 1.

**node-device *name***—(QFabric systems only) (Optional) Display information about alarm conditions for the Node device.

**satellite [*slot-id slot-id*]**—(Junos Fusion only) (Optional) Display information about alarm conditions for the specified satellite device in a Junos Fusion, or for all satellite devices in the Junos Fusion if no satellite devices are specified.

**scc**—(TX Matrix router only) (Optional) Show information about the TX Matrix router (switch-card chassis).

**sfc *number***—(TX Matrix Plus router only) (Optional) Show information about the respective TX Matrix Plus router, which is the switch-fabric chassis. Replace *number* variable with 0.

**Additional Information** Chassis alarms are preset. You cannot modify them.

You cannot clear the alarms for chassis components. Instead, you must remedy the cause of the alarm. When a chassis alarm LED is lit, it indicates that you are running the router or switch in a manner that we do not recommend.

On routers, you can manually silence external devices connected to the alarm relay contacts by pressing the alarm cutoff button, located on the craft interface. Silencing the device does not remove the alarm messages from the display (if present on the router) or extinguish the alarm LEDs. In addition, new alarms that occur after you silence an external device reactivate the external device.



**NOTE:** MX10003 routers do not support craft interface.

In Junos OS release 11.1 and later, alarms for fans also show the slot number of the fans in the CLI output.

In Junos OS Release 11.2 and later, the command output on EX8200 switches shows the detailed location (**Plane/FPC/PFE**) for link errors in the chassis.

In Junos OS Release 10.2 and later, an alarm is shown on T Series routers for a standby SONET Clock Generator (SCG) that is offline or absent.

You may often see the following error messages, in which only the error code is shown and no other information is provided:

```
Apr 12 08:04:10 send: red alarm set, device FPC 6, reason FPC 6 Major Errors
- Error code: 257
Apr 12 08:04:19 send: red alarm set, device FPC 1, reason FPC 1 Major Errors
- Error code: 559
```

To understand what CM\_ALARM error codes mean, you need to first identify the structure of the CM Alarm codes. A CM\_ALARM code has the following structure:

Bits:	Error type:
1-31	Major (1)
0	Minor (0)

According to the table above, the LSB (bit 0) identifies the **Error Type** (major alarm, if the bit is set and minor alarm if the bit is unset). The rest of the bits (1 - 31) identify the actual error code.

Take an example of the following error code, which was logged on a T1600:

```
Apr 12 08:04:10 send: red alarm set, device FPC 1, reason FPC 1 Major Errors
- Error code: 559
```

First, you have to convert 559 to binary; that is **100010111**. The LSB in this case is 1, which means that this is a major alarm. After removing the LSB, you are left with **10001011**, which is equal to 279 in decimal. This is the actual error code, its meaning can be found from the following list:

Chip Type: L Chip	Code
CMALARM_LCHIP_LOUT_DESRD_PARITY_ERR	1
CMALARM_LCHIP_LOUT_DESRD_UNINIT_ERR	2
CMALARM_LCHIP_LOUT_DESRD_ILLEGALLINK_ERR	3
CMALARM_LCHIP_LOUT_DESRD_ILLEGALSIZERR	4
CMALARM_LCHIP_LOUT_HDRF_TOERR_ERR	5
CMALARM_LCHIP_LOUT_HDRF_PARITY_ERR	6
CMALARM_LCHIP_LOUT_HDRF_UCERR_ERR	7
CMALARM_LCHIP_LOUT_NLIF_CRCDROP_ERR	8
CMALARM_LCHIP_LOUT_NLIF_CRCERR_ERR	9

CMALARM_LCHIP_UCODE_TIMEOUT_ERR	10
CMALARM_LCHIP_LIN_SRCTL_ACCT_DROP_ERR	11
CMALARM_LCHIP_LIN_SRCTL_ACCT_ADDR_SIZE_ERR	12
CMALARM_LCHIP_SRAM_PARITY_ERR	13
CMALARM_LCHIP_UCODE_OVFLW_ERR	14
CMALARM_LCHIP_LOUT_HDRF_MTU_ERR	15
<hr/>	
<b>Chip Type: M Chip</b>	<b>Code</b>
CMALARM_MCHIP_ECC_UNCORRECT_ERR	128
<hr/>	
<b>Chip Type: N Chip</b>	<b>Code</b>
CMALARM_NCHIP_RDDMA_JBUS_TIMEOUT_ERR	256
CMALARM_NCHIP_RDDMA_FIFO_OVFLW_ERR	257
CMALARM_NCHIP_RDDMA_FIFO_UNFLW_ERR	258
CMALARM_NCHIP_RDDMA_SIZE_ERR	259
CMALARM_NCHIP_RDDMA_JBUS_CRC_ERR	260
CMALARM_NCHIP_WRDMA_PKTR_ERR	261
CMALARM_NCHIP_WRDMA_PKT_CRC_ERR	262
CMALARM_NCHIP_WRDMA_JBUS_TIMEOUT_ERR	263
CMALARM_NCHIP_WRDMA_FIFO_OVFLW_ERR	264
CMALARM_NCHIP_WRDMA_FIFO_UNFLW_ERR	265
CMALARM_NCHIP_WRDMA_PKT_LEN_ERR	266
CMALARM_NCHIP_WRDMA_JBUS_CRC_ERR	267
CMALARM_NCHIP_PKTR_DMA_AGE_ERR	268
CMALARM_NCHIP_PKTR_ICELLSIG_ERR	269
CMALARM_NCHIP_PKTR_FTTL_ERR	270
CMALARM_NCHIP_RODR_OFFSET_OVFLW_ERR	271

CMALARM_NCHIP_PKTR_TMO_CELL_ERR	272
CMALARM_NCHIP_PKTR_TMO_OUTRANGE_ERR	273
CMALARM_NCHIP_PKTR_MD_REQUEST_Q_OVFLW_ERR	274
CMALARM_NCHIP_PKTR_DMA_BUFFER_OVFLW_ERR	275
CMALARM_NCHIP_PKTR_GRT_OVFLW_ERR	276
CMALARM_NCHIP_FRQ_ERR	277
CMALARM_NCHIP_RODR_IN_Q_OVFLW_ERR	278
CMALARM_NCHIP_DBUF_CRC_ERR	279

Chip Type: R Chip	Code
CMALARM_RCHIP_SRAM_PARITY_ERR	512

Chip Type: R Chip	Code
CMALARM_ICHIP_WO_DESRD_ID_ERR	601
CMALARM_ICHIP_WO_DESRD_DATA_ERR	602
CMALARM_ICHIP_WO_DESRD_OFLOW_ERR	603
CMALARM_ICHIP_WO_HDRF_UCERR_ERR	604
CMALARM_ICHIP_WO_HDRF_MTUERR_ERR	605
CMALARM_ICHIP_WO_HDRF_PARITY_ERR	606
CMALARM_ICHIP_WO_HDRF_TOERR_ERR	607
CMALARM_ICHIP_WO_IP_CRC_ERR	608
CMALARM_ICHIP_WO_IP_INTER_ERR	609
CMALARM_ICHIP_WI_WAN_TIMEOUT_ERR	625
CMALARM_ICHIP_WI_FAB_TIMEOUT_ERR	626
CMALARM_ICHIP_RLDRAM_BIST_ERR	630
CMALARM_ICHIP_SDRAM_BIST_ERR	631
CMALARM_ICHIP_RLDRAM_PARITY_ERR	632

CMALARM_ICHIP_SDRAM_UNCORRECT_ERR	633
CMALARM_ICHIP_SDRAM_CORRECT_ERR	634
CMALARM_ICHIP_FUSE_DONE_ERR	635

According to the table above, the **279** error code corresponds to **CMALARM\_NCHIP\_DBUF\_CRC\_ERR**; this means that new CRC errors were seen on the NCHIP of this particular FPC, which is FPC as per the logs.

If you do not want to convert decimal to binary and vice versa, you may use the following shortcut:

For major alarms, the **Actual Error Code = (Error Code - 1)/2**, where **Error Code** is the code that you get in the log message. For example, if you get the following log:

```
Apr 12 08:04:10 send: red alarm set, device FPC 6, reason FPC 6 Major
Errors - Error code: 257
```

Actual Error Code =  $(257-1)/2 = 128$ . Similarly, for minor alarms, Actual Error Code =  $(\text{Error Code})/2$



**NOTE:** Starting in Junos OS Release 18.2R1, on MX Series routers, the **show chassis alarms** output does not display error codes for PFE-related errors. You can use the following commands to view more details of the errors that caused the alarms:

- **show chassis errors active**
- **show chassis errors active detail**

**Required Privilege Level** view

**Related Documentation**

- *Configuring an RMON Alarm Entry and Its Attributes*
- *Chassis Conditions That Trigger Alarms*

**List of Sample Output**

- [show chassis alarms \(Alarms Active\) on page 175](#)
- [show chassis alarms \(No Alarms Active\) on page 175](#)
- [show chassis alarms \(Fan Tray\) on page 175](#)
- [show chassis alarms \(MX150\) on page 175](#)
- [show chassis alarms \(MX104 Router\) on page 175](#)
- [show chassis alarms \(MX2010 Router\) on page 175](#)
- [show chassis alarms \(MX2020 Router\) on page 176](#)
- [show chassis alarms \(MX10003 Router\) on page 176](#)
- [show chassis alarms \(MX204 Router\) on page 176](#)

[show chassis alarms \(MX2008 Router\) on page 176](#)  
[show chassis alarms \(MX960, MX480, and MX240 Routers showing Major CB Failure\) on page 176](#)  
[show chassis alarms \(PTX10008 Router\) on page 177](#)  
[show chassis alarms \(T4000 Router\) on page 177](#)  
[show chassis alarms \(Unreachable Destinations Present on a T Series Router\) on page 177](#)  
[show chassis alarms \(FPC Offline Due to Unreachable Destinations on a T Series Router\) on page 177](#)  
[show chassis alarms \(SCG Absent on a T Series Router\) on page 178](#)  
[show chassis alarms \(Alarms Active on a TX Matrix Router\) on page 178](#)  
[show chassis alarms \(TX Matrix Plus router with 3D SIBs\) on page 178](#)  
[show chassis alarms \(Alarms on a T4000 Router After the enhanced-mode Statement is Enabled\) on page 180](#)  
[show chassis alarms \(Backup Routing Engine\) on page 180](#)  
[show chassis alarms \(EX Series Switch\) on page 181](#)  
[show chassis alarms \(Alarms Active on the QFX Series and OCX Series Switches\) on page 181](#)  
[show chassis alarms node-device \(Alarms Active on the QFabric System\) on page 181](#)  
[show chassis alarms \(Alarms Active on the QFabric System\) on page 181](#)  
[show chassis alarms \(Alarms Active on an EX8200 Switch\) on page 181](#)  
[show chassis alarms \(EX9251 Switch\) on page 182](#)  
[show chassis alarms \(EX9253 Switch\) on page 182](#)  
[show chassis alarms \(Alarms Active on a PTX5000 Packet Transport Router\) on page 182](#)  
[show chassis alarms \(Mix of PDUs Alarm on a PTX5000 Packet Transport Router with FPC2-PTX-P1A\) on page 182](#)  
[show chassis alarms \(PDU Converter Failed Alarm on a PTX5000 Packet Transport Router with FPC2-PTX-P1A\) on page 183](#)  
[show chassis alarms \(No Power for System Alarm on a PTX5000 Packet Transport Router with FPC2-PTX-P1A\) on page 183](#)  
[show chassis alarms \(Alarms Active on an ACX2000 Universal Metro Router\) on page 183](#)  
[show chassis alarms \(Active Alarm to Indicate Status of the Bad SCB Clock on MX Series\) on page 183](#)  
[show chassis alarms \(Alarms active on a PTX1000 Packet Transport Router\) on page 184](#)  
[show chassis alarms \(MX10003 Router\) on page 184](#)  
[show chassis alarms \(Alarms active on a MX10008 Router\) on page 185](#)

**Output Fields** [Table 7 on page 174](#) lists the output fields for the **show chassis alarms** command. Output fields are listed in the approximate order in which they appear.

*Table 7: show chassis alarms Output Fields*

Field Name	Field Description
Alarm time	Date and time the alarm was first recorded.
Class	Severity class for this alarm: <b>Minor</b> or <b>Major</b> .

Table 7: show chassis alarms Output Fields (continued)

Field Name	Field Description
Description	Information about the alarm.

## Sample Output

### show chassis alarms (Alarms Active)

```
user@host> show chassis alarms
3 alarms are currently active
Alarm time          Class  Description
2000-02-07 10:12:22 UTC Major fxp0: ethernet link down
2000-02-07 10:11:54 UTC Minor YELLOW ALARM - PEM 1 Removed
2000-02-07 10:11:03 UTC Minor YELLOW ALARM - Lower Fan Tray Removed
```

### show chassis alarms (No Alarms Active)

```
user@host> show chassis alarms
No alarms are currently active
```

### show chassis alarms (Fan Tray)

```
user@host> show chassis alarms
4 alarms currently active
Alarm time          Class  Description
2010-11-11 20:27:38 UTC Major Side Fan Tray 7 Failure
2010-11-11 20:27:13 UTC Minor Side Fan Tray 7 Overspeed
2010-11-11 20:27:13 UTC Major Side Fan Tray 5 Failure
2010-11-11 20:27:13 UTC Major Side Fan Tray 0 Failure
```

### show chassis alarms (MX150)

```
user@host > show chassis alarms
1 alarms currently active
Alarm time          Class  Description
2016-06-04 01:49:43 PDT Major Fan Tray 1 Fan 0 failed
```

### show chassis alarms (MX104 Router)

```
user@host >show chassis alarms
1 alarms currently active
Alarm time          Class  Description
2013-06-05 14:43:31 IST Minor Backup RE Active
```

### show chassis alarms (MX2010 Router)

```
user@host> show chassis alarms
7 alarms currently active
Alarm time          Class  Description
2012-08-07 00:46:06 PDT Major Fan Tray 2 Failure
2012-08-06 18:24:36 PDT Minor Redundant feed missing for PSM 6
2012-08-06 07:41:04 PDT Minor Redundant feed missing for PSM 8
2012-08-04 02:42:06 PDT Minor Redundant feed missing for PSM 5
2012-08-03 21:14:24 PDT Minor Loss of communication with Backup RE
```

```
2012-08-03 12:26:03 PDT Minor Redundant feed missing for PSM 4
2012-08-03 10:40:18 PDT Minor Redundant feed missing for PSM 7
```

#### show chassis alarms (MX2020 Router)

```
user@host> show chassis alarms
1 alarms currently active
Alarm time Class Description
2012-10-03 12:14:59 PDT Minor Plane 0 not online
```

#### show chassis alarms (MX10003 Router)

```
user@host> show chassis alarms

9 alarms currently active
Alarm time      Class Description
2017-07-13 21:50:31 PDT Major FPC 1 Temperature Hot
2017-07-13 21:50:04 PDT Minor FPC 1 PIC 1 Invalid port profile configuration
2017-07-13 21:49:13 PDT Minor FPC 1 PIC 0 Invalid port profile configuration
2017-07-13 21:48:54 PDT Major FPC 0 Temperature Hot
2017-07-13 21:43:57 PDT Minor PEM 5 Not Present
2017-07-13 21:43:57 PDT Minor PEM 4 Not Present
2017-07-13 21:43:54 PDT Minor CB 1 Voltage Sensor ADS7830_0x4B Sensor Failed
2017-07-13 21:43:54 PDT Minor CB 0 Voltage Sensor ADS7830_0x4B Sensor Failed
2017-07-13 21:43:31 PDT Minor Loss of communication with Backup RE
```

#### show chassis alarms (MX204 Router)

```
user@host> show chassis alarms

1 alarms currently active
Alarm time      Class Description
2017-11-05 22:13:03 PST Major PEM 0 Not Present
```

#### show chassis alarms (MX2008 Router)

```
user@host> show chassis alarms
No alarms currently active
```

#### show chassis alarms (MX960, MX480, and MX240 Routers showing Major CB Failure)

A major CB 0 failure alarm occurs in the event of a bad CB (unknown or mismatched CBs do not trigger this alarm in Junos Release OS 12.3R9 and later). Following GRES or recovery, if the hardware issue persists, the traffic moves to the good CB and continues. If the alarm was triggered by something transient like a power zone budget on GRES, bringing the CB back online can clear the alarm. Otherwise, replace the bad CB. Note that fabric link speed is not impacted by an offline SCB. The alarm might be raised on CB0, CB1, and CB2.

```
user@host> show chassis alarms
6 alarms currently active
Alarm time      Class Description
2014-10-31 16:49:41 EDT Major PEM 3 Not OK
2014-10-31 16:49:41 EDT Major PEM 2 Not OK
2014-10-31 16:49:31 EDT Major CB 0 Failure
2014-10-31 16:49:31 EDT Minor CB 0 Fabric Chip 0 Not Online
2014-10-31 16:49:31 EDT Minor CB 0 Fabric Chip 1 Not Online
2014-10-31 16:49:31 EDT Minor Backup RE Active
```



**show chassis alarms (PTX10008 Router)**

```

user@host>show chassis alarms
12 alarms currently active
Alarm time          Class Description
2017-05-09 01:38:55 PDT Minor Loss of communication with Backup RE
2017-05-05 06:49:57 PDT Major FPC 5 LCPU Temp Sensor Access Failed
2017-05-05 06:49:57 PDT Major FPC 5 PE2 Temp Sensor Hot
2017-05-05 06:49:57 PDT Major FPC 5 PE1 Temp Sensor Hot
2017-05-05 06:49:57 PDT Major FPC 5 PEO Temp Sensor Hot
2017-05-05 06:49:57 PDT Major FPC 5 Exhaust-C Temp Sensor Hot
2017-05-05 06:49:57 PDT Major FPC 5 Exhaust-B Temp Sensor Hot
2017-05-05 06:49:57 PDT Major FPC 5 Exhaust-A Temp Sensor Hot
2017-05-05 06:49:57 PDT Major FPC 5 Intake-B Temp Sensor Access Failed
2017-05-05 06:49:57 PDT Major FPC 5 Intake-A Temp Sensor Access Failed
2017-05-05 06:49:57 PDT Major Fan Tray 0 Fan 5 running at lower speed
2017-05-05 06:49:57 PDT Major Fan Tray 0 Fan 4 running at lower speed

```

**show chassis alarms (T4000 Router)**

```

user@host> show chassis alarms
9 alarms currently active
Alarm time          Class Description
2007-06-02 01:41:10 UTC Minor RE 0 Not Supported
2007-06-02 01:41:10 UTC Minor CB 0 Not Supported
2007-06-02 01:41:10 UTC Minor Mixed Master and Backup RE types
2007-05-30 19:37:33 UTC Major SPMB 1 not online
2007-05-30 19:37:29 UTC Minor Front Bottom Fan Tray Absent
2007-05-30 19:37:13 UTC Major PEM 1 Input Failure
2007-05-30 19:37:13 UTC Major PEM 0 Not OK
2007-05-30 19:37:03 UTC Major PEM 0 Improper for Platform
2007-05-30 19:37:03 UTC Minor Backup RE Active

```

**show chassis alarms (Unreachable Destinations Present on a T Series Router)**

```

user@host> show chassis alarms
10 alarms currently active
Alarm time          Class Description
2011-08-30 18:43:53 PDT Major FPC 7 has unreachable destinations
2011-08-30 18:43:53 PDT Major FPC 5 has unreachable destinations
2011-08-30 18:43:52 PDT Major FPC 3 has unreachable destinations
2011-08-30 18:43:52 PDT Major FPC 2 has unreachable destinations
2011-08-30 18:43:52 PDT Minor SIB 0 Not Online
2011-08-30 18:43:33 PDT Minor SIB 4 Not Online
2011-08-30 18:43:28 PDT Minor SIB 3 Not Online
2011-08-30 18:43:05 PDT Minor SIB 2 Not Online
2011-08-30 18:43:28 PDT Minor SIB 1 Not Online
2011-08-30 18:43:05 PDT Major PEM 1 Not Ok

```

**show chassis alarms (FPC Offline Due to Unreachable Destinations on a T Series Router)**

```

user@host> show chassis alarms
10 alarms currently active
Alarm time          Class Description
2011-08-30 18:43:53 PDT Major FPC 7 offline due to unreachable destinations
2011-08-30 18:43:53 PDT Major FPC 5 offline due to unreachable destinations
2011-08-30 18:43:52 PDT Major FPC 3 offline due to unreachable destinations
2011-08-30 18:43:52 PDT Major FPC 2 offline due to unreachable destinations
2011-08-30 18:43:52 PDT Minor SIB 0 Not Online

```

```

2011-08-30 18:43:33 PDT Minor SIB 4 Not Online
2011-08-30 18:43:28 PDT Minor SIB 3 Not Online
2011-08-30 18:43:05 PDT Minor SIB 2 Not Online
2011-08-30 18:43:28 PDT Minor SIB 1 Not Online
2011-08-30 18:43:05 PDT Major PEM 1 Not Ok

```

#### show chassis alarms (SCG Absent on a T Series Router)

```

user@host> show chassis alarms
4 alarms currently active
Alarm time          Class Description
2011-01-23 21:42:46 PST Major SCG 0 NO EXT CLK MEAS-BKUP SCG ABS

```

#### show chassis alarms (Alarms Active on a TX Matrix Router)

```

user@host> show chassis alarms
scc-re0:
-----
8 alarms currently active
Alarm time          Class Description
2004-08-05 18:43:53 PDT Minor LCC 0 Minor Errors
2004-08-05 18:43:53 PDT Minor SIB 3 Not Online
2004-08-05 18:43:52 PDT Major SIB 2 Absent
2004-08-05 18:43:52 PDT Major SIB 1 Absent
2004-08-05 18:43:52 PDT Major SIB 0 Absent
2004-08-05 18:43:33 PDT Major LCC 2 Major Errors
2004-08-05 18:43:28 PDT Major LCC 0 Major Errors
2004-08-05 18:43:05 PDT Minor LCC 2 Minor Errors
lcc0-re0:
-----
5 alarms currently active
Alarm time          Class Description
2004-08-05 18:43:53 PDT Minor SIB 3 Not Online
2004-08-05 18:43:49 PDT Major SIB 2 Absent
2004-08-05 18:43:49 PDT Major SIB 1 Absent
2004-08-05 18:43:49 PDT Major SIB 0 Absent
2004-08-05 18:43:28 PDT Major PEM 0 Not OK
lcc2-re0:
-----
5 alarms currently active
Alarm time          Class Description
2004-08-05 18:43:35 PDT Minor SIB 3 Not Online
2004-08-05 18:43:33 PDT Major SIB 2 Absent
2004-08-05 18:43:33 PDT Major SIB 1 Absent
2004-08-05 18:43:33 PDT Major SIB 0 Absent
2004-08-05 18:43:05 PDT Minor PEM 1 Absent

```

#### show chassis alarms (TX Matrix Plus router with 3D SIBs)

```

user@host> show chassis alarms
sfc0-re0:
-----
Alarm time          Class Description
2014-04-08 14:35:13 IST Minor FPM 0 SFC Config Size Changed
2014-04-08 14:32:58 IST Major Fan Tray Failure
2014-04-08 14:31:53 IST Major SIB F13 6 Fault
2014-04-08 14:31:43 IST Major SIB F13 11 Fault
2014-04-08 14:31:08 IST Minor Check SIB F13 12 CXP 14 Fbr Cbl
2014-04-08 14:31:08 IST Minor Check SIB F13 12 CXP 8 Fbr Cbl

```

```

2014-04-08 14:31:08 IST Minor Check SIB F13 12 CXP 3 Fbr Cbl
2014-04-08 14:31:08 IST Major SIB F13 12 CXP 15 fault
2014-04-08 14:31:08 IST Minor SIB F13 12 CXP 14 LOL
2014-04-08 14:31:08 IST Minor Check SIB F13 12 CXP 14
2014-04-08 14:31:08 IST Major SIB F13 12 CXP 10 fault
2014-04-08 14:31:08 IST Minor SIB F13 12 CXP 8 LOL
2014-04-08 14:31:08 IST Minor Check SIB F13 12 CXP 8
2014-04-08 14:31:08 IST Major SIB F13 12 CXP 7 fault
2014-04-08 14:31:08 IST Major SIB F13 12 CXP 4 fault
2014-04-08 14:31:08 IST Minor SIB F13 12 CXP 3 LOL
2014-04-08 14:31:08 IST Minor Check SIB F13 12 CXP 3
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 14 Fbr Cbl
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 12 Fbr Cbl
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 8 Fbr Cbl
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 6 Fbr Cbl
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 4 Fbr Cbl
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 2 Fbr Cbl
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 0 Fbr Cbl
2014-04-08 14:31:08 IST Minor SIB F13 6 CXP 14 LOL
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 14
2014-04-08 14:31:08 IST Minor SIB F13 6 CXP 12 LOL
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 12
2014-04-08 14:31:08 IST Major SIB F13 6 CXP 10 fault
2014-04-08 14:31:08 IST Minor SIB F13 6 CXP 8 LOL
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 8
2014-04-08 14:31:08 IST Minor SIB F13 6 CXP 6 LOL
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 6
2014-04-08 14:31:08 IST Minor SIB F13 6 CXP 4 LOL
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 4
2014-04-08 14:31:08 IST Minor SIB F13 6 CXP 2 LOL
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 2
2014-04-08 14:31:08 IST Minor SIB F13 6 CXP 0 LOL
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 0
2014-04-08 14:31:08 IST Minor SIB F13 12 CXP 14 XC HSL Link Error
2014-04-08 14:29:27 IST Minor LCC 0 Minor Errors
2014-04-08 14:28:37 IST Major LCC 0 Major Errors
2014-04-08 14:28:37 IST Major LCC 2 Major Errors
2014-04-08 14:28:37 IST Minor LCC 2 Minor Errors
2014-04-08 14:28:24 IST Major SIB F2S 4/6 Absent
2014-04-08 14:28:24 IST Major SIB F2S 4/4 Absent
2014-04-08 14:28:24 IST Major SIB F2S 4/2 Absent
2014-04-08 14:28:24 IST Major SIB F2S 4/0 Absent
2014-04-08 14:28:24 IST Major SIB F2S 3/6 Absent
2014-04-08 14:28:24 IST Major SIB F2S 3/4 Absent
2014-04-08 14:28:24 IST Major SIB F2S 3/2 Absent
2014-04-08 14:28:24 IST Major SIB F2S 3/0 Absent
2014-04-08 14:28:24 IST Major SIB F13 9 Absent
2014-04-08 14:28:24 IST Major SIB F13 8 Absent
2014-04-08 14:28:24 IST Major SIB F13 7 Absent
2014-04-08 14:28:24 IST Major SIB F13 4 Absent
2014-04-08 14:28:24 IST Major SIB F13 1 Absent
2014-04-08 14:28:22 IST Major PEM 0 Input Failure
2014-04-08 14:28:22 IST Major PEM 0 Not OK

```

lcc0-re0:

-----  
12 alarms currently active

Alarm time	Class	Description
2014-04-08 14:36:08 IST	Minor	CB 1 M/S Switch Changed
2014-04-08 14:36:08 IST	Minor	CB 1 CHASSIS ID Changed
2014-04-08 14:35:43 IST	Minor	CB 0 M/S Switch Changed

```

2014-04-08 14:35:43 IST Minor CB 0 CHASSIS ID Changed
2014-04-08 14:29:30 IST Minor SIB 4 Not Online
2014-04-08 14:29:30 IST Minor SIB 3 Not Online
2014-04-08 14:29:30 IST Minor SIB 2 Not Online
2014-04-08 14:29:24 IST Major Rear Fan Tray Failure
2014-04-08 14:29:24 IST Major Front Bottom Fan Tray Improper for Platform
2014-04-08 14:29:24 IST Major Front Top Fan Tray Improper for Platform
2014-04-08 14:28:37 IST Major SIB 4 Absent
2014-04-08 14:28:37 IST Major SIB 3 Absent

```

```
lcc2-re0:
```

```
-----
12 alarms currently active
```

Alarm time	Class	Description
2014-04-08 14:36:02 IST	Minor	CB 1 M/S Switch Changed
2014-04-08 14:36:02 IST	Minor	CB 1 CHASSIS ID Changed
2014-04-08 14:35:42 IST	Minor	CB 0 M/S Switch Changed
2014-04-08 14:34:42 IST	Minor	CB 0 CHASSIS ID Changed
2014-04-08 14:29:29 IST	Minor	SIB 0 CXP 7 Unsupported Optics
2014-04-08 14:29:27 IST	Major	Front Bottom Fan Tray Improper for Platform
2014-04-08 14:29:27 IST	Major	Front Top Fan Tray Improper for Platform
2014-04-08 14:29:25 IST	Minor	SIB 4 Not Online
2014-04-08 14:29:25 IST	Minor	SIB 3 Not Online
2014-04-08 14:28:47 IST	Major	PEM 0 Not OK
2014-04-08 14:28:36 IST	Major	SIB 2 Absent
2014-04-08 14:28:36 IST	Minor	Host 0 Boot from alternate media

```
lcc6-re0:
```

```
-----
2 alarms currently active
```

Alarm time	Class	Description
2013-11-06 04:03:56 PST	Minor	SIB 1 CXP 0 XC HSL Link Error
2013-11-06 03:49:32 PST	Major	PEM 1 Not OK

### show chassis alarms (Alarms on a T4000 Router After the enhanced-mode Statement is Enabled)

To enable improved virtual private LAN service (VPLS) MAC address learning on T4000 routers, you must include the **enhanced-mode** statement at the **[edit chassis network-services]** hierarchy level and reboot the router. When router reboots, only the T4000 Type 5 FPCs are required to be present on the router. If there are any other FPCs (apart from T4000 Type 5 FPCs) on the T4000 router, such FPCs become offline, and FPC misconfiguration alarms are generated. The **show chassis alarm** command output displays FPC misconfiguration (**FPC *fpc-slot* misconfig**) as the reason for the generation of the alarms.

```
user@host> show chassis alarms
```

```
2 alarms currently active
```

Alarm time	Class	Description
2011-10-22 10:10:47 PDT	Major	FPC 1 misconfig
2011-10-22 10:10:46 PDT	Major	FPC 0 misconfig

### show chassis alarms (Backup Routing Engine)

```
user@host> show chassis alarms
```

```
2 alarms are currently active
```

Alarm time	Class	Description
2005-04-07 10:12:22 PDT	Minor	Host 1 Boot from alternate media
2005-04-07 10:11:54 PDT	Major	Host 1 compact-flash missing in Boot List

**show chassis alarms (EX Series Switch)**

```

user@switch> show chassis alarms
4 alarms currently active
Alarm time           Class Description
2014-03-12 15:36:09 UTC Minor Require a Fan Tray upgrade
2014-03-12 15:00:02 UTC Major PEM 0 Input Failure
2014-03-12 15:00:02 UTC Major PEM 0 Not OK
2014-03-12 14:59:51 UTC Minor Host 1 Boot from alternate media

```

**show chassis alarms (Alarms Active on the QFX Series and OCX Series Switches)**

```

user@switch> show chassis alarms
1 alarms currently active
Alarm time           Class Description
2012-03-05 2:10:24 UTC Major FPC 0 PEM 0 Airflow not matching Chassis Airflow

```

**show chassis alarms node-device (Alarms Active on the QFabric System)**

```

user@switch> show chassis alarms node-device Test
node-device ED3694
3 alarms currently active
Alarm time           Class Description
2011-08-24 16:04:15 UTC Major Test:fte-0/1/2: Link down
2011-08-24 16:04:14 UTC Major Test:fte-0/1/0: Link down
2011-08-24 14:21:14 UTC Major Test PEM 0 is not supported/powered

```

**show chassis alarms (Alarms Active on the QFabric System)**

```

user@switch> show chassis alarms
IC-1:
-----
1 alarms currently active
Alarm time           Class Description
2011-08-24 16:04:15 UTC Minor Backup RE Active

Test:
-----
3 alarms currently active
Alarm time           Class Description
2011-08-24 16:04:15 UTC Major Test:fte-0/1/2: Link down
2011-08-24 16:04:14 UTC Major Test:fte-0/1/0: Link down
2011-08-24 14:21:14 UTC Major Test PEM 0 is not supported/powered

SNG-0:
-----

NW-NG-0:
-----
1 alarms currently active
Alarm time           Class Description
2011-08-24 15:49:27 UTC Major Test PEM 0 is not supported/powered

```

**show chassis alarms (Alarms Active on an EX8200 Switch)**

```

user@switch> show chassis alarms

6 alarms currently active

```

Alarm time	Class	Description
2010-12-02 19:15:22 UTC	Major	Fan Tray Failure
2010-12-02 19:15:22 UTC	Major	Fan Tray Failure
2010-12-02 19:15:14 UTC	Minor	Check CB 0 Fabric Chip 1 on Plane/FPC/PFE: 1/5/0, 1/5/1, 1/5/2, 1/5/3, 1/7/0, 1/7/1, 1/7/2, 1/7/3, 2/5/0, 2/5/1, ...
2010-12-02 19:15:14 UTC	Minor	Check CB 0 Fabric Chip 0 on Plane/FPC/PFE: 1/5/0, 1/5/1, 1/5/2, 1/5/3, 1/7/0, 1/7/1, 1/7/2, 1/7/3, 2/5/0, 2/5/1, ...
2010-12-02 19:14:18 UTC	Major	PSU 1 Output Failure
2010-12-02 19:14:18 UTC	Minor	Loss of communication with Backup RE

### show chassis alarms (EX9251 Switch)

```
user@switch> show chassis alarms
2 alarms currently active
Alarm time      Class  Description
2018-03-08 05:13:10 PST Major  PEM 0 Not Powered
2018-03-08 05:13:10 PST Major  Fan Tray 2 is not present
```

### show chassis alarms (EX9253 Switch)

```
user@switch> show chassis alarms
6 alarms currently active
Alarm time      Class  Description
2018-03-07 01:09:01 PST Major  Power Budget:Insufficient Power
2018-03-06 23:56:34 PST Minor  Loss of communication with Backup RE
2018-02-15 00:48:10 PST Minor  PEM 3 Not Present
2018-02-15 00:48:10 PST Minor  PEM 2 Not Present
2018-02-15 00:48:07 PST Major  PEM 4 Not Powered
2018-02-15 00:48:07 PST Major  PEM 1 Not Powered
```

### show chassis alarms (Alarms Active on a PTX5000 Packet Transport Router)

```
user@host> show chassis alarms
23 alarms currently active
Alarm time      Class  Description
2011-07-12 16:22:05 PDT Minor  No Redundant Power for Rear Chassis
2011-07-12 16:22:05 PDT Major  PDU 0 PSM 1 Not OK
2011-07-12 16:21:57 PDT Minor  No Redundant Power for Fan 0-2
2011-07-12 16:21:57 PDT Major  PDU 0 PSM 0 Not OK
2011-07-12 15:56:06 PDT Major  PDU 1 PSM 2 Not OK
2011-07-12 15:56:06 PDT Minor  No Redundant Power for FPC 0-7
2011-07-12 15:56:06 PDT Major  PDU 0 PSM 3 Not OK
2011-07-12 15:28:20 PDT Major  PDU 0 PSM 2 Not OK
2011-07-12 15:19:14 PDT Minor  Backup RE Active
```

### show chassis alarms (Mix of PDUs Alarm on a PTX5000 Packet Transport Router with FPC2-PTX-P1A)

All PDUs installed on a PTX5000 router must be of the same type. The **Mix of PDUs** or **Power Manager Non Operational** alarm is raised when different types of PDUs are installed on a PTX5000 router.

```
user@host> show chassis alarms
15 alarms currently active
Alarm time      Class  Description
2013-03-19 23:03:53 PDT Minor  No Redundant Power
2013-03-19 23:03:48 PDT Minor Mix of PDUs
2013-03-19 23:03:47 PDT Minor  PDU 1 PSM 3 Absent
2013-03-19 23:03:47 PDT Minor  PDU 1 PSM 2 Absent
```

```

2013-03-19 23:03:47 PDT Minor PDU 1 PSM 1 Absent
2013-03-19 23:03:47 PDT Minor PDU 1 PSM 0 Absent
2013-03-19 23:03:46 PDT Major No CG Online

```

#### show chassis alarms (PDU Converter Failed Alarm on a PTX5000 Packet Transport Router with FPC2-PTX-P1A)

The **PDU Converter Failed** alarm is raised when one or more 36 V booster converter of a DC PDU fails. If two or more 36 V booster converter fails, fan trays fail and the router might get over heated. Therefore, when this alarm is raised, check the PDU and replace it, if required.

```

user@host> show chassis alarms
11 alarms currently active
Alarm time          Class Description
2013-12-11 22:14:13 PST Minor No Redundant Power for System
2013-12-11 22:14:10 PST Major PDU 0 PSM 7 Not OK
2013-12-11 22:14:10 PST Major PDU 0 PSM 6 Not OK
2013-12-11 22:14:10 PST Major PDU 0 PSM 5 Not OK
2013-12-11 22:14:10 PST Major PDU 0 PSM 4 Not OK
2013-12-11 22:14:10 PST Major PDU 0 PSM 3 Not OK
2013-12-11 22:14:10 PST Major PDU 0 PSM 2 Not OK
2013-12-11 22:14:10 PST Major PDU 0 PSM 1 Not OK
2013-12-11 22:14:10 PST Major PDU 0 PSM 0 Not OK
2013-12-11 22:14:10 PST Major PDU 0 Not OK
2013-12-11 22:14:01 PST Major PDU 0 Converter Failed

```

#### show chassis alarms (No Power for System Alarm on a PTX5000 Packet Transport Router with FPC2-PTX-P1A)

```

user@host> show chassis alarms
8 alarms currently active
Alarm time          Class Description
2013-11-19 01:58:41 PST Major No Power for System
2013-11-19 01:58:37 PST Major PDU 0 PSM 1 Not OK
2013-11-19 01:56:46 PST Major PDU 0 PSM 2 Not OK
2013-11-19 01:54:26 PST Major PDU 0 PSM 3 Not OK
2013-11-19 01:53:30 PST Major PDU 1 PSM 3 Not OK
2013-11-19 01:53:29 PST Major PDU 1 PSM 2 Not OK
2013-11-19 01:53:29 PST Major PDU 1 PSM 1 Not OK
2013-11-19 01:53:29 PST Major PDU 1 PSM 0 Not OK

```

#### show chassis alarms (Alarms Active on an ACX2000 Universal Metro Router)

```

user@host> show chassis alarms
7 alarms currently active
Alarm time          Class Description
2012-05-22 11:19:09 UTC Major xe-0/3/1: Link down
2012-05-22 11:19:09 UTC Major xe-0/3/0: Link down
2012-05-22 11:19:09 UTC Major ge-0/1/7: Link down
2012-05-22 11:19:09 UTC Major ge-0/1/6: Link down
2012-05-22 11:19:09 UTC Major ge-0/1/3: Link down
2012-05-22 11:19:09 UTC Major ge-0/1/2: Link down
2012-05-22 11:19:09 UTC Major ge-0/1/1: Link down

```

#### show chassis alarms (Active Alarm to Indicate Status of the Bad SCB Clock on MX Series)

```

user@host> show chassis alarms
1 alarm currently active
Alarm time          Class Description
2013-08-06 07:48:35 PDT Major CB 0 19.44 MHz clock failure

```

**show chassis alarms (Alarms active on a PTX1000 Packet Transport Router)**

```
user@host> show chassis alarms
2 alarms currently active
Alarm time           Class  Description
2004-08-10 00:55:49 UTC Major  PEM 1 Not Present
2004-08-10 00:55:49 UTC Major  PEM 0 Not Present
```

**show chassis alarms (MX10003 Router)**

If LCMD is down on the backup RE, then the following alarm is seen on the Master.

```
user@host> show chassis alarms
1 alarm currently active
Alarm time           Class  Description
2017-05-09 13:26:27 PDT Major  VMHost RE 1 host application failed
```

If LCMD is down on the master, then following alarms are displayed.

```
user@host> show chassis alarms
3 alarms currently active
Alarm time           Class  Description
2017-05-10 14:12:21 PDT Major  VMHost RE 0 host application failed
2017-05-10 14:12:16 PDT Minor  LCM Peer Absent
2017-05-09 13:26:27 PDT Major  VMHost RE 1 host application failed
```

If the LCMD process is crashing on the master, the system will switchover after one minute provided the backup RE LCMD connection is stable. The system will not switchover under the following conditions: if the backup RE LCMD connection is unstable or if the current master just gained mastership. When the master has just gained mastership, the switchover happens only after four minutes.

The LCM peer connection un-stable alarm is raised when the LCMD-CHASD IPC communication flaps three times within a small interval of two to three minutes. Once LCM peer connection un-stable alarm is raised, the connection status is monitored for two minutes.

```
user@host> show chassis alarms
7 alarms currently active
Alarm time           Class  Description
2017-05-29 10:12:17 PDT Minor  LCM Peer Connection un-stable
2017-05-29 09:04:17 PDT Minor  PEM 8 Not Powered
2017-05-29 09:04:17 PDT Minor  PEM 9 Not Powered
2017-05-29 09:04:17 PDT Minor  PEM 7 Not Powered
2017-05-29 09:04:17 PDT Minor  PEM 3 Not Powered
2017-05-29 09:04:17 PDT Minor  PEM 0 Not Powered
2017-05-29 09:04:08 PDT Minor  Loss of communication with Backup RE
```

If there are no more connection flaps within this two minutes time interval, the LCM peer connection un-stable alarm is cleared.

```
6 alarms currently active
Alarm time           Class  Description
2017-05-29 09:04:17 PDT Minor  PEM 8 Not Powered
2017-05-29 09:04:17 PDT Minor  PEM 9 Not Powered
2017-05-29 09:04:17 PDT Minor  PEM 7 Not Powered
2017-05-29 09:04:17 PDT Minor  PEM 3 Not Powered
```



```

2017-05-29 09:04:17 PDT Minor PEM 0 Not Powered
2017-05-29 09:04:08 PDT Minor Loss of communication with Backup RE

```

A major alarm is raised even if there is on one PLL lock error, and this alarm can be cleared only through an FPC restart.

```

user@host> show chassis alarms
4 alarms currently active
Alarm time          Class Description
2017-02-16 09:06:06 PDT Major FPC 0 Major Errors
2017-02-16 09:08:40 PDT Major FPC 1 Major Errors
2017-02-16 09:11:47 PST Minor Fan Tray 3 Pair 1 Outer Fan running at over speed
2017-02-16 09:11:47 PST Minor Fan Tray 3 Pair 1 Inner Fan running at over speed

```

#### show chassis alarms (Alarms active on a MX10008 Router)

```

user@host> show chassis alarms
13 alarms currently active
Alarm time          Class Description
2018-07-17 05:48:08 PDT Major FPC 2 I2C Failure
2018-07-17 05:47:02 PDT Minor Mixed Master and Backup RE types
2018-07-17 05:47:01 PDT Major Fan Tray 0 Fan 5 Failed
2018-07-17 05:47:01 PDT Major Fan Tray 0 Fan 4 Failed
2018-07-17 05:47:01 PDT Minor PEM 5 Not Powered
2018-07-17 05:47:01 PDT Minor PEM 5 Feed 2 has no input source
2018-07-17 05:47:01 PDT Minor PEM 5 Feed 1 has no input source
2018-07-17 05:47:01 PDT Minor PEM 4 Not Powered
2018-07-17 05:47:01 PDT Minor PEM 4 Feed 2 has no input source
2018-07-17 05:47:01 PDT Minor PEM 4 Feed 1 has no input source
2018-07-17 05:47:01 PDT Minor PEM 3 Not Powered
2018-07-17 05:47:01 PDT Minor PEM 3 Feed 2 has no input source
2018-07-17 05:47:01 PDT Minor PEM 3 Feed 1 has no input source

```

## show chassis beacon

---

**show chassis beacon**  
**(QFX Series)**

```
show chassis beacon
<cb slot-number>
<fpc slot-number>
<interconnect-device name (cb slot-number | fpc slot-number)>
<node-device name>
```

**Release Information** Command introduced in Junos OS Release 11.1 for the QFX Series.  
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

**Description** Display the beacon LED status on a QFX3500, QFX3600, QFX5100, EX4600, OCX Series standalone switch, Node device, and an Interconnect device. You can also display the beacon LED status of the Control Boards and Flexible PIC Concentrators on the Interconnect device.

**Options** **cb slot-number**— (QFabric systems only) (Optional) Display the status of the beacon LEDs for the Control Board on the Interconnect device.

**fpc slot-number** — (QFabric systems only) (Optional) Display the status of the beacon LEDs for the Flexible PIC Concentrator (FPC) on the Interconnect device. (Optional) Display the status of the beacon LEDs for the Flexible PIC Concentrator on the standalone switch.

**interconnect-device name**— (QFabric systems only) (Optional) Display the status of the beacon LEDs for the Interconnect device.

**node-device name**— (QFabric systems only) (Optional) Display the status of the beacon LEDs for the Node device.

**Required Privilege Level** view

**Related Documentation**

- [request chassis beacon on page 118](#)

**List of Sample Output** [show chassis beacon \(QFX Series and OCX Series\) on page 187](#)  
[show chassis beacon interconnect-device \(QFabric System\) on page 187](#)  
[show chassis beacon interconnect-device fpc \(QFabric System\) on page 187](#)  
[show chassis beacon node-device \(QFabric System\) on page 187](#)  
[show chassis beacon node-device fpc \(QFabric System\) on page 187](#)

**Output Fields** [Table 8 on page 187](#) lists the output fields for the **show chassis beacon** command. Output fields are listed in the approximate order in which they appear.

Table 8: show chassis led Output Fields

Field Name	Field Description
Slot	FPC slot number of the device whose content is being displayed. On QFX3500 standalone switches, the number is always 0.
Beacon State	Status of the beacon state: <ul style="list-style-type: none"> <li>Off—The beacon is OFF.</li> <li>On—The beacon is ON.</li> </ul>

## Sample Output

### show chassis beacon (QFX Series and OCX Series)

```
user@switch> show chassis beacon
Slot          Beacon State
FPC           0          OFF
```

### show chassis beacon interconnect-device (QFabric System)

```
user@switch> show chassis beacon interconnect-device interconnect1
Chassis          OFF
CB 0             OFF
CB 1             OFF
FC 0 FPC 0       OFF
FC 1 FPC 1       OFF
RC 0 FPC 8       OFF
RC 1 FPC 9       OFF
```

### show chassis beacon interconnect-device fpc (QFabric System)

```
user@switch> show chassis beacon interconnect-device interconnect1 fpc 0
FPC 0          ON
```

### show chassis beacon node-device (QFabric System)

```
user@switch> show chassis beacon node-device node1
node1          ON
```

### show chassis beacon node-device fpc (QFabric System)

```
user@switch> show chassis beacon node-device node1 fpc 0
FPC 0          ON
```

## show chassis environment

List of Syntax	Syntax on page 188
	Syntax (T320, T640, T1600, and T4000 Routers) on page 188
	Syntax (TX Matrix Routers) on page 188
	Syntax (TX Matrix Plus Routers) on page 188
	Syntax (MX Series Routers) on page 188
	Syntax (MX104 Universal Routing Platforms) on page 189
	Syntax (MX150 Router Appliance) on page 189
	Syntax (MX2010, MX2020, and MX2008 Universal Routing Platforms) on page 189
	Syntax (MX10003 and MX204 Universal Routing Platforms) on page 189
	Syntax (EX8200 Switches) on page 189
	Syntax (EX Series Switches except EX8200) on page 189
	Syntax (QFX Series) on page 189
	Syntax (OCX Series) on page 190
	Syntax (PTX Series Packet Transport Routers) on page 190
	Syntax (ACX Series Universal Metro Routers) on page 190
	Syntax (ACX5048 and ACX5096 Routers) on page 190
	Syntax (ACX500 Routers) on page 190
Syntax	show chassis environment
Syntax (T320, T640, T1600, and T4000 Routers)	show chassis environment <cb <i>cb-slot-number</i> > <fpc <i>fpc-slot-number</i> > <fpm> <pem <i>pem-slot-number</i> > <routing-engine <i>re-slot-number</i> > <scg <i>scg-slot-number</i> > <sib <i>sib-slot-number</i> >
Syntax (TX Matrix Routers)	show chassis environment <lcc <i>number</i>   scc>
Syntax (TX Matrix Plus Routers)	show chassis environment <cb <i>cb-slot-number</i> > <cip <i>cip-slot-number</i> > <fpc <i>fpc-slot-number</i> > <fpm> <lcc <i>number</i> > <pem <i>pem-slot-number</i> > <routing-engine <i>re-slot-number</i> > <scg <i>scg-slot-number</i> > <sfc <i>number</i> > <sib <i>sib-slot-number</i> >
Syntax (MX Series Routers)	show chassis environment <all-members> <local> <member <i>member-id</i> >

Syntax (MX104 Universal Routing Platforms)	show chassis environment <cb> <pem <i>pem-slot-number</i> > <routing-engine <i>re-slot-number</i> >
Syntax (MX150 Router Appliance)	show chassis environment <pem <i>pem-slot-number</i> > <routing-engine <i>re-slot-number</i> >
Syntax (MX2010, MX2020, and MX2008 Universal Routing Platforms)	show chassis environment <adc <i>adc-slot-number</i> > <all-members> <cb <i>cb-slot-number</i> > <fan <i>fantray-slot-number</i> > <fpc <i>fpc-slot-number</i> > <fpm> <local> <member <i>member-id</i> > <monitored> <psm <i>psm-slot-number</i> > <routing-engine <i>re-slot-number</i> > <sfb <i>sfb-slot-number</i> > <satellite [ <i>fpc-slot slot-id</i> [ <i>device-alias alias-name</i> ]]>
Syntax (MX10003 and MX204 Universal Routing Platforms)	show chassis environment <cb <i>cb-slot-number</i> > <fpc <i>fpc-slot-number</i> > <pem <i>pem-slot-number</i> > <routing-engine <i>re-slot-number</i> >
Syntax (EX8200 Switches)	show chassis environment <all-members> <cb <i>cb-slot-number</i> > <fpc <i>fpc-slot-number</i> > <local> <member <i>member-id</i> > <psu <i>psu-slot-number</i> > <routing-engine <i>re-slot-number</i> >
Syntax (EX Series Switches except EX8200)	show chassis environment <all-members> <fpc <i>fpc-slot-number</i> > <local> <member <i>member-id</i> > <power-supply-unit> <routing-engine> <satellite [ <i>fpc-slot slot-id</i> [ <i>device-alias alias-name</i> ]]>
Syntax (QFX Series)	show chassis environment <cb <i>slot-number</i> <interconnect-device <i>name</i> >> <fpc <i>slot-number</i> <interconnect-device <i>name</i> >> <interconnect-device <i>name</i> <slot-number>

<node-device *name*>  
<pem *slot-number* (interconnect-device *name slot-number*) | (node-device *name*)>  
<routing-engine *name* <interconnect-device *name slot-number*>>

**Syntax (OCX Series)**    show chassis environment

**Syntax (PTX Series  
Packet Transport  
Routers)**    show chassis environment  
                 <cb *cb-slot-number*>  
                 <ccg *ccg-slot-number* >  
                 <fpc *fpc-slot-number*>  
                 <fpm>  
                 <monitored>  
                 <pdu *pdu-slot-number*>  
                 <routing-engine *re-slot-number*>  
                 <sib *sib-slot-number*>

**Syntax (ACX Series  
Universal Metro  
Routers)**    show chassis environment  
                 <cb *cb-slot-number*>  
                 <pem *pem-slot-number*>  
                 <routing-engine *re-slot-number*>

**Syntax (ACX5048 and  
ACX5096 Routers)**    show chassis environment  
                 <fpc *slot-number*>  
                 <pem>  
                 <routing-engine>

**Syntax (ACX500  
Routers)**    show chassis environment  
                 <cb *cb-slot-number*>  
                 <routing-engine *re-slot-number*>

**Release Information**    Command introduced before Junos OS Release 7.4.  
                              Command introduced in Junos OS Release 9.0 for EX Series switches.  
                              **sfc** option introduced for the TX Matrix Plus router in Junos OS Release 9.6.  
                              Command introduced in Junos OS Release 11.1 for QFX Series.  
                              Command introduced in Junos OS Release 12.1x48 for PTX Series Packet Transport Routers.  
                              **monitored** option added in Junos OS Release 12.1x48 for PTX Series Packet Transport Routers.  
                              Command introduced in Junos OS Release 12.1 for T4000 Core Routers.  
                              Command introduced in Junos OS Release 12.2 for ACX Series Universal Metro Routers.  
                              Command introduced in Junos OS Release 12.3 for MX 2020 and MX2010 Universal Routing Platforms.  
                              **pem** option introduced in Junos OS Release 12.3 for ACX4000 Universal Metro Routers.  
                              **satellite** option introduced in Junos OS Release 14.2R3.  
                              **all-members**, **local**, and **member** *member-id* options introduced in Junos OS Release 15.1 for MX2010 and MX2020 routers.  
                              Command introduced in Junos OS Release 15.1X54-D20 for ACX5048 and ACX5096 Routers.  
                              Command introduced in Junos OS Release 17.2 for MX2008 Universal Routing Platforms.

Command introduced in Junos OS Release 17.3 for MX150 Router Appliance.  
 Command introduced in Junos OS Release 17.2 for PTX10008 Routers.  
 Command introduced in Junos OS Release 17.3 for MX10003 Universal Routing Platforms.  
 Command introduced in Junos OS Release 17.4 for MX204 Universal Routing Platforms.  
 Command introduced in Junos OS Release 18.1R1 for EX9251 Switches.  
 Command introduced in Junos OS Release 18.2 for EX9253 Switches.  
 Command introduced in Junos OS Release 18.2R1 for MX10008 Routers.

- Description** Display environmental information about the router or switch chassis, including the temperature and information about the fans, power supplies, and Routing Engine.
- In addition, on ACX4000 routers, display temperature information about the different channels of a Modular Interface Card (MIC). The number of channels displayed depends on the type of MIC installed.
- Starting with Junos OS Release 14.1, the **show chassis environment *cb cb-slot-number* | *ccg ccg-slot-number* | *fpc fpc-slot-number* | *fpm* | *monitored* | *pdu pdu-slot-number* | *routing-engine re-slot-number* | *sib sib-slot-number*** operational mode command output displays environmental information for the new DC power supply module (PSM) and power distribution unit (PDU) that are added to provide power to the high-density FPC (FPC2-PTX-PIA) and other components in a PTX5000 Packet Transport Router.
- Options** **none**—Display environmental information about the router or switch chassis. On a TX Matrix router, display environmental information about the TX Matrix router and its attached T640 routers. On a TX Matrix Plus router, display environmental information about the TX Matrix Plus router and its attached routers.
- all-members**—(MX Series routers and EX Series switches only) (Optional) Display chassis environmental information for all the members of the Virtual Chassis configuration.
- adc *adc-slot-number***—(MX2010, MX2020, and MX2008 routers only) (Optional) Display chassis environmental information for the adapter cards. For MX2020 routers, replace ***adc-slot-number*** with a value from 0 through 19. For MX2010 and MX2008 routers, replace ***adc-slot-number*** with a value from 0 through 9.
- cb *cb-slot-number***—(ACX Series Universal Metro Routers, EX Series switches, M120, M320, and M40e routers, MX Series routers, MX2020 routers, MX2010 routers, MX2008 routers, PTX Series Packet Transport Routers, QFX Series, and T Series routers, and TX Matrix Plus routers only) (Optional) Display chassis environmental information for the Control Board. On devices other than EX Series switches, replace ***cb-slot*** with 0 or 1.
- cip *cip-slot-number***—(TX Matrix Plus routers only) (Optional) Display chassis environmental information for the Connection Interface Panel (CIP). Replace the ***cip-slot-number*** variable with a value of 0 or 1.
- cb interconnect-device *name***—(QFabric systems only) (Optional) Display chassis environmental information for the Control Board on an Interconnect device.

**ccg *ccg-slot-number***—(PTX Series only) (Optional) Display chassis environmental information for the Centralized Clock Generator. Replace ***cb-slot*** with a value of **0** or **1**.

**fan *fantray-slot-number***—(MX2010, MX2020, and MX2008 routers only) (Optional) Display chassis environmental information for the fan trays. Replace ***fantray-slot-number*** with a value from **0** through **3**.

**fpc *fpc-slot***—(EX Series switches, M120, M320, and M40e routers, MX Series routers, MX2010 routers, MX2020 routers, MX2008 routers, PTX Series Packet Transport Routers, QFX Series, QFX3500 switches, QFabric systems, T Series routers, and TX Matrix Plus routers) (Optional) Display chassis environmental information for a specified Flexible PIC Concentrator. For MX2010 and MX2008 routers, replace ***fpc-slot*** with a value from **0** through **9**. For MX2020 routers, replace ***fpc-slot*** with a value from **0** through **19**. For information about FPC numbering, see [show chassis environment fpc](#). On a QFabric system, display chassis environmental information for a specified Flexible PIC Concentrator on an Interconnect device. On an EX Series switch, display chassis environmental information for a specified Flexible PIC Concentrator; see the hardware documentation for your switch for information on FPC numbering. On a TX Matrix Plus router with 3D SIBs replace ***fpc-slot*** with a value from **0** through **63**.

**fpm**—(M120, M320, and M40e routers, MX2010 routers, MX2020 routers, MX2008 routers, PTX Series, Packet Transport Routers, T Series routers, and TX Matrix Plus routers only) (Optional) Display chassis environmental information for the craft interface (FPM).

**interconnect-device *name***—(QFabric systems only) (Optional) Display chassis environmental information for the Interconnect device.

**lcc *number***—(TX Matrix routers and TX Matrix Plus routers only) (Optional) Line-card chassis number.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(MX Series routers and EX Series switches only) (Optional) Display chassis environmental information for the local Virtual Chassis member.

**member *member-id***—(MX Series routers and EX Series switches only) (Optional) Display chassis environmental information for the specified member of the Virtual Chassis



configuration. On MX Series routers, replace *member-id* with a value of **0** or **1**. For EX Series switches, see *member* for member ID values.

**monitored**—(MX2020 routers and PTX Series Packet Transport Routers only) (Optional) Display chassis environmental information for monitored temperatures only. Temperatures that are not included in temperature alarm computations are not displayed.

**node-device name**—(QFabric systems only) (Optional) Display chassis environmental information for the Node device.

**pdu pdu-slot-number**—(PTX Series only) (Optional) Display chassis environmental information for the specified power distribution unit.

**pem**—(QFX3500 switches and QFabric systems only) (Optional) Display chassis environmental information for the Power Entry Module on the specified Interconnect device or Node device.

**pem pem-slot-number**—(ACX Series Universal Metro Routers, M120, M320, and M40e routers, MX Series routers, MX104 routers, QFX Series, and T Series routers only) (Optional) Display chassis environmental information for the Power Entry Module on the specified Power Entry Module. For information about the options, see [show chassis environment pem](#).

**psm psm-slot-number**—(MX2010, MX2020, and MX2008 routers only) (Optional) Display chassis environmental information for the power supply module. For MX2020 routers, replace *psm-slot-number* with a value from **0** through **17**. For MX2010 and MX2008 routers, replace *psm-slot-number* with a value from **0** through **8**.

**psu psu-slot-number**—(EX Series switches only) (Optional) Display chassis environmental information for a specified power supply.

**routing-engine**—(QFX3500 switches and QFabric systems only) (Optional) Display chassis environmental information for the Routing Engine on the specified Interconnect device.

**routing-engine re-slot-number**—(Optional) Display chassis environmental information for the specified Routing Engine. For information about the options, see [show chassis environment routing-engine](#).

**satellite [fpc-slot slot-id | device-alias alias-name]**—(Junos Fusion only)(Optional) Display chassis environmental information for the specified satellite device in a Junos Fusion, or for all satellite devices in the Junos Fusion if no satellite devices are specified.

**scg**—(T Series routers only) (Optional) Display chassis environmental information about the SONET Clock Generator.

**scc**—(TX Matrix routers only) (Optional) Display chassis environmental information about the TX Matrix router (switch-card chassis).

**sfb sfb-slot-number**—(MX2010, MX2020, and MX2008 routers only) (Optional) Display chassis environmental information for the switch fabric board. Replace **sfb-slot-number** with a value from 0 through 7.

**sfc number**—(TX Matrix Plus routers only) (Optional) Display chassis environmental information about the respective TX Matrix Plus router ( switch-fabric chassis). Replace **number** variable with 0.

**sib sib-slot-number**—(M320 routers, PTX Series Packet Transport Routers, and T Series routers only) (Optional) Display chassis environmental information about the specified switch interface board. For information about the options, see *show chassis environment sib*.

**Required Privilege Level**

view

**Related Documentation**

- *show chassis environment adc*
- *show chassis environment cb*
- *show chassis environment ccg*
- *show chassis environment cip*
- [show chassis environment fpc on page 270](#)
- *show chassis environment fpm*
- *show chassis environment lcc*
- *show chassis environment mcs*
- *show chassis environment monitored*
- *show chassis environment pcg*
- *show chassis environment pdu*
- [show chassis environment pem on page 319](#)
- *show chassis environment psm*
- [show chassis environment psu on page 334](#)
- [show chassis environment routing-engine on page 336](#)
- *show chassis environment scg*
- *show chassis environment sfb*
- *show chassis environment sib*
- *show chassis environment sfc*

**List of Sample Output**

[show chassis environment \(M5 Router\) on page 197](#)  
[show chassis environment \(M7i Router\) on page 197](#)  
[show chassis environment \(M10 Router\) on page 198](#)

[show chassis environment \(M10i Router\) on page 198](#)  
[show chassis environment \(M20 Router\) on page 199](#)  
[show chassis environment \(M40 Router\) on page 199](#)  
[show chassis environment \(M40e Router\) on page 199](#)  
[show chassis environment \(M120 Router\) on page 200](#)  
[show chassis environment \(M160 Router\) on page 201](#)  
[show chassis environment \(M320 Router\) on page 201](#)  
[show chassis environment \(MX150\) on page 202](#)  
[show chassis environment \(MX104 Router\) on page 202](#)  
[show chassis environment \(MX240 Router\) on page 203](#)  
[show chassis environment \(MX240 Router with SCBE\) on page 204](#)  
[show chassis environment \(MX480 Router\) on page 205](#)  
[show chassis environment \(MX480 Router with SCBE\) on page 206](#)  
[show chassis environment \(MX960 Router\) on page 207](#)  
[show chassis environment \(MX960 Router with SCBE\) on page 207](#)  
[show chassis environment \(MX960 Router with MPC5EQ\) on page 210](#)  
[show chassis environment \(MX2020 Router\) on page 214](#)  
[show chassis environment \(MX2020 Router with MPC5EQ and MPC6E\) on page 224](#)  
[show chassis environment \(MX2010 Router\) on page 227](#)  
[show chassis environment \(MX2008 Router\) on page 233](#)  
[show chassis environment \(T320 Router\) on page 236](#)  
[show chassis environment \(MX10003 Router\) on page 237](#)  
[show chassis environment \(MX10008 Router\) on page 238](#)  
[show chassis environment \(MX204 Router\) on page 242](#)  
[show chassis environment \(T640 Router\) on page 243](#)  
[show chassis environment \(T4000 Router\) on page 244](#)  
[show chassis environment \(TX Matrix Router\) on page 245](#)  
[show chassis environment \(T1600 Router\) on page 247](#)  
[show chassis environment \(TX Matrix Plus Router\) on page 248](#)  
[show chassis environment \(TX Matrix Plus router with 3D SIBs\) on page 250](#)  
[show chassis environment \(EX4200 Standalone Switch\) on page 253](#)  
[show chassis environment \(EX8216 Switch\) on page 253](#)  
[show chassis environment \(EX9200 Switch\) on page 254](#)  
[show chassis environment \(EX9251 Switch\) on page 255](#)  
[show chassis environment \(EX9253 Switch\) on page 255](#)  
[show chassis environment \(QFX Series and OCX Series\) on page 256](#)  
[show chassis environment interconnect-device \(QFabric System\) on page 256](#)  
[show chassis environment node-device \(QFabric System\) on page 258](#)  
[show chassis environment pem node-device \(QFabric System\) on page 258](#)  
[show chassis environment \(PTX5000 Packet Transport Router\) on page 259](#)  
[show chassis environment \(PTX5000 Packet Transport Router with FPC2-PTX-P1A\) on page 261](#)  
[show chassis environment \(PTX1000 Packet Transport Router\) on page 261](#)  
[show chassis environment \(PTX10008 Router\) on page 262](#)  
[show chassis environment \(PTX10016 Router\) on page 264](#)  
[show chassis environment \(ACX2000 Universal Metro Router\) on page 267](#)  
[show chassis environment \(ACX4000 Universal Metro Router\) on page 267](#)  
[show chassis environment \(ACX5048 Router\) on page 268](#)  
[show chassis environment \(ACX5096 Router\) on page 268](#)

[show chassis environment \(ACX500 Router\) on page 269](#)

**Output Fields** [Table 9 on page 196](#) lists the output fields for the **show chassis environment** command. Output fields are listed in the approximate order in which they appear.

*Table 9: show chassis environment Output Fields*

Field Name	Field Description
<b>Class</b>	<p>Information about the category or class of chassis component:</p> <ul style="list-style-type: none"> <li>• <b>Power:</b> Power information: <ul style="list-style-type: none"> <li>• (M5, M10, M20, and M40 routers and EX Series switches only) Power supply status: <b>OK</b>, <b>Testing</b>, (during initial power-on), <b>Failed</b>, or <b>Absent</b>.</li> <li>• (M7i, M10i, M40e, M120, M160, M320, and T Series routers and EX Series switches only) Power Entry Modules status: <b>OK</b>, <b>Testing</b>, (during initial power-on), <b>Check</b>, <b>Failed</b>, or <b>Absent</b>.</li> <li>• (PTX Series only) Power information is reported in PDU or PSM combinations. The status is: <b>OK</b>, <b>Testing</b>, (during initial power-on), <b>Check</b>, <b>Failed</b>, or <b>Absent</b>.</li> </ul> </li> <li>• <b>Temp:</b> Temperature of air flowing through the chassis in degrees Celsius (C) and Fahrenheit (F). <ul style="list-style-type: none"> <li>• On PTX Series Packet Transport Routers and MX2010, MX2020, and MX2008 Routers, multiple cooling zones are supported. FRU temperatures in each zone are coordinated with the fan speed of fan trays in those zones.</li> <li>• EX2200 switches have a side-to-rear cooling system. The <b>Local Intake</b> temperature is measured by the sensor on the right side of the chassis, and the <b>Remote Intake</b> temperature is measured by the sensor on the left side of the chassis.</li> </ul> </li> <li>• <b>Pic:</b> On ACX4000 routers, multiple temperature channels on a MIC. The status is: <b>OK</b> and the <b>Measurement</b> is in degrees Celsius (C) and Fahrenheit (F).</li> <li>• <b>Fan:</b> Fan status: <b>OK</b>, <b>Testing</b> (during initial power-on), <b>Failed</b>, or <b>Absent</b>. On PTX Series Packet Transport Routers and MX2010, MX2020, and MX2008 Routers, multiple fan trays are supported. Fan status is reported in Fan Tray or Fan combinations. <b>Measurement</b> indicates actual fan RPM (PTX and MX2010, MX2020, and MX2008 Routers only).</li> <li>• <b>Misc:</b> Information about other components of the chassis. <ul style="list-style-type: none"> <li>• On some routers, this field indicates the status of one or more additional components.</li> <li>• On the M40e, M160, and M320 router, <b>Misc</b> includes <b>CIP</b> (Connector Interface Panel). <b>OK</b> indicates that the CIP is present. <b>Absent</b> indicates that the CIP is not present.</li> <li>• On T Series routers, <b>Misc</b> includes <b>CIP</b> and <b>SPMB</b> (Switch Processor Mezzanine Board). <b>OK</b> indicates that the <b>CIP</b> or <b>SPMB</b> is present. <b>Absent</b> indicates that the <b>CIP</b> or <b>SPMB</b> is not present.</li> <li>• On PTX Series Packet Transport Routers, <b>Misc</b> includes the <b>SPMB</b> (Switch Processor Mezzanine Board). The SPMB is located on the control boards. <b>OK</b> indicates that the control board is present. <b>Absent</b> indicates that the control board is not present.</li> </ul> </li> </ul>
<b>Item</b>	<p>(MX2010, MX2020, and MX2008 Routers) Information about the chassis component: Routing Engines, Controls Boards (CBs), Switch Fabric Boards (SFBs), PICs, Flexible PIC Concentrators (FPCs), and Adapter Cards (ADCs).</p> <p>(MX104 Routers) Information about the chassis components: Routing Engines, Control Board (CB), Power Entry Module (PEM), and Compact Forwarding Engine Board (AFEB).</p> <p>(QFabric Systems) Information about the chassis component: Control Boards, Routing Engines, Flexible PIC Concentrators (FPCs), and Power Entry Modules (PEMs), Node Devices, and Interconnect Devices.</p> <p>(QFX Series) Information about the chassis component: Flexible PIC Concentrators (FPCs), and Power Entry Modules (PEMs).</p>

Table 9: show chassis environment Output Fields (continued)

Field Name	Field Description
<b>Status</b>	<p>(MX104, MX2010, MX2020, and MX2008 Routers) Status of the specified chassis component. For example, if the Class is Fan, the fan status can be:</p> <ul style="list-style-type: none"> <li>• <b>OK:</b> The fans are operational.</li> <li>• <b>Testing:</b> The fans are being tested during initial power-on.</li> <li>• <b>Failed:</b> The fans have failed or the fans are not spinning.</li> <li>• <b>Absent:</b> The fan tray is not installed.</li> </ul> <p>If the Class is Power, the power supply status can be:</p> <ul style="list-style-type: none"> <li>• <b>OK:</b> The power component is operational.</li> <li>• <b>Testing:</b> The power component is being tested during initial power-on.</li> <li>• <b>Check:</b> There is insufficient power---that is, fewer than the minimum required feeds are connected.</li> <li>• <b>Failed:</b> The inputs leads have failed.</li> <li>• <b>Absent:</b> The power component is not installed.</li> </ul>
<b>Measurement</b>	<p>(MX104, MX2010, MX2020, and MX2008 Routers) Dependant on the Class. For example, if the Class is Temp, indicates the temperature in degree Celsius and degrees Fahrenheit. If the Class is Fan, indicates actual fan RPM.</p>

## Sample Output

### show chassis environment (M5 Router)

```

user@host> show chassis environment
Class Item                Status    Measurement
Power Power Supply A       OK
       Power Supply B     Absent
Temp  FPC 0                OK        30 degrees C / 86 degrees F
       FEB                OK        33 degrees C / 91 degrees F
       PS Intake          OK        27 degrees C / 80 degrees F
       PS Exhaust         OK        27 degrees C / 80 degrees F
       Routing Engine     OK        34 degrees C / 93 degrees F
Fans  Left Fan 1          OK        Spinning at normal speed
       Left Fan 2         OK        Spinning at normal speed
       Left Fan 3         OK        Spinning at normal speed
       Left Fan 4         OK        Spinning at normal speed
Misc  Craft Interface     OK

```

### show chassis environment (M7i Router)

```

user@host> show chassis environment
Class Item                Status    Measurement
Power Power Supply 0       OK
       Power Supply 1     Absent
Temp  Intake              OK        22 degrees C / 71 degrees F
       FPC 0              OK        23 degrees C / 73 degrees F
       Power Supplies     OK        23 degrees C / 73 degrees F
       CFEB Intake        OK        24 degrees C / 75 degrees F
       CFEB Exhaust       OK        29 degrees C / 84 degrees F
       Routing Engine     OK        26 degrees C / 78 degrees F
Fans  Fan 1              OK        Spinning at normal speed

```

Fan 2	OK	Spinning at normal speed
Fan 3	OK	Spinning at normal speed
Fan 4	OK	Spinning at normal speed

### show chassis environment (M10 Router)

```
user@host> show chassis environment
```

Class	Item	Status	Measurement
Power	Power Supply A	OK	
	Power Supply B	Failed	
Temp	FPC 0	OK	36 degrees C / 96 degrees F
	FPC 1	OK	35 degrees C / 95 degrees F
	FEB	OK	34 degrees C / 93 degrees F
	PS Intake	OK	31 degrees C / 87 degrees F
	PS Exhaust	OK	34 degrees C / 93 degrees F
	Routing Engine	OK	35 degrees C / 95 degrees F
Fans	Left Fan 1	OK	Spinning at normal speed
	Left Fan 2	OK	Spinning at normal speed
	Left Fan 3	OK	Spinning at normal speed
	Left Fan 4	OK	Spinning at normal speed
Misc	Craft Interface	OK	

### show chassis environment (M10i Router)

```
user@host> show chassis environment
```

Class	Item	Status	Measurement
Power	Power Supply 0	OK	
	Power Supply 1	OK	
	Power Supply 2	Absent	
	Power Supply 3	Absent	
Temp	Intake	OK	26 degrees C / 78 degrees F
	FPC 0	OK	27 degrees C / 80 degrees F
	FPC 1	OK	28 degrees C / 82 degrees F
	Lower Power Supplies	OK	29 degrees C / 84 degrees F
	Upper Power Supplies	OK	28 degrees C / 82 degrees F
	CFEB Intake	OK	27 degrees C / 80 degrees F
	CFEB Exhaust	OK	36 degrees C / 96 degrees F
	Routing Engine 0	OK	31 degrees C / 87 degrees F
	Routing Engine 1	OK	27 degrees C / 80 degrees F
Fans	Fan Tray 0 Fan 1	OK	Spinning at normal speed
	Fan Tray 0 Fan 2	OK	Spinning at normal speed
	Fan Tray 0 Fan 3	OK	Spinning at normal speed
	Fan Tray 0 Fan 4	OK	Spinning at normal speed
	Fan Tray 0 Fan 5	OK	Spinning at normal speed
	Fan Tray 0 Fan 6	OK	Spinning at normal speed
	Fan Tray 0 Fan 7	OK	Spinning at normal speed
	Fan Tray 0 Fan 8	OK	Spinning at normal speed
	Fan Tray 1 Fan 1	Absent	
	Fan Tray 1 Fan 2	Absent	
	Fan Tray 1 Fan 3	Absent	
	Fan Tray 1 Fan 4	Absent	
	Fan Tray 1 Fan 5	Absent	
	Fan Tray 1 Fan 6	Absent	
	Fan Tray 1 Fan 7	Absent	
	Fan Tray 1 Fan 8	Absent	

**show chassis environment (M20 Router)**

```

user@host> show chassis environment
Class Item                Status      Measurement
Power Power Supply A        OK
        Power Supply B      Absent
Temp  FPC 0                 OK          28 degrees C / 82 degrees F
        FPC 1               OK          27 degrees C / 80 degrees F
        Power Supply A      OK          22 degrees C / 71 degrees F
        Power Supply B      Absent
        SSB 0               OK          30 degrees C / 86 degrees F
        Backplane           OK          22 degrees C / 71 degrees F
        Routing Engine 0    OK          26 degrees C / 78 degrees F
        Routing Engine 1    Testing
Fans  Rear Fan             OK          Spinning at normal speed
        Front Upper Fan     OK          Spinning at normal speed
        Front Middle Fan    OK          Spinning at normal speed
        Front Bottom Fan    OK          Spinning at normal speed
Misc  Craft Interface      OK

```

**show chassis environment (M40 Router)**

```

user@host> show chassis environment
Class Item                Status      Measurement
Power Power Supply A        OK
        Power Supply B      Absent
Temp  FPC 3                 OK          24 degrees C / 75 degrees F
        FPC 6               OK          26 degrees C / 78 degrees F
        SCB                 OK          26 degrees C / 78 degrees F
        Backplane @ A1      OK          28 degrees C / 82 degrees F
        Backplane @ A2      OK          23 degrees C / 73 degrees F
        Routing Engine       OK          26 degrees C / 78 degrees F
Fans  Top Impeller         OK          Spinning at normal speed
        Bottom impeller      OK          Spinning at normal speed
        Rear Left Fan        OK          Spinning at normal speed
        Rear Center Fan      OK          Spinning at normal speed
        Rear Right Fan       OK          Spinning at normal speed
Misc  Craft Interface      OK

```

**show chassis environment (M40e Router)**

```

user@host> show chassis environment
Class Item                Status      Measurement
Power PEM 0               OK
        PEM 1               Absent
Temp  PCG 0                 OK          44 degrees C / 111 degrees F
        PCG 1               OK          47 degrees C / 116 degrees F
        Routing Engine 0    OK          40 degrees C / 104 degrees F
        Routing Engine 1    OK          37 degrees C / 98 degrees F
        MCS 0               OK          45 degrees C / 113 degrees F
        MCS 1               OK          42 degrees C / 107 degrees F
        SFM 0 SPP           OK          40 degrees C / 104 degrees F
        SFM 0 SPR           OK          44 degrees C / 111 degrees F
        SFM 1 SPP           OK          43 degrees C / 109 degrees F
        SFM 1 SPR           OK          45 degrees C / 113 degrees F
        FPC 0               OK          38 degrees C / 100 degrees F
        FPC 1               OK          40 degrees C / 104 degrees F
        FPC 2               OK          38 degrees C / 100 degrees F

```

	FPC 4	OK	34 degrees C / 93 degrees F
	FPC 5	OK	43 degrees C / 109 degrees F
	FPC 6	OK	41 degrees C / 105 degrees F
	FPC 7	OK	43 degrees C / 109 degrees F
	FPM CMB	OK	28 degrees C / 82 degrees F
	FPM Display	OK	28 degrees C / 82 degrees F
Fans	Rear Bottom Blower	OK	Spinning at normal speed
	Rear Top Blower	OK	Spinning at normal speed
	Front Top Blower	OK	Spinning at normal speed
	Fan Tray Rear Left	OK	Spinning at normal speed
	Fan Tray Rear Right	OK	Spinning at normal speed
	Fan Tray Front Left	OK	Spinning at normal speed
	Fan Tray Front Right	OK	Spinning at normal speed
Misc	CIP	OK	

### show chassis environment (M120 Router)

```
user@host> show chassis environment
```

Class	Item	Status	Measurement
Temp	PEM 0	OK	
	PEM 1	OK	
	Routing Engine 0	OK	43 degrees C / 109 degrees F
	Routing Engine 1	OK	44 degrees C / 111 degrees F
	CB 0 Intake	OK	33 degrees C / 91 degrees F
	CB 0 Exhaust A	OK	36 degrees C / 96 degrees F
	CB 0 Exhaust B	OK	35 degrees C / 95 degrees F
	CB 1 Intake	OK	34 degrees C / 93 degrees F
	CB 1 Exhaust A	OK	38 degrees C / 100 degrees F
	CB 1 Exhaust B	OK	35 degrees C / 95 degrees F
	FEB 3 Intake	OK	35 degrees C / 95 degrees F
	FEB 3 Exhaust A	OK	37 degrees C / 98 degrees F
	FEB 3 Exhaust B	OK	39 degrees C / 102 degrees F
	FEB 4 Intake	OK	33 degrees C / 91 degrees F
	FEB 4 Exhaust A	OK	39 degrees C / 102 degrees F
	FEB 4 Exhaust B	OK	36 degrees C / 96 degrees F
	FPC 2 Exhaust A	OK	32 degrees C / 89 degrees F
	FPC 2 Exhaust B	OK	31 degrees C / 87 degrees F
	FPC 3 Exhaust A	OK	32 degrees C / 89 degrees F
	FPC 3 Exhaust B	OK	33 degrees C / 91 degrees F
	FPC 4 Exhaust A	OK	32 degrees C / 89 degrees F
	FPC 4 Exhaust B	OK	30 degrees C / 86 degrees F
Fans	Front Top Tray Fan 1	OK	Spinning at normal speed
	Front Top Tray Fan 2	OK	Spinning at normal speed
	Front Top Tray Fan 3	OK	Spinning at normal speed
	Front Top Tray Fan 4	OK	Spinning at normal speed
	Front Top Tray Fan 5	OK	Spinning at normal speed
	Front Top Tray Fan 6	OK	Spinning at normal speed
	Front Top Tray Fan 7	OK	Spinning at normal speed
	Front Top Tray Fan 8	OK	Spinning at normal speed
	Front Bottom Tray Fan 1	OK	Spinning at normal speed
	Front Bottom Tray Fan 2	OK	Spinning at normal speed
	Front Bottom Tray Fan 3	OK	Spinning at normal speed
	Front Bottom Tray Fan 4	OK	Spinning at normal speed
	Front Bottom Tray Fan 5	OK	Spinning at normal speed
	Front Bottom Tray Fan 6	OK	Spinning at normal speed
	Front Bottom Tray Fan 7	OK	Spinning at normal speed
	Front Bottom Tray Fan 8	OK	Spinning at normal speed
	Rear Top Tray Fan 1	OK	Spinning at normal speed
	Rear Top Tray Fan 2	OK	Spinning at normal speed
	Rear Top Tray Fan 3	OK	Spinning at normal speed



Rear Top Tray Fan 4	OK	Spinning at normal speed
Rear Top Tray Fan 5	OK	Spinning at normal speed
Rear Top Tray Fan 6	OK	Spinning at normal speed
Rear Top Tray Fan 7	OK	Spinning at normal speed
Rear Top Tray Fan 8	OK	Spinning at normal speed
Rear Bottom Tray Fan 1	OK	Spinning at normal speed
Rear Bottom Tray Fan 2	OK	Spinning at normal speed
Rear Bottom Tray Fan 3	OK	Spinning at normal speed
Rear Bottom Tray Fan 4	OK	Spinning at normal speed
Rear Bottom Tray Fan 5	OK	Spinning at normal speed
Rear Bottom Tray Fan 6	OK	Spinning at normal speed
Rear Bottom Tray Fan 7	OK	Spinning at normal speed
Rear Bottom Tray Fan 8	OK	Spinning at normal speed

### show chassis environment (M160 Router)

```
user@host> show chassis environment
```

Class	Item	Status	Measurement
Power	PEM 0	OK	PEM 1
Temp	PCG 0	OK	45 degrees C / 113 degrees F
	PCG 1	Absent	
	Routing Engine 0	OK	35 degrees C / 95 degrees F
	Routing Engine 1	Absent	
	MCS 0	OK	50 degrees C / 122 degrees F
	SFM 0 SPP	OK	47 degrees C / 116 degrees F
	SFM 0 SPR	OK	49 degrees C / 120 degrees F
	SFM 1 SPP	OK	50 degrees C / 122 degrees F
	SFM 1 SPR	OK	50 degrees C / 122 degrees F
	SFM 2 SPP	OK	51 degrees C / 123 degrees F
	SFM 2 SPR	OK	52 degrees C / 125 degrees F
	SFM 3 SPP	OK	52 degrees C / 125 degrees F
	SFM 3 SPR	OK	48 degrees C / 118 degrees F
	FPC 0	OK	45 degrees C / 113 degrees F
	FPC 6	OK	43 degrees C / 109 degrees F
	FPM CMB	OK	31 degrees C / 87 degrees F
	FPM Display	OK	33 degrees C / 91 degrees F
Fans	Rear Bottom Blower	OK	Spinning at normal speed
	Rear Top Blower	OK	Spinning at normal speed
	Front Top Blower	OK	Spinning at normal speed
	Fan Tray Rear Left	OK	Spinning at normal speed
	Fan Tray Rear Right	OK	Spinning at normal speed
	Fan Tray Front Left	OK	Spinning at normal speed
	Fan Tray Front Right	OK	Spinning at normal speed
Misc	CIP	OK	

### show chassis environment (M320 Router)

```
user@host> show chassis environment
```

Class	Item	Status	Measurement
Temp	PEM 0	Absent	
	PEM 1	Absent	
	PEM 2	OK	
	PEM 3	OK	
	Routing Engine 0	OK	33 degrees C / 91 degrees F
	Routing Engine 1	OK	32 degrees C / 89 degrees F
	CB 0	OK	36 degrees C / 96 degrees F
	CB 1	OK	36 degrees C / 96 degrees F
	SIB 0	OK	38 degrees C / 100 degrees F
	SIB 1	OK	29 degrees C / 84 degrees F

	SIB 2	OK	38 degrees C / 100 degrees F
	SIB 3	OK	41 degrees C / 105 degrees F
	FPC 0 Intake	OK	28 degrees C / 82 degrees F
	FPC 0 Exhaust	OK	40 degrees C / 104 degrees F
	FPC 1 Intake	OK	29 degrees C / 84 degrees F
	FPC 1 Exhaust	OK	39 degrees C / 102 degrees F
	FPC 2 Intake	OK	28 degrees C / 82 degrees F
	FPC 2 Exhaust	OK	38 degrees C / 100 degrees F
	FPC 3 Intake	OK	28 degrees C / 82 degrees F
	FPC 3 Exhaust	OK	39 degrees C / 102 degrees F
	FPC 6 Intake	OK	27 degrees C / 80 degrees F
	FPC 6 Exhaust	OK	39 degrees C / 102 degrees F
	FPC 7 Intake	OK	27 degrees C / 80 degrees F
	FPC 7 Exhaust	OK	42 degrees C / 107 degrees F
	FPM GBUS	OK	30 degrees C / 86 degrees F
Fan	Top Left Front fan	OK	Spinning at normal speed
	Top Right Rear fan	OK	Spinning at normal speed
	Top Right Front fan	OK	Spinning at normal speed
	Top Left Rear fan	OK	Spinning at normal speed
	Bottom Left Front fan	OK	Spinning at normal speed
	Bottom Right Rear fan	OK	Spinning at normal speed
	Bottom Right Front fan	OK	Spinning at normal speed
	Bottom Left Rear fan	OK	Spinning at normal speed
	Rear Fan 1 (TOP)	OK	Spinning at normal speed
	Rear Fan 2	OK	Spinning at normal speed
	Rear Fan 3	OK	Spinning at normal speed
	Rear Fan 4	OK	Spinning at normal speed
	Rear Fan 5	OK	Spinning at normal speed
	Rear Fan 6	OK	Spinning at normal speed
	Rear Fan 7 (Bottom)	OK	Spinning at normal speed
Misc	CIP	OK	

### show chassis environment (MX150)

```
user@host> show chassis environment
```

Class	Item	Status	Measurement
Power	FPC 0 Power Supply 0	OK	
	FPC 0 Sensor 1	OK	42 degrees C / 107 degrees F
Temp	FPC 0 Sensor 2	OK	39 degrees C / 102 degrees F
	FPC 0 Coretemp	OK	75 degrees C / 167 degrees F
	FPC 0 Fan Tray 0	OK	Spinning at normal speed
	FPC 0 Fan Tray 1	OK	Spinning at normal speed

### show chassis environment (MX104 Router)

```
user@host> show chassis environment
```

Class	Item	Status	Measurement
Temp	PEM 0	OK	34 degrees C / 93 degrees F
	PEM 1	Absent	
ABB 0	ABB 0 Intake	OK	33 degrees C / 91 degrees F
	ABB 0 Exhaust A	OK	42 degrees C / 107 degrees F
	ABB 0 Exhaust B	OK	43 degrees C / 109 degrees F
	ABB 1 Intake	Absent	
	ABB 1 Exhaust A	Absent	
	ABB 1 Exhaust B	Absent	
Routing Engine 0	Routing Engine 0	OK	34 degrees C / 93 degrees F
	Routing Engine 0 CPU	OK	46 degrees C / 114 degrees F
	Routing Engine 1	Absent	
	Routing Engine 1 CPU	Absent	

	AFEB 0 AFEB Processor	OK	33 degrees C / 91 degrees F
Fans	Fan 1	OK	Spinning at normal speed
	Fan 2	OK	Spinning at normal speed
	Fan 3	OK	Spinning at normal speed
	Fan 4	OK	Spinning at normal speed
	Fan 5	OK	Spinning at normal speed

### show chassis environment (MX240 Router)

```
user@host> show chassis environment
```

Class	Item	Status	Measurement
Temp	PEM 0	OK	40 degrees C / 104 degrees F
	PEM 1	OK	45 degrees C / 113 degrees F
	PEM 2	Absent	
	PEM 3	Absent	
	Routing Engine 0	OK	39 degrees C / 102 degrees F
	Routing Engine 1	OK	37 degrees C / 98 degrees F
	CB 0 Intake	OK	36 degrees C / 96 degrees F
	CB 0 Exhaust A	OK	34 degrees C / 93 degrees F
	CB 0 Exhaust B	OK	38 degrees C / 100 degrees F
	CB 0 ACBC	OK	37 degrees C / 98 degrees F
	CB 0 SF A	OK	49 degrees C / 120 degrees F
	CB 0 SF B	OK	41 degrees C / 105 degrees F
	CB 1 Intake	OK	37 degrees C / 98 degrees F
	CB 1 Exhaust A	OK	34 degrees C / 93 degrees F
	CB 1 Exhaust B	OK	39 degrees C / 102 degrees F
	CB 1 ACBC	OK	38 degrees C / 100 degrees F
	CB 1 SF A	OK	47 degrees C / 116 degrees F
	CB 1 SF B	OK	41 degrees C / 105 degrees F
	FPC 1 Intake	OK	33 degrees C / 91 degrees F
	FPC 1 Exhaust A	OK	38 degrees C / 100 degrees F
	FPC 1 Exhaust B	OK	53 degrees C / 127 degrees F
	FPC 1 I3 0 TSensor	OK	50 degrees C / 122 degrees F
	FPC 1 I3 0 Chip	OK	53 degrees C / 127 degrees F
	FPC 1 I3 1 TSensor	OK	49 degrees C / 120 degrees F
	FPC 1 I3 1 Chip	OK	52 degrees C / 125 degrees F
	FPC 1 I3 2 TSensor	OK	47 degrees C / 116 degrees F
	FPC 1 I3 2 Chip	OK	49 degrees C / 120 degrees F
	FPC 1 I3 3 TSensor	OK	44 degrees C / 111 degrees F
	FPC 1 I3 3 Chip	OK	46 degrees C / 114 degrees F
	FPC 1 IA 0 TSensor	OK	45 degrees C / 113 degrees F
	FPC 1 IA 0 Chip	OK	44 degrees C / 111 degrees F
	FPC 1 IA 1 TSensor	OK	44 degrees C / 111 degrees F
	FPC 1 IA 1 Chip	OK	48 degrees C / 118 degrees F
	FPC 2 Intake	OK	32 degrees C / 89 degrees F
	FPC 2 Exhaust A	OK	40 degrees C / 104 degrees F
	FPC 2 Exhaust B	OK	52 degrees C / 125 degrees F
	FPC 2 I3 0 TSensor	OK	52 degrees C / 125 degrees F
	FPC 2 I3 0 Chip	OK	56 degrees C / 132 degrees F
	FPC 2 I3 1 TSensor	OK	52 degrees C / 125 degrees F
	FPC 2 I3 1 Chip	OK	55 degrees C / 131 degrees F
	FPC 2 I3 2 TSensor	OK	49 degrees C / 120 degrees F
	FPC 2 I3 2 Chip	OK	52 degrees C / 125 degrees F
	FPC 2 I3 3 TSensor	OK	44 degrees C / 111 degrees F
	FPC 2 I3 3 Chip	OK	48 degrees C / 118 degrees F
	FPC 2 IA 0 TSensor	OK	50 degrees C / 122 degrees F
	FPC 2 IA 0 Chip	OK	48 degrees C / 118 degrees F
	FPC 2 IA 1 TSensor	OK	47 degrees C / 116 degrees F
	FPC 2 IA 1 Chip	OK	53 degrees C / 127 degrees F
Fans	Front Fan	OK	Spinning at normal speed

Middle Fan	OK	Spinning at normal speed
Rear Fan	OK	Spinning at normal speed

**show chassis environment (MX240 Router with SCBE)**

user@host&gt; show chassis environment

Class	Item	Status	Measurement
Temp	PEM 0	OK	40 degrees C / 104 degrees F
	PEM 1	OK	45 degrees C / 113 degrees F
	PEM 2	Absent	
	PEM 3	Absent	
	Routing Engine 0	OK	39 degrees C / 102 degrees F
	Routing Engine 1	OK	37 degrees C / 98 degrees F
	CB 0 Intake	OK	36 degrees C / 96 degrees F
	CB 0 Exhaust A	OK	34 degrees C / 93 degrees F
	CB 0 Exhaust B	OK	38 degrees C / 100 degrees F
	CB 0 ACBC	OK	37 degrees C / 98 degrees F
	CB 0 XF A	OK	49 degrees C / 120 degrees F
	CB 0 XF B	OK	41 degrees C / 105 degrees F
	CB 1 Intake	OK	37 degrees C / 98 degrees F
	CB 1 Exhaust A	OK	34 degrees C / 93 degrees F
	CB 1 Exhaust B	OK	39 degrees C / 102 degrees F
	CB 1 ACBC	OK	38 degrees C / 100 degrees F
	CB 1 XF A	OK	47 degrees C / 116 degrees F
	CB 1 XF B	OK	41 degrees C / 105 degrees F
	FPC 1 Intake	OK	33 degrees C / 91 degrees F
	FPC 1 Exhaust A	OK	38 degrees C / 100 degrees F
	FPC 1 Exhaust B	OK	53 degrees C / 127 degrees F
	FPC 1 I3 0 TSensor	OK	50 degrees C / 122 degrees F
	FPC 1 I3 0 Chip	OK	53 degrees C / 127 degrees F
	FPC 1 I3 1 TSensor	OK	49 degrees C / 120 degrees F
	FPC 1 I3 1 Chip	OK	52 degrees C / 125 degrees F
	FPC 1 I3 2 TSensor	OK	47 degrees C / 116 degrees F
	FPC 1 I3 2 Chip	OK	49 degrees C / 120 degrees F
	FPC 1 I3 3 TSensor	OK	44 degrees C / 111 degrees F
	FPC 1 I3 3 Chip	OK	46 degrees C / 114 degrees F
	FPC 1 IA 0 TSensor	OK	45 degrees C / 113 degrees F
	FPC 1 IA 0 Chip	OK	44 degrees C / 111 degrees F
	FPC 1 IA 1 TSensor	OK	44 degrees C / 111 degrees F
	FPC 1 IA 1 Chip	OK	48 degrees C / 118 degrees F
	FPC 2 Intake	OK	32 degrees C / 89 degrees F
	FPC 2 Exhaust A	OK	40 degrees C / 104 degrees F
	FPC 2 Exhaust B	OK	52 degrees C / 125 degrees F
	FPC 2 I3 0 TSensor	OK	52 degrees C / 125 degrees F
	FPC 2 I3 0 Chip	OK	56 degrees C / 132 degrees F
	FPC 2 I3 1 TSensor	OK	52 degrees C / 125 degrees F
	FPC 2 I3 1 Chip	OK	55 degrees C / 131 degrees F
	FPC 2 I3 2 TSensor	OK	49 degrees C / 120 degrees F
	FPC 2 I3 2 Chip	OK	52 degrees C / 125 degrees F
	FPC 2 I3 3 TSensor	OK	44 degrees C / 111 degrees F
	FPC 2 I3 3 Chip	OK	48 degrees C / 118 degrees F
	FPC 2 IA 0 TSensor	OK	50 degrees C / 122 degrees F
	FPC 2 IA 0 Chip	OK	48 degrees C / 118 degrees F
	FPC 2 IA 1 TSensor	OK	47 degrees C / 116 degrees F
	FPC 2 IA 1 Chip	OK	53 degrees C / 127 degrees F
Fans	Front Fan	OK	Spinning at normal speed
	Middle Fan	OK	Spinning at normal speed
	Rear Fan	OK	Spinning at normal speed

## show chassis environment (MX480 Router)

user@host&gt; show chassis environment

Class	Item	Status	Measurement
Temp	PEM 0	OK	35 degrees C / 95 degrees F
	PEM 1	OK	40 degrees C / 104 degrees F
	PEM 2	Absent	
	PEM 3	Absent	
	Routing Engine 0	OK	44 degrees C / 111 degrees F
	Routing Engine 1	OK	45 degrees C / 113 degrees F
	CB 0 Intake	OK	36 degrees C / 96 degrees F
	CB 0 Exhaust A	OK	38 degrees C / 100 degrees F
	CB 0 Exhaust B	OK	39 degrees C / 102 degrees F
	CB 0 ACBC	OK	37 degrees C / 98 degrees F
	CB 0 SF A	OK	51 degrees C / 123 degrees F
	CB 0 SF B	OK	44 degrees C / 111 degrees F
	CB 1 Intake	OK	36 degrees C / 96 degrees F
	CB 1 Exhaust A	OK	39 degrees C / 102 degrees F
	CB 1 Exhaust B	OK	40 degrees C / 104 degrees F
	CB 1 ACBC	OK	37 degrees C / 98 degrees F
	CB 1 SF A	OK	50 degrees C / 122 degrees F
	CB 1 SF B	OK	43 degrees C / 109 degrees F
	FPC 0 Intake	OK	36 degrees C / 96 degrees F
	FPC 0 Exhaust A	OK	39 degrees C / 102 degrees F
	FPC 0 Exhaust B	OK	51 degrees C / 123 degrees F
	FPC 0 I3 0 TSensor	OK	49 degrees C / 120 degrees F
	FPC 0 I3 0 Chip	OK	56 degrees C / 132 degrees F
	FPC 0 I3 1 TSensor	OK	47 degrees C / 116 degrees F
	FPC 0 I3 1 Chip	OK	52 degrees C / 125 degrees F
	FPC 0 I3 2 TSensor	OK	46 degrees C / 114 degrees F
	FPC 0 I3 2 Chip	OK	48 degrees C / 118 degrees F
	FPC 0 I3 3 TSensor	OK	42 degrees C / 107 degrees F
	FPC 0 I3 3 Chip	OK	45 degrees C / 113 degrees F
	FPC 0 IA 0 TSensor	OK	45 degrees C / 113 degrees F
	FPC 0 IA 0 Chip	OK	45 degrees C / 113 degrees F
	FPC 0 IA 1 TSensor	OK	44 degrees C / 111 degrees F
	FPC 0 IA 1 Chip	OK	48 degrees C / 118 degrees F
	FPC 1 Intake	OK	37 degrees C / 98 degrees F
	FPC 1 Exhaust A	OK	41 degrees C / 105 degrees F
	FPC 1 Exhaust B	OK	52 degrees C / 125 degrees F
	FPC 1 I3 0 TSensor	OK	51 degrees C / 123 degrees F
	FPC 1 I3 0 Chip	OK	57 degrees C / 134 degrees F
	FPC 1 I3 1 TSensor	OK	48 degrees C / 118 degrees F
	FPC 1 I3 1 Chip	OK	52 degrees C / 125 degrees F
	FPC 1 I3 2 TSensor	OK	46 degrees C / 114 degrees F
	FPC 1 I3 2 Chip	OK	50 degrees C / 122 degrees F
	FPC 1 I3 3 TSensor	OK	42 degrees C / 107 degrees F
	FPC 1 I3 3 Chip	OK	46 degrees C / 114 degrees F
	FPC 1 IA 0 TSensor	OK	49 degrees C / 120 degrees F
	FPC 1 IA 0 Chip	OK	48 degrees C / 118 degrees F
	FPC 1 IA 1 TSensor	OK	46 degrees C / 114 degrees F
	FPC 1 IA 1 Chip	OK	50 degrees C / 122 degrees F
Fans	Top Rear Fan	OK	Spinning at normal speed
	Bottom Rear Fan	OK	Spinning at normal speed
	Top Middle Fan	OK	Spinning at normal speed
	Bottom Middle Fan	OK	Spinning at normal speed
	Top Front Fan	OK	Spinning at normal speed
	Bottom Front Fan	OK	Spinning at normal speed

## show chassis environment (MX480 Router with SCBE)

user@host&gt; show chassis environment

Class	Item	Status	Measurement
Temp	PEM 0	OK	35 degrees C / 95 degrees F
	PEM 1	OK	40 degrees C / 104 degrees F
	PEM 2	Absent	
	PEM 3	Absent	
	Routing Engine 0	OK	44 degrees C / 111 degrees F
	Routing Engine 1	OK	45 degrees C / 113 degrees F
	CB 0 Intake	OK	36 degrees C / 96 degrees F
	CB 0 Exhaust A	OK	38 degrees C / 100 degrees F
	CB 0 Exhaust B	OK	39 degrees C / 102 degrees F
	CB 0 ACBC	OK	37 degrees C / 98 degrees F
	CB 0 XF A	OK	51 degrees C / 123 degrees F
	CB 0 XF B	OK	44 degrees C / 111 degrees F
	CB 1 Intake	OK	36 degrees C / 96 degrees F
	CB 1 Exhaust A	OK	39 degrees C / 102 degrees F
	CB 1 Exhaust B	OK	40 degrees C / 104 degrees F
	CB 1 ACBC	OK	37 degrees C / 98 degrees F
	CB 1 XF A	OK	50 degrees C / 122 degrees F
	CB 1 XF B	OK	43 degrees C / 109 degrees F
	FPC 0 Intake	OK	36 degrees C / 96 degrees F
	FPC 0 Exhaust A	OK	39 degrees C / 102 degrees F
	FPC 0 Exhaust B	OK	51 degrees C / 123 degrees F
	FPC 0 I3 0 TSensor	OK	49 degrees C / 120 degrees F
	FPC 0 I3 0 Chip	OK	56 degrees C / 132 degrees F
	FPC 0 I3 1 TSensor	OK	47 degrees C / 116 degrees F
	FPC 0 I3 1 Chip	OK	52 degrees C / 125 degrees F
	FPC 0 I3 2 TSensor	OK	46 degrees C / 114 degrees F
	FPC 0 I3 2 Chip	OK	48 degrees C / 118 degrees F
	FPC 0 I3 3 TSensor	OK	42 degrees C / 107 degrees F
	FPC 0 I3 3 Chip	OK	45 degrees C / 113 degrees F
	FPC 0 IA 0 TSensor	OK	45 degrees C / 113 degrees F
	FPC 0 IA 0 Chip	OK	45 degrees C / 113 degrees F
	FPC 0 IA 1 TSensor	OK	44 degrees C / 111 degrees F
	FPC 0 IA 1 Chip	OK	48 degrees C / 118 degrees F
	FPC 1 Intake	OK	37 degrees C / 98 degrees F
	FPC 1 Exhaust A	OK	41 degrees C / 105 degrees F
	FPC 1 Exhaust B	OK	52 degrees C / 125 degrees F
	FPC 1 I3 0 TSensor	OK	51 degrees C / 123 degrees F
	FPC 1 I3 0 Chip	OK	57 degrees C / 134 degrees F
	FPC 1 I3 1 TSensor	OK	48 degrees C / 118 degrees F
	FPC 1 I3 1 Chip	OK	52 degrees C / 125 degrees F
	FPC 1 I3 2 TSensor	OK	46 degrees C / 114 degrees F
	FPC 1 I3 2 Chip	OK	50 degrees C / 122 degrees F
	FPC 1 I3 3 TSensor	OK	42 degrees C / 107 degrees F
	FPC 1 I3 3 Chip	OK	46 degrees C / 114 degrees F
	FPC 1 IA 0 TSensor	OK	49 degrees C / 120 degrees F
	FPC 1 IA 0 Chip	OK	48 degrees C / 118 degrees F
	FPC 1 IA 1 TSensor	OK	46 degrees C / 114 degrees F
	FPC 1 IA 1 Chip	OK	50 degrees C / 122 degrees F
Fans	Top Rear Fan	OK	Spinning at normal speed
	Bottom Rear Fan	OK	Spinning at normal speed
	Top Middle Fan	OK	Spinning at normal speed
	Bottom Middle Fan	OK	Spinning at normal speed
	Top Front Fan	OK	Spinning at normal speed
	Bottom Front Fan	OK	Spinning at normal speed

## show chassis environment (MX960 Router)

```

user@host> show chassis environment
Class Item                               Status Measurement
Temp PEM 0                               Absent
      PEM 1                               Absent
      PEM 2                               Check
      PEM 3                               OK           35 degrees C / 95 degrees F
      Routing Engine 0                     OK           37 degrees C / 98 degrees F
      Routing Engine 1                     Absent
      CB 0 Intake                           OK           24 degrees C / 75 degrees F
      CB 0 Exhaust A                       OK           30 degrees C / 86 degrees F
      CB 0 Exhaust B                       OK           27 degrees C / 80 degrees F
      CB 1 Intake                           Absent
      CB 1 Exhaust A                       Absent
      CB 1 Exhaust B                       Absent
      CB 1 ACBC                             Absent
      CB 1 SF A                             Absent
      CB 1 SF B                             Absent
      CB 2 Intake                           Absent
      CB 2 Exhaust A                       Absent
      CB 2 Exhaust B                       Absent
      CB 2 ACBC                             Absent
      CB 2 SF A                             Absent
      CB 2 SF B                             Absent
      FPC 4 Intake                           OK           24 degrees C / 75 degrees F
      FPC 4 Exhaust A                       OK           36 degrees C / 96 degrees F
      FPC 4 Exhaust B                       OK           38 degrees C / 100 degrees F
      FPC 7 Intake                           OK           24 degrees C / 75 degrees F
      FPC 7 Exhaust A                       OK           36 degrees C / 96 degrees F
      FPC 7 Exhaust B                       OK           42 degrees C / 107 degrees F
Fans  Top Fan Tray Temp                     Failed
      Top Tray Fan 1                       OK           Spinning at normal speed
      Top Tray Fan 2                       OK           Spinning at normal speed
      Top Tray Fan 3                       OK           Spinning at normal speed
      Top Tray Fan 4                       OK           Spinning at normal speed
      Top Tray Fan 5                       OK           Spinning at normal speed
      Top Tray Fan 6                       OK           Spinning at normal speed
      Bottom Fan Tray Temp                  Failed
      Bottom Tray Fan 1                   OK           Spinning at normal speed
      Bottom Tray Fan 2                   OK           Spinning at normal speed
      Bottom Tray Fan 3                   OK           Spinning at normal speed
      Bottom Tray Fan 4                   OK           Spinning at normal speed
      Bottom Tray Fan 5                   OK           Spinning at normal speed
      Bottom Tray Fan 6                   OK           Spinning at normal speed

```

## show chassis environment (MX960 Router with SCBE)

```

user@host> show chassis environment
Class Item                               Status Measurement
Temp PEM 0                               Absent
      PEM 1                               OK           50 degrees C / 122 degrees F
      PEM 2                               OK           50 degrees C / 122 degrees F
      PEM 3                               OK           50 degrees C / 122 degrees F
      Routing Engine 0                     OK           42 degrees C / 107 degrees F
      Routing Engine 0 CPU                   OK           51 degrees C / 123 degrees F
      Routing Engine 1                     OK           39 degrees C / 102 degrees F
      Routing Engine 1 CPU                   OK           44 degrees C / 111 degrees F
      CB 0 Intake                           OK           35 degrees C / 95 degrees F
      CB 0 Exhaust A                       OK           36 degrees C / 96 degrees F

```

CB 0 Exhaust B	OK	43 degrees C / 109 degrees F
CB 0 ACBC	OK	38 degrees C / 100 degrees F
CB 0 XF A	OK	53 degrees C / 127 degrees F
CB 0 XF B	OK	47 degrees C / 116 degrees F
CB 1 Intake	OK	35 degrees C / 95 degrees F
CB 1 Exhaust A	OK	35 degrees C / 95 degrees F
CB 1 Exhaust B	OK	41 degrees C / 105 degrees F
CB 1 ACBC	OK	38 degrees C / 100 degrees F
CB 1 XF A	OK	52 degrees C / 125 degrees F
CB 1 XF B	OK	47 degrees C / 116 degrees F
CB 2 Intake	OK	32 degrees C / 89 degrees F
CB 2 Exhaust A	OK	30 degrees C / 86 degrees F
CB 2 Exhaust B	OK	35 degrees C / 95 degrees F
CB 2 ACBC	OK	33 degrees C / 91 degrees F
CB 2 XF A	OK	51 degrees C / 123 degrees F
CB 2 XF B	OK	50 degrees C / 122 degrees F
FPC 0 Intake	OK	35 degrees C / 95 degrees F
FPC 0 Exhaust A	OK	39 degrees C / 102 degrees F
FPC 0 Exhaust B	OK	50 degrees C / 122 degrees F
FPC 0 I3 0 TSensor	OK	50 degrees C / 122 degrees F
FPC 0 I3 0 Chip	OK	56 degrees C / 132 degrees F
FPC 0 I3 1 TSensor	OK	47 degrees C / 116 degrees F
FPC 0 I3 1 Chip	OK	50 degrees C / 122 degrees F
FPC 0 I3 2 TSensor	OK	45 degrees C / 113 degrees F
FPC 0 I3 2 Chip	OK	48 degrees C / 118 degrees F
FPC 0 I3 3 TSensor	OK	41 degrees C / 105 degrees F
FPC 0 I3 3 Chip	OK	44 degrees C / 111 degrees F
FPC 0 IA 0 TSensor	OK	45 degrees C / 113 degrees F
FPC 0 IA 0 Chip	OK	45 degrees C / 113 degrees F
FPC 0 IA 1 TSensor	OK	44 degrees C / 111 degrees F
FPC 0 IA 1 Chip	OK	48 degrees C / 118 degrees F
FPC 1 Intake	OK	36 degrees C / 96 degrees F
FPC 1 Exhaust A	OK	47 degrees C / 116 degrees F
FPC 1 Exhaust B	OK	43 degrees C / 109 degrees F
FPC 1 LU 0 TCAM TSensor	OK	53 degrees C / 127 degrees F
FPC 1 LU 0 TCAM Chip	OK	57 degrees C / 134 degrees F
FPC 1 LU 0 TSensor	OK	53 degrees C / 127 degrees F
FPC 1 LU 0 Chip	OK	60 degrees C / 140 degrees F
FPC 1 MQ 0 TSensor	OK	53 degrees C / 127 degrees F
FPC 1 MQ 0 Chip	OK	56 degrees C / 132 degrees F
FPC 1 LU 1 TCAM TSensor	OK	51 degrees C / 123 degrees F
FPC 1 LU 1 TCAM Chip	OK	52 degrees C / 125 degrees F
FPC 1 LU 1 TSensor	OK	51 degrees C / 123 degrees F
FPC 1 LU 1 Chip	OK	53 degrees C / 127 degrees F
FPC 1 MQ 1 TSensor	OK	51 degrees C / 123 degrees F
FPC 1 MQ 1 Chip	OK	58 degrees C / 136 degrees F
FPC 2 Intake	OK	35 degrees C / 95 degrees F
FPC 2 Exhaust A	OK	39 degrees C / 102 degrees F
FPC 2 Exhaust B	OK	54 degrees C / 129 degrees F
FPC 2 I3 0 TSensor	OK	52 degrees C / 125 degrees F
FPC 2 I3 0 Chip	OK	59 degrees C / 138 degrees F
FPC 2 I3 1 TSensor	OK	48 degrees C / 118 degrees F
FPC 2 I3 1 Chip	OK	52 degrees C / 125 degrees F
FPC 2 I3 2 TSensor	OK	47 degrees C / 116 degrees F
FPC 2 I3 2 Chip	OK	49 degrees C / 120 degrees F
FPC 2 I3 3 TSensor	OK	41 degrees C / 105 degrees F
FPC 2 I3 3 Chip	OK	44 degrees C / 111 degrees F
FPC 2 IA 0 TSensor	OK	47 degrees C / 116 degrees F
FPC 2 IA 0 Chip	OK	46 degrees C / 114 degrees F
FPC 2 IA 1 TSensor	OK	45 degrees C / 113 degrees F
FPC 2 IA 1 Chip	OK	49 degrees C / 120 degrees F



FPC 3 Intake	OK	34 degrees C / 93 degrees F
FPC 3 Exhaust A	OK	34 degrees C / 93 degrees F
FPC 3 Exhaust B	OK	47 degrees C / 116 degrees F
FPC 3 I3 0 TSensor	OK	48 degrees C / 118 degrees F
FPC 3 I3 0 Chip	OK	52 degrees C / 125 degrees F
FPC 3 I3 1 TSensor	OK	46 degrees C / 114 degrees F
FPC 3 I3 1 Chip	OK	48 degrees C / 118 degrees F
FPC 3 IA 0 TSensor	OK	41 degrees C / 105 degrees F
FPC 3 IA 0 Chip	OK	40 degrees C / 104 degrees F
FPC 5 Intake	OK	42 degrees C / 107 degrees F
FPC 5 Exhaust A	OK	42 degrees C / 107 degrees F
FPC 5 Exhaust B	OK	53 degrees C / 127 degrees F
FPC 5 LU 0 TSensor	OK	53 degrees C / 127 degrees F
FPC 5 LU 0 Chip	OK	54 degrees C / 129 degrees F
FPC 5 LU 1 TSensor	OK	53 degrees C / 127 degrees F
FPC 5 LU 1 Chip	OK	61 degrees C / 141 degrees F
FPC 5 LU 2 TSensor	OK	53 degrees C / 127 degrees F
FPC 5 LU 2 Chip	OK	51 degrees C / 123 degrees F
FPC 5 LU 3 TSensor	OK	53 degrees C / 127 degrees F
FPC 5 LU 3 Chip	OK	53 degrees C / 127 degrees F
FPC 5 MQ 0 TSensor	OK	47 degrees C / 116 degrees F
FPC 5 MQ 0 Chip	OK	52 degrees C / 125 degrees F
FPC 5 MQ 1 TSensor	OK	47 degrees C / 116 degrees F
FPC 5 MQ 1 Chip	OK	52 degrees C / 125 degrees F
FPC 5 MQ 2 TSensor	OK	47 degrees C / 116 degrees F
FPC 5 MQ 2 Chip	OK	46 degrees C / 114 degrees F
FPC 5 MQ 3 TSensor	OK	47 degrees C / 116 degrees F
FPC 5 MQ 3 Chip	OK	45 degrees C / 113 degrees F
FPC 7 Intake	OK	36 degrees C / 96 degrees F
FPC 7 Exhaust A	OK	35 degrees C / 95 degrees F
FPC 7 Exhaust B	OK	33 degrees C / 91 degrees F
FPC 7 QX 0 TSensor	OK	42 degrees C / 107 degrees F
FPC 7 QX 0 Chip	OK	47 degrees C / 116 degrees F
FPC 7 LU 0 TCAM TSensor	OK	42 degrees C / 107 degrees F
FPC 7 LU 0 TCAM Chip	OK	44 degrees C / 111 degrees F
FPC 7 LU 0 TSensor	OK	42 degrees C / 107 degrees F
FPC 7 LU 0 Chip	OK	46 degrees C / 114 degrees F
FPC 7 MQ 0 TSensor	OK	42 degrees C / 107 degrees F
FPC 7 MQ 0 Chip	OK	45 degrees C / 113 degrees F
FPC 8 Intake	OK	33 degrees C / 91 degrees F
FPC 8 Exhaust A	OK	33 degrees C / 91 degrees F
FPC 8 Exhaust B	OK	36 degrees C / 96 degrees F
FPC 8 I3 0 TSensor	OK	38 degrees C / 100 degrees F
FPC 8 I3 0 Chip	OK	43 degrees C / 109 degrees F
FPC 8 BDS 0 TSensor	OK	37 degrees C / 98 degrees F
FPC 8 BDS 0 Chip	OK	36 degrees C / 96 degrees F
FPC 8 IA 0 TSensor	OK	37 degrees C / 98 degrees F
FPC 8 IA 0 Chip	OK	37 degrees C / 98 degrees F
FPC 10 Intake	OK	38 degrees C / 100 degrees F
FPC 10 Exhaust A	OK	36 degrees C / 96 degrees F
FPC 10 Exhaust B	OK	41 degrees C / 105 degrees F
FPC 10 I3 0 TSensor	OK	40 degrees C / 104 degrees F
FPC 10 I3 0 Chip	OK	42 degrees C / 107 degrees F
FPC 10 I3 1 TSensor	OK	40 degrees C / 104 degrees F
FPC 10 I3 1 Chip	OK	44 degrees C / 111 degrees F
FPC 10 I3 2 TSensor	OK	42 degrees C / 107 degrees F
FPC 10 I3 2 Chip	OK	43 degrees C / 109 degrees F
FPC 10 I3 3 TSensor	OK	39 degrees C / 102 degrees F
FPC 10 I3 3 Chip	OK	44 degrees C / 111 degrees F
FPC 10 IA 0 TSensor	OK	36 degrees C / 96 degrees F
FPC 10 IA 0 Chip	OK	36 degrees C / 96 degrees F

Fans	FPC 10 IA 1 TSensor	OK	43 degrees C / 109 degrees F
	FPC 10 IA 1 Chip	OK	42 degrees C / 107 degrees F
	Top Fan Tray Temp	OK	37 degrees C / 98 degrees F
	Top Tray Fan 1	OK	Spinning at normal speed
	Top Tray Fan 2	OK	Spinning at normal speed
	Top Tray Fan 3	OK	Spinning at normal speed
	Top Tray Fan 4	OK	Spinning at normal speed
	Top Tray Fan 5	OK	Spinning at normal speed
	Top Tray Fan 6	OK	Spinning at normal speed
	Bottom Fan Tray Temp	OK	28 degrees C / 82 degrees F
	Bottom Tray Fan 1	OK	Spinning at normal speed
	Bottom Tray Fan 2	OK	Spinning at normal speed
	Bottom Tray Fan 3	OK	Spinning at normal speed
	Bottom Tray Fan 4	OK	Spinning at normal speed
	Bottom Tray Fan 5	OK	Spinning at normal speed
	Bottom Tray Fan 6	OK	Spinning at normal speed

### show chassis environment (MX960 Router with MPC5EQ)

```
user@host> show chassis environment
```

Class	Item	Status	Measurement
Temp	PEM 0	OK	50 degrees C / 122 degrees F
	PEM 1	OK	45 degrees C / 113 degrees F
	PEM 2	OK	45 degrees C / 113 degrees F
	PEM 3	Absent	
	Routing Engine 0	OK	31 degrees C / 87 degrees F
	Routing Engine 0 CPU	OK	30 degrees C / 86 degrees F
	Routing Engine 1	Present	
	Routing Engine 1 CPU	Present	
	CB 0 Intake	OK	29 degrees C / 84 degrees F
	CB 0 Exhaust A	OK	29 degrees C / 84 degrees F
	CB 0 Exhaust B	OK	34 degrees C / 93 degrees F
	CB 0 ACBC	OK	32 degrees C / 89 degrees F
	CB 0 XF A	OK	49 degrees C / 120 degrees F
	CB 0 XF B	OK	45 degrees C / 113 degrees F
	CB 1 Intake	OK	26 degrees C / 78 degrees F
	CB 1 Exhaust A	OK	26 degrees C / 78 degrees F
	CB 1 Exhaust B	OK	27 degrees C / 80 degrees F
	CB 1 ACBC	OK	26 degrees C / 78 degrees F
	CB 1 XF A	OK	32 degrees C / 89 degrees F
	CB 1 XF B	OK	32 degrees C / 89 degrees F
	CB 2 Intake	OK	28 degrees C / 82 degrees F
	CB 2 Exhaust A	OK	27 degrees C / 80 degrees F
	CB 2 Exhaust B	OK	33 degrees C / 91 degrees F
	CB 2 ACBC	OK	30 degrees C / 86 degrees F
	CB 2 XF A	OK	48 degrees C / 118 degrees F
	CB 2 XF B	OK	46 degrees C / 114 degrees F
	FPC 0 Intake	OK	38 degrees C / 100 degrees F
	FPC 0 Exhaust A	OK	48 degrees C / 118 degrees F
	FPC 0 Exhaust B	OK	49 degrees C / 120 degrees F
	FPC 0 XL TSen	OK	48 degrees C / 118 degrees F
	FPC 0 XL Chip	OK	50 degrees C / 122 degrees F
	FPC 0 XL_XR0 TSen	OK	48 degrees C / 118 degrees F
	FPC 0 XL_XR0 Chip	OK	53 degrees C / 127 degrees F
	FPC 0 XL_XR1 TSen	OK	48 degrees C / 118 degrees F
	FPC 0 XL_XR1 Chip	OK	54 degrees C / 129 degrees F
	FPC 0 XQ TSen	OK	48 degrees C / 118 degrees F
	FPC 0 XQ Chip	OK	52 degrees C / 125 degrees F
	FPC 0 XQ_XR0 TSen	OK	48 degrees C / 118 degrees F
	FPC 0 XQ_XR0 Chip	OK	62 degrees C / 143 degrees F
	FPC 0 XQ_XR1 TSen	OK	48 degrees C / 118 degrees F

FPC 0 XQ_XR1 Chip	OK	62 degrees C / 143 degrees F
FPC 0 XM 0 TSen	OK	53 degrees C / 127 degrees F
FPC 0 XM 0 Chip	OK	63 degrees C / 145 degrees F
FPC 0 XM 1 TSen	OK	53 degrees C / 127 degrees F
FPC 0 XM 1 Chip	OK	46 degrees C / 114 degrees F
FPC 0 PLX PCIe Switch TSe	OK	53 degrees C / 127 degrees F
FPC 0 PLX PCIe Switch Chi	OK	66 degrees C / 150 degrees F
FPC 1 Intake	OK	31 degrees C / 87 degrees F
FPC 1 Exhaust A	OK	38 degrees C / 100 degrees F
FPC 1 Exhaust B	OK	49 degrees C / 120 degrees F
FPC 1 LU 0 TSen	OK	41 degrees C / 105 degrees F
FPC 1 LU 0 Chip	OK	47 degrees C / 116 degrees F
FPC 1 LU 1 TSen	OK	41 degrees C / 105 degrees F
FPC 1 LU 1 Chip	OK	42 degrees C / 107 degrees F
FPC 1 LU 2 TSen	OK	41 degrees C / 105 degrees F
FPC 1 LU 2 Chip	OK	46 degrees C / 114 degrees F
FPC 1 LU 3 TSen	OK	41 degrees C / 105 degrees F
FPC 1 LU 3 Chip	OK	51 degrees C / 123 degrees F
FPC 1 XM 0 TSen	OK	41 degrees C / 105 degrees F
FPC 1 XM 0 Chip	OK	49 degrees C / 120 degrees F
FPC 1 XF 0 TSen	OK	41 degrees C / 105 degrees F
FPC 1 XF 0 Chip	OK	63 degrees C / 145 degrees F
FPC 1 PLX Switch TSen	OK	41 degrees C / 105 degrees F
FPC 1 PLX Switch Chip	OK	43 degrees C / 109 degrees F
FPC 3 Intake	OK	31 degrees C / 87 degrees F
FPC 3 Exhaust A	OK	37 degrees C / 98 degrees F
FPC 3 Exhaust B	OK	43 degrees C / 109 degrees F
FPC 3 LU 0 TSen	OK	42 degrees C / 107 degrees F
FPC 3 LU 0 Chip	OK	43 degrees C / 109 degrees F
FPC 3 LU 1 TSen	OK	42 degrees C / 107 degrees F
FPC 3 LU 1 Chip	OK	46 degrees C / 114 degrees F
FPC 3 LU 2 TSen	OK	42 degrees C / 107 degrees F
FPC 3 LU 2 Chip	OK	40 degrees C / 104 degrees F
FPC 3 LU 3 TSen	OK	42 degrees C / 107 degrees F
FPC 3 LU 3 Chip	OK	41 degrees C / 105 degrees F
FPC 3 MQ 0 TSen	OK	37 degrees C / 98 degrees F
FPC 3 MQ 0 Chip	OK	37 degrees C / 98 degrees F
FPC 3 MQ 1 TSen	OK	37 degrees C / 98 degrees F
FPC 3 MQ 1 Chip	OK	40 degrees C / 104 degrees F
FPC 3 MQ 2 TSen	OK	37 degrees C / 98 degrees F
FPC 3 MQ 2 Chip	OK	36 degrees C / 96 degrees F
FPC 3 MQ 3 TSen	OK	37 degrees C / 98 degrees F
FPC 3 MQ 3 Chip	OK	38 degrees C / 100 degrees F
FPC 4 Intake	OK	34 degrees C / 93 degrees F
FPC 4 Exhaust A	OK	45 degrees C / 113 degrees F
FPC 4 Exhaust B	OK	47 degrees C / 116 degrees F
FPC 4 XL TSen	OK	44 degrees C / 111 degrees F
FPC 4 XL Chip	OK	47 degrees C / 116 degrees F
FPC 4 XL_XR0 TSen	OK	44 degrees C / 111 degrees F
FPC 4 XL_XR0 Chip	OK	48 degrees C / 118 degrees F
FPC 4 XL_XR1 TSen	OK	44 degrees C / 111 degrees F
FPC 4 XL_XR1 Chip	OK	47 degrees C / 116 degrees F
FPC 4 XQ TSen	OK	44 degrees C / 111 degrees F
FPC 4 XQ Chip	OK	47 degrees C / 116 degrees F
FPC 4 XQ_XR0 TSen	OK	44 degrees C / 111 degrees F
FPC 4 XQ_XR0 Chip	OK	57 degrees C / 134 degrees F
FPC 4 XQ_XR1 TSen	OK	44 degrees C / 111 degrees F
FPC 4 XQ_XR1 Chip	OK	58 degrees C / 136 degrees F
FPC 4 XM 0 TSen	OK	51 degrees C / 123 degrees F
FPC 4 XM 0 Chip	OK	61 degrees C / 141 degrees F
FPC 4 XM 1 TSen	OK	51 degrees C / 123 degrees F

FPC 4 XM 1 Chip	OK	47 degrees C / 116 degrees F
FPC 4 PLX PCIe Switch TSe	OK	51 degrees C / 123 degrees F
FPC 4 PLX PCIe Switch Chi	OK	60 degrees C / 140 degrees F
FPC 5 Intake	OK	34 degrees C / 93 degrees F
FPC 5 Exhaust A	OK	45 degrees C / 113 degrees F
FPC 5 Exhaust B	OK	47 degrees C / 116 degrees F
FPC 5 XL TSen	OK	45 degrees C / 113 degrees F
FPC 5 XL Chip	OK	47 degrees C / 116 degrees F
FPC 5 XL_XR0 TSen	OK	45 degrees C / 113 degrees F
FPC 5 XL_XR0 Chip	OK	49 degrees C / 120 degrees F
FPC 5 XL_XR1 TSen	OK	45 degrees C / 113 degrees F
FPC 5 XL_XR1 Chip	OK	49 degrees C / 120 degrees F
FPC 5 XQ TSen	OK	45 degrees C / 113 degrees F
FPC 5 XQ Chip	OK	48 degrees C / 118 degrees F
FPC 5 XQ_XR0 TSen	OK	45 degrees C / 113 degrees F
FPC 5 XQ_XR0 Chip	OK	60 degrees C / 140 degrees F
FPC 5 XQ_XR1 TSen	OK	45 degrees C / 113 degrees F
FPC 5 XQ_XR1 Chip	OK	58 degrees C / 136 degrees F
FPC 5 XM 0 TSen	OK	50 degrees C / 122 degrees F
FPC 5 XM 0 Chip	OK	48 degrees C / 118 degrees F
FPC 5 XM 1 TSen	OK	50 degrees C / 122 degrees F
FPC 5 XM 1 Chip	OK	47 degrees C / 116 degrees F
FPC 5 PLX PCIe Switch TSe	OK	50 degrees C / 122 degrees F
FPC 5 PLX PCIe Switch Chi	OK	59 degrees C / 138 degrees F
FPC 7 Intake	OK	32 degrees C / 89 degrees F
FPC 7 Exhaust A	OK	32 degrees C / 89 degrees F
FPC 7 Exhaust B	OK	33 degrees C / 91 degrees F
FPC 7 LU 0 TSen	OK	49 degrees C / 120 degrees F
FPC 7 LU 0 Chip	OK	44 degrees C / 111 degrees F
FPC 7 LU 1 TSen	OK	49 degrees C / 120 degrees F
FPC 7 LU 1 Chip	OK	47 degrees C / 116 degrees F
FPC 7 LU 2 TSen	OK	49 degrees C / 120 degrees F
FPC 7 LU 2 Chip	OK	39 degrees C / 102 degrees F
FPC 7 LU 3 TSen	OK	49 degrees C / 120 degrees F
FPC 7 LU 3 Chip	OK	43 degrees C / 109 degrees F
FPC 7 XM 0 TSen	OK	49 degrees C / 120 degrees F
FPC 7 XM 0 Chip	OK	57 degrees C / 134 degrees F
FPC 7 XM 1 TSen	OK	49 degrees C / 120 degrees F
FPC 7 XM 1 Chip	OK	48 degrees C / 118 degrees F
FPC 7 PLX Switch TSen	OK	49 degrees C / 120 degrees F
FPC 7 PLX Switch Chip	OK	45 degrees C / 113 degrees F
FPC 8 Intake	OK	36 degrees C / 96 degrees F
FPC 8 Exhaust A	OK	51 degrees C / 123 degrees F
FPC 8 Exhaust B	OK	46 degrees C / 114 degrees F
FPC 8 XL TSen	OK	46 degrees C / 114 degrees F
FPC 8 XL Chip	OK	47 degrees C / 116 degrees F
FPC 8 XL_XR0 TSen	OK	46 degrees C / 114 degrees F
FPC 8 XL_XR0 Chip	OK	53 degrees C / 127 degrees F
FPC 8 XL_XR1 TSen	OK	46 degrees C / 114 degrees F
FPC 8 XL_XR1 Chip	OK	52 degrees C / 125 degrees F
FPC 8 XQ TSen	OK	46 degrees C / 114 degrees F
FPC 8 XQ Chip	OK	46 degrees C / 114 degrees F
FPC 8 XQ_XR0 TSen	OK	46 degrees C / 114 degrees F
FPC 8 XQ_XR0 Chip	OK	59 degrees C / 138 degrees F
FPC 8 XQ_XR1 TSen	OK	46 degrees C / 114 degrees F
FPC 8 XQ_XR1 Chip	OK	57 degrees C / 134 degrees F
FPC 8 XM 0 TSen	OK	52 degrees C / 125 degrees F
FPC 8 XM 0 Chip	OK	61 degrees C / 141 degrees F
FPC 8 XM 1 TSen	OK	52 degrees C / 125 degrees F
FPC 8 XM 1 Chip	OK	47 degrees C / 116 degrees F
FPC 8 PLX PCIe Switch TSe	OK	52 degrees C / 125 degrees F

FPC 8 PLX PCIe Switch Chi	OK	63 degrees C / 145 degrees F
FPC 9 Intake	OK	31 degrees C / 87 degrees F
FPC 9 Exhaust A	OK	34 degrees C / 93 degrees F
FPC 9 Exhaust B	OK	35 degrees C / 95 degrees F
FPC 9 QX 0 TSen	OK	42 degrees C / 107 degrees F
FPC 9 QX 0 Chip	OK	45 degrees C / 113 degrees F
FPC 9 LU 0 TCAM TSen	OK	42 degrees C / 107 degrees F
FPC 9 LU 0 TCAM Chip	OK	41 degrees C / 105 degrees F
FPC 9 LU 0 TSen	OK	42 degrees C / 107 degrees F
FPC 9 LU 0 Chip	OK	43 degrees C / 109 degrees F
FPC 9 MQ 0 TSen	OK	42 degrees C / 107 degrees F
FPC 9 MQ 0 Chip	OK	43 degrees C / 109 degrees F
FPC 9 QX 1 TSen	OK	38 degrees C / 100 degrees F
FPC 9 QX 1 Chip	OK	40 degrees C / 104 degrees F
FPC 9 LU 1 TCAM TSen	OK	38 degrees C / 100 degrees F
FPC 9 LU 1 TCAM Chip	OK	38 degrees C / 100 degrees F
FPC 9 LU 1 TSen	OK	38 degrees C / 100 degrees F
FPC 9 LU 1 Chip	OK	41 degrees C / 105 degrees F
FPC 9 MQ 1 TSen	OK	38 degrees C / 100 degrees F
FPC 9 MQ 1 Chip	OK	41 degrees C / 105 degrees F
FPC 10 Intake	OK	35 degrees C / 95 degrees F
FPC 10 Exhaust A	OK	51 degrees C / 123 degrees F
FPC 10 Exhaust B	OK	46 degrees C / 114 degrees F
FPC 10 XL TSen	OK	42 degrees C / 107 degrees F
FPC 10 XL Chip	OK	44 degrees C / 111 degrees F
FPC 10 XL_XR0 TSen	OK	42 degrees C / 107 degrees F
FPC 10 XL_XR0 Chip	OK	47 degrees C / 116 degrees F
FPC 10 XL_XR1 TSen	OK	42 degrees C / 107 degrees F
FPC 10 XL_XR1 Chip	OK	48 degrees C / 118 degrees F
FPC 10 XQ TSen	OK	42 degrees C / 107 degrees F
FPC 10 XQ Chip	OK	46 degrees C / 114 degrees F
FPC 10 XQ_XR0 TSen	OK	42 degrees C / 107 degrees F
FPC 10 XQ_XR0 Chip	OK	57 degrees C / 134 degrees F
FPC 10 XQ_XR1 TSen	OK	42 degrees C / 107 degrees F
FPC 10 XQ_XR1 Chip	OK	53 degrees C / 127 degrees F
FPC 10 XM 0 TSen	OK	51 degrees C / 123 degrees F
FPC 10 XM 0 Chip	OK	61 degrees C / 141 degrees F
FPC 10 XM 1 TSen	OK	51 degrees C / 123 degrees F
FPC 10 XM 1 Chip	OK	49 degrees C / 120 degrees F
FPC 10 PLX PCIe Switch TSe	OK	51 degrees C / 123 degrees F
FPC 10 PLX PCIe Switch Chi	OK	61 degrees C / 141 degrees F
FPC 11 Intake	OK	33 degrees C / 91 degrees F
FPC 11 Exhaust A	OK	33 degrees C / 91 degrees F
FPC 11 Exhaust B	OK	34 degrees C / 93 degrees F
FPC 11 LU 0 TSen	OK	50 degrees C / 122 degrees F
FPC 11 LU 0 Chip	OK	48 degrees C / 118 degrees F
FPC 11 LU 1 TSen	OK	50 degrees C / 122 degrees F
FPC 11 LU 1 Chip	OK	50 degrees C / 122 degrees F
FPC 11 LU 2 TSen	OK	50 degrees C / 122 degrees F
FPC 11 LU 2 Chip	OK	41 degrees C / 105 degrees F
FPC 11 LU 3 TSen	OK	50 degrees C / 122 degrees F
FPC 11 LU 3 Chip	OK	48 degrees C / 118 degrees F
FPC 11 XM 0 TSen	OK	50 degrees C / 122 degrees F
FPC 11 XM 0 Chip	OK	57 degrees C / 134 degrees F
FPC 11 XM 1 TSen	OK	50 degrees C / 122 degrees F
FPC 11 XM 1 Chip	OK	52 degrees C / 125 degrees F
FPC 11 PLX Switch TSen	OK	50 degrees C / 122 degrees F
FPC 11 PLX Switch Chip	OK	45 degrees C / 113 degrees F
Fans Top Fan Tray Temp	OK	42 degrees C / 107 degrees F
Top Tray Fan 1	OK	Spinning at high speed
Top Tray Fan 2	OK	Spinning at high speed

Top Tray Fan 3	OK	Spinning at high speed
Top Tray Fan 4	OK	Spinning at high speed
Top Tray Fan 5	OK	Spinning at high speed
Top Tray Fan 6	OK	Spinning at high speed
Top Tray Fan 7	OK	Spinning at high speed
Top Tray Fan 8	OK	Spinning at high speed
Top Tray Fan 9	OK	Spinning at high speed
Top Tray Fan 10	OK	Spinning at high speed
Top Tray Fan 11	OK	Spinning at high speed
Top Tray Fan 12	OK	Spinning at high speed
Bottom Fan Tray Temp	OK	33 degrees C / 91 degrees F
Bottom Tray Fan 1	OK	Spinning at high speed
Bottom Tray Fan 2	OK	Spinning at high speed
Bottom Tray Fan 3	OK	Spinning at high speed
Bottom Tray Fan 4	OK	Spinning at high speed
Bottom Tray Fan 5	OK	Spinning at high speed
Bottom Tray Fan 6	OK	Spinning at high speed
Bottom Tray Fan 7	OK	Spinning at high speed
Bottom Tray Fan 8	OK	Spinning at high speed
Bottom Tray Fan 9	OK	Spinning at high speed
Bottom Tray Fan 10	OK	Spinning at high speed
Bottom Tray Fan 11	OK	Spinning at high speed
Bottom Tray Fan 12	OK	Spinning at high speed

**show chassis environment (MX2020 Router)**

user@host&gt; show chassis environment

Class	Item	Status	Measurement
Temp	PSM 0	Absent	
	PSM 1	Absent	
	PSM 2	OK	41 degrees C / 105 degrees F
	PSM 3	OK	39 degrees C / 102 degrees F
	PSM 4	OK	39 degrees C / 102 degrees F
	PSM 5	OK	38 degrees C / 100 degrees F
	PSM 6	OK	38 degrees C / 100 degrees F
	PSM 7	OK	38 degrees C / 100 degrees F
	PSM 8	OK	37 degrees C / 98 degrees F
	PSM 9	Absent	
	PSM 10	Absent	
	PSM 11	OK	47 degrees C / 116 degrees F
	PSM 12	OK	45 degrees C / 113 degrees F
	PSM 13	OK	44 degrees C / 111 degrees F
	PSM 14	OK	44 degrees C / 111 degrees F
	PSM 15	OK	43 degrees C / 109 degrees F
	PSM 16	OK	42 degrees C / 107 degrees F
	PSM 17	OK	41 degrees C / 105 degrees F
	PDM 0	OK	
	PDM 1	Absent	
	PDM 2	Absent	
	PDM 3	OK	
	CB 0 IntakeA-Zone0	OK	45 degrees C / 113 degrees F
	CB 0 IntakeB-Zone1	OK	34 degrees C / 93 degrees F
	CB 0 IntakeC-Zone0	OK	48 degrees C / 118 degrees F
	CB 0 ExhaustA-Zone0	OK	45 degrees C / 113 degrees F
	CB 0 ExhaustB-Zone1	OK	37 degrees C / 98 degrees F
	CB 0 TCBC-Zone0	OK	41 degrees C / 105 degrees F
	CB 1 IntakeA-Zone0	OK	46 degrees C / 114 degrees F
	CB 1 IntakeB-Zone1	OK	42 degrees C / 107 degrees F
	CB 1 IntakeC-Zone0	OK	49 degrees C / 120 degrees F
	CB 1 ExhaustA-Zone0	OK	46 degrees C / 114 degrees F
	CB 1 ExhaustB-Zone1	OK	41 degrees C / 105 degrees F

CB 1 TCBC-Zone0	OK	46 degrees C / 114 degrees F
SPMB 0 Intake	OK	33 degrees C / 91 degrees F
SPMB 1 Intake	OK	42 degrees C / 107 degrees F
Routing Engine 0	OK	35 degrees C / 95 degrees F
Routing Engine 0 CPU	OK	34 degrees C / 93 degrees F
Routing Engine 1	OK	44 degrees C / 111 degrees F
Routing Engine 1 CPU	OK	42 degrees C / 107 degrees F
SFB 0 Intake-Zone0	OK	55 degrees C / 131 degrees F
SFB 0 Exhaust-Zone1	OK	48 degrees C / 118 degrees F
SFB 0 IntakeA-Zone0	OK	50 degrees C / 122 degrees F
SFB 0 IntakeB-Zone1	OK	40 degrees C / 104 degrees F
SFB 0 Exhaust-Zone0	OK	52 degrees C / 125 degrees F
SFB 0 SFB-XF2-Zone1	OK	61 degrees C / 141 degrees F
SFB 0 SFB-XF1-Zone0	OK	69 degrees C / 156 degrees F
SFB 0 SFB-XF0-Zone0	OK	68 degrees C / 154 degrees F
SFB 1 Intake-Zone0	OK	56 degrees C / 132 degrees F
SFB 1 Exhaust-Zone1	OK	47 degrees C / 116 degrees F
SFB 1 IntakeA-Zone0	OK	51 degrees C / 123 degrees F
SFB 1 IntakeB-Zone1	OK	40 degrees C / 104 degrees F
SFB 1 Exhaust-Zone0	OK	51 degrees C / 123 degrees F
SFB 1 SFB-XF2-Zone1	OK	62 degrees C / 143 degrees F
SFB 1 SFB-XF1-Zone0	OK	67 degrees C / 152 degrees F
SFB 1 SFB-XF0-Zone0	OK	69 degrees C / 156 degrees F
SFB 2 Intake-Zone0	OK	56 degrees C / 132 degrees F
SFB 2 Exhaust-Zone1	OK	47 degrees C / 116 degrees F
SFB 2 IntakeA-Zone0	OK	51 degrees C / 123 degrees F
SFB 2 IntakeB-Zone1	OK	40 degrees C / 104 degrees F
SFB 2 Exhaust-Zone0	OK	53 degrees C / 127 degrees F
SFB 2 SFB-XF2-Zone1	OK	65 degrees C / 149 degrees F
SFB 2 SFB-XF1-Zone0	OK	69 degrees C / 156 degrees F
SFB 2 SFB-XF0-Zone0	OK	70 degrees C / 158 degrees F
SFB 3 Intake-Zone0	OK	57 degrees C / 134 degrees F
SFB 3 Exhaust-Zone1	OK	48 degrees C / 118 degrees F
SFB 3 IntakeA-Zone0	OK	52 degrees C / 125 degrees F
SFB 3 IntakeB-Zone1	OK	41 degrees C / 105 degrees F
SFB 3 Exhaust-Zone0	OK	53 degrees C / 127 degrees F
SFB 3 SFB-XF2-Zone1	OK	66 degrees C / 150 degrees F
SFB 3 SFB-XF1-Zone0	OK	69 degrees C / 156 degrees F
SFB 3 SFB-XF0-Zone0	OK	71 degrees C / 159 degrees F
SFB 4 Intake-Zone0	OK	58 degrees C / 136 degrees F
SFB 4 Exhaust-Zone1	OK	49 degrees C / 120 degrees F
SFB 4 IntakeA-Zone0	OK	54 degrees C / 129 degrees F
SFB 4 IntakeB-Zone1	OK	42 degrees C / 107 degrees F
SFB 4 Exhaust-Zone0	OK	53 degrees C / 127 degrees F
SFB 4 SFB-XF2-Zone1	OK	64 degrees C / 147 degrees F
SFB 4 SFB-XF1-Zone0	OK	68 degrees C / 154 degrees F
SFB 4 SFB-XF0-Zone0	OK	71 degrees C / 159 degrees F
SFB 5 Intake-Zone0	OK	58 degrees C / 136 degrees F
SFB 5 Exhaust-Zone1	OK	50 degrees C / 122 degrees F
SFB 5 IntakeA-Zone0	OK	53 degrees C / 127 degrees F
SFB 5 IntakeB-Zone1	OK	43 degrees C / 109 degrees F
SFB 5 Exhaust-Zone0	OK	54 degrees C / 129 degrees F
SFB 5 SFB-XF2-Zone1	OK	66 degrees C / 150 degrees F
SFB 5 SFB-XF1-Zone0	OK	69 degrees C / 156 degrees F
SFB 5 SFB-XF0-Zone0	OK	74 degrees C / 165 degrees F
SFB 6 Intake-Zone0	OK	58 degrees C / 136 degrees F
SFB 6 Exhaust-Zone1	OK	49 degrees C / 120 degrees F
SFB 6 IntakeA-Zone0	OK	53 degrees C / 127 degrees F
SFB 6 IntakeB-Zone1	OK	43 degrees C / 109 degrees F
SFB 6 Exhaust-Zone0	OK	53 degrees C / 127 degrees F
SFB 6 SFB-XF2-Zone1	OK	65 degrees C / 149 degrees F

SFB 6 SFB-XF1-Zone0	OK	68 degrees C / 154 degrees F
SFB 6 SFB-XF0-Zone0	OK	72 degrees C / 161 degrees F
SFB 7 Intake-Zone0	OK	57 degrees C / 134 degrees F
SFB 7 Exhaust-Zone1	OK	50 degrees C / 122 degrees F
SFB 7 IntakeA-Zone0	OK	53 degrees C / 127 degrees F
SFB 7 IntakeB-Zone1	OK	43 degrees C / 109 degrees F
SFB 7 Exhaust-Zone0	OK	54 degrees C / 129 degrees F
SFB 7 SFB-XF2-Zone1	OK	68 degrees C / 154 degrees F
SFB 7 SFB-XF1-Zone0	OK	69 degrees C / 156 degrees F
SFB 7 SFB-XF0-Zone0	OK	73 degrees C / 163 degrees F
FPC 0 Intake	OK	41 degrees C / 105 degrees F
FPC 0 Exhaust A	OK	48 degrees C / 118 degrees F
FPC 0 Exhaust B	OK	62 degrees C / 143 degrees F
FPC 0 LU 0 TSen	OK	59 degrees C / 138 degrees F
FPC 0 LU 0 Chip	OK	62 degrees C / 143 degrees F
FPC 0 LU 1 TSen	OK	59 degrees C / 138 degrees F
FPC 0 LU 1 Chip	OK	64 degrees C / 147 degrees F
FPC 0 LU 2 TSen	OK	59 degrees C / 138 degrees F
FPC 0 LU 2 Chip	OK	53 degrees C / 127 degrees F
FPC 0 LU 3 TSen	OK	59 degrees C / 138 degrees F
FPC 0 LU 3 Chip	OK	53 degrees C / 127 degrees F
FPC 0 MQ 0 TSen	OK	47 degrees C / 116 degrees F
FPC 0 MQ 0 Chip	OK	49 degrees C / 120 degrees F
FPC 0 MQ 1 TSen	OK	47 degrees C / 116 degrees F
FPC 0 MQ 1 Chip	OK	51 degrees C / 123 degrees F
FPC 0 MQ 2 TSen	OK	47 degrees C / 116 degrees F
FPC 0 MQ 2 Chip	OK	44 degrees C / 111 degrees F
FPC 0 MQ 3 TSen	OK	47 degrees C / 116 degrees F
FPC 0 MQ 3 Chip	OK	45 degrees C / 113 degrees F
FPC 1 Intake	OK	40 degrees C / 104 degrees F
FPC 1 Exhaust A	OK	49 degrees C / 120 degrees F
FPC 1 Exhaust B	OK	58 degrees C / 136 degrees F
FPC 1 LU 0 TSen	OK	55 degrees C / 131 degrees F
FPC 1 LU 0 Chip	OK	56 degrees C / 132 degrees F
FPC 1 LU 1 TSen	OK	55 degrees C / 131 degrees F
FPC 1 LU 1 Chip	OK	58 degrees C / 136 degrees F
FPC 1 LU 2 TSen	OK	55 degrees C / 131 degrees F
FPC 1 LU 2 Chip	OK	49 degrees C / 120 degrees F
FPC 1 LU 3 TSen	OK	55 degrees C / 131 degrees F
FPC 1 LU 3 Chip	OK	51 degrees C / 123 degrees F
FPC 1 MQ 0 TSen	OK	47 degrees C / 116 degrees F
FPC 1 MQ 0 Chip	OK	48 degrees C / 118 degrees F
FPC 1 MQ 1 TSen	OK	47 degrees C / 116 degrees F
FPC 1 MQ 1 Chip	OK	50 degrees C / 122 degrees F
FPC 1 MQ 2 TSen	OK	47 degrees C / 116 degrees F
FPC 1 MQ 2 Chip	OK	44 degrees C / 111 degrees F
FPC 1 MQ 3 TSen	OK	47 degrees C / 116 degrees F
FPC 1 MQ 3 Chip	OK	44 degrees C / 111 degrees F
FPC 2 Intake	OK	39 degrees C / 102 degrees F
FPC 2 Exhaust A	OK	49 degrees C / 120 degrees F
FPC 2 Exhaust B	OK	61 degrees C / 141 degrees F
FPC 2 LU 0 TSen	OK	58 degrees C / 136 degrees F
FPC 2 LU 0 Chip	OK	60 degrees C / 140 degrees F
FPC 2 LU 1 TSen	OK	58 degrees C / 136 degrees F
FPC 2 LU 1 Chip	OK	65 degrees C / 149 degrees F
FPC 2 LU 2 TSen	OK	58 degrees C / 136 degrees F
FPC 2 LU 2 Chip	OK	51 degrees C / 123 degrees F
FPC 2 LU 3 TSen	OK	58 degrees C / 136 degrees F
FPC 2 LU 3 Chip	OK	53 degrees C / 127 degrees F
FPC 2 MQ 0 TSen	OK	47 degrees C / 116 degrees F
FPC 2 MQ 0 Chip	OK	50 degrees C / 122 degrees F



FPC 2 MQ 1 TSen	OK	47 degrees C / 116 degrees F
FPC 2 MQ 1 Chip	OK	52 degrees C / 125 degrees F
FPC 2 MQ 2 TSen	OK	47 degrees C / 116 degrees F
FPC 2 MQ 2 Chip	OK	45 degrees C / 113 degrees F
FPC 2 MQ 3 TSen	OK	47 degrees C / 116 degrees F
FPC 2 MQ 3 Chip	OK	46 degrees C / 114 degrees F
FPC 3 Intake	OK	40 degrees C / 104 degrees F
FPC 3 Exhaust A	OK	49 degrees C / 120 degrees F
FPC 3 Exhaust B	OK	61 degrees C / 141 degrees F
FPC 3 LU 0 TSen	OK	58 degrees C / 136 degrees F
FPC 3 LU 0 Chip	OK	61 degrees C / 141 degrees F
FPC 3 LU 1 TSen	OK	58 degrees C / 136 degrees F
FPC 3 LU 1 Chip	OK	62 degrees C / 143 degrees F
FPC 3 LU 2 TSen	OK	58 degrees C / 136 degrees F
FPC 3 LU 2 Chip	OK	51 degrees C / 123 degrees F
FPC 3 LU 3 TSen	OK	58 degrees C / 136 degrees F
FPC 3 LU 3 Chip	OK	53 degrees C / 127 degrees F
FPC 3 MQ 0 TSen	OK	48 degrees C / 118 degrees F
FPC 3 MQ 0 Chip	OK	50 degrees C / 122 degrees F
FPC 3 MQ 1 TSen	OK	48 degrees C / 118 degrees F
FPC 3 MQ 1 Chip	OK	54 degrees C / 129 degrees F
FPC 3 MQ 2 TSen	OK	48 degrees C / 118 degrees F
FPC 3 MQ 2 Chip	OK	45 degrees C / 113 degrees F
FPC 3 MQ 3 TSen	OK	48 degrees C / 118 degrees F
FPC 3 MQ 3 Chip	OK	48 degrees C / 118 degrees F
FPC 4 Intake	OK	40 degrees C / 104 degrees F
FPC 4 Exhaust A	OK	49 degrees C / 120 degrees F
FPC 4 Exhaust B	OK	62 degrees C / 143 degrees F
FPC 4 LU 0 TSen	OK	59 degrees C / 138 degrees F
FPC 4 LU 0 Chip	OK	62 degrees C / 143 degrees F
FPC 4 LU 1 TSen	OK	59 degrees C / 138 degrees F
FPC 4 LU 1 Chip	OK	65 degrees C / 149 degrees F
FPC 4 LU 2 TSen	OK	59 degrees C / 138 degrees F
FPC 4 LU 2 Chip	OK	51 degrees C / 123 degrees F
FPC 4 LU 3 TSen	OK	59 degrees C / 138 degrees F
FPC 4 LU 3 Chip	OK	53 degrees C / 127 degrees F
FPC 4 MQ 0 TSen	OK	48 degrees C / 118 degrees F
FPC 4 MQ 0 Chip	OK	52 degrees C / 125 degrees F
FPC 4 MQ 1 TSen	OK	48 degrees C / 118 degrees F
FPC 4 MQ 1 Chip	OK	53 degrees C / 127 degrees F
FPC 4 MQ 2 TSen	OK	48 degrees C / 118 degrees F
FPC 4 MQ 2 Chip	OK	46 degrees C / 114 degrees F
FPC 4 MQ 3 TSen	OK	48 degrees C / 118 degrees F
FPC 4 MQ 3 Chip	OK	47 degrees C / 116 degrees F
FPC 5 Intake	OK	41 degrees C / 105 degrees F
FPC 5 Exhaust A	OK	50 degrees C / 122 degrees F
FPC 5 Exhaust B	OK	63 degrees C / 145 degrees F
FPC 5 LU 0 TSen	OK	60 degrees C / 140 degrees F
FPC 5 LU 0 Chip	OK	63 degrees C / 145 degrees F
FPC 5 LU 1 TSen	OK	60 degrees C / 140 degrees F
FPC 5 LU 1 Chip	OK	66 degrees C / 150 degrees F
FPC 5 LU 2 TSen	OK	60 degrees C / 140 degrees F
FPC 5 LU 2 Chip	OK	56 degrees C / 132 degrees F
FPC 5 LU 3 TSen	OK	60 degrees C / 140 degrees F
FPC 5 LU 3 Chip	OK	54 degrees C / 129 degrees F
FPC 5 MQ 0 TSen	OK	49 degrees C / 120 degrees F
FPC 5 MQ 0 Chip	OK	52 degrees C / 125 degrees F
FPC 5 MQ 1 TSen	OK	49 degrees C / 120 degrees F
FPC 5 MQ 1 Chip	OK	53 degrees C / 127 degrees F
FPC 5 MQ 2 TSen	OK	49 degrees C / 120 degrees F
FPC 5 MQ 2 Chip	OK	48 degrees C / 118 degrees F

FPC 5 MQ 3 TSen	OK	49 degrees C / 120 degrees F
FPC 5 MQ 3 Chip	OK	47 degrees C / 116 degrees F
FPC 6 Intake	OK	42 degrees C / 107 degrees F
FPC 6 Exhaust A	OK	51 degrees C / 123 degrees F
FPC 6 Exhaust B	OK	63 degrees C / 145 degrees F
FPC 6 LU 0 TSen	OK	61 degrees C / 141 degrees F
FPC 6 LU 0 Chip	OK	64 degrees C / 147 degrees F
FPC 6 LU 1 TSen	OK	61 degrees C / 141 degrees F
FPC 6 LU 1 Chip	OK	66 degrees C / 150 degrees F
FPC 6 LU 2 TSen	OK	61 degrees C / 141 degrees F
FPC 6 LU 2 Chip	OK	56 degrees C / 132 degrees F
FPC 6 LU 3 TSen	OK	61 degrees C / 141 degrees F
FPC 6 LU 3 Chip	OK	56 degrees C / 132 degrees F
FPC 6 MQ 0 TSen	OK	50 degrees C / 122 degrees F
FPC 6 MQ 0 Chip	OK	56 degrees C / 132 degrees F
FPC 6 MQ 1 TSen	OK	50 degrees C / 122 degrees F
FPC 6 MQ 1 Chip	OK	59 degrees C / 138 degrees F
FPC 6 MQ 2 TSen	OK	50 degrees C / 122 degrees F
FPC 6 MQ 2 Chip	OK	49 degrees C / 120 degrees F
FPC 6 MQ 3 TSen	OK	50 degrees C / 122 degrees F
FPC 6 MQ 3 Chip	OK	49 degrees C / 120 degrees F
FPC 7 Intake	OK	41 degrees C / 105 degrees F
FPC 7 Exhaust A	OK	51 degrees C / 123 degrees F
FPC 7 Exhaust B	OK	63 degrees C / 145 degrees F
FPC 7 LU 0 TSen	OK	60 degrees C / 140 degrees F
FPC 7 LU 0 Chip	OK	61 degrees C / 141 degrees F
FPC 7 LU 1 TSen	OK	60 degrees C / 140 degrees F
FPC 7 LU 1 Chip	OK	65 degrees C / 149 degrees F
FPC 7 LU 2 TSen	OK	60 degrees C / 140 degrees F
FPC 7 LU 2 Chip	OK	54 degrees C / 129 degrees F
FPC 7 LU 3 TSen	OK	60 degrees C / 140 degrees F
FPC 7 LU 3 Chip	OK	53 degrees C / 127 degrees F
FPC 7 MQ 0 TSen	OK	50 degrees C / 122 degrees F
FPC 7 MQ 0 Chip	OK	53 degrees C / 127 degrees F
FPC 7 MQ 1 TSen	OK	50 degrees C / 122 degrees F
FPC 7 MQ 1 Chip	OK	54 degrees C / 129 degrees F
FPC 7 MQ 2 TSen	OK	50 degrees C / 122 degrees F
FPC 7 MQ 2 Chip	OK	47 degrees C / 116 degrees F
FPC 7 MQ 3 TSen	OK	50 degrees C / 122 degrees F
FPC 7 MQ 3 Chip	OK	47 degrees C / 116 degrees F
FPC 8 Intake	OK	41 degrees C / 105 degrees F
FPC 8 Exhaust A	OK	50 degrees C / 122 degrees F
FPC 8 Exhaust B	OK	62 degrees C / 143 degrees F
FPC 8 LU 0 TSen	OK	59 degrees C / 138 degrees F
FPC 8 LU 0 Chip	OK	62 degrees C / 143 degrees F
FPC 8 LU 1 TSen	OK	59 degrees C / 138 degrees F
FPC 8 LU 1 Chip	OK	64 degrees C / 147 degrees F
FPC 8 LU 2 TSen	OK	59 degrees C / 138 degrees F
FPC 8 LU 2 Chip	OK	55 degrees C / 131 degrees F
FPC 8 LU 3 TSen	OK	59 degrees C / 138 degrees F
FPC 8 LU 3 Chip	OK	54 degrees C / 129 degrees F
FPC 8 MQ 0 TSen	OK	49 degrees C / 120 degrees F
FPC 8 MQ 0 Chip	OK	51 degrees C / 123 degrees F
FPC 8 MQ 1 TSen	OK	49 degrees C / 120 degrees F
FPC 8 MQ 1 Chip	OK	52 degrees C / 125 degrees F
FPC 8 MQ 2 TSen	OK	49 degrees C / 120 degrees F
FPC 8 MQ 2 Chip	OK	46 degrees C / 114 degrees F
FPC 8 MQ 3 TSen	OK	49 degrees C / 120 degrees F
FPC 8 MQ 3 Chip	OK	47 degrees C / 116 degrees F
FPC 9 Intake	OK	42 degrees C / 107 degrees F
FPC 9 Exhaust A	OK	51 degrees C / 123 degrees F

FPC 9 Exhaust B	OK	63 degrees C / 145 degrees F
FPC 9 LU 0 TSen	OK	60 degrees C / 140 degrees F
FPC 9 LU 0 Chip	OK	65 degrees C / 149 degrees F
FPC 9 LU 1 TSen	OK	60 degrees C / 140 degrees F
FPC 9 LU 1 Chip	OK	67 degrees C / 152 degrees F
FPC 9 LU 2 TSen	OK	60 degrees C / 140 degrees F
FPC 9 LU 2 Chip	OK	54 degrees C / 129 degrees F
FPC 9 LU 3 TSen	OK	60 degrees C / 140 degrees F
FPC 9 LU 3 Chip	OK	54 degrees C / 129 degrees F
FPC 9 MQ 0 TSen	OK	51 degrees C / 123 degrees F
FPC 9 MQ 0 Chip	OK	55 degrees C / 131 degrees F
FPC 9 MQ 1 TSen	OK	51 degrees C / 123 degrees F
FPC 9 MQ 1 Chip	OK	59 degrees C / 138 degrees F
FPC 9 MQ 2 TSen	OK	51 degrees C / 123 degrees F
FPC 9 MQ 2 Chip	OK	49 degrees C / 120 degrees F
FPC 9 MQ 3 TSen	OK	51 degrees C / 123 degrees F
FPC 9 MQ 3 Chip	OK	49 degrees C / 120 degrees F
FPC 10 Intake	OK	44 degrees C / 111 degrees F
FPC 10 Exhaust A	OK	49 degrees C / 120 degrees F
FPC 10 Exhaust B	OK	55 degrees C / 131 degrees F
FPC 10 LU 0 TSen	OK	54 degrees C / 129 degrees F
FPC 10 LU 0 Chip	OK	55 degrees C / 131 degrees F
FPC 10 LU 1 TSen	OK	54 degrees C / 129 degrees F
FPC 10 LU 1 Chip	OK	59 degrees C / 138 degrees F
FPC 10 LU 2 TSen	OK	54 degrees C / 129 degrees F
FPC 10 LU 2 Chip	OK	52 degrees C / 125 degrees F
FPC 10 LU 3 TSen	OK	54 degrees C / 129 degrees F
FPC 10 LU 3 Chip	OK	51 degrees C / 123 degrees F
FPC 10 MQ 0 TSen	OK	48 degrees C / 118 degrees F
FPC 10 MQ 0 Chip	OK	49 degrees C / 120 degrees F
FPC 10 MQ 1 TSen	OK	48 degrees C / 118 degrees F
FPC 10 MQ 1 Chip	OK	52 degrees C / 125 degrees F
FPC 10 MQ 2 TSen	OK	48 degrees C / 118 degrees F
FPC 10 MQ 2 Chip	OK	47 degrees C / 116 degrees F
FPC 10 MQ 3 TSen	OK	48 degrees C / 118 degrees F
FPC 10 MQ 3 Chip	OK	47 degrees C / 116 degrees F
FPC 11 Intake	OK	30 degrees C / 86 degrees F
FPC 11 Exhaust A	OK	35 degrees C / 95 degrees F
FPC 11 Exhaust B	OK	30 degrees C / 86 degrees F
FPC 11 LU 0 TSen	OK	57 degrees C / 134 degrees F
FPC 11 LU 0 Chip	OK	58 degrees C / 136 degrees F
FPC 11 LU 1 TSen	OK	57 degrees C / 134 degrees F
FPC 11 LU 1 Chip	OK	62 degrees C / 143 degrees F
FPC 11 LU 2 TSen	OK	57 degrees C / 134 degrees F
FPC 11 LU 2 Chip	OK	53 degrees C / 127 degrees F
FPC 11 LU 3 TSen	OK	57 degrees C / 134 degrees F
FPC 11 LU 3 Chip	OK	54 degrees C / 129 degrees F
FPC 11 MQ 0 TSen	OK	52 degrees C / 125 degrees F
FPC 11 MQ 0 Chip	OK	52 degrees C / 125 degrees F
FPC 11 MQ 1 TSen	OK	52 degrees C / 125 degrees F
FPC 11 MQ 1 Chip	OK	57 degrees C / 134 degrees F
FPC 11 MQ 2 TSen	OK	52 degrees C / 125 degrees F
FPC 11 MQ 2 Chip	OK	48 degrees C / 118 degrees F
FPC 11 MQ 3 TSen	OK	52 degrees C / 125 degrees F
FPC 11 MQ 3 Chip	OK	52 degrees C / 125 degrees F
FPC 12 Intake	OK	40 degrees C / 104 degrees F
FPC 12 Exhaust A	OK	47 degrees C / 116 degrees F
FPC 12 Exhaust B	OK	52 degrees C / 125 degrees F
FPC 12 LU 0 TSen	OK	51 degrees C / 123 degrees F
FPC 12 LU 0 Chip	OK	52 degrees C / 125 degrees F
FPC 12 LU 1 TSen	OK	51 degrees C / 123 degrees F

FPC 12 LU 1 Chip	OK	55 degrees C / 131 degrees F
FPC 12 LU 2 TSen	OK	51 degrees C / 123 degrees F
FPC 12 LU 2 Chip	OK	47 degrees C / 116 degrees F
FPC 12 LU 3 TSen	OK	51 degrees C / 123 degrees F
FPC 12 LU 3 Chip	OK	50 degrees C / 122 degrees F
FPC 12 MQ 0 TSen	OK	46 degrees C / 114 degrees F
FPC 12 MQ 0 Chip	OK	46 degrees C / 114 degrees F
FPC 12 MQ 1 TSen	OK	46 degrees C / 114 degrees F
FPC 12 MQ 1 Chip	OK	50 degrees C / 122 degrees F
FPC 12 MQ 2 TSen	OK	46 degrees C / 114 degrees F
FPC 12 MQ 2 Chip	OK	44 degrees C / 111 degrees F
FPC 12 MQ 3 TSen	OK	46 degrees C / 114 degrees F
FPC 12 MQ 3 Chip	OK	46 degrees C / 114 degrees F
FPC 13 Intake	OK	40 degrees C / 104 degrees F
FPC 13 Exhaust A	OK	48 degrees C / 118 degrees F
FPC 13 Exhaust B	OK	52 degrees C / 125 degrees F
FPC 13 LU 0 TSen	OK	51 degrees C / 123 degrees F
FPC 13 LU 0 Chip	OK	52 degrees C / 125 degrees F
FPC 13 LU 1 TSen	OK	51 degrees C / 123 degrees F
FPC 13 LU 1 Chip	OK	55 degrees C / 131 degrees F
FPC 13 LU 2 TSen	OK	51 degrees C / 123 degrees F
FPC 13 LU 2 Chip	OK	48 degrees C / 118 degrees F
FPC 13 LU 3 TSen	OK	51 degrees C / 123 degrees F
FPC 13 LU 3 Chip	OK	48 degrees C / 118 degrees F
FPC 13 MQ 0 TSen	OK	46 degrees C / 114 degrees F
FPC 13 MQ 0 Chip	OK	46 degrees C / 114 degrees F
FPC 13 MQ 1 TSen	OK	46 degrees C / 114 degrees F
FPC 13 MQ 1 Chip	OK	50 degrees C / 122 degrees F
FPC 13 MQ 2 TSen	OK	46 degrees C / 114 degrees F
FPC 13 MQ 2 Chip	OK	44 degrees C / 111 degrees F
FPC 13 MQ 3 TSen	OK	46 degrees C / 114 degrees F
FPC 13 MQ 3 Chip	OK	46 degrees C / 114 degrees F
FPC 14 Intake	OK	40 degrees C / 104 degrees F
FPC 14 Exhaust A	OK	50 degrees C / 122 degrees F
FPC 14 Exhaust B	OK	51 degrees C / 123 degrees F
FPC 14 LU 0 TSen	OK	50 degrees C / 122 degrees F
FPC 14 LU 0 Chip	OK	50 degrees C / 122 degrees F
FPC 14 LU 1 TSen	OK	50 degrees C / 122 degrees F
FPC 14 LU 1 Chip	OK	54 degrees C / 129 degrees F
FPC 14 LU 2 TSen	OK	50 degrees C / 122 degrees F
FPC 14 LU 2 Chip	OK	47 degrees C / 116 degrees F
FPC 14 LU 3 TSen	OK	50 degrees C / 122 degrees F
FPC 14 LU 3 Chip	OK	49 degrees C / 120 degrees F
FPC 14 MQ 0 TSen	OK	47 degrees C / 116 degrees F
FPC 14 MQ 0 Chip	OK	46 degrees C / 114 degrees F
FPC 14 MQ 1 TSen	OK	47 degrees C / 116 degrees F
FPC 14 MQ 1 Chip	OK	51 degrees C / 123 degrees F
FPC 14 MQ 2 TSen	OK	47 degrees C / 116 degrees F
FPC 14 MQ 2 Chip	OK	45 degrees C / 113 degrees F
FPC 14 MQ 3 TSen	OK	47 degrees C / 116 degrees F
FPC 14 MQ 3 Chip	OK	48 degrees C / 118 degrees F
FPC 15 Intake	OK	44 degrees C / 111 degrees F
FPC 15 Exhaust A	OK	49 degrees C / 120 degrees F
FPC 15 Exhaust B	OK	60 degrees C / 140 degrees F
FPC 15 LU 0 TSen	OK	50 degrees C / 122 degrees F
FPC 15 LU 0 Chip	OK	56 degrees C / 132 degrees F
FPC 15 LU 1 TSen	OK	50 degrees C / 122 degrees F
FPC 15 LU 1 Chip	OK	50 degrees C / 122 degrees F
FPC 15 LU 2 TSen	OK	50 degrees C / 122 degrees F
FPC 15 LU 2 Chip	OK	58 degrees C / 136 degrees F
FPC 15 LU 3 TSen	OK	50 degrees C / 122 degrees F

FPC 15 LU 3 Chip	OK	63 degrees C / 145 degrees F
FPC 15 XM 0 TSen	OK	50 degrees C / 122 degrees F
FPC 15 XM 0 Chip	OK	56 degrees C / 132 degrees F
FPC 15 XF 0 TSen	OK	50 degrees C / 122 degrees F
FPC 15 XF 0 Chip	OK	68 degrees C / 154 degrees F
FPC 15 PLX Switch TSen	OK	50 degrees C / 122 degrees F
FPC 15 PLX Switch Chip	OK	56 degrees C / 132 degrees F
FPC 16 Intake	OK	42 degrees C / 107 degrees F
FPC 16 Exhaust A	OK	51 degrees C / 123 degrees F
FPC 16 Exhaust B	OK	53 degrees C / 127 degrees F
FPC 16 LU 0 TSen	OK	51 degrees C / 123 degrees F
FPC 16 LU 0 Chip	OK	52 degrees C / 125 degrees F
FPC 16 LU 1 TSen	OK	51 degrees C / 123 degrees F
FPC 16 LU 1 Chip	OK	55 degrees C / 131 degrees F
FPC 16 LU 2 TSen	OK	51 degrees C / 123 degrees F
FPC 16 LU 2 Chip	OK	48 degrees C / 118 degrees F
FPC 16 LU 3 TSen	OK	51 degrees C / 123 degrees F
FPC 16 LU 3 Chip	OK	49 degrees C / 120 degrees F
FPC 16 MQ 0 TSen	OK	49 degrees C / 120 degrees F
FPC 16 MQ 0 Chip	OK	48 degrees C / 118 degrees F
FPC 16 MQ 1 TSen	OK	49 degrees C / 120 degrees F
FPC 16 MQ 1 Chip	OK	53 degrees C / 127 degrees F
FPC 16 MQ 2 TSen	OK	49 degrees C / 120 degrees F
FPC 16 MQ 2 Chip	OK	46 degrees C / 114 degrees F
FPC 16 MQ 3 TSen	OK	49 degrees C / 120 degrees F
FPC 16 MQ 3 Chip	OK	49 degrees C / 120 degrees F
FPC 17 Intake	OK	43 degrees C / 109 degrees F
FPC 17 Exhaust A	OK	51 degrees C / 123 degrees F
FPC 17 Exhaust B	OK	55 degrees C / 131 degrees F
FPC 17 LU 0 TSen	OK	54 degrees C / 129 degrees F
FPC 17 LU 0 Chip	OK	57 degrees C / 134 degrees F
FPC 17 LU 1 TSen	OK	54 degrees C / 129 degrees F
FPC 17 LU 1 Chip	OK	60 degrees C / 140 degrees F
FPC 17 LU 2 TSen	OK	54 degrees C / 129 degrees F
FPC 17 LU 2 Chip	OK	53 degrees C / 127 degrees F
FPC 17 LU 3 TSen	OK	54 degrees C / 129 degrees F
FPC 17 LU 3 Chip	OK	53 degrees C / 127 degrees F
FPC 17 MQ 0 TSen	OK	49 degrees C / 120 degrees F
FPC 17 MQ 0 Chip	OK	50 degrees C / 122 degrees F
FPC 17 MQ 1 TSen	OK	49 degrees C / 120 degrees F
FPC 17 MQ 1 Chip	OK	54 degrees C / 129 degrees F
FPC 17 MQ 2 TSen	OK	49 degrees C / 120 degrees F
FPC 17 MQ 2 Chip	OK	47 degrees C / 116 degrees F
FPC 17 MQ 3 TSen	OK	49 degrees C / 120 degrees F
FPC 17 MQ 3 Chip	OK	51 degrees C / 123 degrees F
FPC 18 Intake	OK	44 degrees C / 111 degrees F
FPC 18 Exhaust A	OK	53 degrees C / 127 degrees F
FPC 18 Exhaust B	OK	57 degrees C / 134 degrees F
FPC 18 LU 0 TSen	OK	56 degrees C / 132 degrees F
FPC 18 LU 0 Chip	OK	57 degrees C / 134 degrees F
FPC 18 LU 1 TSen	OK	56 degrees C / 132 degrees F
FPC 18 LU 1 Chip	OK	62 degrees C / 143 degrees F
FPC 18 LU 2 TSen	OK	56 degrees C / 132 degrees F
FPC 18 LU 2 Chip	OK	53 degrees C / 127 degrees F
FPC 18 LU 3 TSen	OK	56 degrees C / 132 degrees F
FPC 18 LU 3 Chip	OK	55 degrees C / 131 degrees F
FPC 18 MQ 0 TSen	OK	51 degrees C / 123 degrees F
FPC 18 MQ 0 Chip	OK	54 degrees C / 129 degrees F
FPC 18 MQ 1 TSen	OK	51 degrees C / 123 degrees F
FPC 18 MQ 1 Chip	OK	58 degrees C / 136 degrees F
FPC 18 MQ 2 TSen	OK	51 degrees C / 123 degrees F

FPC 18 MQ 2 Chip	OK	50 degrees C / 122 degrees F
FPC 18 MQ 3 TSen	OK	51 degrees C / 123 degrees F
FPC 18 MQ 3 Chip	OK	53 degrees C / 127 degrees F
FPC 19 Intake	OK	48 degrees C / 118 degrees F
FPC 19 Exhaust A	OK	56 degrees C / 132 degrees F
FPC 19 Exhaust B	OK	64 degrees C / 147 degrees F
FPC 19 LU 0 TSen	OK	63 degrees C / 145 degrees F
FPC 19 LU 0 Chip	OK	64 degrees C / 147 degrees F
FPC 19 LU 1 TSen	OK	63 degrees C / 145 degrees F
FPC 19 LU 1 Chip	OK	70 degrees C / 158 degrees F
FPC 19 LU 2 TSen	OK	63 degrees C / 145 degrees F
FPC 19 LU 2 Chip	OK	61 degrees C / 141 degrees F
FPC 19 LU 3 TSen	OK	63 degrees C / 145 degrees F
FPC 19 LU 3 Chip	OK	62 degrees C / 143 degrees F
FPC 19 MQ 0 TSen	OK	56 degrees C / 132 degrees F
FPC 19 MQ 0 Chip	OK	60 degrees C / 140 degrees F
FPC 19 MQ 1 TSen	OK	56 degrees C / 132 degrees F
FPC 19 MQ 1 Chip	OK	62 degrees C / 143 degrees F
FPC 19 MQ 2 TSen	OK	56 degrees C / 132 degrees F
FPC 19 MQ 2 Chip	OK	56 degrees C / 132 degrees F
FPC 19 MQ 3 TSen	OK	56 degrees C / 132 degrees F
FPC 19 MQ 3 Chip	OK	57 degrees C / 134 degrees F
ADC 0 Intake	OK	40 degrees C / 104 degrees F
ADC 0 Exhaust	OK	52 degrees C / 125 degrees F
ADC 0 ADC-XF1	OK	59 degrees C / 138 degrees F
ADC 0 ADC-XF0	OK	66 degrees C / 150 degrees F
ADC 1 Intake	OK	38 degrees C / 100 degrees F
ADC 1 Exhaust	OK	50 degrees C / 122 degrees F
ADC 1 ADC-XF1	OK	59 degrees C / 138 degrees F
ADC 1 ADC-XF0	OK	63 degrees C / 145 degrees F
ADC 2 Intake	OK	37 degrees C / 98 degrees F
ADC 2 Exhaust	OK	52 degrees C / 125 degrees F
ADC 2 ADC-XF1	OK	53 degrees C / 127 degrees F
ADC 2 ADC-XF0	OK	61 degrees C / 141 degrees F
ADC 3 Intake	OK	40 degrees C / 104 degrees F
ADC 3 Exhaust	OK	51 degrees C / 123 degrees F
ADC 3 ADC-XF1	OK	61 degrees C / 141 degrees F
ADC 3 ADC-XF0	OK	64 degrees C / 147 degrees F
ADC 4 Intake	OK	39 degrees C / 102 degrees F
ADC 4 Exhaust	OK	51 degrees C / 123 degrees F
ADC 4 ADC-XF1	OK	60 degrees C / 140 degrees F
ADC 4 ADC-XF0	OK	63 degrees C / 145 degrees F
ADC 5 Intake	OK	38 degrees C / 100 degrees F
ADC 5 Exhaust	OK	54 degrees C / 129 degrees F
ADC 5 ADC-XF1	OK	56 degrees C / 132 degrees F
ADC 5 ADC-XF0	OK	67 degrees C / 152 degrees F
ADC 6 Intake	OK	39 degrees C / 102 degrees F
ADC 6 Exhaust	OK	52 degrees C / 125 degrees F
ADC 6 ADC-XF1	OK	59 degrees C / 138 degrees F
ADC 6 ADC-XF0	OK	66 degrees C / 150 degrees F
ADC 7 Intake	OK	39 degrees C / 102 degrees F
ADC 7 Exhaust	OK	54 degrees C / 129 degrees F
ADC 7 ADC-XF1	OK	62 degrees C / 143 degrees F
ADC 7 ADC-XF0	OK	70 degrees C / 158 degrees F
ADC 8 Intake	OK	39 degrees C / 102 degrees F
ADC 8 Exhaust	OK	52 degrees C / 125 degrees F
ADC 8 ADC-XF1	OK	61 degrees C / 141 degrees F
ADC 8 ADC-XF0	OK	65 degrees C / 149 degrees F
ADC 9 Intake	OK	41 degrees C / 105 degrees F
ADC 9 Exhaust	OK	51 degrees C / 123 degrees F
ADC 9 ADC-XF1	OK	63 degrees C / 145 degrees F

ADC 9 ADC-XF0	OK	63 degrees C / 145 degrees F
ADC 10 Intake	OK	48 degrees C / 118 degrees F
ADC 10 Exhaust	OK	53 degrees C / 127 degrees F
ADC 10 ADC-XF1	OK	67 degrees C / 152 degrees F
ADC 10 ADC-XF0	OK	66 degrees C / 150 degrees F
ADC 12 Intake	OK	49 degrees C / 120 degrees F
ADC 12 Exhaust	OK	54 degrees C / 129 degrees F
ADC 12 ADC-XF1	OK	67 degrees C / 152 degrees F
ADC 12 ADC-XF0	OK	67 degrees C / 152 degrees F
ADC 13 Intake	OK	49 degrees C / 120 degrees F
ADC 13 Exhaust	OK	57 degrees C / 134 degrees F
ADC 13 ADC-XF1	OK	66 degrees C / 150 degrees F
ADC 13 ADC-XF0	OK	69 degrees C / 156 degrees F
ADC 14 Intake	OK	51 degrees C / 123 degrees F
ADC 14 Exhaust	OK	59 degrees C / 138 degrees F
ADC 14 ADC-XF1	OK	69 degrees C / 156 degrees F
ADC 14 ADC-XF0	OK	74 degrees C / 165 degrees F
ADC 15 Intake	OK	50 degrees C / 122 degrees F
ADC 15 Exhaust	OK	59 degrees C / 138 degrees F
ADC 15 ADC-XF1	OK	68 degrees C / 154 degrees F
ADC 15 ADC-XF0	OK	69 degrees C / 156 degrees F
ADC 16 Intake	OK	52 degrees C / 125 degrees F
ADC 16 Exhaust	OK	58 degrees C / 136 degrees F
ADC 16 ADC-XF1	OK	68 degrees C / 154 degrees F
ADC 16 ADC-XF0	OK	70 degrees C / 158 degrees F
ADC 17 Intake	OK	52 degrees C / 125 degrees F
ADC 17 Exhaust	OK	59 degrees C / 138 degrees F
ADC 17 ADC-XF1	OK	69 degrees C / 156 degrees F
ADC 17 ADC-XF0	OK	71 degrees C / 159 degrees F
ADC 18 Intake	OK	53 degrees C / 127 degrees F
ADC 18 Exhaust	OK	59 degrees C / 138 degrees F
ADC 18 ADC-XF1	OK	68 degrees C / 154 degrees F
ADC 18 ADC-XF0	OK	73 degrees C / 163 degrees F
ADC 19 Intake	OK	50 degrees C / 122 degrees F
ADC 19 Exhaust	OK	59 degrees C / 138 degrees F
ADC 19 ADC-XF1	OK	68 degrees C / 154 degrees F
ADC 19 ADC-XF0	OK	72 degrees C / 161 degrees F
Fans Fan Tray 0 Fan 1	OK	7440 RPM
Fan Tray 0 Fan 2	OK	7200 RPM
Fan Tray 0 Fan 3	OK	6960 RPM
Fan Tray 0 Fan 4	OK	7200 RPM
Fan Tray 0 Fan 5	OK	7080 RPM
Fan Tray 0 Fan 6	OK	6840 RPM
Fan Tray 1 Fan 1	OK	6840 RPM
Fan Tray 1 Fan 2	OK	6960 RPM
Fan Tray 1 Fan 3	OK	6960 RPM
Fan Tray 1 Fan 4	OK	7080 RPM
Fan Tray 1 Fan 5	OK	6960 RPM
Fan Tray 1 Fan 6	OK	6960 RPM
Fan Tray 2 Fan 1	OK	8640 RPM
Fan Tray 2 Fan 2	OK	8640 RPM
Fan Tray 2 Fan 3	OK	8760 RPM
Fan Tray 2 Fan 4	OK	8760 RPM
Fan Tray 2 Fan 5	OK	8640 RPM
Fan Tray 2 Fan 6	OK	8640 RPM
Fan Tray 3 Fan 1	OK	8520 RPM
Fan Tray 3 Fan 2	OK	8520 RPM
Fan Tray 3 Fan 3	OK	8640 RPM
Fan Tray 3 Fan 4	OK	8640 RPM
Fan Tray 3 Fan 5	OK	8520 RPM
Fan Tray 3 Fan 6	OK	8520 RPM

## show chassis environment (MX2020 Router with MPC5EQ and MPC6E)

Class	Item	Status	Measurement
Temp	PSM 0	OK	32 degrees C / 89 degrees F
	PSM 1	OK	32 degrees C / 89 degrees F
	PSM 2	OK	32 degrees C / 89 degrees F
	PSM 3	OK	32 degrees C / 89 degrees F
	PSM 4	OK	32 degrees C / 89 degrees F
	PSM 5	OK	33 degrees C / 91 degrees F
	PSM 6	OK	32 degrees C / 89 degrees F
	PSM 7	OK	32 degrees C / 89 degrees F
	PSM 8	OK	32 degrees C / 89 degrees F
	PSM 9	Absent	
	PSM 10	Absent	
	PSM 11	Absent	
	PSM 12	OK	33 degrees C / 91 degrees F
	PSM 13	OK	33 degrees C / 91 degrees F
	PSM 14	OK	34 degrees C / 93 degrees F
	PSM 15	OK	34 degrees C / 93 degrees F
	PSM 16	OK	33 degrees C / 91 degrees F
	PSM 17	OK	33 degrees C / 91 degrees F
	PDM 0	OK	
	PDM 1	OK	
	PDM 2	OK	
	PDM 3	OK	
	CB 0 IntakeA-Zone0	OK	34 degrees C / 93 degrees F
	CB 0 IntakeB-Zone1	OK	26 degrees C / 78 degrees F
	CB 0 IntakeC-Zone0	OK	38 degrees C / 100 degrees F
	CB 0 ExhaustA-Zone0	OK	34 degrees C / 93 degrees F
	CB 0 ExhaustB-Zone1	OK	27 degrees C / 80 degrees F
	CB 0 TCBC-Zone0	OK	32 degrees C / 89 degrees F
	CB 1 IntakeA-Zone0	OK	24 degrees C / 75 degrees F
	CB 1 IntakeB-Zone1	OK	22 degrees C / 71 degrees F
	CB 1 IntakeC-Zone0	OK	34 degrees C / 93 degrees F
	CB 1 ExhaustA-Zone0	OK	31 degrees C / 87 degrees F
	CB 1 ExhaustB-Zone1	OK	24 degrees C / 75 degrees F
	CB 1 TCBC-Zone0	OK	27 degrees C / 80 degrees F
	SPMB 0 Intake	OK	25 degrees C / 77 degrees F
	SPMB 1 Intake	OK	23 degrees C / 73 degrees F
	Routing Engine 0	OK	28 degrees C / 82 degrees F
	Routing Engine 0 CPU	OK	25 degrees C / 77 degrees F
	Routing Engine 1	OK	25 degrees C / 77 degrees F
	Routing Engine 1 CPU	OK	24 degrees C / 75 degrees F
	SFB 0 Intake-Zone0	OK	45 degrees C / 113 degrees F
	SFB 0 Exhaust-Zone1	OK	34 degrees C / 93 degrees F
	SFB 0 IntakeA-Zone0	OK	32 degrees C / 89 degrees F
	SFB 0 IntakeB-Zone1	OK	28 degrees C / 82 degrees F
	SFB 0 Exhaust-Zone0	OK	36 degrees C / 96 degrees F
	SFB 0 SFB-XF2-Zone1	OK	46 degrees C / 114 degrees F
	SFB 0 SFB-XF1-Zone0	OK	48 degrees C / 118 degrees F
	SFB 0 SFB-XF0-Zone0	OK	60 degrees C / 140 degrees F
	SFB 1 Intake-Zone0	OK	44 degrees C / 111 degrees F
	SFB 1 Exhaust-Zone1	OK	34 degrees C / 93 degrees F
	SFB 1 IntakeA-Zone0	OK	35 degrees C / 95 degrees F
	SFB 1 IntakeB-Zone1	OK	27 degrees C / 80 degrees F
	SFB 1 Exhaust-Zone0	OK	37 degrees C / 98 degrees F
	SFB 1 SFB-XF2-Zone1	OK	47 degrees C / 116 degrees F
	SFB 1 SFB-XF1-Zone0	OK	49 degrees C / 120 degrees F
	SFB 1 SFB-XF0-Zone0	OK	56 degrees C / 132 degrees F
	SFB 2 Intake-Zone0	OK	41 degrees C / 105 degrees F



SFB 2 Exhaust-Zone1	OK	34 degrees C / 93 degrees F
SFB 2 IntakeA-Zone0	OK	35 degrees C / 95 degrees F
SFB 2 IntakeB-Zone1	OK	28 degrees C / 82 degrees F
SFB 2 Exhaust-Zone0	OK	37 degrees C / 98 degrees F
SFB 2 SFB-XF2-Zone1	OK	47 degrees C / 116 degrees F
SFB 2 SFB-XF1-Zone0	OK	55 degrees C / 131 degrees F
SFB 2 SFB-XF0-Zone0	OK	55 degrees C / 131 degrees F
SFB 3 Intake-Zone0	OK	43 degrees C / 109 degrees F
SFB 3 Exhaust-Zone1	OK	33 degrees C / 91 degrees F
SFB 3 IntakeA-Zone0	OK	35 degrees C / 95 degrees F
SFB 3 IntakeB-Zone1	OK	27 degrees C / 80 degrees F
SFB 3 Exhaust-Zone0	OK	36 degrees C / 96 degrees F
SFB 3 SFB-XF2-Zone1	OK	46 degrees C / 114 degrees F
SFB 3 SFB-XF1-Zone0	OK	46 degrees C / 114 degrees F
SFB 3 SFB-XF0-Zone0	OK	57 degrees C / 134 degrees F
SFB 4 Intake-Zone0	OK	36 degrees C / 96 degrees F
SFB 4 Exhaust-Zone1	OK	32 degrees C / 89 degrees F
SFB 4 IntakeA-Zone0	OK	31 degrees C / 87 degrees F
SFB 4 IntakeB-Zone1	OK	26 degrees C / 78 degrees F
SFB 4 Exhaust-Zone0	OK	32 degrees C / 89 degrees F
SFB 4 SFB-XF2-Zone1	OK	44 degrees C / 111 degrees F
SFB 4 SFB-XF1-Zone0	OK	45 degrees C / 113 degrees F
SFB 4 SFB-XF0-Zone0	OK	52 degrees C / 125 degrees F
SFB 5 Intake-Zone0	OK	31 degrees C / 87 degrees F
SFB 5 Exhaust-Zone1	OK	30 degrees C / 86 degrees F
SFB 5 IntakeA-Zone0	OK	26 degrees C / 78 degrees F
SFB 5 IntakeB-Zone1	OK	24 degrees C / 75 degrees F
SFB 5 Exhaust-Zone0	OK	29 degrees C / 84 degrees F
SFB 5 SFB-XF2-Zone1	OK	43 degrees C / 109 degrees F
SFB 5 SFB-XF1-Zone0	OK	47 degrees C / 116 degrees F
SFB 5 SFB-XF0-Zone0	OK	49 degrees C / 120 degrees F
SFB 6 Intake-Zone0	OK	30 degrees C / 86 degrees F
SFB 6 Exhaust-Zone1	OK	29 degrees C / 84 degrees F
SFB 6 IntakeA-Zone0	OK	25 degrees C / 77 degrees F
SFB 6 IntakeB-Zone1	OK	24 degrees C / 75 degrees F
SFB 6 Exhaust-Zone0	OK	29 degrees C / 84 degrees F
SFB 6 SFB-XF2-Zone1	OK	43 degrees C / 109 degrees F
SFB 6 SFB-XF1-Zone0	OK	44 degrees C / 111 degrees F
SFB 6 SFB-XF0-Zone0	OK	45 degrees C / 113 degrees F
SFB 7 Intake-Zone0	OK	31 degrees C / 87 degrees F
SFB 7 Exhaust-Zone1	OK	30 degrees C / 86 degrees F
SFB 7 IntakeA-Zone0	OK	26 degrees C / 78 degrees F
SFB 7 IntakeB-Zone1	OK	24 degrees C / 75 degrees F
SFB 7 Exhaust-Zone0	OK	28 degrees C / 82 degrees F
SFB 7 SFB-XF2-Zone1	OK	50 degrees C / 122 degrees F
SFB 7 SFB-XF1-Zone0	OK	43 degrees C / 109 degrees F
SFB 7 SFB-XF0-Zone0	OK	47 degrees C / 116 degrees F
FPC 0 Intake	OK	31 degrees C / 87 degrees F
FPC 0 Exhaust A	OK	49 degrees C / 120 degrees F
FPC 0 Exhaust B	OK	43 degrees C / 109 degrees F
FPC 0 XL TSen	OK	42 degrees C / 107 degrees F
FPC 0 XL Chip	OK	46 degrees C / 114 degrees F
FPC 0 XL_XR0 TSen	OK	42 degrees C / 107 degrees F
FPC 0 XL_XR0 Chip	OK	48 degrees C / 118 degrees F
FPC 0 XL_XR1 TSen	OK	42 degrees C / 107 degrees F
FPC 0 XL_XR1 Chip	OK	48 degrees C / 118 degrees F
FPC 0 XQ TSen	OK	42 degrees C / 107 degrees F
FPC 0 XQ Chip	OK	44 degrees C / 111 degrees F
FPC 0 XQ_XR0 TSen	OK	42 degrees C / 107 degrees F
FPC 0 XQ_XR0 Chip	OK	57 degrees C / 134 degrees F
FPC 0 XQ_XR1 TSen	OK	42 degrees C / 107 degrees F

FPC 0 XQ_XR1 Chip	OK	55 degrees C / 131 degrees F
FPC 0 XM 0 TSen	OK	48 degrees C / 118 degrees F
FPC 0 XM 0 Chip	OK	62 degrees C / 143 degrees F
FPC 0 XM 1 TSen	OK	48 degrees C / 118 degrees F
FPC 0 XM 1 Chip	OK	44 degrees C / 111 degrees F
FPC 0 PLX PCIe Switch TSe	OK	48 degrees C / 118 degrees F
FPC 0 PLX PCIe Switch Chi	OK	57 degrees C / 134 degrees F
FPC 1 Intake	OK	29 degrees C / 84 degrees F
FPC 1 Exhaust A	OK	36 degrees C / 96 degrees F
FPC 1 Exhaust B	OK	44 degrees C / 111 degrees F
FPC 1 LU 0 TSen	OK	38 degrees C / 100 degrees F
FPC 1 LU 0 Chip	OK	45 degrees C / 113 degrees F
FPC 1 LU 1 TSen	OK	38 degrees C / 100 degrees F
FPC 1 LU 1 Chip	OK	38 degrees C / 100 degrees F
FPC 1 LU 2 TSen	OK	38 degrees C / 100 degrees F
FPC 1 LU 2 Chip	OK	42 degrees C / 107 degrees F
FPC 1 LU 3 TSen	OK	38 degrees C / 100 degrees F
FPC 1 LU 3 Chip	OK	47 degrees C / 116 degrees F
FPC 1 XM 0 TSen	OK	38 degrees C / 100 degrees F
FPC 1 XM 0 Chip	OK	44 degrees C / 111 degrees F
FPC 1 XF 0 TSen	OK	38 degrees C / 100 degrees F
FPC 1 XF 0 Chip	OK	54 degrees C / 129 degrees F
FPC 1 PLX Switch TSen	OK	38 degrees C / 100 degrees F
FPC 1 PLX Switch Chip	OK	41 degrees C / 105 degrees F
FPC 2 Intake	OK	28 degrees C / 82 degrees F
FPC 2 Exhaust A	OK	28 degrees C / 82 degrees F
FPC 2 Exhaust B	OK	28 degrees C / 82 degrees F
FPC 2 LU 0 TSen	OK	40 degrees C / 104 degrees F
FPC 2 LU 0 Chip	OK	40 degrees C / 104 degrees F
FPC 2 LU 1 TSen	OK	40 degrees C / 104 degrees F
FPC 2 LU 1 Chip	OK	41 degrees C / 105 degrees F
FPC 2 LU 2 TSen	OK	40 degrees C / 104 degrees F
FPC 2 LU 2 Chip	OK	34 degrees C / 93 degrees F
FPC 2 LU 3 TSen	OK	40 degrees C / 104 degrees F
FPC 2 LU 3 Chip	OK	38 degrees C / 100 degrees F
FPC 2 XM 0 TSen	OK	40 degrees C / 104 degrees F
FPC 2 XM 0 Chip	OK	47 degrees C / 116 degrees F
FPC 2 XM 1 TSen	OK	40 degrees C / 104 degrees F
FPC 2 XM 1 Chip	OK	42 degrees C / 107 degrees F
FPC 2 PLX Switch TSen	OK	40 degrees C / 104 degrees F
FPC 2 PLX Switch Chip	OK	39 degrees C / 102 degrees F
FPC 3 Intake	OK	27 degrees C / 80 degrees F
FPC 3 Exhaust A	OK	38 degrees C / 100 degrees F
FPC 3 Exhaust B	OK	31 degrees C / 87 degrees F
FPC 3 QX 0 TSen	OK	38 degrees C / 100 degrees F
FPC 3 QX 0 Chip	OK	42 degrees C / 107 degrees F
FPC 3 LU 0 TCAM TSen	OK	38 degrees C / 100 degrees F
FPC 3 LU 0 TCAM Chip	OK	43 degrees C / 109 degrees F
FPC 3 LU 0 TSen	OK	38 degrees C / 100 degrees F
FPC 3 LU 0 Chip	OK	42 degrees C / 107 degrees F
FPC 3 MQ 0 TSen	OK	38 degrees C / 100 degrees F
FPC 3 MQ 0 Chip	OK	39 degrees C / 102 degrees F
FPC 3 QX 1 TSen	OK	32 degrees C / 89 degrees F
FPC 3 QX 1 Chip	OK	36 degrees C / 96 degrees F
FPC 3 LU 1 TCAM TSen	OK	32 degrees C / 89 degrees F
FPC 3 LU 1 TCAM Chip	OK	35 degrees C / 95 degrees F
FPC 3 LU 1 TSen	OK	32 degrees C / 89 degrees F
FPC 3 LU 1 Chip	OK	37 degrees C / 98 degrees F
FPC 3 MQ 1 TSen	OK	32 degrees C / 89 degrees F
FPC 3 MQ 1 Chip	OK	36 degrees C / 96 degrees F
FPC 4 Intake	OK	29 degrees C / 84 degrees F

```

FPC 4 Exhaust A           OK           36 degrees C / 96 degrees F
FPC 4 Exhaust B           OK           40 degrees C / 104 degrees F
FPC 4 XL TSen              OK           39 degrees C / 102 degrees F
FPC 4 XL Chip              OK           42 degrees C / 107 degrees F
FPC 4 XL_XR0 TSen         OK           39 degrees C / 102 degrees F
FPC 4 XL_XR0 Chip         OK           45 degrees C / 113 degrees F
FPC 4 XL_XR1 TSen         OK           39 degrees C / 102 degrees F
FPC 4 XL_XR1 Chip         OK           46 degrees C / 114 degrees F
FPC 4 XQ TSen              OK           39 degrees C / 102 degrees F
FPC 4 XQ Chip              OK           42 degrees C / 107 degrees F
FPC 4 XQ_XR0 TSen         OK           39 degrees C / 102 degrees F
FPC 4 XQ_XR0 Chip         OK           54 degrees C / 129 degrees F
FPC 4 XQ_XR1 TSen         OK           39 degrees C / 102 degrees F
FPC 4 XQ_XR1 Chip         OK           53 degrees C / 127 degrees F
FPC 4 XM 0 TSen            OK           45 degrees C / 113 degrees F
FPC 4 XM 0 Chip            OK           59 degrees C / 138 degrees F
FPC 4 XM 1 TSen            OK           45 degrees C / 113 degrees F
FPC 4 XM 1 Chip            OK           41 degrees C / 105 degrees F
FPC 4 PLX PCIe Switch TSe OK           45 degrees C / 113 degrees F
FPC 4 PLX PCIe Switch Chi OK           58 degrees C / 136 degrees F
FPC 5 Intake               OK           29 degrees C / 84 degrees F
FPC 5 Exhaust A           OK           33 degrees C / 91 degrees F
FPC 5 Exhaust B           OK           39 degrees C / 102 degrees F
FPC 5 LU 0 TSen            OK           40 degrees C / 104 degrees F
FPC 5 LU 0 Chip            OK           40 degrees C / 104 degrees F
FPC 5 LU 1 TSen            OK           40 degrees C / 104 degrees F
FPC 5 LU 1 Chip            OK           45 degrees C / 113 degrees F
FPC 5 LU 2 TSen            OK           40 degrees C / 104 degrees F
FPC 5 LU 2 Chip            OK           40 degrees C / 104 degrees F
FPC 5 LU 3 TSen            OK           40 degrees C / 104 degrees F
FPC 5 LU 3 Chip            OK           46 degrees C / 114 degrees F
FPC 5 MQ 0 TSen            OK           32 degrees C / 89 degrees F
FPC 5 MQ 0 Chip            OK           33 degrees C / 91 degrees F
FPC 5 MQ 1 TSen            OK           32 degrees C / 89 degrees F
FPC 5 MQ 1 Chip            OK           35 degrees C / 95 degrees F
FPC 5 MQ 2 TSen            OK           32 degrees C / 89 degrees F
FPC 5 MQ 2 Chip            OK           32 degrees C / 89 degrees F
FPC 5 MQ 3 TSen            OK           32 degrees C / 89 degrees F
FPC 5 MQ 3 Chip            OK           32 degrees C / 89 degrees F
FPC 9 Intake               OK           25 degrees C / 77 degrees F
FPC 9 Exhaust A           OK           37 degrees C / 98 degrees F
FPC 9 Exhaust B           OK           40 degrees C / 104 degrees F
FPC 9 XL 0 TSen            OK           40 degrees C / 104 degrees F
...

```

### show chassis environment (MX2010 Router)

```

user@host> show chassis environment
Class Item                Status      Measurement
Temp PSM 0                  OK          7 degrees C / 44 degrees F
      PSM 1                  OK          7 degrees C / 44 degrees F
      PSM 2                  OK          7 degrees C / 44 degrees F
      PSM 3                  OK          6 degrees C / 42 degrees F
      PSM 4                  OK          6 degrees C / 42 degrees F
      PSM 5                  OK          6 degrees C / 42 degrees F
      PSM 6                  OK          6 degrees C / 42 degrees F
      PSM 7                  OK          7 degrees C / 44 degrees F
      PSM 8                  OK          7 degrees C / 44 degrees F
      PDM 0                  OK
      PDM 1                  Absent
      CB 0 IntakeA-Zone0     OK          14 degrees C / 57 degrees F

```

CB 0 IntakeB-Zone1	OK	7 degrees C / 44 degrees F
CB 0 IntakeC-Zone0	OK	22 degrees C / 71 degrees F
CB 0 ExhaustA-Zone0	OK	14 degrees C / 57 degrees F
CB 0 ExhaustB-Zone1	OK	9 degrees C / 48 degrees F
CB 0 TCBC-Zone0	OK	11 degrees C / 51 degrees F
CB 1 IntakeA-Zone0	OK	9 degrees C / 48 degrees F
CB 1 IntakeB-Zone1	OK	5 degrees C / 41 degrees F
CB 1 IntakeC-Zone0	OK	20 degrees C / 68 degrees F
CB 1 ExhaustA-Zone0	OK	12 degrees C / 53 degrees F
CB 1 ExhaustB-Zone1	OK	7 degrees C / 44 degrees F
CB 1 TCBC-Zone0	OK	10 degrees C / 50 degrees F
SPMB 0 Intake	OK	5 degrees C / 41 degrees F
SPMB 1 Intake	OK	4 degrees C / 39 degrees F
Routing Engine 0	OK	9 degrees C / 48 degrees F
Routing Engine 0 CPU	OK	9 degrees C / 48 degrees F
Routing Engine 1	OK	6 degrees C / 42 degrees F
Routing Engine 1 CPU	OK	6 degrees C / 42 degrees F
SFB 0 Intake-Zone0	OK	26 degrees C / 78 degrees F
SFB 0 Exhaust-Zone1	OK	17 degrees C / 62 degrees F
SFB 0 IntakeA-Zone0	OK	16 degrees C / 60 degrees F
SFB 0 IntakeB-Zone1	OK	11 degrees C / 51 degrees F
SFB 0 Exhaust-Zone0	OK	18 degrees C / 64 degrees F
SFB 0 SFB-XF2-Zone1	OK	25 degrees C / 77 degrees F
SFB 0 SFB-XF1-Zone0	OK	23 degrees C / 73 degrees F
SFB 0 SFB-XF0-Zone0	OK	33 degrees C / 91 degrees F
SFB 1 Intake-Zone0	OK	27 degrees C / 80 degrees F
SFB 1 Exhaust-Zone1	OK	15 degrees C / 59 degrees F
SFB 1 IntakeA-Zone0	OK	20 degrees C / 68 degrees F
SFB 1 IntakeB-Zone1	OK	10 degrees C / 50 degrees F
SFB 1 Exhaust-Zone0	OK	19 degrees C / 66 degrees F
SFB 1 SFB-XF2-Zone1	OK	26 degrees C / 78 degrees F
SFB 1 SFB-XF1-Zone0	OK	27 degrees C / 80 degrees F
SFB 1 SFB-XF0-Zone0	OK	32 degrees C / 89 degrees F
SFB 2 Intake-Zone0	OK	21 degrees C / 69 degrees F
SFB 2 Exhaust-Zone1	OK	13 degrees C / 55 degrees F
SFB 2 IntakeA-Zone0	OK	18 degrees C / 64 degrees F
SFB 2 IntakeB-Zone1	OK	9 degrees C / 48 degrees F
SFB 2 Exhaust-Zone0	OK	16 degrees C / 60 degrees F
SFB 2 SFB-XF2-Zone1	OK	24 degrees C / 75 degrees F
SFB 2 SFB-XF1-Zone0	OK	21 degrees C / 69 degrees F
SFB 2 SFB-XF0-Zone0	OK	26 degrees C / 78 degrees F
SFB 4 Intake-Zone0	OK	28 degrees C / 82 degrees F
SFB 4 Exhaust-Zone1	OK	16 degrees C / 60 degrees F
SFB 4 IntakeA-Zone0	OK	18 degrees C / 64 degrees F
SFB 4 IntakeB-Zone1	OK	11 degrees C / 51 degrees F
SFB 4 Exhaust-Zone0	OK	19 degrees C / 66 degrees F
SFB 4 SFB-XF2-Zone1	OK	27 degrees C / 80 degrees F
SFB 4 SFB-XF1-Zone0	OK	27 degrees C / 80 degrees F
SFB 4 SFB-XF0-Zone0	OK	32 degrees C / 89 degrees F
SFB 5 Intake-Zone0	OK	22 degrees C / 71 degrees F
SFB 5 Exhaust-Zone1	OK	14 degrees C / 57 degrees F
SFB 5 IntakeA-Zone0	OK	18 degrees C / 64 degrees F
SFB 5 IntakeB-Zone1	OK	10 degrees C / 50 degrees F
SFB 5 Exhaust-Zone0	OK	17 degrees C / 62 degrees F
SFB 5 SFB-XF2-Zone1	OK	22 degrees C / 71 degrees F
SFB 5 SFB-XF1-Zone0	OK	29 degrees C / 84 degrees F
SFB 5 SFB-XF0-Zone0	OK	27 degrees C / 80 degrees F
SFB 6 Intake-Zone0	OK	27 degrees C / 80 degrees F
SFB 6 Exhaust-Zone1	OK	13 degrees C / 55 degrees F
SFB 6 IntakeA-Zone0	OK	19 degrees C / 66 degrees F
SFB 6 IntakeB-Zone1	OK	10 degrees C / 50 degrees F

SFB 6 Exhaust-Zone0	OK	20 degrees C / 68 degrees F
SFB 6 SFB-XF2-Zone1	OK	24 degrees C / 75 degrees F
SFB 6 SFB-XF1-Zone0	OK	32 degrees C / 89 degrees F
SFB 6 SFB-XF0-Zone0	OK	33 degrees C / 91 degrees F
SFB 7 Intake-Zone0	OK	25 degrees C / 77 degrees F
SFB 7 Exhaust-Zone1	OK	13 degrees C / 55 degrees F
SFB 7 IntakeA-Zone0	OK	14 degrees C / 57 degrees F
SFB 7 IntakeB-Zone1	OK	8 degrees C / 46 degrees F
SFB 7 Exhaust-Zone0	OK	17 degrees C / 62 degrees F
SFB 7 SFB-XF2-Zone1	OK	21 degrees C / 69 degrees F
SFB 7 SFB-XF1-Zone0	OK	21 degrees C / 69 degrees F
SFB 7 SFB-XF0-Zone0	OK	33 degrees C / 91 degrees F
FPC 0 Intake	OK	13 degrees C / 55 degrees F
FPC 0 Exhaust A	OK	13 degrees C / 55 degrees F
FPC 0 Exhaust B	OK	14 degrees C / 57 degrees F
FPC 0 LU 0 TSen	OK	28 degrees C / 82 degrees F
FPC 0 LU 0 Chip	OK	25 degrees C / 77 degrees F
FPC 0 LU 1 TSen	OK	28 degrees C / 82 degrees F
FPC 0 LU 1 Chip	OK	27 degrees C / 80 degrees F
FPC 0 LU 2 TSen	OK	28 degrees C / 82 degrees F
FPC 0 LU 2 Chip	OK	19 degrees C / 66 degrees F
FPC 0 LU 3 TSen	OK	28 degrees C / 82 degrees F
FPC 0 LU 3 Chip	OK	23 degrees C / 73 degrees F
FPC 0 XM 0 TSen	OK	28 degrees C / 82 degrees F
FPC 0 XM 0 Chip	OK	33 degrees C / 91 degrees F
FPC 0 XM 1 TSen	OK	28 degrees C / 82 degrees F
FPC 0 XM 1 Chip	OK	26 degrees C / 78 degrees F
FPC 0 PLX Switch TSen	OK	28 degrees C / 82 degrees F
FPC 0 PLX Switch Chip	OK	26 degrees C / 78 degrees F
FPC 1 Intake	OK	10 degrees C / 50 degrees F
FPC 1 Exhaust A	OK	24 degrees C / 75 degrees F
FPC 1 Exhaust B	OK	28 degrees C / 82 degrees F
FPC 1 LU 0 TSen	OK	22 degrees C / 71 degrees F
FPC 1 LU 0 Chip	OK	31 degrees C / 87 degrees F
FPC 1 LU 1 TSen	OK	22 degrees C / 71 degrees F
FPC 1 LU 1 Chip	OK	21 degrees C / 69 degrees F
FPC 1 LU 2 TSen	OK	22 degrees C / 71 degrees F
FPC 1 LU 2 Chip	OK	25 degrees C / 77 degrees F
FPC 1 LU 3 TSen	OK	22 degrees C / 71 degrees F
FPC 1 LU 3 Chip	OK	33 degrees C / 91 degrees F
FPC 1 XM 0 TSen	OK	22 degrees C / 71 degrees F
FPC 1 XM 0 Chip	OK	30 degrees C / 86 degrees F
FPC 1 XF 0 TSen	OK	22 degrees C / 71 degrees F
FPC 1 XF 0 Chip	OK	37 degrees C / 98 degrees F
FPC 1 PLX Switch TSen	OK	22 degrees C / 71 degrees F
FPC 1 PLX Switch Chip	OK	22 degrees C / 71 degrees F
FPC 2 Intake	OK	9 degrees C / 48 degrees F
FPC 2 Exhaust A	OK	10 degrees C / 50 degrees F
FPC 2 Exhaust B	OK	10 degrees C / 50 degrees F
FPC 2 LU 0 TSen	OK	26 degrees C / 78 degrees F
FPC 2 LU 0 Chip	OK	25 degrees C / 77 degrees F
FPC 2 LU 1 TSen	OK	26 degrees C / 78 degrees F
FPC 2 LU 1 Chip	OK	26 degrees C / 78 degrees F
FPC 2 LU 2 TSen	OK	26 degrees C / 78 degrees F
FPC 2 LU 2 Chip	OK	17 degrees C / 62 degrees F
FPC 2 LU 3 TSen	OK	26 degrees C / 78 degrees F
FPC 2 LU 3 Chip	OK	22 degrees C / 71 degrees F
FPC 2 XM 0 TSen	OK	26 degrees C / 78 degrees F
FPC 2 XM 0 Chip	OK	34 degrees C / 93 degrees F
FPC 2 XM 1 TSen	OK	26 degrees C / 78 degrees F
FPC 2 XM 1 Chip	OK	26 degrees C / 78 degrees F

FPC 2 PLX Switch TSen	OK	26 degrees C / 78 degrees F
FPC 2 PLX Switch Chip	OK	20 degrees C / 68 degrees F
FPC 3 Intake	OK	12 degrees C / 53 degrees F
FPC 3 Exhaust A	OK	16 degrees C / 60 degrees F
FPC 3 Exhaust B	OK	26 degrees C / 78 degrees F
FPC 3 LU 0 TSen	OK	23 degrees C / 73 degrees F
FPC 3 LU 0 Chip	OK	26 degrees C / 78 degrees F
FPC 3 LU 1 TSen	OK	23 degrees C / 73 degrees F
FPC 3 LU 1 Chip	OK	27 degrees C / 80 degrees F
FPC 3 LU 2 TSen	OK	23 degrees C / 73 degrees F
FPC 3 LU 2 Chip	OK	22 degrees C / 71 degrees F
FPC 3 LU 3 TSen	OK	23 degrees C / 73 degrees F
FPC 3 LU 3 Chip	OK	21 degrees C / 69 degrees F
FPC 3 MQ 0 TSen	OK	15 degrees C / 59 degrees F
FPC 3 MQ 0 Chip	OK	18 degrees C / 64 degrees F
FPC 3 MQ 1 TSen	OK	15 degrees C / 59 degrees F
FPC 3 MQ 1 Chip	OK	20 degrees C / 68 degrees F
FPC 3 MQ 2 TSen	OK	15 degrees C / 59 degrees F
FPC 3 MQ 2 Chip	OK	17 degrees C / 62 degrees F
FPC 3 MQ 3 TSen	OK	15 degrees C / 59 degrees F
FPC 3 MQ 3 Chip	OK	16 degrees C / 60 degrees F
FPC 4 Intake	OK	11 degrees C / 51 degrees F
FPC 4 Exhaust A	OK	22 degrees C / 71 degrees F
FPC 4 Exhaust B	OK	28 degrees C / 82 degrees F
FPC 4 LU 0 TSen	OK	22 degrees C / 71 degrees F
FPC 4 LU 0 Chip	OK	33 degrees C / 91 degrees F
FPC 4 LU 1 TSen	OK	22 degrees C / 71 degrees F
FPC 4 LU 1 Chip	OK	21 degrees C / 69 degrees F
FPC 4 LU 2 TSen	OK	22 degrees C / 71 degrees F
FPC 4 LU 2 Chip	OK	26 degrees C / 78 degrees F
FPC 4 LU 3 TSen	OK	22 degrees C / 71 degrees F
FPC 4 LU 3 Chip	OK	33 degrees C / 91 degrees F
FPC 4 XM 0 TSen	OK	22 degrees C / 71 degrees F
FPC 4 XM 0 Chip	OK	30 degrees C / 86 degrees F
FPC 4 XF 0 TSen	OK	22 degrees C / 71 degrees F
FPC 4 XF 0 Chip	OK	37 degrees C / 98 degrees F
FPC 4 PLX Switch TSen	OK	22 degrees C / 71 degrees F
FPC 4 PLX Switch Chip	OK	23 degrees C / 73 degrees F
FPC 5 Intake	OK	12 degrees C / 53 degrees F
FPC 5 Exhaust A	OK	12 degrees C / 53 degrees F
FPC 5 Exhaust B	OK	12 degrees C / 53 degrees F
FPC 5 LU 0 TSen	OK	27 degrees C / 80 degrees F
FPC 5 LU 0 Chip	OK	28 degrees C / 82 degrees F
FPC 5 LU 1 TSen	OK	27 degrees C / 80 degrees F
FPC 5 LU 1 Chip	OK	27 degrees C / 80 degrees F
FPC 5 LU 2 TSen	OK	27 degrees C / 80 degrees F
FPC 5 LU 2 Chip	OK	19 degrees C / 66 degrees F
FPC 5 LU 3 TSen	OK	27 degrees C / 80 degrees F
FPC 5 LU 3 Chip	OK	22 degrees C / 71 degrees F
FPC 5 XM 0 TSen	OK	27 degrees C / 80 degrees F
FPC 5 XM 0 Chip	OK	36 degrees C / 96 degrees F
FPC 5 XM 1 TSen	OK	27 degrees C / 80 degrees F
FPC 5 XM 1 Chip	OK	26 degrees C / 78 degrees F
FPC 5 PLX Switch TSen	OK	27 degrees C / 80 degrees F
FPC 5 PLX Switch Chip	OK	24 degrees C / 75 degrees F
FPC 6 Intake	OK	12 degrees C / 53 degrees F
FPC 6 Exhaust A	OK	17 degrees C / 62 degrees F
FPC 6 Exhaust B	OK	28 degrees C / 82 degrees F
FPC 6 LU 0 TSen	OK	24 degrees C / 75 degrees F
FPC 6 LU 0 Chip	OK	29 degrees C / 84 degrees F
FPC 6 LU 1 TSen	OK	24 degrees C / 75 degrees F

FPC 6 LU 1 Chip	OK	30 degrees C / 86 degrees F
FPC 6 LU 2 TSen	OK	24 degrees C / 75 degrees F
FPC 6 LU 2 Chip	OK	24 degrees C / 75 degrees F
FPC 6 LU 3 TSen	OK	24 degrees C / 75 degrees F
FPC 6 LU 3 Chip	OK	22 degrees C / 71 degrees F
FPC 6 MQ 0 TSen	OK	16 degrees C / 60 degrees F
FPC 6 MQ 0 Chip	OK	19 degrees C / 66 degrees F
FPC 6 MQ 1 TSen	OK	16 degrees C / 60 degrees F
FPC 6 MQ 1 Chip	OK	20 degrees C / 68 degrees F
FPC 6 MQ 2 TSen	OK	16 degrees C / 60 degrees F
FPC 6 MQ 2 Chip	OK	17 degrees C / 62 degrees F
FPC 6 MQ 3 TSen	OK	16 degrees C / 60 degrees F
FPC 6 MQ 3 Chip	OK	16 degrees C / 60 degrees F
FPC 7 Intake	OK	10 degrees C / 50 degrees F
FPC 7 Exhaust A	OK	10 degrees C / 50 degrees F
FPC 7 Exhaust B	OK	11 degrees C / 51 degrees F
FPC 7 LU 0 TSen	OK	26 degrees C / 78 degrees F
FPC 7 LU 0 Chip	OK	26 degrees C / 78 degrees F
FPC 7 LU 1 TSen	OK	26 degrees C / 78 degrees F
FPC 7 LU 1 Chip	OK	29 degrees C / 84 degrees F
FPC 7 LU 2 TSen	OK	26 degrees C / 78 degrees F
FPC 7 LU 2 Chip	OK	19 degrees C / 66 degrees F
FPC 7 LU 3 TSen	OK	26 degrees C / 78 degrees F
FPC 7 LU 3 Chip	OK	24 degrees C / 75 degrees F
FPC 7 XM 0 TSen	OK	26 degrees C / 78 degrees F
FPC 7 XM 0 Chip	OK	34 degrees C / 93 degrees F
FPC 7 XM 1 TSen	OK	26 degrees C / 78 degrees F
FPC 7 XM 1 Chip	OK	32 degrees C / 89 degrees F
FPC 7 PLX Switch TSen	OK	26 degrees C / 78 degrees F
FPC 7 PLX Switch Chip	OK	22 degrees C / 71 degrees F
FPC 8 Intake	OK	10 degrees C / 50 degrees F
FPC 8 Exhaust A	OK	22 degrees C / 71 degrees F
FPC 8 Exhaust B	OK	28 degrees C / 82 degrees F
FPC 8 LU 0 TSen	OK	20 degrees C / 68 degrees F
FPC 8 LU 0 Chip	OK	33 degrees C / 91 degrees F
FPC 8 LU 1 TSen	OK	20 degrees C / 68 degrees F
FPC 8 LU 1 Chip	OK	23 degrees C / 73 degrees F
FPC 8 LU 2 TSen	OK	20 degrees C / 68 degrees F
FPC 8 LU 2 Chip	OK	26 degrees C / 78 degrees F
FPC 8 LU 3 TSen	OK	20 degrees C / 68 degrees F
FPC 8 LU 3 Chip	OK	33 degrees C / 91 degrees F
FPC 8 XM 0 TSen	OK	20 degrees C / 68 degrees F
FPC 8 XM 0 Chip	OK	29 degrees C / 84 degrees F
FPC 8 XF 0 TSen	OK	20 degrees C / 68 degrees F
FPC 8 XF 0 Chip	OK	38 degrees C / 100 degrees F
FPC 8 PLX Switch TSen	OK	20 degrees C / 68 degrees F
FPC 8 PLX Switch Chip	OK	24 degrees C / 75 degrees F
FPC 9 Intake	OK	11 degrees C / 51 degrees F
FPC 9 Exhaust A	OK	11 degrees C / 51 degrees F
FPC 9 Exhaust B	OK	11 degrees C / 51 degrees F
FPC 9 LU 0 TSen	OK	25 degrees C / 77 degrees F
FPC 9 LU 0 Chip	OK	24 degrees C / 75 degrees F
FPC 9 LU 1 TSen	OK	25 degrees C / 77 degrees F
FPC 9 LU 1 Chip	OK	26 degrees C / 78 degrees F
FPC 9 LU 2 TSen	OK	25 degrees C / 77 degrees F
FPC 9 LU 2 Chip	OK	16 degrees C / 60 degrees F
FPC 9 LU 3 TSen	OK	25 degrees C / 77 degrees F
FPC 9 LU 3 Chip	OK	21 degrees C / 69 degrees F
FPC 9 XM 0 TSen	OK	25 degrees C / 77 degrees F
FPC 9 XM 0 Chip	OK	32 degrees C / 89 degrees F
FPC 9 XM 1 TSen	OK	25 degrees C / 77 degrees F

	FPC 9 XM 1 Chip	OK	25 degrees C / 77 degrees F
	FPC 9 PLX Switch TSen	OK	25 degrees C / 77 degrees F
	FPC 9 PLX Switch Chip	OK	21 degrees C / 69 degrees F
	ADC 0 Intake	OK	12 degrees C / 53 degrees F
	ADC 0 Exhaust	OK	20 degrees C / 68 degrees F
	ADC 0 ADC-XF1	OK	26 degrees C / 78 degrees F
	ADC 0 ADC-XF0	OK	32 degrees C / 89 degrees F
	ADC 1 Intake	OK	11 degrees C / 51 degrees F
	ADC 1 Exhaust	OK	21 degrees C / 69 degrees F
	ADC 1 ADC-XF1	OK	24 degrees C / 75 degrees F
	ADC 1 ADC-XF0	OK	31 degrees C / 87 degrees F
	ADC 2 Intake	OK	14 degrees C / 57 degrees F
	ADC 2 Exhaust	OK	21 degrees C / 69 degrees F
	ADC 2 ADC-XF1	OK	28 degrees C / 82 degrees F
	ADC 2 ADC-XF0	OK	34 degrees C / 93 degrees F
	ADC 3 Intake	OK	13 degrees C / 55 degrees F
	ADC 3 Exhaust	OK	19 degrees C / 66 degrees F
	ADC 3 ADC-XF1	OK	24 degrees C / 75 degrees F
	ADC 3 ADC-XF0	OK	31 degrees C / 87 degrees F
	ADC 4 Intake	OK	9 degrees C / 48 degrees F
	ADC 4 Exhaust	OK	22 degrees C / 71 degrees F
	ADC 4 ADC-XF1	OK	28 degrees C / 82 degrees F
	ADC 4 ADC-XF0	OK	35 degrees C / 95 degrees F
	ADC 5 Intake	OK	12 degrees C / 53 degrees F
	ADC 5 Exhaust	OK	22 degrees C / 71 degrees F
	ADC 5 ADC-XF1	OK	28 degrees C / 82 degrees F
	ADC 5 ADC-XF0	OK	34 degrees C / 93 degrees F
	ADC 6 Intake	OK	11 degrees C / 51 degrees F
	ADC 6 Exhaust	OK	21 degrees C / 69 degrees F
	ADC 6 ADC-XF1	OK	26 degrees C / 78 degrees F
ADC	6 ADC-XF0	OK	35 degrees C / 95 degrees F
	ADC 7 Intake	OK	14 degrees C / 57 degrees F
	ADC 7 Exhaust	OK	22 degrees C / 71 degrees F
	ADC 7 ADC-XF1	OK	26 degrees C / 78 degrees F
	ADC 7 ADC-XF0	OK	34 degrees C / 93 degrees F
	ADC 8 Intake	OK	14 degrees C / 57 degrees F
	ADC 8 Exhaust	OK	21 degrees C / 69 degrees F
	ADC 8 ADC-XF1	OK	24 degrees C / 75 degrees F
	ADC 8 ADC-XF0	OK	31 degrees C / 87 degrees F
	ADC 9 Intake	OK	10 degrees C / 50 degrees F
	ADC 9 Exhaust	OK	22 degrees C / 71 degrees F
	ADC 9 ADC-XF1	OK	28 degrees C / 82 degrees F
	ADC 9 ADC-XF0	OK	36 degrees C / 96 degrees F
Fans	Fan Tray 0 Fan 1	OK	3480 RPM
	Fan Tray 0 Fan 2	OK	3480 RPM
	Fan Tray 0 Fan 3	OK	3480 RPM
	Fan Tray 0 Fan 4	OK	3360 RPM
	Fan Tray 0 Fan 5	OK	3360 RPM
	Fan Tray 0 Fan 6	OK	3480 RPM
	Fan Tray 1 Fan 1	OK	3360 RPM
	Fan Tray 1 Fan 2	OK	3360 RPM
	Fan Tray 1 Fan 3	OK	3360 RPM
	Fan Tray 1 Fan 4	OK	3480 RPM
	Fan Tray 1 Fan 5	OK	3480 RPM
	Fan Tray 1 Fan 6	OK	3480 RPM
	Fan Tray 2 Fan 1	OK	3360 RPM
	Fan Tray 2 Fan 2	OK	3360 RPM
	Fan Tray 2 Fan 3	OK	3480 RPM
	Fan Tray 2 Fan 4	OK	3480 RPM
	Fan Tray 2 Fan 5	OK	3360 RPM
	Fan Tray 2 Fan 6	OK	3480 RPM



Fan Tray 3 Fan 1	OK	3360 RPM
Fan Tray 3 Fan 2	OK	3360 RPM
Fan Tray 3 Fan 3	OK	3480 RPM
Fan Tray 3 Fan 4	OK	3480 RPM
Fan Tray 3 Fan 5	OK	3480 RPM
Fan Tray 3 Fan 6	OK	3360 RPM

### show chassis environment (MX2008 Router)

```
user@host>show chassis environment
```

Class	Item	Status	Measurement
Temp	PSM 0	Absent	
	PSM 1	OK	29 degrees C / 84 degrees F
	PSM 2	OK	30 degrees C / 86 degrees F
	PSM 3	OK	29 degrees C / 84 degrees F
	PSM 4	OK	29 degrees C / 84 degrees F
	PSM 5	OK	30 degrees C / 86 degrees F
	PSM 6	OK	29 degrees C / 84 degrees F
	PSM 7	OK	31 degrees C / 87 degrees F
	PSM 8	Absent	
	PDM 0	OK	
	PDM 1	OK	
	CB 0 Inlet1	OK	37 degrees C / 98 degrees F
	CB 0 Inlet2	OK	45 degrees C / 113 degrees F
	CB 0 Inlet3	OK	44 degrees C / 111 degrees F
	CB 0 Inlet4	OK	41 degrees C / 105 degrees F
	CB 0 Exhaust1	OK	30 degrees C / 86 degrees F
	CB 0 Exhaust2	OK	40 degrees C / 104 degrees F
	CB 0 Exhaust3	OK	48 degrees C / 118 degrees F
	CB 0 Exhaust4	OK	46 degrees C / 114 degrees F
	CB 1 Inlet1	OK	30 degrees C / 86 degrees F
	CB 1 Inlet2	OK	31 degrees C / 87 degrees F
	CB 1 Inlet3	OK	29 degrees C / 84 degrees F
	CB 1 Inlet4	OK	32 degrees C / 89 degrees F
	CB 1 Exhaust1	OK	30 degrees C / 86 degrees F
	CB 1 Exhaust2	OK	33 degrees C / 91 degrees F
	CB 1 Exhaust3	OK	34 degrees C / 93 degrees F
	CB 1 Exhaust4	OK	34 degrees C / 93 degrees F
	Routing Engine 0	OK	
	Routing Engine 0 CPU	OK	75 degrees C / 167 degrees F
	Routing Engine 1	OK	
	Routing Engine 1 CPU	OK	46 degrees C / 114 degrees F
	SFB 0 Inlet2	OK	44 degrees C / 111 degrees F
	SFB 0 Exhaust1	OK	39 degrees C / 102 degrees F
	SFB 0 Inlet1	OK	41 degrees C / 105 degrees F
	SFB 0 Exhaust2	OK	45 degrees C / 113 degrees F
	SFB 0 SFB2-PF-local	OK	45 degrees C / 113 degrees F
	SFB 0 SFB2-PF-die	OK	51 degrees C / 123 degrees F
	SFB 1 Inlet2	OK	30 degrees C / 86 degrees F
	SFB 1 Exhaust1	OK	27 degrees C / 80 degrees F
	SFB 1 Inlet1	OK	28 degrees C / 82 degrees F
	SFB 1 Exhaust2	OK	31 degrees C / 87 degrees F
	SFB 1 SFB2-PF-local	OK	30 degrees C / 86 degrees F
	SFB 1 SFB2-PF-die	OK	37 degrees C / 98 degrees F
	SFB 2 Inlet2	OK	28 degrees C / 82 degrees F
	SFB 2 Exhaust1	OK	26 degrees C / 78 degrees F
	SFB 2 Inlet1	OK	27 degrees C / 80 degrees F
	SFB 2 Exhaust2	OK	28 degrees C / 82 degrees F
	SFB 2 SFB2-PF-local	OK	27 degrees C / 80 degrees F
	SFB 2 SFB2-PF-die	OK	33 degrees C / 91 degrees F
	SFB 3 Inlet2	OK	28 degrees C / 82 degrees F

SFB 3 Exhaust1	OK	26 degrees C / 78 degrees F
SFB 3 Inlet1	OK	26 degrees C / 78 degrees F
SFB 3 Exhaust2	OK	28 degrees C / 82 degrees F
SFB 3 SFB2-PF-local	OK	27 degrees C / 80 degrees F
SFB 3 SFB2-PF-die	OK	33 degrees C / 91 degrees F
SFB 4 Inlet2	OK	28 degrees C / 82 degrees F
SFB 4 Exhaust1	OK	26 degrees C / 78 degrees F
SFB 4 Inlet1	OK	26 degrees C / 78 degrees F
SFB 4 Exhaust2	OK	28 degrees C / 82 degrees F
SFB 4 SFB2-PF-local	OK	27 degrees C / 80 degrees F
SFB 4 SFB2-PF-die	OK	32 degrees C / 89 degrees F
SFB 5 Inlet2	OK	29 degrees C / 84 degrees F
SFB 5 Exhaust1	OK	27 degrees C / 80 degrees F
SFB 5 Inlet1	OK	28 degrees C / 82 degrees F
SFB 5 Exhaust2	OK	29 degrees C / 84 degrees F
SFB 5 SFB2-PF-local	OK	28 degrees C / 82 degrees F
SFB 5 SFB2-PF-die	OK	34 degrees C / 93 degrees F
SFB 6 Inlet2	OK	33 degrees C / 91 degrees F
SFB 6 Exhaust1	OK	32 degrees C / 89 degrees F
SFB 6 Inlet1	OK	32 degrees C / 89 degrees F
SFB 6 Exhaust2	OK	34 degrees C / 93 degrees F
SFB 6 SFB2-PF-local	OK	33 degrees C / 91 degrees F
SFB 6 SFB2-PF-die	OK	40 degrees C / 104 degrees F
SFB 7 Inlet2	OK	29 degrees C / 84 degrees F
SFB 7 Exhaust1	OK	28 degrees C / 82 degrees F
SFB 7 Inlet1	OK	29 degrees C / 84 degrees F
SFB 7 Exhaust2	OK	29 degrees C / 84 degrees F
SFB 7 SFB2-PF-local	OK	28 degrees C / 82 degrees F
SFB 7 SFB2-PF-die	OK	33 degrees C / 91 degrees F
FPC 0 Intake	OK	29 degrees C / 84 degrees F
FPC 0 Exhaust A	OK	42 degrees C / 107 degrees F
FPC 0 Exhaust B	OK	42 degrees C / 107 degrees F
FPC 0 XL 0 TSen	OK	38 degrees C / 100 degrees F
FPC 0 XL 0 Chip	OK	53 degrees C / 127 degrees F
FPC 0 XL 0 XR2 0 TSen	OK	38 degrees C / 100 degrees F
FPC 0 XL 0 XR2 0 Chip	OK	59 degrees C / 138 degrees F
FPC 0 XL 0 XR2 1 TSen	OK	38 degrees C / 100 degrees F
FPC 0 XL 0 XR2 1 Chip	OK	59 degrees C / 138 degrees F
FPC 0 XL 1 TSen	OK	30 degrees C / 86 degrees F
FPC 0 XL 1 Chip	OK	42 degrees C / 107 degrees F
FPC 0 XL 1 XR2 0 TSen	OK	30 degrees C / 86 degrees F
FPC 0 XL 1 XR2 0 Chip	OK	49 degrees C / 120 degrees F
FPC 0 XL 1 XR2 1 TSen	OK	30 degrees C / 86 degrees F
FPC 0 XL 1 XR2 1 Chip	OK	50 degrees C / 122 degrees F
FPC 0 XM 0 TSen	OK	42 degrees C / 107 degrees F
FPC 0 XM 0 Chip	OK	49 degrees C / 120 degrees F
FPC 0 XM 1 TSen	OK	42 degrees C / 107 degrees F
FPC 0 XM 1 Chip	OK	42 degrees C / 107 degrees F
FPC 0 XM 2 TSen	OK	42 degrees C / 107 degrees F
FPC 0 XM 2 Chip	OK	42 degrees C / 107 degrees F
FPC 0 XM 3 TSen	OK	42 degrees C / 107 degrees F
FPC 0 XM 3 Chip	OK	40 degrees C / 104 degrees F
FPC 0 PCIe Switch TSen	OK	42 degrees C / 107 degrees F
FPC 0 PCIe Switch Chip	OK	22 degrees C / 71 degrees F
FPC 1 Intake	OK	29 degrees C / 84 degrees F
FPC 1 Exhaust A	OK	52 degrees C / 125 degrees F
FPC 1 Exhaust B	OK	44 degrees C / 111 degrees F
FPC 1 EA0 TSen	OK	54 degrees C / 129 degrees F
FPC 1 EA0 Chip	OK	47 degrees C / 116 degrees F
FPC 1 EA0_XR0 TSen	OK	54 degrees C / 129 degrees F
FPC 1 EA0_XR0 Chip	OK	56 degrees C / 132 degrees F

FPC 1 EA0_XR1 TSen	OK	54 degrees C / 129 degrees F
FPC 1 EA0_XR1 Chip	OK	53 degrees C / 127 degrees F
FPC 1 EA1 TSen	OK	54 degrees C / 129 degrees F
FPC 1 EA1 Chip	OK	49 degrees C / 120 degrees F
FPC 1 EA1_XR0 TSen	OK	54 degrees C / 129 degrees F
FPC 1 EA1_XR0 Chip	OK	57 degrees C / 134 degrees F
FPC 1 EA1_XR1 TSen	OK	54 degrees C / 129 degrees F
FPC 1 EA1_XR1 Chip	OK	58 degrees C / 136 degrees F
FPC 1 PEX TSen	OK	54 degrees C / 129 degrees F
FPC 1 PEX Chip	OK	39 degrees C / 102 degrees F
FPC 1 EA2 TSen	OK	43 degrees C / 109 degrees F
FPC 1 EA2 Chip	OK	39 degrees C / 102 degrees F
FPC 1 EA2_XR0 TSen	OK	43 degrees C / 109 degrees F
FPC 1 EA2_XR0 Chip	OK	45 degrees C / 113 degrees F
FPC 1 EA2_XR1 TSen	OK	43 degrees C / 109 degrees F
FPC 1 EA2_XR1 Chip	OK	42 degrees C / 107 degrees F
FPC 1 EA3 TSen	OK	43 degrees C / 109 degrees F
FPC 1 EA3 Chip	OK	40 degrees C / 104 degrees F
FPC 1 EA3_XR0 TSen	OK	43 degrees C / 109 degrees F
FPC 1 EA3_XR0 Chip	OK	50 degrees C / 122 degrees F
FPC 1 EA3_XR1 TSen	OK	43 degrees C / 109 degrees F
FPC 1 EA3_XR1 Chip	OK	46 degrees C / 114 degrees F
FPC 1 EA0_HMC0 Logic die	OK	60 degrees C / 140 degrees F
FPC 1 EA0_HMC0 DRAM botm	OK	57 degrees C / 134 degrees F
FPC 1 EA0_HMC1 Logic die	OK	61 degrees C / 141 degrees F
FPC 1 EA0_HMC1 DRAM botm	OK	58 degrees C / 136 degrees F
FPC 1 EA0_HMC2 Logic die	OK	57 degrees C / 134 degrees F
FPC 1 EA0_HMC2 DRAM botm	OK	54 degrees C / 129 degrees F
FPC 1 EA1_HMC0 Logic die	OK	65 degrees C / 149 degrees F
FPC 1 EA1_HMC0 DRAM botm	OK	62 degrees C / 143 degrees F
FPC 1 EA1_HMC1 Logic die	OK	64 degrees C / 147 degrees F
FPC 1 EA1_HMC1 DRAM botm	OK	61 degrees C / 141 degrees F
FPC 1 EA1_HMC2 Logic die	OK	61 degrees C / 141 degrees F
FPC 1 EA1_HMC2 DRAM botm	OK	58 degrees C / 136 degrees F
FPC 1 EA2_HMC0 Logic die	OK	50 degrees C / 122 degrees F
FPC 1 EA2_HMC0 DRAM botm	OK	47 degrees C / 116 degrees F
FPC 1 EA2_HMC1 Logic die	OK	54 degrees C / 129 degrees F
FPC 1 EA2_HMC1 DRAM botm	OK	51 degrees C / 123 degrees F
FPC 1 EA2_HMC2 Logic die	OK	51 degrees C / 123 degrees F
FPC 1 EA2_HMC2 DRAM botm	OK	48 degrees C / 118 degrees F
FPC 1 EA3_HMC0 Logic die	OK	51 degrees C / 123 degrees F
FPC 1 EA3_HMC0 DRAM botm	OK	48 degrees C / 118 degrees F
FPC 1 EA3_HMC1 Logic die	OK	51 degrees C / 123 degrees F
FPC 1 EA3_HMC1 DRAM botm	OK	48 degrees C / 118 degrees F
FPC 1 EA3_HMC2 Logic die	OK	51 degrees C / 123 degrees F
FPC 1 EA3_HMC2 DRAM botm	OK	48 degrees C / 118 degrees F
FPC 7 Intake	OK	30 degrees C / 86 degrees F
FPC 7 Exhaust A	OK	45 degrees C / 113 degrees F
FPC 7 Exhaust B	OK	38 degrees C / 100 degrees F
FPC 7 QX 0 TSen	OK	48 degrees C / 118 degrees F
FPC 7 QX 0 Chip	OK	51 degrees C / 123 degrees F
FPC 7 LU 0 TCAM TSen	OK	48 degrees C / 118 degrees F
FPC 7 LU 0 TCAM Chip	OK	51 degrees C / 123 degrees F
FPC 7 LU 0 TSen	OK	48 degrees C / 118 degrees F
FPC 7 LU 0 Chip	OK	50 degrees C / 122 degrees F
FPC 7 MQ 0 TSen	OK	48 degrees C / 118 degrees F
FPC 7 MQ 0 Chip	OK	54 degrees C / 129 degrees F
FPC 7 QX 1 TSen	OK	41 degrees C / 105 degrees F
FPC 7 QX 1 Chip	OK	42 degrees C / 107 degrees F
FPC 7 LU 1 TCAM TSen	OK	41 degrees C / 105 degrees F
FPC 7 LU 1 TCAM Chip	OK	43 degrees C / 109 degrees F

	FPC 7 LU 1 TSen	OK	41 degrees C / 105 degrees F
	FPC 7 LU 1 Chip	OK	46 degrees C / 114 degrees F
	FPC 7 MQ 1 TSen	OK	41 degrees C / 105 degrees F
	FPC 7 MQ 1 Chip	OK	47 degrees C / 116 degrees F
	ADC 7 Intake	OK	32 degrees C / 89 degrees F
	ADC 7 Exhaust	OK	39 degrees C / 102 degrees F
	ADC 7 ADC-XF1	OK	46 degrees C / 114 degrees F
	ADC 7 ADC-XF0	OK	54 degrees C / 129 degrees F
Fans	Fan Tray 0 Fan 1	OK	6240 RPM
	Fan Tray 0 Fan 2	OK	6120 RPM
	Fan Tray 0 Fan 3	OK	6120 RPM
	Fan Tray 0 Fan 4	OK	5760 RPM
	Fan Tray 0 Fan 5	OK	5880 RPM
	Fan Tray 0 Fan 6	OK	6000 RPM
	Fan Tray 1 Fan 1	OK	5880 RPM
	Fan Tray 1 Fan 2	OK	5880 RPM
	Fan Tray 1 Fan 3	OK	6000 RPM
	Fan Tray 1 Fan 4	OK	6000 RPM
	Fan Tray 1 Fan 5	OK	6000 RPM
	Fan Tray 1 Fan 6	OK	6000 RPM

### show chassis environment (T320 Router)

```
user@host> show chassis environment
```

Class	Item	Status	Measurement
Power	PEM 0	OK	
	PEM 1	Absent	
Temp	SCG 0	OK	28 degrees C / 82 degrees F
	SCG 1	OK	28 degrees C / 82 degrees F
	Routing Engine 0	OK	31 degrees C / 87 degrees F
	Routing Engine 1	OK	30 degrees C / 86 degrees F
	CB 0	OK	32 degrees C / 89 degrees F
	CB 1	OK	32 degrees C / 89 degrees F
	SIB 0	OK	33 degrees C / 91 degrees F
	SIB 1	OK	33 degrees C / 91 degrees F
	SIB 2	OK	34 degrees C / 93 degrees F
	FPC 0 Top	OK	38 degrees C / 100 degrees F
	FPC 0 Bottom	OK	32 degrees C / 89 degrees F
	FPC 1 Top	OK	38 degrees C / 100 degrees F
	FPC 1 Bottom	OK	33 degrees C / 91 degrees F
	FPC 2 Top	OK	36 degrees C / 96 degrees F
	FPC 2 Bottom	OK	31 degrees C / 87 degrees F
	FPM GBUS	OK	26 degrees C / 78 degrees F
	FPM Display	OK	29 degrees C / 84 degrees F
Fans	Top Left Front fan	OK	Spinning at normal speed
	Top Left Middle fan	OK	Spinning at normal speed
	Top Left Rear fan	OK	Spinning at normal speed
	Top Right Front fan	OK	Spinning at normal speed
	Top Right Middle fan	OK	Spinning at normal speed
	Top Right Rear fan	OK	Spinning at normal speed
	Bottom Left Front fan	OK	Spinning at normal speed
	Bottom Left Middle fan	OK	Spinning at normal speed
	Bottom Left Rear fan	OK	Spinning at normal speed
	Bottom Right Front fan	OK	Spinning at normal speed
	Bottom Right Middle fan	OK	Spinning at normal speed
	Bottom Right Rear fan	OK	Spinning at normal speed
	Rear Tray Top fan	OK	Spinning at normal speed
	Rear Tray Second fan	OK	Spinning at normal speed
	Rear Tray Middle fan	OK	Spinning at normal speed
	Rear Tray Fourth fan	OK	Spinning at normal speed
	Rear Tray Bottom fan	OK	Spinning at normal speed

```

Misc  CIP                OK
      SPMB 0             OK
      SPMB 1             OK

```

### show chassis environment (MX10003 Router)

```
user@host> show chassis environment
```

Class	Item	Status	Measurement
Temp	CB 0 Exhaust Temp Sensor 0x49	OK	36 degrees C / 96 degrees F
	CB 0 Inlet Temp Sensor 0x49	OK	29 degrees C / 84 degrees F
	CB 1 Exhaust Temp Sensor 0x49	OK	36 degrees C / 96 degrees F
	CB 1 Inlet Temp Sensor 0x49	OK	31 degrees C / 87 degrees F
	FPC 0 Intake Temp Sensor	OK	29 degrees C / 84 degrees F
	FPC 0 Exhaust-A Temp Sensor	OK	55 degrees C / 131 degrees F
	FPC 0 Exhaust-B Temp Sensor	OK	44 degrees C / 111 degrees F
	FPC 0 EA0 Chip	OK	58 degrees C / 136 degrees F
	FPC 0 EA0-XR0 Chip	OK	61 degrees C / 141 degrees F
	FPC 0 EA0-XR1 Chip	OK	62 degrees C / 143 degrees F
	FPC 0 EA1 Chip	OK	67 degrees C / 152 degrees F
	FPC 0 EA1-XR0 Chip	OK	71 degrees C / 159 degrees F
	FPC 0 EA1-XR1 Chip	OK	72 degrees C / 161 degrees F
	FPC 0 PEX Chip	OK	75 degrees C / 167 degrees F
	FPC 0 EA2 Chip	OK	49 degrees C / 120 degrees F
	FPC 0 EA2-XR0 Chip	OK	55 degrees C / 131 degrees F
	FPC 0 EA2-XR1 Chip	OK	56 degrees C / 132 degrees F
	FPC 0 PF Chip	OK	68 degrees C / 154 degrees F
	FPC 0 EA0_HMC0 Logic die	OK	72 degrees C / 161 degrees F
	FPC 0 EA0_HMC0 DRAM botm	OK	69 degrees C / 156 degrees F
	FPC 0 EA0_HMC1 Logic die	OK	72 degrees C / 161 degrees F
	FPC 0 EA0_HMC1 DRAM botm	OK	69 degrees C / 156 degrees F
	FPC 0 EA0_HMC2 Logic die	OK	75 degrees C / 167 degrees F
	FPC 0 EA0_HMC2 DRAM botm	OK	72 degrees C / 161 degrees F
	FPC 0 EA1_HMC0 Logic die	OK	81 degrees C / 177 degrees F
	FPC 0 EA1_HMC0 DRAM botm	OK	78 degrees C / 172 degrees F
	FPC 0 EA1_HMC1 Logic die	OK	79 degrees C / 174 degrees F
	FPC 0 EA1_HMC1 DRAM botm	OK	76 degrees C / 168 degrees F
	FPC 0 EA1_HMC2 Logic die	OK	82 degrees C / 179 degrees F
	FPC 0 EA1_HMC2 DRAM botm	OK	79 degrees C / 174 degrees F
	FPC 0 EA2_HMC0 Logic die	OK	61 degrees C / 141 degrees F
	FPC 0 EA2_HMC0 DRAM botm	OK	58 degrees C / 136 degrees F
	FPC 0 EA2_HMC1 Logic die	OK	62 degrees C / 143 degrees F
	FPC 0 EA2_HMC1 DRAM botm	OK	59 degrees C / 138 degrees F
	FPC 0 EA2_HMC2 Logic die	OK	64 degrees C / 147 degrees F
	FPC 0 EA2_HMC2 DRAM botm	OK	61 degrees C / 141 degrees F
	FPC 1 Intake Temp Sensor	OK	28 degrees C / 82 degrees F
	FPC 1 Exhaust-A Temp Sensor	OK	58 degrees C / 136 degrees F
	FPC 1 Exhaust-B Temp Sensor	OK	46 degrees C / 114 degrees F
	FPC 1 EA0 Chip	OK	64 degrees C / 147 degrees F
	FPC 1 EA0-XR0 Chip	OK	67 degrees C / 152 degrees F
	FPC 1 EA0-XR1 Chip	OK	68 degrees C / 154 degrees F
	FPC 1 EA1 Chip	OK	70 degrees C / 158 degrees F
	FPC 1 EA1-XR0 Chip	OK	74 degrees C / 165 degrees F
	FPC 1 EA1-XR1 Chip	OK	74 degrees C / 165 degrees F
	FPC 1 PEX Chip	OK	88 degrees C / 190 degrees F
	FPC 1 EA2 Chip	OK	50 degrees C / 122 degrees F
	FPC 1 EA2-XR0 Chip	OK	54 degrees C / 129 degrees F
	FPC 1 EA2-XR1 Chip	OK	56 degrees C / 132 degrees F
	FPC 1 PF Chip	OK	71 degrees C / 159 degrees F
	FPC 1 EA0_HMC0 Logic die	OK	74 degrees C / 165 degrees F

	FPC 1 EA0_HMC0 DRAM botm	OK	71 degrees C / 159 degrees F
	FPC 1 EA0_HMC1 Logic die	OK	78 degrees C / 172 degrees F
	FPC 1 EA0_HMC1 DRAM botm	OK	75 degrees C / 167 degrees F
	FPC 1 EA0_HMC2 Logic die	OK	78 degrees C / 172 degrees F
	FPC 1 EA0_HMC2 DRAM botm	OK	75 degrees C / 167 degrees F
	FPC 1 EA1_HMC0 Logic die	OK	84 degrees C / 183 degrees F
	FPC 1 EA1_HMC0 DRAM botm	OK	81 degrees C / 177 degrees F
	FPC 1 EA1_HMC1 Logic die	OK	81 degrees C / 177 degrees F
	FPC 1 EA1_HMC1 DRAM botm	OK	78 degrees C / 172 degrees F
	FPC 1 EA1_HMC2 Logic die	OK	85 degrees C / 185 degrees F
	FPC 1 EA1_HMC2 DRAM botm	OK	82 degrees C / 179 degrees F
	FPC 1 EA2_HMC0 Logic die	OK	63 degrees C / 145 degrees F
	FPC 1 EA2_HMC0 DRAM botm	OK	60 degrees C / 140 degrees F
	FPC 1 EA2_HMC1 Logic die	OK	60 degrees C / 140 degrees F
	FPC 1 EA2_HMC1 DRAM botm	OK	57 degrees C / 134 degrees F
	FPC 1 EA2_HMC2 Logic die	OK	66 degrees C / 150 degrees F
	FPC 1 EA2_HMC2 DRAM botm	OK	63 degrees C / 145 degrees F
Power	PEM 0	OK	
	PEM 1	OK	
	PEM 2	OK	
	PEM 3	OK	
	PEM 4	Absent	
	PEM 5	Absent	
Fans	Fan Tray 0 Fan 0	OK	Spinning at normal speed
	Fan Tray 0 Fan 1	OK	Spinning at normal speed
	Fan Tray 0 Fan 2	OK	Spinning at normal speed
	Fan Tray 0 Fan 3	OK	Spinning at normal speed
	Fan Tray 1 Fan 0	OK	Spinning at normal speed
	Fan Tray 1 Fan 1	OK	Spinning at normal speed
	Fan Tray 1 Fan 2	OK	Spinning at normal speed
	Fan Tray 1 Fan 3	OK	Spinning at normal speed
	Fan Tray 2 Fan 0	OK	Spinning at normal speed
	Fan Tray 2 Fan 1	OK	Spinning at normal speed
	Fan Tray 2 Fan 2	OK	Spinning at normal speed
	Fan Tray 2 Fan 3	OK	Spinning at normal speed
	Fan Tray 3 Fan 0	OK	Spinning at normal speed
	Fan Tray 3 Fan 1	OK	Spinning at normal speed
	Fan Tray 3 Fan 2	OK	Spinning at normal speed
	Fan Tray 3 Fan 3	OK	Spinning at normal speed

## show chassis environment (MX10008 Router)

user@host> show chassis environment			
Class	Item	Status	Measurement
Temp	Routing Engine 0 CPU	OK	41 degrees C / 105 degrees F
	Routing Engine 1 CPU	OK	40 degrees C / 104 degrees F
	CB 0 Intake A Temp Sensor	OK	24 degrees C / 75 degrees F
	CB 0 Intake B Temp Sensor	OK	24 degrees C / 75 degrees F
	CB 0 Exhaust A Temp Sensor	OK	28 degrees C / 82 degrees F
	CB 0 Exhaust B Temp Sensor	OK	30 degrees C / 86 degrees F
	CB 0 Middle Temp Sensor	OK	28 degrees C / 82 degrees F
	CB 1 Intake A Temp Sensor	OK	24 degrees C / 75 degrees F
	CB 1 Intake B Temp Sensor	OK	23 degrees C / 73 degrees F
	CB 1 Exhaust A Temp Sensor	OK	27 degrees C / 80 degrees F
	CB 1 Exhaust B Temp Sensor	OK	29 degrees C / 84 degrees F
	CB 1 Middle Temp Sensor	OK	28 degrees C / 82 degrees F
	FPC 0 Intake-A Temp Sensor	OK	32 degrees C / 89 degrees F
	FPC 0 Exhaust-A Temp Sensor	OK	44 degrees C / 111 degrees F
	FPC 0 Exhaust-B Temp Sensor	OK	49 degrees C / 120 degrees F
	FPC 0 EA0 Temp Sensor	OK	66 degrees C / 150 degrees F
	FPC 0 EA0_XR0 Temp Sensor	OK	69 degrees C / 156 degrees F

FPC 0 EA0_XR1 Temp Sensor	OK	73 degrees C / 163 degrees F
FPC 0 EA1 Temp Sensor	OK	60 degrees C / 140 degrees F
FPC 0 EA1_XR0 Temp Sensor	OK	64 degrees C / 147 degrees F
FPC 0 EA1_XR1 Temp Sensor	OK	63 degrees C / 145 degrees F
FPC 0 EA2 Temp Sensor	OK	68 degrees C / 154 degrees F
FPC 0 EA2_XR0 Temp Sensor	OK	73 degrees C / 163 degrees F
FPC 0 EA2_XR1 Temp Sensor	OK	72 degrees C / 161 degrees F
FPC 0 EA3 Temp Sensor	OK	63 degrees C / 145 degrees F
FPC 0 EA3_XR0 Temp Sensor	OK	66 degrees C / 150 degrees F
FPC 0 EA3_XR1 Temp Sensor	OK	65 degrees C / 149 degrees F
FPC 0 EA4 Temp Sensor	OK	68 degrees C / 154 degrees F
FPC 0 EA4_XR0 Temp Sensor	OK	71 degrees C / 159 degrees F
FPC 0 EA4_XR1 Temp Sensor	OK	70 degrees C / 158 degrees F
FPC 0 EA5 Temp Sensor	OK	56 degrees C / 132 degrees F
FPC 0 EA5_XR0 Temp Sensor	OK	61 degrees C / 141 degrees F
FPC 0 EA5_XR1 Temp Sensor	OK	63 degrees C / 145 degrees F
FPC 0 EA0_HMC0 Logic die	OK	75 degrees C / 167 degrees F
FPC 0 EA0_HMC0 DRAM botm	OK	72 degrees C / 161 degrees F
FPC 0 EA0_HMC1 Logic die	OK	75 degrees C / 167 degrees F
FPC 0 EA0_HMC1 DRAM botm	OK	72 degrees C / 161 degrees F
FPC 0 EA0_HMC2 Logic die	OK	77 degrees C / 170 degrees F
FPC 0 EA0_HMC2 DRAM botm	OK	74 degrees C / 165 degrees F
FPC 0 EA1_HMC0 Logic die	OK	72 degrees C / 161 degrees F
FPC 0 EA1_HMC0 DRAM botm	OK	69 degrees C / 156 degrees F
FPC 0 EA1_HMC1 Logic die	OK	73 degrees C / 163 degrees F
FPC 0 EA1_HMC1 DRAM botm	OK	70 degrees C / 158 degrees F
FPC 0 EA1_HMC2 Logic die	OK	72 degrees C / 161 degrees F
FPC 0 EA1_HMC2 DRAM botm	OK	69 degrees C / 156 degrees F
FPC 0 EA2_HMC0 Logic die	OK	80 degrees C / 176 degrees F
FPC 0 EA2_HMC0 DRAM botm	OK	77 degrees C / 170 degrees F
FPC 0 EA2_HMC1 Logic die	OK	80 degrees C / 176 degrees F
FPC 0 EA2_HMC1 DRAM botm	OK	77 degrees C / 170 degrees F
FPC 0 EA2_HMC2 Logic die	OK	79 degrees C / 174 degrees F
FPC 0 EA2_HMC2 DRAM botm	OK	76 degrees C / 168 degrees F
FPC 0 EA3_HMC0 Logic die	OK	77 degrees C / 170 degrees F
FPC 0 EA3_HMC0 DRAM botm	OK	74 degrees C / 165 degrees F
FPC 0 EA3_HMC1 Logic die	OK	78 degrees C / 172 degrees F
FPC 0 EA3_HMC1 DRAM botm	OK	75 degrees C / 167 degrees F
FPC 0 EA3_HMC2 Logic die	OK	77 degrees C / 170 degrees F
FPC 0 EA3_HMC2 DRAM botm	OK	74 degrees C / 165 degrees F
FPC 0 EA4_HMC0 Logic die	OK	80 degrees C / 176 degrees F
FPC 0 EA4_HMC0 DRAM botm	OK	77 degrees C / 170 degrees F
FPC 0 EA4_HMC1 Logic die	OK	81 degrees C / 177 degrees F
FPC 0 EA4_HMC1 DRAM botm	OK	78 degrees C / 172 degrees F
FPC 0 EA4_HMC2 Logic die	OK	80 degrees C / 176 degrees F
FPC 0 EA4_HMC2 DRAM botm	OK	77 degrees C / 170 degrees F
FPC 0 EA5_HMC0 Logic die	OK	68 degrees C / 154 degrees F
FPC 0 EA5_HMC0 DRAM botm	OK	65 degrees C / 149 degrees F
FPC 0 EA5_HMC1 Logic die	OK	68 degrees C / 154 degrees F
FPC 0 EA5_HMC1 DRAM botm	OK	65 degrees C / 149 degrees F
FPC 0 EA5_HMC2 Logic die	OK	67 degrees C / 152 degrees F
FPC 0 EA5_HMC2 DRAM botm	OK	64 degrees C / 147 degrees F
FPC 2 Intake-A Temp Sensor	OK	32 degrees C / 89 degrees F
FPC 2 Exhaust-A Temp Sensor	OK	52 degrees C / 125 degrees F
FPC 2 Exhaust-B Temp Sensor	OK	50 degrees C / 122 degrees F
FPC 2 EA0 Temp Sensor	OK	71 degrees C / 159 degrees F
FPC 2 EA0_XR0 Temp Sensor	OK	75 degrees C / 167 degrees F
FPC 2 EA0_XR1 Temp Sensor	OK	78 degrees C / 172 degrees F
FPC 2 EA1 Temp Sensor	OK	64 degrees C / 147 degrees F
FPC 2 EA1_XR0 Temp Sensor	OK	67 degrees C / 152 degrees F
FPC 2 EA1_XR1 Temp Sensor	OK	65 degrees C / 149 degrees F

FPC 2 EA2 Temp Sensor	OK	75 degrees C / 167 degrees F
FPC 2 EA2_XR0 Temp Sensor	OK	80 degrees C / 176 degrees F
FPC 2 EA2_XR1 Temp Sensor	OK	80 degrees C / 176 degrees F
FPC 2 EA3 Temp Sensor	OK	66 degrees C / 150 degrees F
FPC 2 EA3_XR0 Temp Sensor	OK	69 degrees C / 156 degrees F
FPC 2 EA3_XR1 Temp Sensor	OK	69 degrees C / 156 degrees F
FPC 2 EA4 Temp Sensor	OK	75 degrees C / 167 degrees F
FPC 2 EA4_XR0 Temp Sensor	OK	76 degrees C / 168 degrees F
FPC 2 EA4_XR1 Temp Sensor	OK	75 degrees C / 167 degrees F
FPC 2 EA5 Temp Sensor	OK	60 degrees C / 140 degrees F
FPC 2 EA5_XR0 Temp Sensor	OK	64 degrees C / 147 degrees F
FPC 2 EA5_XR1 Temp Sensor	OK	64 degrees C / 147 degrees F
FPC 2 EA0_HMC0 Logic die	OK	84 degrees C / 183 degrees F
FPC 2 EA0_HMC0 DRAM botm	OK	81 degrees C / 177 degrees F
FPC 2 EA0_HMC1 Logic die	OK	85 degrees C / 185 degrees F
FPC 2 EA0_HMC1 DRAM botm	OK	82 degrees C / 179 degrees F
FPC 2 EA0_HMC2 Logic die	OK	83 degrees C / 181 degrees F
FPC 2 EA0_HMC2 DRAM botm	OK	80 degrees C / 176 degrees F
FPC 2 EA1_HMC0 Logic die	OK	76 degrees C / 168 degrees F
FPC 2 EA1_HMC0 DRAM botm	OK	73 degrees C / 163 degrees F
FPC 2 EA1_HMC1 Logic die	OK	76 degrees C / 168 degrees F
FPC 2 EA1_HMC1 DRAM botm	OK	73 degrees C / 163 degrees F
FPC 2 EA1_HMC2 Logic die	OK	76 degrees C / 168 degrees F
FPC 2 EA1_HMC2 DRAM botm	OK	73 degrees C / 163 degrees F
FPC 2 EA2_HMC0 Logic die	OK	86 degrees C / 186 degrees F
FPC 2 EA2_HMC0 DRAM botm	OK	83 degrees C / 181 degrees F
FPC 2 EA2_HMC1 Logic die	OK	87 degrees C / 188 degrees F
FPC 2 EA2_HMC1 DRAM botm	OK	84 degrees C / 183 degrees F
FPC 2 EA2_HMC2 Logic die	OK	87 degrees C / 188 degrees F
FPC 2 EA2_HMC2 DRAM botm	OK	84 degrees C / 183 degrees F
FPC 2 EA3_HMC0 Logic die	OK	80 degrees C / 176 degrees F
FPC 2 EA3_HMC0 DRAM botm	OK	77 degrees C / 170 degrees F
FPC 2 EA3_HMC1 Logic die	OK	80 degrees C / 176 degrees F
FPC 2 EA3_HMC1 DRAM botm	OK	77 degrees C / 170 degrees F
FPC 2 EA3_HMC2 Logic die	OK	80 degrees C / 176 degrees F
FPC 2 EA3_HMC2 DRAM botm	OK	77 degrees C / 170 degrees F
FPC 2 EA4_HMC0 Logic die	OK	88 degrees C / 190 degrees F
FPC 2 EA4_HMC0 DRAM botm	OK	85 degrees C / 185 degrees F
FPC 2 EA4_HMC1 Logic die	OK	89 degrees C / 192 degrees F
FPC 2 EA4_HMC1 DRAM botm	OK	86 degrees C / 186 degrees F
FPC 2 EA4_HMC2 Logic die	OK	80 degrees C / 176 degrees F
FPC 2 EA4_HMC2 DRAM botm	OK	77 degrees C / 170 degrees F
FPC 2 EA5_HMC0 Logic die	OK	72 degrees C / 161 degrees F
FPC 2 EA5_HMC0 DRAM botm	OK	69 degrees C / 156 degrees F
FPC 2 EA5_HMC1 Logic die	OK	69 degrees C / 156 degrees F
FPC 2 EA5_HMC1 DRAM botm	OK	66 degrees C / 150 degrees F
FPC 2 EA5_HMC2 Logic die	OK	72 degrees C / 161 degrees F
FPC 2 EA5_HMC2 DRAM botm	OK	69 degrees C / 156 degrees F
FPC 3 Intake-A Temp Sensor	OK	30 degrees C / 86 degrees F
FPC 3 Exhaust-A Temp Sensor	OK	48 degrees C / 118 degrees F
FPC 3 Exhaust-B Temp Sensor	OK	44 degrees C / 111 degrees F
FPC 3 EA0 Temp Sensor	OK	60 degrees C / 140 degrees F
FPC 3 EA0_XR0 Temp Sensor	OK	65 degrees C / 149 degrees F
FPC 3 EA0_XR1 Temp Sensor	OK	67 degrees C / 152 degrees F
FPC 3 EA1 Temp Sensor	OK	54 degrees C / 129 degrees F
FPC 3 EA1_XR0 Temp Sensor	OK	59 degrees C / 138 degrees F
FPC 3 EA1_XR1 Temp Sensor	OK	58 degrees C / 136 degrees F
FPC 3 EA2 Temp Sensor	OK	62 degrees C / 143 degrees F
FPC 3 EA2_XR0 Temp Sensor	OK	66 degrees C / 150 degrees F
FPC 3 EA2_XR1 Temp Sensor	OK	66 degrees C / 150 degrees F
FPC 3 EA3 Temp Sensor	OK	54 degrees C / 129 degrees F



	FPC 3 EA3_XR0 Temp Sensor	OK	57 degrees C / 134 degrees F
	FPC 3 EA3_XR1 Temp Sensor	OK	56 degrees C / 132 degrees F
	FPC 3 EA4 Temp Sensor	OK	68 degrees C / 154 degrees F
	FPC 3 EA4_XR0 Temp Sensor	OK	71 degrees C / 159 degrees F
	FPC 3 EA4_XR1 Temp Sensor	OK	70 degrees C / 158 degrees F
	FPC 3 EA5 Temp Sensor	OK	55 degrees C / 131 degrees F
	FPC 3 EA5_XR0 Temp Sensor	OK	58 degrees C / 136 degrees F
	FPC 3 EA5_XR1 Temp Sensor	OK	58 degrees C / 136 degrees F
	FPC 3 EA0_HMC0 Logic die	OK	69 degrees C / 156 degrees F
	FPC 3 EA0_HMC0 DRAM botm	OK	66 degrees C / 150 degrees F
	FPC 3 EA0_HMC1 Logic die	OK	70 degrees C / 158 degrees F
	FPC 3 EA0_HMC1 DRAM botm	OK	67 degrees C / 152 degrees F
	FPC 3 EA0_HMC2 Logic die	OK	69 degrees C / 156 degrees F
	FPC 3 EA0_HMC2 DRAM botm	OK	66 degrees C / 150 degrees F
	FPC 3 EA1_HMC0 Logic die	OK	67 degrees C / 152 degrees F
	FPC 3 EA1_HMC0 DRAM botm	OK	64 degrees C / 147 degrees F
	FPC 3 EA1_HMC1 Logic die	OK	64 degrees C / 147 degrees F
	FPC 3 EA1_HMC1 DRAM botm	OK	61 degrees C / 141 degrees F
	FPC 3 EA1_HMC2 Logic die	OK	64 degrees C / 147 degrees F
	FPC 3 EA1_HMC2 DRAM botm	OK	61 degrees C / 141 degrees F
	FPC 3 EA2_HMC0 Logic die	OK	74 degrees C / 165 degrees F
	FPC 3 EA2_HMC0 DRAM botm	OK	71 degrees C / 159 degrees F
	FPC 3 EA2_HMC1 Logic die	OK	76 degrees C / 168 degrees F
	FPC 3 EA2_HMC1 DRAM botm	OK	73 degrees C / 163 degrees F
	FPC 3 EA2_HMC2 Logic die	OK	74 degrees C / 165 degrees F
	FPC 3 EA2_HMC2 DRAM botm	OK	71 degrees C / 159 degrees F
	FPC 3 EA3_HMC0 Logic die	OK	69 degrees C / 156 degrees F
	FPC 3 EA3_HMC0 DRAM botm	OK	66 degrees C / 150 degrees F
	FPC 3 EA3_HMC1 Logic die	OK	68 degrees C / 154 degrees F
	FPC 3 EA3_HMC1 DRAM botm	OK	65 degrees C / 149 degrees F
	FPC 3 EA3_HMC2 Logic die	OK	68 degrees C / 154 degrees F
	FPC 3 EA3_HMC2 DRAM botm	OK	65 degrees C / 149 degrees F
	FPC 3 EA4_HMC0 Logic die	OK	81 degrees C / 177 degrees F
	FPC 3 EA4_HMC0 DRAM botm	OK	78 degrees C / 172 degrees F
	FPC 3 EA4_HMC1 Logic die	OK	80 degrees C / 176 degrees F
	FPC 3 EA4_HMC1 DRAM botm	OK	77 degrees C / 170 degrees F
	FPC 3 EA4_HMC2 Logic die	OK	81 degrees C / 177 degrees F
	FPC 3 EA4_HMC2 DRAM botm	OK	78 degrees C / 172 degrees F
	FPC 3 EA5_HMC0 Logic die	OK	68 degrees C / 154 degrees F
	FPC 3 EA5_HMC0 DRAM botm	OK	65 degrees C / 149 degrees F
	FPC 3 EA5_HMC1 Logic die	OK	70 degrees C / 158 degrees F
	FPC 3 EA5_HMC1 DRAM botm	OK	67 degrees C / 152 degrees F
	FPC 3 EA5_HMC2 Logic die	OK	69 degrees C / 156 degrees F
	FPC 3 EA5_HMC2 DRAM botm	OK	66 degrees C / 150 degrees F
Power	PEM 0	OK	29 degrees C / 84 degrees F
	PEM 1	OK	27 degrees C / 80 degrees F
	PEM 2	OK	30 degrees C / 86 degrees F
	PEM 3	Check	
	PEM 4	Check	
	PEM 5	Check	
Fans	Fan Tray 0 Fan 0	OK	Spinning at normal speed
	Fan Tray 0 Fan 1	OK	Spinning at normal speed
	Fan Tray 0 Fan 2	OK	Spinning at normal speed
	Fan Tray 0 Fan 3	OK	Spinning at normal speed
	Fan Tray 0 Fan 4	Failed	
	Fan Tray 0 Fan 5	Failed	
	Fan Tray 0 Fan 6	OK	Spinning at normal speed
	Fan Tray 0 Fan 7	OK	Spinning at normal speed
	Fan Tray 0 Fan 8	OK	Spinning at normal speed
	Fan Tray 0 Fan 9	OK	Spinning at normal speed
	Fan Tray 0 Fan 10	OK	Spinning at normal speed

Fan Tray 1 Fan 0	OK	Spinning at normal speed
Fan Tray 1 Fan 1	OK	Spinning at normal speed
Fan Tray 1 Fan 2	OK	Spinning at normal speed
Fan Tray 1 Fan 3	OK	Spinning at normal speed
Fan Tray 1 Fan 4	OK	Spinning at normal speed
Fan Tray 1 Fan 5	OK	Spinning at normal speed
Fan Tray 1 Fan 6	OK	Spinning at normal speed
Fan Tray 1 Fan 7	OK	Spinning at normal speed
Fan Tray 1 Fan 8	OK	Spinning at normal speed
Fan Tray 1 Fan 9	OK	Spinning at normal speed
Fan Tray 1 Fan 10	OK	Spinning at normal speed
SFB 0 Intake-A	OK	32 degrees C / 89 degrees F
SFB 0 Intake-B	OK	21 degrees C / 69 degrees F
SFB 0 Exhaust-A	OK	27 degrees C / 80 degrees F
SFB 0 Exhaust-B	OK	32 degrees C / 89 degrees F
SFB 0 PF0	OK	39 degrees C / 102 degrees F
SFB 0 PF1	OK	29 degrees C / 84 degrees F
SFB 1 Intake-A	OK	43 degrees C / 109 degrees F
SFB 1 Intake-B	OK	20 degrees C / 68 degrees F
SFB 1 Exhaust-A	OK	25 degrees C / 77 degrees F
SFB 1 Exhaust-B	OK	44 degrees C / 111 degrees F
SFB 1 PF0	OK	50 degrees C / 122 degrees F
SFB 1 PF1	OK	29 degrees C / 84 degrees F
SFB 2 Intake-A	OK	39 degrees C / 102 degrees F
SFB 2 Intake-B	OK	20 degrees C / 68 degrees F
SFB 2 Exhaust-A	OK	25 degrees C / 77 degrees F
SFB 2 Exhaust-B	OK	38 degrees C / 100 degrees F
SFB 2 PF0	OK	45 degrees C / 113 degrees F
SFB 2 PF1	OK	30 degrees C / 86 degrees F
SFB 3 Intake-A	OK	36 degrees C / 96 degrees F
SFB 3 Intake-B	OK	20 degrees C / 68 degrees F
SFB 3 Exhaust-A	OK	25 degrees C / 77 degrees F
SFB 3 Exhaust-B	OK	35 degrees C / 95 degrees F
SFB 3 PF0	OK	42 degrees C / 107 degrees F
SFB 3 PF1	OK	29 degrees C / 84 degrees F
SFB 4 Intake-A	OK	30 degrees C / 86 degrees F
SFB 4 Intake-B	OK	20 degrees C / 68 degrees F
SFB 4 Exhaust-A	OK	25 degrees C / 77 degrees F
SFB 4 Exhaust-B	OK	31 degrees C / 87 degrees F
SFB 4 PF0	OK	41 degrees C / 105 degrees F
SFB 4 PF1	OK	29 degrees C / 84 degrees F
SFB 5 Intake-A	OK	30 degrees C / 86 degrees F
SFB 5 Intake-B	OK	21 degrees C / 69 degrees F
SFB 5 Exhaust-A	OK	25 degrees C / 77 degrees F
SFB 5 Exhaust-B	OK	30 degrees C / 86 degrees F
SFB 5 PF0	OK	35 degrees C / 95 degrees F
SFB 5 PF1	OK	34 degrees C / 93 degrees F

### show chassis environment (MX204 Router)

```
user@host> show chassis environment
```

Class	Item	Status	Measurement
Temp	CB 0 Top Right Inlet Sensor	OK	35 degrees C / 95 degrees F
	CB 0 Top Left Inlet Sensor	OK	37 degrees C / 98 degrees F
	CB 0 Top Right Exhaust Sensor	OK	43 degrees C / 109 degrees F
	CB 0 Top Left Exhaust Sensor	OK	50 degrees C / 122 degrees F
	CB 0 CPU Core-0 Temp	OK	47 degrees C / 116 degrees F
	CB 0 CPU Core-1 Temp	OK	48 degrees C / 118 degrees F
	CB 0 CPU Core-2 Temp	OK	47 degrees C / 116 degrees F
	CB 0 CPU Core-3 Temp	OK	47 degrees C / 116 degrees F

	CB 0 CPU Core-4 Temp	OK	47 degrees C / 116 degrees F
	CB 0 CPU Core-5 Temp	OK	47 degrees C / 116 degrees F
	CB 0 CPU Core-6 Temp	OK	47 degrees C / 116 degrees F
	CB 0 CPU Core-7 Temp	OK	47 degrees C / 116 degrees F
	FPC 0 EAO_HMC0 Logic die	OK	77 degrees C / 170 degrees F
	FPC 0 EAO_HMC0 DRAM botm	OK	74 degrees C / 165 degrees F
	FPC 0 EAO_HMC1 Logic die	OK	81 degrees C / 177 degrees F
	FPC 0 EAO_HMC1 DRAM botm	OK	78 degrees C / 172 degrees F
	FPC 0 EAO Chip	OK	94 degrees C / 201 degrees F
	FPC 0 EAO-XR0 Chip	OK	64 degrees C / 147 degrees F
	FPC 0 EAO-XR1 Chip	OK	65 degrees C / 149 degrees F
Power	PEM 0	Absent	
	PEM 1	OK	48 degrees C / 118 degrees F
Fans	Fan Tray 0 Fan 0	OK	Spinning at normal speed
	Fan Tray 0 Fan 1	OK	Spinning at normal speed
	Fan Tray 1 Fan 0	OK	Spinning at normal speed
	Fan Tray 1 Fan 1	OK	Spinning at normal speed
	Fan Tray 2 Fan 0	OK	Spinning at normal speed
	Fan Tray 2 Fan 1	OK	Spinning at normal speed

### show chassis environment (T640 Router)

```
user@host> show chassis environment
```

Class	Item	Status	Measurement
Temp	PEM 0	Absent	
	PEM 1	OK	22 degrees C / 71 degrees F
	SCG 0	OK	30 degrees C / 86 degrees F
	SCG 1	OK	30 degrees C / 86 degrees F
	Routing Engine 0	Present	
	Routing Engine 1	OK	27 degrees C / 80 degrees F
	CB 0	Present	
	CB 1	OK	33 degrees C / 91 degrees F
	SIB 0	Absent	
	SIB 1	Absent	
	SIB 2	Absent	
	SIB 3	Absent	
	SIB 4	Absent	
	FPC 4 Top	Testing	
	FPC 4 Bottom	Testing	
	FPC 5 Top	Testing	
	FPC 5 Bottom	Testing	
	FPC 6 Top	Testing	
	FPC 6 Bottom	Testing	
	FPM GBUS	OK	23 degrees C / 73 degrees F
	FPM Display	Absent	
Fans	Top Left Front fan	OK	Spinning at normal speed
	Top Left Middle fan	OK	Spinning at normal speed
	Top Left Rear fan	OK	Spinning at normal speed
	Top Right Front fan	OK	Spinning at normal speed
	Top Right Middle fan	OK	Spinning at normal speed
	Top Right Rear fan	OK	Spinning at normal speed
	Bottom Left Front fan	OK	Spinning at normal speed
	Bottom Left Middle fan	OK	Spinning at normal speed
	Bottom Left Rear fan	OK	Spinning at normal speed
	Bottom Right Front fan	OK	Spinning at normal speed
	Bottom Right Middle fan	OK	Spinning at normal speed
	Bottom Right Rear fan	OK	Spinning at normal speed
	Fourth Blower from top	OK	Spinning at normal speed
	Bottom Blower	OK	Spinning at normal speed
	Middle Blower	OK	Spinning at normal speed
	Top Blower	OK	Spinning at normal speed

```

                Second Blower from top OK
Misc CIP OK
      SPMB 0 OK
      SPMB 1 OK

```

```

                Spinning at normal speed

```

### show chassis environment (T4000 Router)

```

user@host> show chassis environment

```

Class	Item	Status	Measurement
Temp	PEM 0	OK	33 degrees C / 91 degrees F
	PEM 1	Absent	
	SCG 0	OK	33 degrees C / 91 degrees F
	SCG 1	OK	33 degrees C / 91 degrees F
	Routing Engine 0	OK	33 degrees C / 91 degrees F
	Routing Engine 0 CPU	OK	50 degrees C / 122 degrees F
	Routing Engine 1	OK	32 degrees C / 89 degrees F
	Routing Engine 1 CPU	OK	46 degrees C / 114 degrees F
	CB 0	OK	32 degrees C / 89 degrees F
	CB 1	OK	33 degrees C / 91 degrees F
	SIB 0	OK	42 degrees C / 107 degrees F
	SIB 1	OK	42 degrees C / 107 degrees F
	SIB 2	OK	42 degrees C / 107 degrees F
	SIB 3	OK	43 degrees C / 109 degrees F
	SIB 4	OK	45 degrees C / 113 degrees F
	FPC 0 Fan Intake	OK	34 degrees C / 93 degrees F
	FPC 0 Fan Exhaust	OK	48 degrees C / 118 degrees F
	FPC 0 PMB	OK	47 degrees C / 116 degrees F
	FPC 0 LMB0	OK	50 degrees C / 122 degrees F
	FPC 0 LMB1	OK	41 degrees C / 105 degrees F
	FPC 0 LMB2	OK	35 degrees C / 95 degrees F
	FPC 0 PFE1 LU2	OK	46 degrees C / 114 degrees F
	FPC 0 PFE1 LU0	OK	41 degrees C / 105 degrees F
	FPC 0 PFE0 LU0	OK	57 degrees C / 134 degrees F
	FPC 0 XF1	OK	46 degrees C / 114 degrees F
	FPC 0 XF0	OK	52 degrees C / 125 degrees F
	FPC 0 XM1	OK	41 degrees C / 105 degrees F
	FPC 0 XM0	OK	50 degrees C / 122 degrees F
	FPC 0 PFE0 LU1	OK	56 degrees C / 132 degrees F
	FPC 0 PFE0 LU2	OK	45 degrees C / 113 degrees F
	FPC 0 PFE1 LU1	OK	37 degrees C / 98 degrees F
	FPC 3 Fan Intake	OK	36 degrees C / 96 degrees F
	FPC 3 Fan Exhaust	OK	51 degrees C / 123 degrees F
	FPC 3 PMB	OK	43 degrees C / 109 degrees F
	FPC 3 LMB0	OK	57 degrees C / 134 degrees F
	FPC 3 LMB1	OK	54 degrees C / 129 degrees F
	FPC 3 LMB2	OK	38 degrees C / 100 degrees F
	FPC 3 PFE1 LU2	OK	63 degrees C / 145 degrees F
	FPC 3 PFE1 LU0	OK	45 degrees C / 113 degrees F
	FPC 3 PFE0 LU0	OK	69 degrees C / 156 degrees F
	FPC 3 XF1	OK	62 degrees C / 143 degrees F
	FPC 3 XF0	OK	63 degrees C / 145 degrees F
	FPC 3 XM1	OK	43 degrees C / 109 degrees F
	FPC 3 XM0	OK	67 degrees C / 152 degrees F
	FPC 3 PFE0 LU1	OK	63 degrees C / 145 degrees F
	FPC 3 PFE0 LU2	OK	66 degrees C / 150 degrees F
	FPC 3 PFE1 LU1	OK	41 degrees C / 105 degrees F
	FPC 5 Top	OK	39 degrees C / 102 degrees F
	FPC 5 Bottom	OK	38 degrees C / 100 degrees F
	FPC 6 Fan Intake	OK	33 degrees C / 91 degrees F
	FPC 6 Fan Exhaust	OK	49 degrees C / 120 degrees F

	FPC 6 PMB	OK	40 degrees C / 104 degrees F
	FPC 6 LMB0	OK	60 degrees C / 140 degrees F
	FPC 6 LMB1	OK	58 degrees C / 136 degrees F
	FPC 6 LMB2	OK	40 degrees C / 104 degrees F
	FPC 6 PFE1 LU2	OK	69 degrees C / 156 degrees F
	FPC 6 PFE1 LU0	OK	45 degrees C / 113 degrees F
	FPC 6 PFE0 LU0	OK	71 degrees C / 159 degrees F
	FPC 6 XF1	OK	58 degrees C / 136 degrees F
	FPC 6 XF0	OK	65 degrees C / 149 degrees F
	FPC 6 XM1	OK	39 degrees C / 102 degrees F
	FPC 6 XM0	OK	66 degrees C / 150 degrees F
	FPC 6 PFE0 LU1	OK	69 degrees C / 156 degrees F
	FPC 6 PFE0 LU2	OK	69 degrees C / 156 degrees F
	FPC 6 PFE1 LU1	OK	42 degrees C / 107 degrees F
	FPM GBUS	OK	24 degrees C / 75 degrees F
	FPM Display	OK	27 degrees C / 80 degrees F
Fans	Top Left Front fan	OK	Spinning at high speed
	Top Left Middle fan	OK	Spinning at high speed
	Top Left Rear fan	OK	Spinning at high speed
	Top Right Front fan	OK	Spinning at high speed
	Top Right Middle fan	OK	Spinning at high speed
	Top Right Rear fan	OK	Spinning at high speed
	Bottom Left Front fan	OK	Spinning at high speed
	Bottom Left Middle fan	OK	Spinning at high speed
	Bottom Left Rear fan	OK	Spinning at high speed
	Bottom Right Front fan	OK	Spinning at high speed
	Bottom Right Middle fan	OK	Spinning at high speed
	Bottom Right Rear fan	OK	Spinning at high speed
	Rear Tray Top fan	OK	Spinning at high speed
	Rear Tray Second fan	OK	Spinning at high speed
	Rear Tray Third fan	OK	Spinning at high speed
	Rear Tray Fourth fan	OK	Spinning at high speed
	Rear Tray Fifth fan	OK	Spinning at high speed
	Rear Tray Sixth fan	OK	Spinning at high speed
	Rear Tray Seventh fan	OK	Spinning at high speed
	Rear Tray Bottom fan	OK	Spinning at high speed
Misc	CIP	OK	
	SPMB 0	OK	
	SPMB 1	OK	

### show chassis environment (TX Matrix Router)

```
user@host> show chassis environment
```

-----			
Class	Item	Status	Measurement
Temp	PEM 0	Absent	
	PEM 1	OK	29 degrees C / 84 degrees F
	Routing Engine 0	OK	34 degrees C / 93 degrees F
	Routing Engine 1	OK	34 degrees C / 93 degrees F
	CB 0	OK	32 degrees C / 89 degrees F
	CB 1	OK	32 degrees C / 89 degrees F
	SIB 0	OK	44 degrees C / 111 degrees F
	SIB 0 (B)	OK	44 degrees C / 111 degrees F
	FPM GBUS	OK	27 degrees C / 80 degrees F
	FPM Display	OK	32 degrees C / 89 degrees F
Fans	Top Left Front fan	OK	Spinning at normal speed
	Top Left Middle fan	OK	Spinning at normal speed
	Top Left Rear fan	OK	Spinning at normal speed
	Top Right Front fan	OK	Spinning at normal speed
	Top Right Middle fan	OK	Spinning at normal speed

	Top Right Rear fan	OK	Spinning at normal speed
	Bottom Left Front fan	OK	Spinning at normal speed
	Bottom Left Middle fan	OK	Spinning at normal speed
	Bottom Left Rear fan	OK	Spinning at normal speed
	Bottom Right Front fan	OK	Spinning at normal speed
	Bottom Right Middle fan	OK	Spinning at normal speed
	Bottom Right Rear fan	OK	Spinning at normal speed
	Rear Tray Top fan	OK	Spinning at normal speed
	Rear Tray Second fan	OK	Spinning at normal speed
	Rear Tray Third fan	OK	Spinning at normal speed
	Rear Tray Fourth fan	OK	Spinning at normal speed
	Rear Tray Fifth fan	OK	Spinning at normal speed
	Rear Tray Sixth fan	OK	Spinning at normal speed
	Rear Tray Seventh fan	OK	Spinning at normal speed
	Rear Tray Bottom fan	OK	Spinning at normal speed
Misc	CIP 0	OK	
	CIP 1	OK	
	SPMB 0	OK	
	SPMB 1	OK	

## lcc0-re0:

Class	Item	Status	Measurement
Temp	PEM 0	OK	29 degrees C / 84 degrees F
	PEM 1	Absent	
	SCG 0	OK	35 degrees C / 95 degrees F
	SCG 1	Absent	
	Routing Engine 0	OK	39 degrees C / 102 degrees F
	Routing Engine 1	OK	36 degrees C / 96 degrees F
	CB 0	OK	32 degrees C / 89 degrees F
	CB 1	OK	32 degrees C / 89 degrees F
	SIB 0	OK	40 degrees C / 104 degrees F
	SIB 0 (B)	OK	51 degrees C / 123 degrees F
	FPC 0 Top	OK	45 degrees C / 113 degrees F
	FPC 0 Bottom	OK	31 degrees C / 87 degrees F
	FPC 1 Top	OK	34 degrees C / 93 degrees F
	FPC 1 Bottom	OK	31 degrees C / 87 degrees F
	FPM GBUS	OK	30 degrees C / 86 degrees F
	FPM Display	OK	34 degrees C / 93 degrees F
Fans	Top Left Front fan	OK	Spinning at normal speed
	Top Left Middle fan	OK	Spinning at normal speed
	Top Left Rear fan	OK	Spinning at normal speed
	Top Right Front fan	OK	Spinning at normal speed
	Top Right Middle fan	OK	Spinning at normal speed
	Top Right Rear fan	OK	Spinning at normal speed
	Bottom Left Front fan	OK	Spinning at normal speed
	Bottom Left Middle fan	OK	Spinning at normal speed
	Bottom Left Rear fan	OK	Spinning at normal speed
	Bottom Right Front fan	OK	Spinning at normal speed
	Bottom Right Middle fan	OK	Spinning at normal speed
	Bottom Right Rear fan	OK	Spinning at normal speed
	Rear Tray Top fan	OK	Spinning at normal speed
	Rear Tray Second fan	OK	Spinning at normal speed
	Rear Tray Third fan	OK	Spinning at normal speed
	Rear Tray Fourth fan	OK	Spinning at normal speed
	Rear Tray Fifth fan	OK	Spinning at normal speed
	Rear Tray Sixth fan	OK	Spinning at normal speed
	Rear Tray Seventh fan	OK	Spinning at normal speed
	Rear Tray Bottom fan	OK	Spinning at normal speed
Misc	CIP	OK	
	SPMB 0	OK	

```

SPMB 1                                OK

lcc2-re0:
-----
Class Item                               Status      Measurement
Temp PEM 0                              OK          29 degrees C / 84 degrees F
      PEM 1                              Absent
      SCG 0                              OK          32 degrees C / 89 degrees F
      SCG 1                              Absent
      Routing Engine 0                   OK          31 degrees C / 87 degrees F
      Routing Engine 1                   OK          32 degrees C / 89 degrees F
      CB 0                               OK          30 degrees C / 86 degrees F
      SIB 0                              OK          38 degrees C / 100 degrees F
      SIB 0 (B)                          OK          49 degrees C / 120 degrees F
      FPC 0 Top                           OK          45 degrees C / 113 degrees F
      FPC 0 Bottom                       OK          33 degrees C / 91 degrees F
      FPC 1 Top                           OK          37 degrees C / 98 degrees F
      FPC 1 Bottom                       OK          33 degrees C / 91 degrees F
      FPM GBUS                           OK          30 degrees C / 86 degrees F
      FPM Display                        OK          34 degrees C / 93 degrees F
Fans  Top Left Front fan                 OK          Spinning at normal speed
      Top Left Middle fan                OK          Spinning at normal speed
...

```

#### show chassis environment (T1600 Router)

```

user@host> show chassis environment

Class Item                               Status      Measurement
Temp PEM 0                              OK          27 degrees C / 80 degrees F
      PEM 1                              Absent
      SCG 0                              OK          31 degrees C / 87 degrees F
      SCG 1                              OK          35 degrees C / 95 degrees F
      Routing Engine 0                   OK          30 degrees C / 86 degrees F
      Routing Engine 1                   OK          30 degrees C / 86 degrees F
      CB 0                               OK          31 degrees C / 87 degrees F
      CB 1                               OK          31 degrees C / 87 degrees F
      SIB 0                              OK          41 degrees C / 105 degrees F
      SIB 0 (B)                          OK          34 degrees C / 93 degrees F
      SIB 1                              OK          0 degrees C / 32 degrees F
      SIB 1 (B)                          OK          0 degrees C / 32 degrees F
      SIB 2                              OK          0 degrees C / 32 degrees F
      SIB 2 (B)                          OK          0 degrees C / 32 degrees F
      SIB 3                              OK          0 degrees C / 32 degrees F
      SIB 3 (B)                          OK          0 degrees C / 32 degrees F
      SIB 4                              OK          0 degrees C / 32 degrees F
      SIB 4 (B)                          OK          0 degrees C / 32 degrees F
      FPC 0 Top                           OK          49 degrees C / 120 degrees F
      FPC 0 Bottom                       OK          50 degrees C / 122 degrees F
      FPC 1 Top                           OK          48 degrees C / 118 degrees F
      FPC 1 Bottom                       OK          49 degrees C / 120 degrees F
      FPM GBUS                           OK          27 degrees C / 80 degrees F
      FPM Display                        OK          30 degrees C / 86 degrees F
Fans  Top Left Front fan                 OK          Spinning at normal speed
      Top Left Middle fan                OK          Spinning at normal speed
      Top Left Rear fan                  OK          Spinning at normal speed
      Top Right Front fan                 OK          Spinning at normal speed
      Top Right Middle fan               OK          Spinning at normal speed
      Top Right Rear fan                 OK          Spinning at normal speed
      Bottom Left Front fan              OK          Spinning at normal speed
      Bottom Left Middle fan             OK          Spinning at normal speed
      Bottom Left Rear fan               OK          Spinning at normal speed

```

	Bottom Right Front fan	OK	Spinning at normal speed
	Bottom Right Middle fan	OK	Spinning at normal speed
	Bottom Right Rear fan	OK	Spinning at normal speed
	Rear Tray Top fan	OK	Spinning at normal speed
	Rear Tray Second fan	OK	Spinning at normal speed
	Rear Tray Third fan	OK	Spinning at normal speed
	Rear Tray Fourth fan	OK	Spinning at normal speed
	Rear Tray Fifth fan	OK	Spinning at normal speed
	Rear Tray Sixth fan	OK	Spinning at normal speed
	Rear Tray Seventh fan	OK	Spinning at normal speed
	Rear Tray Bottom fan	OK	Spinning at normal speed
Misc	CIP	OK	
	SPMB 0	OK	
	SPMB 1	OK	

**show chassis environment (TX Matrix Plus Router)**

user@host&gt; show chassis environment

Class	Item	Status	Measurement
Temp	PEM 0	OK	28 degrees C / 82 degrees F
	PEM 1	Absent	
	Routing Engine 0	OK	27 degrees C / 80 degrees F
	Routing Engine 1	OK	29 degrees C / 84 degrees F
	CB 0 Intake	OK	26 degrees C / 78 degrees F
	CB 0 Exhaust A	OK	25 degrees C / 77 degrees F
	CB 0 Exhaust B	OK	25 degrees C / 77 degrees F
	CB 1 Intake	OK	26 degrees C / 78 degrees F
	CB 1 Exhaust A	OK	26 degrees C / 78 degrees F
	CB 1 Exhaust B	OK	26 degrees C / 78 degrees F
	SIB F13 0	OK	47 degrees C / 116 degrees F
	SIB F13 0 (B)	OK	48 degrees C / 118 degrees F
	SIB F13 1	OK	38 degrees C / 100 degrees F
	SIB F13 1 (B)	OK	37 degrees C / 98 degrees F
	SIB F2S 0/0	OK	27 degrees C / 80 degrees F
	SIB F2S 0/2	OK	28 degrees C / 82 degrees F
	SIB F2S 0/4	OK	27 degrees C / 80 degrees F
	SIB F2S 0/6	OK	28 degrees C / 82 degrees F
	SIB F2S 1/0	OK	26 degrees C / 78 degrees F
	SIB F2S 1/2	OK	26 degrees C / 78 degrees F
	SIB F2S 1/4	OK	26 degrees C / 78 degrees F
	SIB F2S 1/6	OK	26 degrees C / 78 degrees F
	SIB F2S 2/0	OK	25 degrees C / 77 degrees F
	SIB F2S 2/2	OK	25 degrees C / 77 degrees F
	SIB F2S 2/4	OK	23 degrees C / 73 degrees F
	CIP 0 Intake	OK	23 degrees C / 73 degrees F
	CIP 0 Exhaust A	OK	24 degrees C / 75 degrees F
	CIP 0 Exhaust B	OK	24 degrees C / 75 degrees F
	CIP 1 Intake	OK	24 degrees C / 75 degrees F
	CIP 1 Exhaust A	OK	25 degrees C / 77 degrees F
	CIP 1 Exhaust B	OK	25 degrees C / 77 degrees F
Fans	Fan Tray 0 Fan 1	OK	Spinning at normal speed
	Fan Tray 0 Fan 2	OK	Spinning at normal speed
	Fan Tray 0 Fan 3	OK	Spinning at normal speed
	Fan Tray 0 Fan 4	OK	Spinning at normal speed
	Fan Tray 0 Fan 5	OK	Spinning at normal speed
	Fan Tray 0 Fan 6	OK	Spinning at normal speed
	Fan Tray 1 Fan 1	OK	Spinning at normal speed
	Fan Tray 1 Fan 2	OK	Spinning at normal speed
	Fan Tray 1 Fan 3	OK	Spinning at normal speed



Fan Tray 1 Fan 4	OK	Spinning at normal speed
Fan Tray 1 Fan 5	OK	Spinning at normal speed
Fan Tray 1 Fan 6	OK	Spinning at normal speed
Fan Tray 2 Fan 1	OK	Spinning at normal speed
Fan Tray 2 Fan 2	OK	Spinning at normal speed
Fan Tray 2 Fan 3	OK	Spinning at normal speed
Fan Tray 2 Fan 4	OK	Spinning at normal speed
Fan Tray 2 Fan 5	OK	Spinning at normal speed
Fan Tray 2 Fan 6	OK	Spinning at normal speed
Fan Tray 2 Fan 7	OK	Spinning at normal speed
Fan Tray 2 Fan 8	OK	Spinning at normal speed
Fan Tray 2 Fan 9	OK	Spinning at normal speed
Fan Tray 3 Fan 1	OK	Spinning at normal speed
Fan Tray 3 Fan 2	OK	Spinning at normal speed
Fan Tray 3 Fan 3	OK	Spinning at normal speed
Fan Tray 3 Fan 4	OK	Spinning at normal speed
Fan Tray 3 Fan 5	OK	Spinning at normal speed
Fan Tray 3 Fan 6	OK	Spinning at normal speed
Fan Tray 3 Fan 7	OK	Spinning at normal speed
Fan Tray 3 Fan 8	OK	Spinning at normal speed
Fan Tray 3 Fan 9	OK	Spinning at normal speed
Fan Tray 4 Fan 1	OK	Spinning at normal speed
Fan Tray 4 Fan 2	OK	Spinning at normal speed
Fan Tray 4 Fan 3	OK	Spinning at normal speed
Fan Tray 4 Fan 4	OK	Spinning at normal speed
Fan Tray 4 Fan 5	OK	Spinning at normal speed
Fan Tray 4 Fan 6	OK	Spinning at normal speed
Fan Tray 4 Fan 7	OK	Spinning at normal speed
Fan Tray 4 Fan 8	OK	Spinning at normal speed
Fan Tray 4 Fan 9	OK	Spinning at normal speed
Fan Tray 5 Fan 1	OK	Spinning at normal speed
Fan Tray 5 Fan 2	OK	Spinning at normal speed
Fan Tray 5 Fan 3	OK	Spinning at normal speed
Fan Tray 5 Fan 4	OK	Spinning at normal speed
Fan Tray 5 Fan 5	OK	Spinning at normal speed
Fan Tray 5 Fan 6	OK	Spinning at normal speed
Fan Tray 5 Fan 7	OK	Spinning at normal speed
Fan Tray 5 Fan 8	OK	Spinning at normal speed
Fan Tray 5 Fan 9	OK	Spinning at normal speed
Misc SPMB 0	OK	
SPMB 1	OK	

1cc0-re0:

Class	Item	Status	Measurement
Temp	PEM 0	OK	27 degrees C / 80 degrees F
	PEM 1	Absent	
	SCG 0	OK	31 degrees C / 87 degrees F
	SCG 1	OK	35 degrees C / 95 degrees F
	Routing Engine 0	OK	30 degrees C / 86 degrees F
	Routing Engine 1	OK	30 degrees C / 86 degrees F
	CB 0	OK	31 degrees C / 87 degrees F
	CB 1	OK	31 degrees C / 87 degrees F
	SIB 0	OK	41 degrees C / 105 degrees F
	SIB 0 (B)	OK	34 degrees C / 93 degrees F
	SIB 1	OK	0 degrees C / 32 degrees F
	SIB 1 (B)	OK	0 degrees C / 32 degrees F
	SIB 2	OK	0 degrees C / 32 degrees F
	SIB 2 (B)	OK	0 degrees C / 32 degrees F
	SIB 3	OK	0 degrees C / 32 degrees F
	SIB 3 (B)	OK	0 degrees C / 32 degrees F

	SIB 4	OK	0 degrees C / 32 degrees F
	SIB 4 (B)	OK	0 degrees C / 32 degrees F
	FPC 0 Top	OK	49 degrees C / 120 degrees F
	FPC 0 Bottom	OK	50 degrees C / 122 degrees F
	FPC 1 Top	OK	48 degrees C / 118 degrees F
	FPC 1 Bottom	OK	49 degrees C / 120 degrees F
	FPM GBUS	OK	27 degrees C / 80 degrees F
	FPM Display	OK	30 degrees C / 86 degrees F
Fans	Top Left Front fan	OK	Spinning at normal speed
	Top Left Middle fan	OK	Spinning at normal speed
	Top Left Rear fan	OK	Spinning at normal speed
	Top Right Front fan	OK	Spinning at normal speed
	Top Right Middle fan	OK	Spinning at normal speed
	Top Right Rear fan	OK	Spinning at normal speed
	Bottom Left Front fan	OK	Spinning at normal speed
	Bottom Left Middle fan	OK	Spinning at normal speed
	Bottom Left Rear fan	OK	Spinning at normal speed
	Bottom Right Front fan	OK	Spinning at normal speed
	Bottom Right Middle fan	OK	Spinning at normal speed
	Bottom Right Rear fan	OK	Spinning at normal speed
	Rear Tray Top fan	OK	Spinning at normal speed
	Rear Tray Second fan	OK	Spinning at normal speed
	Rear Tray Third fan	OK	Spinning at normal speed
	Rear Tray Fourth fan	OK	Spinning at normal speed
	Rear Tray Fifth fan	OK	Spinning at normal speed
	Rear Tray Sixth fan	OK	Spinning at normal speed
	Rear Tray Seventh fan	OK	Spinning at normal speed
	Rear Tray Bottom fan	OK	Spinning at normal speed
Misc	CIP	OK	
	SPMB 0	OK	
	SPMB 1	OK	

### show chassis environment (TX Matrix Plus router with 3D SIBs)

```
user@host> show chassis environment
```

Class	Item	Status	Measurement
Temp	PEM 0	Check	30 degrees C / 86 degrees F
	PEM 1	OK	33 degrees C / 91 degrees F
	Routing Engine 0	OK	28 degrees C / 82 degrees F
	Routing Engine 0 CPU	OK	42 degrees C / 107 degrees F
	Routing Engine 1	OK	29 degrees C / 84 degrees F
	Routing Engine 1 CPU	OK	44 degrees C / 111 degrees F
	CB 0 Intake	OK	30 degrees C / 86 degrees F
	CB 0 Exhaust A	OK	28 degrees C / 82 degrees F
	CB 0 Exhaust B	OK	30 degrees C / 86 degrees F
	CB 1 Intake	OK	31 degrees C / 87 degrees F
	CB 1 Exhaust A	OK	27 degrees C / 80 degrees F
	CB 1 Exhaust B	OK	31 degrees C / 87 degrees F
	SIB F13 0 Board	OK	44 degrees C / 111 degrees F
	SIB F13 0 XF Junction	OK	62 degrees C / 143 degrees F
	SIB F13 3 Board	OK	45 degrees C / 113 degrees F
	SIB F13 3 XF Junction	OK	60 degrees C / 140 degrees F
	SIB F13 6 Board	OK	47 degrees C / 116 degrees F
	SIB F13 6 XF Junction	OK	62 degrees C / 143 degrees F
	SIB F2S 0/0 Board	OK	32 degrees C / 89 degrees F
	SIB F2S 0/0 XF Junction	OK	42 degrees C / 107 degrees F
	SIB F2S 0/2 Board	OK	31 degrees C / 87 degrees F
	SIB F2S 0/2 XF Junction	OK	41 degrees C / 105 degrees F
	SIB F2S 0/4 Board	OK	31 degrees C / 87 degrees F

	SIB F2S 0/4 XF Junction	OK	42 degrees C / 107 degrees F
	SIB F2S 0/6 Board	OK	31 degrees C / 87 degrees F
	SIB F2S 0/6 XF Junction	OK	41 degrees C / 105 degrees F
	SIB F2S 1/0 Board	OK	31 degrees C / 87 degrees F
	SIB F2S 1/0 XF Junction	OK	41 degrees C / 105 degrees F
	SIB F2S 1/2 Board	OK	29 degrees C / 84 degrees F
	SIB F2S 1/2 XF Junction	OK	39 degrees C / 102 degrees F
	SIB F2S 1/4 Board	OK	29 degrees C / 84 degrees F
	SIB F2S 1/4 XF Junction	OK	35 degrees C / 95 degrees F
	SIB F2S 1/6 Board	OK	30 degrees C / 86 degrees F
	SIB F2S 1/6 XF Junction	OK	41 degrees C / 105 degrees F
	SIB F2S 2/0 Board	OK	30 degrees C / 86 degrees F
	SIB F2S 2/0 XF Junction	OK	42 degrees C / 107 degrees F
	SIB F2S 2/2 Board	OK	28 degrees C / 82 degrees F
	SIB F2S 2/2 XF Junction	OK	39 degrees C / 102 degrees F
	SIB F2S 2/4 Board	OK	29 degrees C / 84 degrees F
	SIB F2S 2/4 XF Junction	OK	42 degrees C / 107 degrees F
	SIB F2S 2/6 Board	OK	29 degrees C / 84 degrees F
	SIB F2S 2/6 XF Junction	OK	41 degrees C / 105 degrees F
	CIP 0 Intake	OK	25 degrees C / 77 degrees F
	CIP 0 Exhaust A	OK	26 degrees C / 78 degrees F
	CIP 0 Exhaust B	OK	26 degrees C / 78 degrees F
	CIP 1 Intake	OK	26 degrees C / 78 degrees F
	CIP 1 Exhaust A	OK	27 degrees C / 80 degrees F
	CIP 1 Exhaust B	OK	27 degrees C / 80 degrees F
Fans	Fan Tray 0 Fan 1	OK	Spinning at normal speed
	Fan Tray 0 Fan 2	OK	Spinning at normal speed
	Fan Tray 0 Fan 3	OK	Spinning at normal speed
	Fan Tray 0 Fan 4	OK	Spinning at normal speed
	Fan Tray 0 Fan 5	OK	Spinning at normal speed
	Fan Tray 0 Fan 6	OK	Spinning at normal speed
	Fan Tray 1 Fan 1	OK	Spinning at normal speed
	Fan Tray 1 Fan 2	OK	Spinning at normal speed
	Fan Tray 1 Fan 3	OK	Spinning at normal speed
	Fan Tray 1 Fan 4	OK	Spinning at normal speed
	Fan Tray 1 Fan 5	OK	Spinning at normal speed
	Fan Tray 1 Fan 6	OK	Spinning at normal speed
	Fan Tray 2 Fan 1	OK	Spinning at normal speed
	Fan Tray 2 Fan 2	OK	Spinning at normal speed
	Fan Tray 2 Fan 3	OK	Spinning at normal speed
	Fan Tray 2 Fan 4	OK	Spinning at normal speed
	Fan Tray 2 Fan 5	OK	Spinning at normal speed
	Fan Tray 2 Fan 6	OK	Spinning at normal speed
	Fan Tray 2 Fan 7	OK	Spinning at normal speed
	Fan Tray 2 Fan 8	OK	Spinning at normal speed
	Fan Tray 2 Fan 9	OK	Spinning at normal speed
	Fan Tray 3 Fan 1	OK	Spinning at normal speed
	Fan Tray 3 Fan 2	OK	Spinning at normal speed
	Fan Tray 3 Fan 3	OK	Spinning at normal speed
	Fan Tray 3 Fan 4	OK	Spinning at normal speed
	Fan Tray 3 Fan 5	OK	Spinning at normal speed
	Fan Tray 3 Fan 6	OK	Spinning at normal speed
	Fan Tray 3 Fan 7	OK	Spinning at normal speed
	Fan Tray 3 Fan 8	OK	Spinning at normal speed
	Fan Tray 3 Fan 9	OK	Spinning at normal speed
	Fan Tray 4 Fan 1	OK	Spinning at normal speed
	Fan Tray 4 Fan 2	OK	Spinning at normal speed
	Fan Tray 4 Fan 3	OK	Spinning at normal speed
	Fan Tray 4 Fan 4	OK	Spinning at normal speed
	Fan Tray 4 Fan 5	OK	Spinning at normal speed
	Fan Tray 4 Fan 6	OK	Spinning at normal speed

	Fan Tray 4 Fan 7	OK	Spinning at normal speed
	Fan Tray 4 Fan 8	OK	Spinning at normal speed
	Fan Tray 4 Fan 9	OK	Spinning at normal speed
	Fan Tray 5 Fan 1	OK	Spinning at normal speed
	Fan Tray 5 Fan 2	OK	Spinning at normal speed
	Fan Tray 5 Fan 3	OK	Spinning at normal speed
	Fan Tray 5 Fan 4	OK	Spinning at normal speed
	Fan Tray 5 Fan 5	OK	Spinning at normal speed
	Fan Tray 5 Fan 6	OK	Spinning at normal speed
	Fan Tray 5 Fan 7	OK	Spinning at normal speed
	Fan Tray 5 Fan 8	OK	Spinning at normal speed
	Fan Tray 5 Fan 9	Check	
Misc	SPMB 0	OK	
	SPMB 1	OK	

1cc0-re0:

Class	Item	Status	Measurement
Temp	PEM 0	OK	29 degrees C / 84 degrees F
	PEM 1	Check	29 degrees C / 84 degrees F
	SCG 0	OK	32 degrees C / 89 degrees F
	SCG 1	OK	33 degrees C / 91 degrees F
	Routing Engine 0	OK	32 degrees C / 89 degrees F
	Routing Engine 0 CPU	OK	51 degrees C / 123 degrees F
	Routing Engine 1	OK	32 degrees C / 89 degrees F
	Routing Engine 1 CPU	OK	49 degrees C / 120 degrees F
	CB 0	OK	34 degrees C / 93 degrees F
	CB 1	OK	34 degrees C / 93 degrees F
	SIB 0	OK	39 degrees C / 102 degrees F
	SIB 0 (B)	Absent	
	SIB 1	OK	39 degrees C / 102 degrees F
	SIB 1 (B)	Absent	
	SIB 2	OK	39 degrees C / 102 degrees F
	SIB 2 (B)	Absent	
	FPC 4 Top	OK	43 degrees C / 109 degrees F
	FPC 4 Bottom	OK	43 degrees C / 109 degrees F
	FPC 7 Fan Intake	OK	35 degrees C / 95 degrees F
	FPC 7 Fan Exhaust	OK	50 degrees C / 122 degrees F
	FPC 7 PMB	OK	50 degrees C / 122 degrees F
	FPC 7 LMB0	OK	55 degrees C / 131 degrees F
	FPC 7 LMB1	OK	49 degrees C / 120 degrees F
	FPC 7 LMB2	OK	39 degrees C / 102 degrees F
	FPC 7 PFE1 LU2	OK	55 degrees C / 131 degrees F
	FPC 7 PFE1 LU0	OK	45 degrees C / 113 degrees F
	FPC 7 PFE0 LU0	OK	62 degrees C / 143 degrees F
	FPC 7 XF1	OK	52 degrees C / 125 degrees F
	FPC 7 XF0	OK	61 degrees C / 141 degrees F
	FPC 7 XM1	OK	39 degrees C / 102 degrees F
	FPC 7 XM0	OK	56 degrees C / 132 degrees F
	FPC 7 PFE0 LU1	OK	60 degrees C / 140 degrees F
	FPC 7 PFE0 LU2	OK	55 degrees C / 131 degrees F
	FPC 7 PFE1 LU1	OK	41 degrees C / 105 degrees F
	FPM GBUS	OK	24 degrees C / 75 degrees F
	FPM Display	OK	28 degrees C / 82 degrees F
Fans	Top Left Front fan	OK	Spinning at normal speed
	Top Left Middle fan	OK	Spinning at normal speed
	Top Left Rear fan	OK	Spinning at normal speed
	Top Right Front fan	OK	Spinning at normal speed
	Top Right Middle fan	OK	Spinning at normal speed
	Top Right Rear fan	OK	Spinning at normal speed
	Bottom Left Front fan	OK	Spinning at normal speed

Bottom Left Middle fan	OK	Spinning at normal speed
Bottom Left Rear fan	OK	Spinning at normal speed
Bottom Right Front fan	OK	Spinning at normal speed
Bottom Right Middle fan	OK	Spinning at normal speed
Bottom Right Rear fan	OK	Spinning at normal speed
Rear Tray fan 1 (Top)	OK	Spinning at normal speed
Rear Tray fan 2	OK	Spinning at normal speed
Rear Tray fan 3	OK	Spinning at normal speed
Rear Tray fan 4	OK	Spinning at normal speed
Rear Tray fan 5	OK	Spinning at normal speed
Rear Tray fan 6	OK	Spinning at normal speed
Rear Tray fan 7	OK	Spinning at normal speed
Rear Tray fan 8	OK	Spinning at normal speed
Rear Tray fan 9	OK	Spinning at normal speed
Rear Tray fan 10	OK	Spinning at normal speed
Rear Tray fan 11	OK	Spinning at normal speed
Rear Tray fan 12	OK	Spinning at normal speed
Rear Tray fan 13	OK	Spinning at normal speed
Rear Tray fan 14	OK	Spinning at normal speed
Rear Tray fan 15	OK	Spinning at normal speed
Rear Tray fan 16 (Bottom)	OK	Spinning at normal speed
Misc CIP	OK	
SPMB 0	OK	
SPMB 1	OK	

#### show chassis environment (EX4200 Standalone Switch)

```
user@switch> show chassis environment
```

Class	Item	Status	Measurement
Power	FPC 0 Power Supply 0	OK	
	FPC 0 Power Supply 1	Absent	
Temp	FPC 0 CPU	OK	41 degrees C / 105 degrees F
	FPC 0 EX-PFE1	OK	42 degrees C / 107 degrees F
	FPC 0 EX-PFE2	OK	46 degrees C / 114 degrees F
	FPC 0 GEPHY Front Left	OK	25 degrees C / 77 degrees F
	FPC 0 GEPHY Front Right	OK	27 degrees C / 80 degrees F
	FPC 0 Uplink Conn	OK	29 degrees C / 84 degrees F
Fans	FPC 0 Fan 1	OK	Spinning at normal speed
	FPC 0 Fan 2	OK	Spinning at normal speed
	FPC 0 Fan 3	OK	Spinning at normal speed

#### show chassis environment (EX8216 Switch)

```
user@switch> show chassis environment
```

Class	Item	Status	Measurement
Power	PSU 0	OK	
	PSU 1	OK	
	PSU 2	OK	
	PSU 3	Check	
	PSU 4	Absent	
	PSU 5	Absent	
Temp	CB 0 Intake	OK	23 degrees C / 73 degrees F
	CB 0 Exhaust	OK	26 degrees C / 78 degrees F
	CB 1 Intake	OK	22 degrees C / 71 degrees F
	CB 1 Exhaust	OK	25 degrees C / 77 degrees F
	FPC 4 Intake	OK	49 degrees C / 120 degrees F
	FPC 4 Exhaust	OK	59 degrees C / 138 degrees F
	SIB 5 Intake	OK	25 degrees C / 77 degrees F
	SIB 5 Exhaust	OK	35 degrees C / 95 degrees F
	SIB 6 Intake	OK	25 degrees C / 77 degrees F

	SIB 6 Exhaust	OK	38 degrees C / 100 degrees F
Fans	Top Fan 1	OK	Spinning at normal speed
	Top Fan 2	OK	Spinning at normal speed
	Top Fan 3	OK	Spinning at normal speed
	Top Fan 4	OK	Spinning at normal speed
	Top Fan 5	OK	Spinning at normal speed
	Top Fan 6	OK	Spinning at normal speed
	Top Fan 7	OK	Spinning at normal speed
	Top Fan 8	OK	Spinning at normal speed
	Top Fan 9	OK	Spinning at normal speed
	Bottom Fan 1	OK	Spinning at normal speed
	Bottom Fan 2	OK	Spinning at normal speed
	Bottom Fan 3	OK	Spinning at normal speed
	Bottom Fan 4	OK	Spinning at normal speed
	Bottom Fan 5	OK	Spinning at normal speed
	Bottom Fan 6	OK	Spinning at normal speed
	Bottom Fan 7	OK	Spinning at normal speed
	Bottom Fan 8	OK	Spinning at normal speed
	Bottom Fan 9	OK	Spinning at normal speed

### show chassis environment (EX9200 Switch)

```
user@switch> show chassis environment
```

Class	Item	Status	Measurement
Temp	PEM 0	Check	
	PEM 1	OK	40 degrees C / 104 degrees F
	PEM 2	OK	40 degrees C / 104 degrees F
	PEM 3	Absent	
	Routing Engine 0	OK	35 degrees C / 95 degrees F
	Routing Engine 0 CPU	OK	33 degrees C / 91 degrees F
	Routing Engine 1	OK	38 degrees C / 100 degrees F
	Routing Engine 1 CPU	OK	33 degrees C / 91 degrees F
	CB 0 Intake	OK	35 degrees C / 95 degrees F
	CB 0 Exhaust A	OK	33 degrees C / 91 degrees F
	CB 0 Exhaust B	OK	40 degrees C / 104 degrees F
	CB 0 ACBC	OK	39 degrees C / 102 degrees F
	CB 0 XF A	OK	49 degrees C / 120 degrees F
	CB 0 XF B	OK	46 degrees C / 114 degrees F
	CB 1 Intake	OK	37 degrees C / 98 degrees F
	CB 1 Exhaust A	OK	32 degrees C / 89 degrees F
	CB 1 Exhaust B	OK	39 degrees C / 102 degrees F
	CB 1 ACBC	OK	41 degrees C / 105 degrees F
	CB 1 XF A	OK	49 degrees C / 120 degrees F
	CB 1 XF B	OK	49 degrees C / 120 degrees F
	FPC 2 Intake	OK	37 degrees C / 98 degrees F
	FPC 2 Exhaust A	OK	40 degrees C / 104 degrees F
	FPC 2 Exhaust B	OK	34 degrees C / 93 degrees F
	FPC 2 LU 0 TCAM TSen	OK	44 degrees C / 111 degrees F
	FPC 2 LU 0 TCAM Chip	OK	48 degrees C / 118 degrees F
	FPC 2 LU 0 TSen	OK	44 degrees C / 111 degrees F
	FPC 2 LU 0 Chip	OK	60 degrees C / 140 degrees F
	FPC 2 MQ 0 TSen	OK	44 degrees C / 111 degrees F
	FPC 2 MQ 0 Chip	OK	51 degrees C / 123 degrees F
	FPC 3 Intake	OK	39 degrees C / 102 degrees F
	FPC 3 Exhaust A	OK	51 degrees C / 123 degrees F

[...Output truncated...]

Fans	Top Rear Fan	OK	Spinning at intermediate-speed
	Bottom Rear Fan	OK	Spinning at intermediate-speed
	Top Middle Fan	OK	Spinning at intermediate-speed

Bottom Middle Fan	OK	Spinning at intermediate-speed
Top Front Fan	OK	Spinning at intermediate-speed
Bottom Front Fan	OK	Spinning at intermediate-speed

#### show chassis environment (EX9251 Switch)

```

user@switch> show chassis environment
Class Item                               Status      Measurement
Temp  CB 0 Top Right Inlet Sensor           OK          29 degrees C / 84 degrees F
      CB 0 Top Left Inlet Sensor          OK          29 degrees C / 84 degrees F
      CB 0 Top Right Exhaust Sensor        OK          40 degrees C / 104 degrees F
      CB 0 Top Left Exhaust Sensor         OK          59 degrees C / 138 degrees F
      CB 0 CPU Core-0 Temp                 OK          45 degrees C / 113 degrees F
      CB 0 CPU Core-1 Temp                 OK          44 degrees C / 111 degrees F
      CB 0 CPU Core-2 Temp                 OK          44 degrees C / 111 degrees F
      CB 0 CPU Core-3 Temp                 OK          44 degrees C / 111 degrees F
      CB 0 CPU Core-4 Temp                 OK          45 degrees C / 113 degrees F
      CB 0 CPU Core-5 Temp                 OK          44 degrees C / 111 degrees F
      CB 0 CPU Core-6 Temp                 OK          44 degrees C / 111 degrees F
      CB 0 CPU Core-7 Temp                 OK          43 degrees C / 109 degrees F
Power PEM 0                             Check
      PEM 1                             OK          36 degrees C / 96 degrees F
Fans  Fan Tray 0 Fan 0                   OK          Spinning at normal speed
      Fan Tray 0 Fan 1                   OK          Spinning at normal speed
      Fan Tray 1 Fan 0                   OK          Spinning at normal speed
      Fan Tray 1 Fan 1                   OK          Spinning at normal speed
      Fan Tray 2 Fan 0                   Absent
      Fan Tray 2 Fan 1                   Absent

```

#### show chassis environment (EX9253 Switch)

```

user@switch> show chassis environment
Class Item                               Status      Measurement
Temp  CB 0 Exhaust Temp Sensor             OK          37 degrees C / 98 degrees F
      CB 0 Inlet Temp Sensor              OK          31 degrees C / 87 degrees F
      CB 0 CPU DIE Temp Sensor             OK          42 degrees C / 107 degrees F
      CB 1 Exhaust Temp Sensor             OK          31 degrees C / 87 degrees F
      CB 1 Inlet Temp Sensor               OK          28 degrees C / 82 degrees F
      CB 1 CPU DIE Temp Sensor             OK          42 degrees C / 107 degrees F
      FPC 0 Intake Temp Sensor             OK          31 degrees C / 87 degrees F
      FPC 0 Exhaust-A Temp Sensor          OK          58 degrees C / 136 degrees F
      FPC 0 Exhaust-B Temp Sensor          OK          47 degrees C / 116 degrees F
      FPC 1 Intake Temp Sensor             OK          29 degrees C / 84 degrees F
      FPC 1 Exhaust-A Temp Sensor          OK          59 degrees C / 138 degrees F
      FPC 1 Exhaust-B Temp Sensor          OK          48 degrees C / 118 degrees F
Power PEM 0                             OK          54 degrees C / 129 degrees F
      PEM 1                             Check
      PEM 2                             Absent
      PEM 3                             Absent
      PEM 4                             Check
      PEM 5                             OK          61 degrees C / 141 degrees F
Fans  Fan Tray 0 Fan 0                   OK          Spinning at normal speed
      Fan Tray 0 Fan 1                   OK          Spinning at normal speed
      Fan Tray 0 Fan 2                   OK          Spinning at normal speed
      Fan Tray 0 Fan 3                   OK          Spinning at normal speed
      Fan Tray 1 Fan 0                   OK          Spinning at normal speed
      Fan Tray 1 Fan 1                   OK          Spinning at normal speed
      Fan Tray 1 Fan 2                   OK          Spinning at normal speed
      Fan Tray 1 Fan 3                   OK          Spinning at normal speed
      Fan Tray 2 Fan 0                   OK          Spinning at normal speed

```

Fan Tray 2 Fan 1	OK	Spinning at normal speed
Fan Tray 2 Fan 2	OK	Spinning at normal speed
Fan Tray 2 Fan 3	OK	Spinning at normal speed
Fan Tray 3 Fan 0	OK	Spinning at normal speed
Fan Tray 3 Fan 1	OK	Spinning at normal speed
Fan Tray 3 Fan 2	OK	Spinning at normal speed
Fan Tray 3 Fan 3	OK	Spinning at normal speed

### show chassis environment (QFX Series and OCX Series)

```
user@switch> show chassis environment
```

Class	Item	Status	Measurement
Temp	CB 0 Top Right Inlet Sensor	OK	29 degrees C / 84 degrees F
	CB 0 Top Left Inlet Sensor	OK	29 degrees C / 84 degrees F
	CB 0 Top Right Exhaust Sensor	OK	40 degrees C / 104 degrees F
	CB 0 Top Left Exhaust Sensor	OK	59 degrees C / 138 degrees F
	CB 0 CPU Core-0 Temp	OK	45 degrees C / 113 degrees F
	CB 0 CPU Core-1 Temp	OK	44 degrees C / 111 degrees F
	CB 0 CPU Core-2 Temp	OK	44 degrees C / 111 degrees F
	CB 0 CPU Core-3 Temp	OK	44 degrees C / 111 degrees F
	CB 0 CPU Core-4 Temp	OK	45 degrees C / 113 degrees F
	CB 0 CPU Core-5 Temp	OK	44 degrees C / 111 degrees F
	CB 0 CPU Core-6 Temp	OK	44 degrees C / 111 degrees F
	CB 0 CPU Core-7 Temp	OK	43 degrees C / 109 degrees F
Power	PEM 0	Check	
	PEM 1	OK	36 degrees C / 96 degrees F
Fans	Fan Tray 0 Fan 0	OK	Spinning at normal speed
	Fan Tray 0 Fan 1	OK	Spinning at normal speed
	Fan Tray 1 Fan 0	OK	Spinning at normal speed
	Fan Tray 1 Fan 1	OK	Spinning at normal speed
	Fan Tray 2 Fan 0	Absent	
	Fan Tray 2 Fan 1	Absent	

### show chassis environment interconnect-device (QFabric System)

```
user@switch> show chassis environment interconnect-device IC-A0004
```

Class	Item	Status	Measurement
	CB 0		
	CB 0 L Intake	OK	30 degrees C / 86 degrees F
	CB 0 R Intake	OK	31 degrees C / 87 degrees F
	CB 0 L Exhaust	OK	32 degrees C / 89 degrees F
	CB 0 R Exhaust	OK	33 degrees C / 91 degrees F
	Routing Engine 0 CPU temp	OK	51 degrees C / 123 degrees F
	CB 1		
	CB 1 L Intake	OK	27 degrees C / 80 degrees F
	CB 1 R Intake	OK	29 degrees C / 84 degrees F
	CB 1 L Exhaust	OK	31 degrees C / 87 degrees F
	CB 1 R Exhaust	OK	32 degrees C / 89 degrees F
	Routing Engine 1 CPU temp	OK	40 degrees C / 104 degrees F
	FC 0 FPC 0		
	FPC 0 L Intake	OK	25 degrees C / 77 degrees F
	FPC 0 R Intake	OK	28 degrees C / 82 degrees F
	FPC 0 L Exhaust	OK	28 degrees C / 82 degrees F
	FPC 0 R Exhaust	OK	29 degrees C / 84 degrees F
	FC 7 FPC 7		
	FPC 7 L Intake	OK	25 degrees C / 77 degrees F
	FPC 7 R Intake	OK	26 degrees C / 78 degrees F
	FPC 7 L Exhaust	OK	28 degrees C / 82 degrees F
	FPC 7 R Exhaust	OK	29 degrees C / 84 degrees F
	RC 0 FPC 8		



FPC 8 L Intake	OK	25 degrees C / 77 degrees F
FPC 8 R Intake	OK	26 degrees C / 78 degrees F
FPC 8 L Exhaust	OK	32 degrees C / 89 degrees F
FPC 8 R Exhaust	OK	30 degrees C / 86 degrees F
RC 7 FPC 15		
FPC 15 L Intake	OK	24 degrees C / 75 degrees F
FPC 15 R Intake	OK	25 degrees C / 77 degrees F
FPC 15 L Exhaust	OK	33 degrees C / 91 degrees F
FPC 15 R Exhaust	OK	31 degrees C / 87 degrees F
Fans TFT 0 Fan 0	OK	Spinning at normal speed
Fans TFT 0 Fan 1	OK	Spinning at normal speed
Fans TFT 0 Fan 2	OK	Spinning at normal speed
Fans TFT 0 Fan 3	OK	Spinning at normal speed
Fans TFT 0 Fan 4	OK	Spinning at normal speed
Fans TFT 0 Fan 5	OK	Spinning at normal speed
Fans BFT 1 Fan 0	OK	Spinning at normal speed
Fans BFT 1 Fan 1	OK	Spinning at normal speed
Fans BFT 1 Fan 2	OK	Spinning at normal speed
Fans BFT 1 Fan 3	Check	
Fans BFT 1 Fan 4	OK	Spinning at normal speed
Fans BFT 1 Fan 5	OK	Spinning at normal speed
Fans SFT 0 Fan 0 Rotor 0	OK	Spinning at normal speed
Fans SFT 0 Fan 0 Rotor 1	OK	Spinning at normal speed
Fans SFT 0 Fan 1 Rotor 0	OK	Spinning at normal speed
Fans SFT 0 Fan 1 Rotor 1	OK	Spinning at normal speed
Fans SFT 0 Fan 2 Rotor 0	OK	Spinning at normal speed
Fans SFT 0 Fan 2 Rotor 1	OK	Spinning at normal speed
Fans SFT 0 Fan 3 Rotor 0	OK	Spinning at normal speed
Fans SFT 0 Fan 3 Rotor 1	OK	Spinning at normal speed
Fans SFT 1 Fan 0 Rotor 0	OK	Spinning at normal speed
Fans SFT 1 Fan 0 Rotor 1	OK	Spinning at normal speed
Fans SFT 1 Fan 1 Rotor 0	OK	Spinning at normal speed
Fans SFT 1 Fan 1 Rotor 1	OK	Spinning at normal speed
Fans SFT 1 Fan 2 Rotor 0	OK	Spinning at normal speed
Fans SFT 1 Fan 2 Rotor 1	OK	Spinning at normal speed
Fans SFT 1 Fan 3 Rotor 0	OK	Spinning at normal speed
Fans SFT 1 Fan 3 Rotor 1	OK	Spinning at normal speed
Fans SFT 2 Fan 0 Rotor 0	OK	Spinning at normal speed
Fans SFT 2 Fan 0 Rotor 1	OK	Spinning at normal speed
Fans SFT 2 Fan 1 Rotor 0	OK	Spinning at normal speed
Fans SFT 2 Fan 1 Rotor 1	OK	Spinning at normal speed
Fans SFT 2 Fan 2 Rotor 0	OK	Spinning at normal speed
Fans SFT 2 Fan 2 Rotor 1	OK	Spinning at normal speed
Fans SFT 2 Fan 3 Rotor 0	OK	Spinning at normal speed
Fans SFT 2 Fan 3 Rotor 1	OK	Spinning at normal speed
Fans SFT 3 Fan 0 Rotor 0	OK	Spinning at normal speed
Fans SFT 3 Fan 0 Rotor 1	OK	Spinning at normal speed
Fans SFT 3 Fan 1 Rotor 0	OK	Spinning at normal speed
Fans SFT 3 Fan 1 Rotor 1	OK	Spinning at normal speed
Fans SFT 3 Fan 2 Rotor 0	OK	Spinning at normal speed
Fans SFT 3 Fan 2 Rotor 1	OK	Spinning at normal speed
Fans SFT 3 Fan 3 Rotor 0	OK	Spinning at normal speed
Fans SFT 3 Fan 3 Rotor 1	OK	Spinning at normal speed
Fans SFT 4 Fan 0 Rotor 0	OK	Spinning at normal speed
Fans SFT 4 Fan 0 Rotor 1	OK	Spinning at normal speed
Fans SFT 4 Fan 1 Rotor 0	OK	Spinning at normal speed
Fans SFT 4 Fan 1 Rotor 1	OK	Spinning at normal speed
Fans SFT 4 Fan 2 Rotor 0	OK	Spinning at normal speed
Fans SFT 4 Fan 2 Rotor 1	OK	Spinning at normal speed
Fans SFT 4 Fan 3 Rotor 0	OK	Spinning at normal speed
Fans SFT 4 Fan 3 Rotor 1	OK	Spinning at normal speed

Fans	SFT 5 Fan 0 Rotor 0	OK	Spinning at normal speed
Fans	SFT 5 Fan 0 Rotor 1	OK	Spinning at normal speed
Fans	SFT 5 Fan 1 Rotor 0	OK	Spinning at normal speed
Fans	SFT 5 Fan 1 Rotor 1	OK	Spinning at normal speed
Fans	SFT 5 Fan 2 Rotor 0	OK	Spinning at normal speed
Fans	SFT 5 Fan 2 Rotor 1	OK	Spinning at normal speed
Fans	SFT 5 Fan 3 Rotor 0	OK	Spinning at normal speed
Fans	SFT 5 Fan 3 Rotor 1	OK	Spinning at normal speed
Fans	SFT 6 Fan 0 Rotor 0	OK	Spinning at normal speed
Fans	SFT 6 Fan 0 Rotor 1	OK	Spinning at normal speed
Fans	SFT 6 Fan 1 Rotor 0	OK	Spinning at normal speed
Fans	SFT 6 Fan 1 Rotor 1	OK	Spinning at normal speed
Fans	SFT 6 Fan 2 Rotor 0	OK	Spinning at normal speed
Fans	SFT 6 Fan 2 Rotor 1	OK	Spinning at normal speed
Fans	SFT 6 Fan 3 Rotor 0	OK	Spinning at normal speed
Fans	SFT 6 Fan 3 Rotor 1	OK	Spinning at normal speed
Fans	SFT 7 Fan 0 Rotor 0	OK	Spinning at normal speed
Fans	SFT 7 Fan 0 Rotor 1	OK	Spinning at normal speed
Fans	SFT 7 Fan 1 Rotor 0	OK	Spinning at normal speed
Fans	SFT 7 Fan 1 Rotor 1	OK	Spinning at normal speed
Fans	SFT 7 Fan 2 Rotor 0	OK	Spinning at normal speed
Fans	SFT 7 Fan 2 Rotor 1	OK	Spinning at normal speed
Fans	SFT 7 Fan 3 Rotor 0	OK	Spinning at normal speed
Fans	SFT 7 Fan 3 Rotor 1	OK	Spinning at normal speed
Power	PEM 0	OK	30 degrees C / 86 degrees F
Power	PEM 1	OK	30 degrees C / 86 degrees F
Power	PEM 2	OK	30 degrees C / 86 degrees F
Power	PEM 3	Absent	
Power	PEM 4	Absent	
Power	PEM 5	Absent	

### show chassis environment node-device (QFabric System)

```

user@switch> show chassis environment node-device node1
Class Item                               Status Measurement
Power node1 Power Supply 0              Absent
      node1 Power Supply 1              Absent
Fans  node1 Fan Tray 0                  Testing
      node1 Fan Tray 1                  Testing
      node1 Fan Tray 2                  Testing

```

### show chassis environment pem node-device (QFabric System)

```

user@switch> show chassis environment pem node-device node1
FPC 0 PEM 0 status:
  State      Check
  Airflow    Front to Back
  Temperature OK
  AC Input:   OK
  DC Output   Voltage(V) Current(A) Power(W) Load(%)
                        12         10        120      18
FPC 0 PEM 1 status:
  State      Online
  Airflow    Back to Front
  Temperature OK
  AC Input:   OK
  DC Output   Voltage(V) Current(A) Power(W) Load(%)
                        11         10        110      17

```

## show chassis environment (PTX5000 Packet Transport Router)

user@host&gt; show chassis environment

Class	Item	Status	Measurement
Temp	PDU 0	OK	
	PDU 0 PSM 0	OK	36 degrees C / 96 degrees F
	PDU 0 PSM 1	OK	38 degrees C / 100 degrees F
	PDU 0 PSM 2	OK	38 degrees C / 100 degrees F
	PDU 0 PSM 3	OK	37 degrees C / 98 degrees F
	PDU 1	Absent	
	CCG 0	OK	44 degrees C / 111 degrees F
	CCG 1	OK	44 degrees C / 111 degrees F
	Routing Engine 0	OK	62 degrees C / 143 degrees F
	Routing Engine 0 CPU	OK	75 degrees C / 167 degrees F
	Routing Engine 1	OK	51 degrees C / 123 degrees F
	Routing Engine 1 CPU	OK	64 degrees C / 147 degrees F
	CB 0 Intake	OK	38 degrees C / 100 degrees F
	CB 0 Exhaust A	OK	46 degrees C / 114 degrees F
	CB 0 Exhaust B	OK	42 degrees C / 107 degrees F
	CB 1 Intake	OK	35 degrees C / 95 degrees F
	CB 1 Exhaust A	OK	39 degrees C / 102 degrees F
	CB 1 Exhaust B	OK	36 degrees C / 96 degrees F
	SIB 0 Exhaust	OK	47 degrees C / 116 degrees F
	SIB 0 Junction	OK	45 degrees C / 113 degrees F
	SIB 1 Exhaust	OK	44 degrees C / 111 degrees F
	SIB 1 Junction	OK	43 degrees C / 109 degrees F
	SIB 2 Exhaust	OK	47 degrees C / 116 degrees F
	SIB 2 Junction	OK	42 degrees C / 107 degrees F
	SIB 3 Exhaust	OK	43 degrees C / 109 degrees F
	SIB 3 Junction	OK	43 degrees C / 109 degrees F
	SIB 4 Exhaust	OK	47 degrees C / 116 degrees F
	SIB 4 Junction	OK	42 degrees C / 107 degrees F
	SIB 5 Exhaust	OK	42 degrees C / 107 degrees F
	SIB 5 Junction	OK	40 degrees C / 104 degrees F
	SIB 6 Exhaust	OK	46 degrees C / 114 degrees F
	SIB 6 Junction	OK	42 degrees C / 107 degrees F
	SIB 7 Exhaust	OK	43 degrees C / 109 degrees F
	SIB 7 Junction	OK	39 degrees C / 102 degrees F
	SIB 8 Exhaust	OK	44 degrees C / 111 degrees F
	SIB 8 Junction	OK	41 degrees C / 105 degrees F
	FPC 0 PMB	OK	35 degrees C / 95 degrees F
	FPC 0 Intake	OK	33 degrees C / 91 degrees F
	FPC 0 Exhaust A	OK	51 degrees C / 123 degrees F
	FPC 0 Exhaust B	OK	43 degrees C / 109 degrees F
	FPC 0 TL0	OK	48 degrees C / 118 degrees F
	FPC 0 TQ0	OK	53 degrees C / 127 degrees F
	FPC 0 TL1	OK	56 degrees C / 132 degrees F
	FPC 0 TQ1	OK	58 degrees C / 136 degrees F
	FPC 0 TL2	OK	55 degrees C / 131 degrees F
	FPC 0 TQ2	OK	56 degrees C / 132 degrees F
	FPC 0 TL3	OK	59 degrees C / 138 degrees F
	FPC 0 TQ3	OK	59 degrees C / 138 degrees F
	FPC 2 PMB	OK	35 degrees C / 95 degrees F
	FPC 2 Intake	OK	34 degrees C / 93 degrees F
	FPC 2 Exhaust A	OK	51 degrees C / 123 degrees F
	FPC 2 Exhaust B	OK	52 degrees C / 125 degrees F
	FPC 2 TL0	OK	53 degrees C / 127 degrees F
	FPC 2 TQ0	OK	53 degrees C / 127 degrees F
	FPC 2 TL1	OK	57 degrees C / 134 degrees F
	FPC 2 TQ1	OK	58 degrees C / 136 degrees F
	FPC 2 TL2	OK	54 degrees C / 129 degrees F

FPC 2 TQ2	OK	59 degrees C / 138 degrees F
FPC 2 TL3	OK	60 degrees C / 140 degrees F
FPC 2 TQ3	OK	64 degrees C / 147 degrees F
PIC 2/0 Ambient	OK	49 degrees C / 120 degrees F
FPC 3 PMB	OK	34 degrees C / 93 degrees F
FPC 3 Intake	OK	35 degrees C / 95 degrees F
FPC 3 Exhaust A	OK	54 degrees C / 129 degrees F
FPC 3 Exhaust B	OK	49 degrees C / 120 degrees F
FPC 3 TL0	OK	49 degrees C / 120 degrees F
FPC 3 TQ0	OK	55 degrees C / 131 degrees F
FPC 3 TL1	OK	56 degrees C / 132 degrees F
FPC 3 TQ1	OK	58 degrees C / 136 degrees F
FPC 3 TL2	OK	56 degrees C / 132 degrees F
FPC 3 TQ2	OK	59 degrees C / 138 degrees F
FPC 3 TL3	OK	62 degrees C / 143 degrees F
FPC 3 TQ3	OK	63 degrees C / 145 degrees F
PIC 3/1	Absent	
FPC 5 PMB	OK	35 degrees C / 95 degrees F
FPC 5 Intake	OK	34 degrees C / 93 degrees F
FPC 5 Exhaust A	OK	51 degrees C / 123 degrees F
FPC 5 Exhaust B	OK	53 degrees C / 127 degrees F
FPC 5 TL0	OK	54 degrees C / 129 degrees F
FPC 5 TQ0	OK	52 degrees C / 125 degrees F
FPC 5 TL1	OK	61 degrees C / 141 degrees F
FPC 5 TQ1	OK	60 degrees C / 140 degrees F
FPC 5 TL2	OK	55 degrees C / 131 degrees F
FPC 5 TQ2	OK	55 degrees C / 131 degrees F
FPC 5 TL3	OK	59 degrees C / 138 degrees F
FPC 5 TQ3	OK	58 degrees C / 136 degrees F
PIC 5/0 Ambient	OK	51 degrees C / 123 degrees F
PIC 5/1 Ambient	OK	34 degrees C / 93 degrees F
PIC 5/1 cfp-5/1/0	OK	34 degrees C / 93 degrees F
PIC 5/1 cfp-5/1/1	OK	36 degrees C / 96 degrees F
FPC 6 PMB	OK	36 degrees C / 96 degrees F
FPC 6 Intake	OK	33 degrees C / 91 degrees F
FPC 6 Exhaust A	OK	51 degrees C / 123 degrees F
FPC 6 Exhaust B	OK	39 degrees C / 102 degrees F
FPC 6 TL0	OK	44 degrees C / 111 degrees F
FPC 6 TQ0	OK	54 degrees C / 129 degrees F
FPC 6 TL1	OK	59 degrees C / 138 degrees F
FPC 6 TQ1	OK	58 degrees C / 136 degrees F
FPC 6 TL2	OK	60 degrees C / 140 degrees F
FPC 6 TQ2	OK	57 degrees C / 134 degrees F
FPC 6 TL3	OK	65 degrees C / 149 degrees F
FPC 6 TQ3	OK	60 degrees C / 140 degrees F
FPC 7 PMB	OK	35 degrees C / 95 degrees F
FPC 7 Intake	OK	33 degrees C / 91 degrees F
FPC 7 Exhaust A	OK	53 degrees C / 127 degrees F
FPC 7 Exhaust B	OK	40 degrees C / 104 degrees F
FPC 7 TL0	OK	46 degrees C / 114 degrees F
FPC 7 TQ0	OK	58 degrees C / 136 degrees F
FPC 7 TL1	OK	53 degrees C / 127 degrees F
FPC 7 TQ1	OK	59 degrees C / 138 degrees F
FPC 7 TL2	OK	56 degrees C / 132 degrees F
FPC 7 TQ2	OK	61 degrees C / 141 degrees F
FPC 7 TL3	OK	63 degrees C / 145 degrees F
FPC 7 TQ3	OK	63 degrees C / 145 degrees F
FPM I2CS	OK	37 degrees C / 98 degrees F
Fans Fan Tray 0 Fan 1	OK	3042 RPM
Fans Fan Tray 0 Fan 2	OK	3042 RPM
Fans Fan Tray 0 Fan 3	OK	3000 RPM

Fan Tray 0 Fan 4	OK	3042 RPM
Fan Tray 0 Fan 5	OK	3000 RPM
Fan Tray 0 Fan 6	OK	3042 RPM
Fan Tray 0 Fan 7	OK	3085 RPM
Fan Tray 0 Fan 8	OK	3042 RPM
Fan Tray 0 Fan 9	OK	3042 RPM
Fan Tray 0 Fan 10	OK	3085 RPM
Fan Tray 0 Fan 11	OK	3085 RPM
Fan Tray 0 Fan 12	OK	3128 RPM
Fan Tray 0 Fan 13	OK	3128 RPM
Fan Tray 0 Fan 14	OK	3042 RPM
Fan Tray 1 Fan 1	OK	2299 RPM
Fan Tray 1 Fan 2	OK	2399 RPM
Fan Tray 1 Fan 3	OK	2299 RPM
Fan Tray 1 Fan 4	OK	2266 RPM
Fan Tray 1 Fan 5	OK	2266 RPM
Fan Tray 1 Fan 6	OK	2366 RPM
Fan Tray 2 Fan 1	OK	2199 RPM
Fan Tray 2 Fan 2	OK	2133 RPM
Fan Tray 2 Fan 3	OK	2366 RPM
Fan Tray 2 Fan 4	OK	2233 RPM
Fan Tray 2 Fan 5	OK	2399 RPM
Fan Tray 2 Fan 6	OK	2233 RPM
Misc SPMB 0 Intake	OK	50 degrees C / 122 degrees F
SPMB 1 Intake	OK	40 degrees C / 104 degrees F

#### show chassis environment (PTX5000 Packet Transport Router with FPC2-PTX-P1A)

```
user@host> show chassis environment
```

Class	Item	Status	Measurement
Temp	PDU 0	OK	
	PDU 0 PSM 0	OK	41 degrees C / 105 degrees F
	PDU 0 PSM 1	Absent	
	PDU 0 PSM 2	OK	43 degrees C / 109 degrees F
	PDU 0 PSM 3	Absent	
	PDU 0 PSM 4	OK	44 degrees C / 111 degrees F
	PDU 0 PSM 5	Absent	
	PDU 0 PSM 6	OK	45 degrees C / 113 degrees F
	PDU 0 PSM 7	Absent	
	PDU 1	OK	
	PDU 1 PSM 0	Absent	
	PDU 1 PSM 1	OK	45 degrees C / 113 degrees F
	PDU 1 PSM 2	Absent	
	PDU 1 PSM 3	OK	43 degrees C / 109 degrees F
	PDU 1 PSM 4	Absent	
	PDU 1 PSM 5	OK	46 degrees C / 114 degrees F
	PDU 1 PSM 6	Absent	
	PDU 1 PSM 7	OK	46 degrees C / 114 degrees F
	CCG 0	OK	27 degrees C / 80 degrees F
	CCG 1	OK	29 degrees C / 84 degrees F
	...		

#### show chassis environment (PTX1000 Packet Transport Router)

```
user@host> show chassis environment
```

Class	Item	Status	Measurement
Power	FPC 0 Power Supply 0	Absent	
	FPC 0 Power Supply 1	Absent	
	FPC 0 Power Supply 2	OK	
	FPC 0 Power Supply 3	OK	

Temp	FPC 0 Intake Temp Sensor	OK	25 degrees C / 77 degrees F
	FPC 0 Exhaust Temp Sensor	OK	35 degrees C / 95 degrees F
	FPC 0 Mezz Temp Sensor 0	OK	25 degrees C / 77 degrees F
	FPC 0 Mezz Temp Sensor 1	OK	34 degrees C / 93 degrees F
	FPC 0 PE2 Temp Sensor	OK	34 degrees C / 93 degrees F
	FPC 0 PE1 Temp Sensor	OK	32 degrees C / 89 degrees F
	FPC 0 PF0 Temp Sensor	OK	40 degrees C / 104 degrees F
	FPC 0 PE0 Temp Sensor	OK	33 degrees C / 91 degrees F
	FPC 0 PE5 Temp Sensor	OK	34 degrees C / 93 degrees F
	FPC 0 PE4 Temp Sensor	OK	34 degrees C / 93 degrees F
	FPC 0 PF1 Temp Sensor	OK	41 degrees C / 105 degrees F
	FPC 0 PE3 Temp Sensor	OK	36 degrees C / 96 degrees F
	FPC 0 CPU Die Temp Sensor	OK	40 degrees C / 104 degrees F
	FPC 0 OCX0 Temp Sensor	OK	37 degrees C / 98 degrees F
Fans	FPC 0 Fan Tray 0	OK	Spinning at normal speed
	FPC 0 Fan Tray 1	OK	Spinning at normal speed
	FPC 0 Fan Tray 2	OK	Spinning at normal speed

#### show chassis environment (PTX10008 Router)

```
user@host> show chassis environment
```

Class	Item	Status	Measurement
Temp	Routing Engine 0 CPU	OK	40 degrees C / 104 degrees F
	Routing Engine 1 CPU	OK	40 degrees C / 104 degrees F
	CB 0 Intake Temp Sensor	OK	29 degrees C / 84 degrees F
	CB 0 Exhaust Temp Sensor	OK	33 degrees C / 91 degrees F
	CB 1 Intake Temp Sensor	OK	28 degrees C / 82 degrees F
	CB 1 Exhaust Temp Sensor	OK	32 degrees C / 89 degrees F
	FPC 0 Intake-A Temp Sensor	OK	38 degrees C / 100 degrees F
	FPC 0 Intake-B Temp Sensor	OK	34 degrees C / 93 degrees F
	FPC 0 Exhaust-A Temp Sensor	OK	36 degrees C / 96 degrees F
	FPC 0 Exhaust-B Temp Sensor	OK	37 degrees C / 98 degrees F
	FPC 0 Exhaust-C Temp Sensor	OK	40 degrees C / 104 degrees F
	FPC 0 PE0 Temp Sensor	OK	40 degrees C / 104 degrees F
	FPC 0 PE1 Temp Sensor	OK	42 degrees C / 107 degrees F
	FPC 0 PE2 Temp Sensor	OK	44 degrees C / 111 degrees F
	FPC 0 LCPU Temp Sensor	OK	41 degrees C / 105 degrees F
	FPC 1 Intake-A Temp Sensor	OK	37 degrees C / 98 degrees F
	FPC 1 Intake-B Temp Sensor	OK	33 degrees C / 91 degrees F
	FPC 1 Exhaust-A Temp Sensor	OK	37 degrees C / 98 degrees F
	FPC 1 Exhaust-B Temp Sensor	OK	38 degrees C / 100 degrees F
	FPC 1 Exhaust-C Temp Sensor	OK	40 degrees C / 104 degrees F
	FPC 1 PE0 Temp Sensor	OK	41 degrees C / 105 degrees F
	FPC 1 PE1 Temp Sensor	OK	41 degrees C / 105 degrees F
	FPC 1 PE2 Temp Sensor	OK	45 degrees C / 113 degrees F
	FPC 1 LCPU Temp Sensor	OK	40 degrees C / 104 degrees F
	FPC 2 Intake-A Temp Sensor	OK	44 degrees C / 111 degrees F
	FPC 2 Intake-B Temp Sensor	OK	30 degrees C / 86 degrees F
	FPC 2 Exhaust-A Temp Sensor	OK	52 degrees C / 125 degrees F
	FPC 2 Exhaust-B Temp Sensor	OK	54 degrees C / 129 degrees F
	FPC 2 Exhaust-C Temp Sensor	OK	52 degrees C / 125 degrees F
	FPC 2 PE0 Temp Sensor	OK	49 degrees C / 120 degrees F
	FPC 2 PE1 Temp Sensor	OK	59 degrees C / 138 degrees F
	FPC 2 PE2 Temp Sensor	OK	49 degrees C / 120 degrees F
	FPC 2 PE3 Temp Sensor	OK	60 degrees C / 140 degrees F
	FPC 2 PE4 Temp Sensor	OK	49 degrees C / 120 degrees F
	FPC 2 PE5 Temp Sensor	OK	63 degrees C / 145 degrees F
	FPC 2 LCPU Temp Sensor	OK	47 degrees C / 116 degrees F
	FPC 3 Intake-A Temp Sensor	OK	42 degrees C / 107 degrees F
	FPC 3 Intake-B Temp Sensor	OK	30 degrees C / 86 degrees F
	FPC 3 Exhaust-A Temp Sensor	OK	46 degrees C / 114 degrees F

FPC 3 Exhaust-B Temp Sensor	OK	48 degrees C / 118 degrees F
FPC 3 Exhaust-C Temp Sensor	OK	47 degrees C / 116 degrees F
FPC 3 PE0 Temp Sensor	OK	47 degrees C / 116 degrees F
FPC 3 PE1 Temp Sensor	OK	53 degrees C / 127 degrees F
FPC 3 PE2 Temp Sensor	OK	46 degrees C / 114 degrees F
FPC 3 PE3 Temp Sensor	OK	53 degrees C / 127 degrees F
FPC 3 PE4 Temp Sensor	OK	48 degrees C / 118 degrees F
FPC 3 PE5 Temp Sensor	OK	57 degrees C / 134 degrees F
FPC 3 LCPU Temp Sensor	OK	47 degrees C / 116 degrees F
FPC 5 Intake-A Temp Sensor	Failed	
FPC 5 Intake-B Temp Sensor	Failed	
FPC 5 Exhaust-A Temp Sensor	OK	40 degrees C / 104 degrees F
FPC 5 Exhaust-B Temp Sensor	OK	40 degrees C / 104 degrees F
FPC 5 Exhaust-C Temp Sensor	OK	41 degrees C / 105 degrees F
FPC 5 PE0 Temp Sensor	OK	46 degrees C / 114 degrees F
FPC 5 PE1 Temp Sensor	OK	48 degrees C / 118 degrees F
FPC 5 PE2 Temp Sensor	OK	51 degrees C / 123 degrees F
FPC 5 LCPU Temp Sensor	Failed	
FPC 6 Intake-A Temp Sensor	OK	40 degrees C / 104 degrees F
FPC 6 Intake-B Temp Sensor	OK	36 degrees C / 96 degrees F
FPC 6 Exhaust-A Temp Sensor	OK	39 degrees C / 102 degrees F
FPC 6 Exhaust-B Temp Sensor	OK	39 degrees C / 102 degrees F
FPC 6 Exhaust-C Temp Sensor	OK	39 degrees C / 102 degrees F
FPC 6 PE0 Temp Sensor	OK	44 degrees C / 111 degrees F
FPC 6 PE1 Temp Sensor	OK	45 degrees C / 113 degrees F
FPC 6 PE2 Temp Sensor	OK	50 degrees C / 122 degrees F
FPC 6 LCPU Temp Sensor	OK	40 degrees C / 104 degrees F
SIB 0 Intake-A Temp Sensor	OK	37 degrees C / 98 degrees F
SIB 0 Intake-B Temp Sensor	OK	30 degrees C / 86 degrees F
SIB 0 Exhaust-A Temp Sensor	OK	33 degrees C / 91 degrees F
SIB 0 Exhaust-B Temp Sensor	OK	38 degrees C / 100 degrees F
SIB 0 PF0 Temp Sensor	OK	46 degrees C / 114 degrees F
SIB 0 PF1 Temp Sensor	OK	39 degrees C / 102 degrees F
SIB 1 Intake-A Temp Sensor	OK	43 degrees C / 109 degrees F
SIB 1 Intake-B Temp Sensor	OK	34 degrees C / 93 degrees F
SIB 1 Exhaust-A Temp Sensor	OK	36 degrees C / 96 degrees F
SIB 1 Exhaust-B Temp Sensor	OK	44 degrees C / 111 degrees F
SIB 1 PF0 Temp Sensor	OK	54 degrees C / 129 degrees F
SIB 1 PF1 Temp Sensor	OK	41 degrees C / 105 degrees F
SIB 2 Intake-A Temp Sensor	OK	46 degrees C / 114 degrees F
SIB 2 Intake-B Temp Sensor	OK	35 degrees C / 95 degrees F
SIB 2 Exhaust-A Temp Sensor	OK	37 degrees C / 98 degrees F
SIB 2 Exhaust-B Temp Sensor	OK	47 degrees C / 116 degrees F
SIB 2 PF0 Temp Sensor	OK	55 degrees C / 131 degrees F
SIB 2 PF1 Temp Sensor	OK	42 degrees C / 107 degrees F
SIB 3 Intake-A Temp Sensor	OK	45 degrees C / 113 degrees F
SIB 3 Intake-B Temp Sensor	OK	35 degrees C / 95 degrees F
SIB 3 Exhaust-A Temp Sensor	OK	36 degrees C / 96 degrees F
SIB 3 Exhaust-B Temp Sensor	OK	45 degrees C / 113 degrees F
SIB 3 PF0 Temp Sensor	OK	54 degrees C / 129 degrees F
SIB 3 PF1 Temp Sensor	OK	42 degrees C / 107 degrees F
SIB 4 Intake-A Temp Sensor	OK	46 degrees C / 114 degrees F
SIB 4 Intake-B Temp Sensor	OK	34 degrees C / 93 degrees F
SIB 4 Exhaust-A Temp Sensor	OK	36 degrees C / 96 degrees F
SIB 4 Exhaust-B Temp Sensor	OK	46 degrees C / 114 degrees F
SIB 4 PF0 Temp Sensor	OK	54 degrees C / 129 degrees F
SIB 4 PF1 Temp Sensor	OK	41 degrees C / 105 degrees F
SIB 5 Intake-A Temp Sensor	OK	38 degrees C / 100 degrees F
SIB 5 Intake-B Temp Sensor	OK	31 degrees C / 87 degrees F
SIB 5 Exhaust-A Temp Sensor	OK	34 degrees C / 93 degrees F
SIB 5 Exhaust-B Temp Sensor	OK	39 degrees C / 102 degrees F

	SIB 5 PF0 Temp Sensor	OK	44 degrees C / 111 degrees F
	SIB 5 PF1 Temp Sensor	OK	42 degrees C / 107 degrees F
Power	Power Supply 0	OK	
	Power Supply 1	OK	
	Power Supply 2	OK	
	Power Supply 3	OK	
	Power Supply 4	Check	
	Power Supply 5	OK	
Fans	Fan Tray 0 Fan 0	OK	Spinning at normal speed
	Fan Tray 0 Fan 1	OK	Spinning at normal speed
	Fan Tray 0 Fan 2	OK	Spinning at normal speed
	Fan Tray 0 Fan 3	OK	Spinning at normal speed
	Fan Tray 0 Fan 4	Failed	
	Fan Tray 0 Fan 5	Failed	
	Fan Tray 0 Fan 6	OK	Spinning at normal speed
	Fan Tray 0 Fan 7	OK	Spinning at normal speed
	Fan Tray 0 Fan 8	OK	Spinning at normal speed
	Fan Tray 0 Fan 9	OK	Spinning at normal speed
	Fan Tray 0 Fan 10	OK	Spinning at normal speed
	Fan Tray 1 Fan 0	OK	Spinning at normal speed
	Fan Tray 1 Fan 1	OK	Spinning at normal speed
	Fan Tray 1 Fan 2	OK	Spinning at normal speed
	Fan Tray 1 Fan 3	OK	Spinning at normal speed
	Fan Tray 1 Fan 4	OK	Spinning at normal speed
	Fan Tray 1 Fan 5	OK	Spinning at normal speed
	Fan Tray 1 Fan 6	OK	Spinning at normal speed
	Fan Tray 1 Fan 7	OK	Spinning at normal speed
	Fan Tray 1 Fan 8	OK	Spinning at normal speed
	Fan Tray 1 Fan 9	OK	Spinning at normal speed
	Fan Tray 1 Fan 10	OK	Spinning at normal speed

### show chassis environment (PTX10016 Router)

user@host> show chassis environment			
Class	Item	Status	Measurement
	Routing Engine 0 CPU	OK	34 degrees C / 93 degrees F
	Routing Engine 1 CPU	OK	34 degrees C / 93 degrees F
Temp	CB 0 Intake Temp Sensor	OK	20 degrees C / 68 degrees F
	CB 0 Exhaust Temp Sensor	OK	24 degrees C / 75 degrees F
	CB 1 Intake Temp Sensor	OK	20 degrees C / 68 degrees F
	CB 1 Exhaust Temp Sensor	OK	23 degrees C / 73 degrees F
	FPC 1 Intake-A Temp Sensor	OK	37 degrees C / 98 degrees F
	FPC 1 Intake-B Temp Sensor	OK	32 degrees C / 89 degrees F
	FPC 1 Exhaust-A Temp Sensor	OK	37 degrees C / 98 degrees F
	FPC 1 Exhaust-B Temp Sensor	OK	36 degrees C / 96 degrees F
	FPC 1 Exhaust-C Temp Sensor	OK	36 degrees C / 96 degrees F
	FPC 1 PE0 Temp Sensor	OK	45 degrees C / 113 degrees F
	FPC 1 PE1 Temp Sensor	OK	46 degrees C / 114 degrees F
	FPC 1 PE2 Temp Sensor	OK	54 degrees C / 129 degrees F
	FPC 1 LCPU Temp Sensor	OK	35 degrees C / 95 degrees F
	FPC 3 Intake-A Temp Sensor	OK	35 degrees C / 95 degrees F
	FPC 3 Intake-B Temp Sensor	OK	31 degrees C / 87 degrees F
	FPC 3 Exhaust-A Temp Sensor	OK	36 degrees C / 96 degrees F
	FPC 3 Exhaust-B Temp Sensor	OK	35 degrees C / 95 degrees F
	FPC 3 Exhaust-C Temp Sensor	OK	33 degrees C / 91 degrees F
	FPC 3 PE0 Temp Sensor	OK	43 degrees C / 109 degrees F
	FPC 3 PE1 Temp Sensor	OK	45 degrees C / 113 degrees F
	FPC 3 PE2 Temp Sensor	OK	49 degrees C / 120 degrees F
	FPC 3 LCPU Temp Sensor	OK	35 degrees C / 95 degrees F
	FPC 6 Intake-A Temp Sensor	OK	34 degrees C / 93 degrees F
	FPC 6 Intake-B Temp Sensor	OK	31 degrees C / 87 degrees F



	FPC 6 Exhaust-A Temp Sensor	OK	35 degrees C / 95 degrees F
	FPC 6 Exhaust-B Temp Sensor	OK	35 degrees C / 95 degrees F
	FPC 6 Exhaust-C Temp Sensor	OK	35 degrees C / 95 degrees F
	FPC 6 PE0 Temp Sensor	OK	43 degrees C / 109 degrees F
	FPC 6 PE1 Temp Sensor	OK	43 degrees C / 109 degrees F
	FPC 6 PE2 Temp Sensor	OK	47 degrees C / 116 degrees F
	FPC 6 LCPU Temp Sensor	OK	35 degrees C / 95 degrees F
	FPC 8 Intake-A Temp Sensor	OK	34 degrees C / 93 degrees F
	FPC 8 Intake-B Temp Sensor	OK	31 degrees C / 87 degrees F
	FPC 8 Exhaust-A Temp Sensor	OK	37 degrees C / 98 degrees F
	FPC 8 Exhaust-B Temp Sensor	OK	37 degrees C / 98 degrees F
	FPC 8 Exhaust-C Temp Sensor	OK	38 degrees C / 100 degrees F
	FPC 8 PE0 Temp Sensor	OK	42 degrees C / 107 degrees F
	FPC 8 PE1 Temp Sensor	OK	44 degrees C / 111 degrees F
	FPC 8 PE2 Temp Sensor	OK	47 degrees C / 116 degrees F
	FPC 8 LCPU Temp Sensor	OK	33 degrees C / 91 degrees F
	FPC 9 Intake-A Temp Sensor	OK	44 degrees C / 111 degrees F
	FPC 9 Intake-B Temp Sensor	OK	28 degrees C / 82 degrees F
	FPC 9 Exhaust-A Temp Sensor	OK	51 degrees C / 123 degrees F
	FPC 9 Exhaust-B Temp Sensor	OK	52 degrees C / 125 degrees F
	FPC 9 Exhaust-C Temp Sensor	OK	48 degrees C / 118 degrees F
	FPC 9 PE0 Temp Sensor	OK	52 degrees C / 125 degrees F
	FPC 9 PE1 Temp Sensor	OK	66 degrees C / 150 degrees F
	FPC 9 PE2 Temp Sensor	OK	50 degrees C / 122 degrees F
	FPC 9 PE3 Temp Sensor	OK	65 degrees C / 149 degrees F
	FPC 9 PE4 Temp Sensor	OK	51 degrees C / 123 degrees F
	FPC 9 PE5 Temp Sensor	OK	68 degrees C / 154 degrees F
	FPC 9 LCPU Temp Sensor	OK	46 degrees C / 114 degrees F
Power	Power Supply 0	OK	22 degrees C / 71 degrees F
	Power Supply 1	OK	23 degrees C / 73 degrees F
	Power Supply 2	OK	23 degrees C / 73 degrees F
	Power Supply 3	OK	21 degrees C / 69 degrees F
	Power Supply 4	OK	22 degrees C / 71 degrees F
	Power Supply 5	OK	25 degrees C / 77 degrees F
	Power Supply 6	OK	21 degrees C / 69 degrees F
	Power Supply 7	Absent	
	Power Supply 8	Absent	
	Power Supply 9	Absent	
Fans	Fan Tray 0 Fan 0	OK	Spinning at normal speed
	Fan Tray 0 Fan 1	OK	Spinning at normal speed
	Fan Tray 0 Fan 2	OK	Spinning at normal speed
	Fan Tray 0 Fan 3	OK	Spinning at normal speed
	Fan Tray 0 Fan 4	OK	Spinning at normal speed
	Fan Tray 0 Fan 5	OK	Spinning at normal speed
	Fan Tray 0 Fan 6	OK	Spinning at normal speed
	Fan Tray 0 Fan 7	OK	Spinning at normal speed
	Fan Tray 0 Fan 8	OK	Spinning at normal speed
	Fan Tray 0 Fan 9	OK	Spinning at normal speed
	Fan Tray 0 Fan 10	OK	Spinning at normal speed
	Fan Tray 0 Fan 11	OK	Spinning at normal speed
	Fan Tray 0 Fan 12	OK	Spinning at normal speed
	Fan Tray 0 Fan 13	OK	Spinning at normal speed
	Fan Tray 0 Fan 14	OK	Spinning at normal speed
	Fan Tray 0 Fan 15	OK	Spinning at normal speed
	Fan Tray 0 Fan 16	OK	Spinning at normal speed
	Fan Tray 0 Fan 17	OK	Spinning at normal speed
	Fan Tray 0 Fan 18	OK	Spinning at normal speed
	Fan Tray 0 Fan 19	OK	Spinning at normal speed
	Fan Tray 0 Fan 20	OK	Spinning at normal speed
	Fan Tray 1 Fan 0	OK	Spinning at normal speed
	Fan Tray 1 Fan 1	OK	Spinning at normal speed

Fan Tray 1 Fan 2	OK	Spinning at normal speed
Fan Tray 1 Fan 3	OK	Spinning at normal speed
Fan Tray 1 Fan 4	OK	Spinning at normal speed
Fan Tray 1 Fan 5	OK	Spinning at normal speed
Fan Tray 1 Fan 6	OK	Spinning at normal speed
Fan Tray 1 Fan 7	OK	Spinning at normal speed
Fan Tray 1 Fan 8	OK	Spinning at normal speed
Fan Tray 1 Fan 9	OK	Spinning at normal speed
Fan Tray 1 Fan 10	OK	Spinning at normal speed
Fan Tray 1 Fan 11	OK	Spinning at normal speed
Fan Tray 1 Fan 12	OK	Spinning at normal speed
Fan Tray 1 Fan 13	OK	Spinning at normal speed
Fan Tray 1 Fan 14	OK	Spinning at normal speed
Fan Tray 1 Fan 15	OK	Spinning at normal speed
Fan Tray 1 Fan 16	OK	Spinning at normal speed
Fan Tray 1 Fan 17	OK	Spinning at normal speed
Fan Tray 1 Fan 18	OK	Spinning at normal speed
Fan Tray 1 Fan 19	OK	Spinning at normal speed
Fan Tray 1 Fan 20	OK	Spinning at normal speed
SIB 0 Intake-A Temp Sensor	OK	20 degrees C / 68 degrees F
SIB 0 Intake-B Temp Sensor	OK	20 degrees C / 68 degrees F
SIB 0 Intake-C Temp Sensor	OK	16 degrees C / 60 degrees F
SIB 0 Exhaust-A Temp Sensor	OK	28 degrees C / 82 degrees F
SIB 0 Exhaust-B Temp Sensor	OK	28 degrees C / 82 degrees F
SIB 0 Exhaust-C Temp Sensor	OK	23 degrees C / 73 degrees F
SIB 0 PF0 Temp Sensor	OK	30 degrees C / 86 degrees F
SIB 0 PF1 Temp Sensor	OK	30 degrees C / 86 degrees F
SIB 0 PF2 Temp Sensor	OK	31 degrees C / 87 degrees F
SIB 0 PF3 Temp Sensor	OK	32 degrees C / 89 degrees F
SIB 0 PF4 Temp Sensor	OK	27 degrees C / 80 degrees F
SIB 0 PF5 Temp Sensor	OK	26 degrees C / 78 degrees F
SIB 1 Intake-A Temp Sensor	OK	22 degrees C / 71 degrees F
SIB 1 Intake-B Temp Sensor	OK	22 degrees C / 71 degrees F
SIB 1 Intake-C Temp Sensor	OK	16 degrees C / 60 degrees F
SIB 1 Exhaust-A Temp Sensor	OK	29 degrees C / 84 degrees F
SIB 1 Exhaust-B Temp Sensor	OK	31 degrees C / 87 degrees F
SIB 1 Exhaust-C Temp Sensor	OK	23 degrees C / 73 degrees F
SIB 1 PF0 Temp Sensor	OK	32 degrees C / 89 degrees F
SIB 1 PF1 Temp Sensor	OK	31 degrees C / 87 degrees F
SIB 1 PF2 Temp Sensor	OK	33 degrees C / 91 degrees F
SIB 1 PF3 Temp Sensor	OK	38 degrees C / 100 degrees F
SIB 1 PF4 Temp Sensor	OK	28 degrees C / 82 degrees F
SIB 1 PF5 Temp Sensor	OK	26 degrees C / 78 degrees F
SIB 2 Intake-A Temp Sensor	OK	24 degrees C / 75 degrees F
SIB 2 Intake-B Temp Sensor	OK	21 degrees C / 69 degrees F
SIB 2 Intake-C Temp Sensor	OK	16 degrees C / 60 degrees F
SIB 2 Exhaust-A Temp Sensor	OK	28 degrees C / 82 degrees F
SIB 2 Exhaust-B Temp Sensor	OK	32 degrees C / 89 degrees F
SIB 2 Exhaust-C Temp Sensor	OK	23 degrees C / 73 degrees F
SIB 2 PF0 Temp Sensor	OK	31 degrees C / 87 degrees F
SIB 2 PF1 Temp Sensor	OK	30 degrees C / 86 degrees F
SIB 2 PF2 Temp Sensor	OK	33 degrees C / 91 degrees F
SIB 2 PF3 Temp Sensor	OK	41 degrees C / 105 degrees F
SIB 2 PF4 Temp Sensor	OK	27 degrees C / 80 degrees F
SIB 2 PF5 Temp Sensor	OK	26 degrees C / 78 degrees F
SIB 3 Intake-A Temp Sensor	OK	22 degrees C / 71 degrees F
SIB 3 Intake-B Temp Sensor	OK	23 degrees C / 73 degrees F
SIB 3 Intake-C Temp Sensor	OK	16 degrees C / 60 degrees F
SIB 3 Exhaust-A Temp Sensor	OK	29 degrees C / 84 degrees F
SIB 3 Exhaust-B Temp Sensor	OK	31 degrees C / 87 degrees F
SIB 3 Exhaust-C Temp Sensor	OK	24 degrees C / 75 degrees F

SIB 3 PF0 Temp Sensor	OK	32 degrees C / 89 degrees F
SIB 3 PF1 Temp Sensor	OK	30 degrees C / 86 degrees F
SIB 3 PF2 Temp Sensor	OK	31 degrees C / 87 degrees F
SIB 3 PF3 Temp Sensor	OK	39 degrees C / 102 degrees F
SIB 3 PF4 Temp Sensor	OK	27 degrees C / 80 degrees F
SIB 3 PF5 Temp Sensor	OK	26 degrees C / 78 degrees F
SIB 4 Intake-A Temp Sensor	OK	22 degrees C / 71 degrees F
SIB 4 Intake-B Temp Sensor	OK	25 degrees C / 77 degrees F
SIB 4 Intake-C Temp Sensor	OK	16 degrees C / 60 degrees F
SIB 4 Exhaust-A Temp Sensor	OK	29 degrees C / 84 degrees F
SIB 4 Exhaust-B Temp Sensor	OK	32 degrees C / 89 degrees F
SIB 4 Exhaust-C Temp Sensor	OK	23 degrees C / 73 degrees F
SIB 4 PF0 Temp Sensor	OK	32 degrees C / 89 degrees F
SIB 4 PF1 Temp Sensor	OK	31 degrees C / 87 degrees F
SIB 4 PF2 Temp Sensor	OK	32 degrees C / 89 degrees F
SIB 4 PF3 Temp Sensor	OK	40 degrees C / 104 degrees F
SIB 4 PF4 Temp Sensor	OK	26 degrees C / 78 degrees F
SIB 4 PF5 Temp Sensor	OK	25 degrees C / 77 degrees F
SIB 5 Intake-A Temp Sensor	OK	21 degrees C / 69 degrees F
SIB 5 Intake-B Temp Sensor	OK	20 degrees C / 68 degrees F
SIB 5 Intake-C Temp Sensor	OK	16 degrees C / 60 degrees F
SIB 5 Exhaust-A Temp Sensor	OK	27 degrees C / 80 degrees F
SIB 5 Exhaust-B Temp Sensor	OK	27 degrees C / 80 degrees F
SIB 5 Exhaust-C Temp Sensor	OK	23 degrees C / 73 degrees F
SIB 5 PF0 Temp Sensor	OK	30 degrees C / 86 degrees F
SIB 5 PF1 Temp Sensor	OK	29 degrees C / 84 degrees F
SIB 5 PF2 Temp Sensor	OK	30 degrees C / 86 degrees F
SIB 5 PF3 Temp Sensor	OK	32 degrees C / 89 degrees F
SIB 5 PF4 Temp Sensor	OK	28 degrees C / 82 degrees F
SIB 5 PF5 Temp Sensor	OK	27 degrees C / 80 degrees F

#### show chassis environment (ACX2000 Universal Metro Router)

```
user@host> show chassis environment
```

Class	Item	Status	Measurement
	PCB Left	OK	44 degrees C / 111 degrees F
	SFP+ Xcvr	OK	50 degrees C / 122 degrees F
	FEB	OK	70 degrees C / 158 degrees F
	PCB Up	OK	63 degrees C / 145 degrees F
	PCB Mid	OK	66 degrees C / 150 degrees F
	Telecom Mod	OK	65 degrees C / 149 degrees F
	Routing Engine	OK	54 degrees C / 129 degrees F
	Heater off		

#### show chassis environment (ACX4000 Universal Metro Router)

On the ACX4000 router, the MIC output of the **show chassis environment** command varies depending on the number of temperature channels present in the installed MIC.

```
user@host> show chassis environment
```

Class	Item	Status	Measurement
Temp	PEM 0	OK	33 degrees C / 91 degrees F
	PEM 1	Absent	
	PCB Bottom	OK	30 degrees C / 86 degrees F
	PCB Middle	OK	34 degrees C / 93 degrees F
	BCM56445	OK	33 degrees C / 91 degrees F
	SFP+ Xcvr	OK	32 degrees C / 89 degrees F
	Fan tray inlet	OK	39 degrees C / 102 degrees F
	Exhaust	OK	30 degrees C / 86 degrees F

	Routing Engine	OK	32 degrees C / 89 degrees F
	Heater off		
Pic	PIC 0/0 Channel 0	OK	28 degrees C / 82 degrees F
	PIC 0/0 Channel 1	OK	29 degrees C / 84 degrees F
	PIC 0/0 Channel 2	OK	0 degrees C / 32 degrees F
	PIC 0/0 Channel 3	OK	0 degrees C / 32 degrees F
	PIC 0/0 Channel 4	OK	0 degrees C / 32 degrees F
	PIC 0/0 Channel 5	OK	0 degrees C / 32 degrees F
	PIC 0/0 Channel 6	OK	0 degrees C / 32 degrees F
	PIC 0/0 Channel 7	OK	0 degrees C / 32 degrees F
	PIC 0/0 Channel 8	OK	0 degrees C / 32 degrees F
	PIC 0/0 Channel 9	OK	0 degrees C / 32 degrees F
	PIC 1/0 Channel 0	OK	33 degrees C / 91 degrees F
	PIC 1/0 Channel 1	OK	31 degrees C / 87 degrees F
	PIC 1/0 Channel 2	OK	30 degrees C / 86 degrees F
	PIC 1/0 Channel 3	OK	0 degrees C / 32 degrees F
	PIC 1/0 Channel 4	OK	0 degrees C / 32 degrees F
	PIC 1/0 Channel 5	OK	0 degrees C / 32 degrees F
	PIC 1/0 Channel 6	OK	0 degrees C / 32 degrees F
	PIC 1/0 Channel 7	OK	0 degrees C / 32 degrees F
	PIC 1/0 Channel 8	OK	0 degrees C / 32 degrees F
	PIC 1/1 Channel 0	OK	31 degrees C / 87 degrees F
	PIC 1/1 Channel 1	OK	29 degrees C / 84 degrees F
	PIC 1/1 Channel 2	OK	28 degrees C / 82 degrees F
	PIC 1/1 Channel 3	OK	0 degrees C / 32 degrees F
	PIC 1/1 Channel 4	OK	0 degrees C / 32 degrees F
	PIC 1/1 Channel 5	OK	0 degrees C / 32 degrees F
	PIC 1/1 Channel 6	OK	0 degrees C / 32 degrees F
	PIC 1/1 Channel 7	OK	0 degrees C / 32 degrees F
	PIC 1/1 Channel 8	OK	0 degrees C / 32 degrees F
Fans	Fan 1	OK	Spinning at normal speed
	Fan 2	OK	Spinning at normal speed

### show chassis environment (ACX5048 Router)

user@host> show chassis environment

Class	Item	Status	Measurement
Power	FPC 0 Power Supply 0	Absent	
	FPC 0 Power Supply 1	OK	
Temp	FPC 0 Sensor TopMiddle E	OK	23 degrees C / 73 degrees F
	FPC 0 Sensor TopRight C	OK	18 degrees C / 64 degrees F
	FPC 0 Sensor TopLeft C	OK	21 degrees C / 69 degrees F
	FPC 0 Sensor TopRight E	OK	20 degrees C / 68 degrees F
	FPC 0 Sensor CPURight C	OK	23 degrees C / 73 degrees F
	FPC 0 Sensor CPULeft E	OK	22 degrees C / 71 degrees F
	FPC 0 Sensor CPU Die Temp	OK	39 degrees C / 102 degrees F
Fans	FPC 0 Fan Tray 0	OK	Spinning at normal speed
	FPC 0 Fan Tray 1	OK	Spinning at normal speed
	FPC 0 Fan Tray 2	OK	Spinning at normal speed
	FPC 0 Fan Tray 3	OK	Spinning at normal speed
	FPC 0 Fan Tray 4	OK	Spinning at normal speed

### show chassis environment (ACX5096 Router)

user@host> show chassis environment

Class	Item	Status	Measurement
Power	FPC 0 Power Supply 0	OK	
	FPC 0 Power Supply 1	OK	

Temp	FPC 0 Sensor TopMiddle E	OK	32 degrees C / 89 degrees F
	FPC 0 Sensor TopRight I	OK	29 degrees C / 84 degrees F
	FPC 0 Sensor TopLeft I	OK	23 degrees C / 73 degrees F
	FPC 0 Sensor TopRight E	OK	28 degrees C / 82 degrees F
	FPC 0 Sensor CPURight I	OK	30 degrees C / 86 degrees F
	FPC 0 Sensor CPULeft I	OK	29 degrees C / 84 degrees F
	FPC 0 Sensor Die Temp	OK	46 degrees C / 114 degrees F
	FPC 0 Mezz Temp	OK	23 degrees C / 73 degrees F
Fans	FPC 0 Fan Tray 0	OK	Spinning at normal speed
	FPC 0 Fan Tray 1	OK	Spinning at normal speed
	FPC 0 Fan Tray 2	OK	Spinning at normal speed

### show chassis environment (ACX500 Router)

```
user@host> show chassis environment
```

Class	Item	Status	Measurement
Power	Mod	OK	47 degrees C / 116 degrees F
	BCM54610	OK	46 degrees C / 114 degrees F
	DPLL31404	OK	45 degrees C / 113 degrees F
	CPLD	OK	42 degrees C / 107 degrees F
	1588-FPGA	OK	43 degrees C / 109 degrees F
	NPU	OK	62 degrees C / 143 degrees F
	MAC sensor 1	OK	40 degrees C / 104 degrees F
	MAC sensor 2	OK	38 degrees C / 100 degrees F
	SFP PHY	OK	38 degrees C / 100 degrees F
	Combo/RJ45 PHY	OK	37 degrees C / 98 degrees F
	SFP sensor 1	OK	35 degrees C / 95 degrees F
	SFP sensor 2	OK	33 degrees C / 91 degrees F
	SFP sensor 3	OK	32 degrees C / 89 degrees F
	Routing Engine	OK	54 degrees C / 129 degrees F
	Heater	off	

## show chassis environment fpc

---

<b>List of Syntax</b>	<a href="#">Syntax on page 270</a> <a href="#">Syntax (TX Matrix and TX Matrix Plus Routers) on page 270</a> <a href="#">Syntax (MX Series Routers) on page 270</a> <a href="#">Syntax (MX2010, MX10003, MX204, MX2008, and MX10008 Universal Routing Platforms) on page 270</a> <a href="#">Syntax (MX2020 Universal Routing Platforms) on page 270</a> <a href="#">Syntax (QFX Series) on page 270</a> <a href="#">Syntax (OCX Series) on page 270</a> <a href="#">Syntax (PTX3000 Series) on page 270</a> <a href="#">Syntax (PTX10008 Series) on page 271</a> <a href="#">Syntax (EX9251, EX9253 Switches) on page 271</a>
<b>Syntax</b>	show chassis environment fpc <slot>
<b>Syntax (TX Matrix and TX Matrix Plus Routers)</b>	show chassis environment fpc <lcc number> <slot>
<b>Syntax (MX Series Routers)</b>	show chassis environment fpc <slot> <all-members> <local> <member member-id>
<b>Syntax (MX2010, MX10003, MX204, MX2008, and MX10008 Universal Routing Platforms)</b>	show chassis environment fpc <slot>
<b>Syntax (MX2020 Universal Routing Platforms)</b>	show chassis environment fpc <slot> <satellite [fpc-slot slot-id  device-alias alias-name]
<b>Syntax (QFX Series)</b>	show chassis environment fpc <fpc-slot> interconnect-device name
<b>Syntax (OCX Series)</b>	show chassis environment fpc <fpc-slot>
<b>Syntax (PTX3000 Series)</b>	show chassis environment fpc <fpc-slot>

<b>Syntax (PTX10008 Series)</b>	<code>show chassis environment fpc</code> <code>&lt;fpc-slot&gt;</code>
<b>Syntax (EX9251, EX9253 Switches)</b>	<code>show chassis environment fpc</code> <code>&lt;fpc-slot&gt;</code>
<b>Release Information</b>	<p>Command introduced before Junos OS Release 7.4.</p> <p>Command introduced in Junos OS Release 9.0 for EX Series switches.</p> <p>Command introduced in Junos OS Release 11.1 for QFX Series.</p> <p>Command introduced in Junos OS Release 12.1X48 for PTX Series Packet Transport Routers.</p> <p>Command introduced in Junos OS Release 12.1 for T4000 Core Routers.</p> <p>Command introduced in Junos OS Release 12.3 for MX 2010 and MX2020 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.</p> <p><b>satellite</b> option introduced in Junos OS Release 14.2R3.</p> <p>Command introduced in Junos OS Release 17.2 for MX2008 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 17.2 for PTX10008 Routers.</p> <p>Command introduced in Junos OS Release 17.3 for MX10003 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 17.4 for MX204 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 18.1R1 for EX9251 switches.</p> <p>Command introduced in Junos OS Release 18.2 for EX9253 Switches.</p> <p>Command introduced in Junos OS Release 18.2R1 for MX10008 Universal Routing Platforms.</p>
<b>Description</b>	(M40e, M120, M160, M320, MX Series, T Series routers, EX Series, QFX Series, and PTX Series routers only) Display environmental information about Flexible PIC Concentrators (FPCs).
<b>Options</b>	<p><b>none</b>—Display environmental information about all FPCs. On a TX Matrix router, display environmental information about all FPCs on the TX Matrix router and its attached T640 routers. On a TX Matrix Plus router, display environmental information about all FPCs on the TX Matrix Plus router and its attached routers.</p> <p><b>all-members</b>—(MX Series routers only) (Optional) Display environmental information for the FPCs in all the members of the Virtual Chassis configuration.</p> <p><b>interconnect-device <i>name</i></b>—(QFabric systems only) (Optional) Display chassis environmental information for the Interconnect device.</p> <p><b>lcc <i>number</i></b>—(TX Matrix router and TX Matrix Plus router only) (Optional) Line-card chassis number.</p> <p>Replace <i>number</i> with the following values depending on the LCC configuration:</p> <ul style="list-style-type: none"> <li>• 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.</li> <li>• 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.</li> </ul>

- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(MX Series routers only) (Optional) Display environmental information for the FPCs in the local Virtual Chassis member.

**member *member-id***—(MX Series routers only) (Optional) Display environmental information for the FPCs in the specified member of the Virtual Chassis configuration. Replace *member-id* with a value of 0 or 1.

**satellite [*fpc-slot slot-id* | *device-alias alias-name*]**—(Junos Fusion only)(Optional) Display environmental information for the FPCs in the specified satellite device in a Junos Fusion, or for all satellite devices in the Junos Fusion if no satellite devices are specified.

***slot* or *fpc-slot***—(Optional) Display environmental information about an individual FPC:

- (TX Matrix and TX Matrix Plus routers only) On a TX Matrix router, if you specify the number of the T640 router by using only the **lcc *number*** option (the recommended method), replace ***slot*** with a value from 0 through 7. Similarly, on a TX Matrix Plus router, if you specify the number of the router by using only the **lcc *number*** option (the recommended method), replace ***slot*** with a value from 0 through 7. Otherwise, replace ***slot*** with a value from 0 through 31. For example, the following commands have the same result:

```
user@host> show chassis environment fpc 1 lcc 1
user@host> show chassis environment fpc 9
```

- M120 router—Replace ***slot*** with a value from 0 through 5.
- MX240 router—Replace ***slot*** with a value from 0 through 2.
- MX480 router—Replace ***slot*** with a value from 0 through 5.
- MX960 router—Replace ***slot*** with a value from 0 through 11.
- MX2010 router—Replace ***slot*** with a value from 0 through 9.
- MX2020 router—Replace ***slot*** with a value from 0 through 19.
- MX2008 router—Replace ***slot*** with a value from 0 through 9.
- Other routers—Replace ***slot*** with a value from 0 through 7.
- EX Series switches:
  - EX3200 switches and EX4200 standalone switches—Replace ***slot*** with 0.
  - EX4200 switches in a Virtual Chassis configuration—Replace ***slot*** with a value from 0 through 9 (switch's member ID).



- EX6210 switches—Replace **slot** with a value from 0 through 3 (line card only), 4 or 5 (line card or Switch Fabric and Routing Engine (SRE) module), or 6 through 9 (line card only).
- EX8208 switches—Replace **slot** with a value from 0 through 7 (line card).
- EX8216 switches—Replace **slot** with a value from 0 through 15 (line card).
- QFX3500 switches —Replace **fpc-slot** with 0 through 15.
- PTX5000 Packet Transport Router—Replace **fpc-slot** with 0 through 7.
- PTX3000 Packet Transport Router—Replace **fpc-slot** with 0 through 15.

**Required Privilege Level** view

- Related Documentation**
- [request chassis fpc on page 127](#)
  - [show chassis fpc on page 424](#)
  - *show chassis fpc-feb-connectivity*
  - *Configuring the Junos OS to Resynchronize FPC Sequence Numbers with Active FPCs when an FPC Comes Online*
  - *MX960 Flexible PIC Concentrator Description*

- List of Sample Output**
- [show chassis environment fpc \(M120 Router\) on page 275](#)
  - [show chassis environment fpc \(M160 Router\) on page 276](#)
  - [show chassis environment fpc \(M320 Router\) on page 276](#)
  - [show chassis environment fpc \(MX2020 Router\) on page 277](#)
  - [show chassis environment fpc \(MX2010 Router\) on page 280](#)
  - [show chassis environment fpc \(MX2008 Router\) on page 283](#)
  - [show chassis environment fpc \(MX240 Router\) on page 286](#)
  - [show chassis environment fpc \(MX480 Router\) on page 287](#)
  - [show chassis environment fpc \(MX960 Router\) on page 288](#)
  - [show chassis environment fpc \(MX480 Router with 100-Gigabit Ethernet CFP\) on page 289](#)
  - [show chassis environment fpc \(MX240, MX480, MX960 with Application Services Modular Line Card on page 290](#)
  - [show chassis environment fpc \(MX10003 Router\) on page 290](#)
  - [show chassis environment fpc \(MX204 Router\) on page 294](#)
  - [show chassis environment fpc \(MX10008 Router\) on page 294](#)
  - [show chassis environment fpc \(T320, T640, and T1600 Routers\) on page 301](#)
  - [show chassis environment fpc \(T4000 Router\) on page 302](#)
  - [show chassis environment fpc lcc \(TX Matrix Router\) on page 307](#)
  - [show chassis environment fpc lcc \(TX Matrix Plus Router\) on page 307](#)
  - [show chassis environment fpc \(QFX Series and OCX Series\) on page 308](#)
  - [show chassis environment fpc interconnect-device \(QFabric Systems\) on page 308](#)
  - [show chassis environment fpc 5\(PTX3000 Packet Transport Router\) on page 309](#)

[show chassis environment fpc 0 \(PTX5000 Packet Transport Router\) on page 309](#)  
[show chassis environment fpc 07 \(PTX5000 Packet Transport Router with FPC2-PTX-P1A\) on page 310](#)  
[show chassis environment fpc \(PTX10008 router\) on page 311](#)  
[show chassis environment fpc \(PTX10016 router\) on page 314](#)  
[show chassis environment FPC 1 \(MX Routers with Media Services Blade \[MSB\]\) on page 317](#)  
[show chassis environment fpc \(EX9251 Switches\) on page 318](#)  
[show chassis environment fpc \(EX9253 Switches\) on page 318](#)

**Output Fields** Table 10 on page 274 lists the output fields for the **show chassis environment fpc** command. Output fields are listed in the approximate order in which they appear.

*Table 10: show chassis environment fpc Output Fields*

Field Name	Field Description
<b>State</b>	<p>Status of the FPC:</p> <ul style="list-style-type: none"> <li>• <b>Unknown</b>—FPC is not detected by the router.</li> <li>• <b>Empty</b>—No FPC is present.</li> <li>• <b>Present</b>—FPC is detected by the chassis daemon but is either not supported by the current version of the Junos OS, or the FPC is coming up but not yet online.</li> <li>• <b>Ready</b>—FPC is in intermediate or transition state.</li> <li>• <b>Announce online</b>—Intermediate state during which the FPC is coming up but not yet online, and the chassis manager acknowledges the chassisd FPC online initiative.</li> <li>• <b>Online</b>—FPC is online and running.</li> <li>• <b>Offline</b>—FPC is powered down.</li> <li>• <b>Diagnostics</b>—FPC is set to operate in diagnostics mode.</li> </ul>
<b>Temperature</b>	(M40e and M160 routers and QFX Series only) Temperature of the air flowing past the FPC.
<b>PMB Temperature</b>	<p>(PTX Series only) Temperature of the air flowing past the PMB (bottom of the FPC).</p> <p>The PTX5000 Packet Transport Router with FPC2-PTX-P1A include multiple temperatures for PMB (<b>TEMPO</b> and <b>TEMP1</b>).</p>
<b>PMB CPU Temperature</b>	(PTX5000 Packet Transport Router with FPC2-PTX-P1A only) Temperature of the air flowing past the PMB CPU.
<b>Temperature Intake</b>	(M320 routers, MX2010 routers, MX2020 routers, MX2008 routers, and PTX Series only) Temperature of the air flowing into the chassis.
<b>Temperature Top</b>	(T Series routers only) Temperature of the air flowing past the top of the FPC.
<b>Temperature Exhaust</b>	<p>(M120 and M320 routers, MX2010 routers, MX2020 routers, MX2008 routers, and PTX Series only) Temperature of the air flowing out of the chassis.</p> <p>The PTX Series Packet Transport Routers, and the MX2010, MX2020, and MX2008 routers include exhaust temperatures for multiple zones (<b>Exhaust A</b> and <b>Exhaust B</b>).</p>
<b>Temperature Bottom</b>	(T Series routers only) Temperature of the air flowing past the bottom of the FPC.

Table 10: show chassis environment fpc Output Fields (continued)

Field Name	Field Description
<b>TL <i>n</i> Temperature</b>	(PTX Series only) Temperature of the air flowing past the specified TL area of the packet forwarding engine (PFE) on the FPC.
<b>TQ <i>n</i> Temperature</b>	(PTX Series only) Temperature of the air flowing past the specified TQ area of the packet forwarding engine (PFE) on the FPC.
<b>Temperature MMBO</b>	(T640 router only) Temperature of the air flowing past the type 3 FPC.
<b>Temperature MMB1</b>	(M320 and T Series routers only) Temperature of the air flowing past the type 1, type 2, and type 3 FPC.
<b>Power</b>	Information about the voltage supplied to the FPC. The left column displays the required power, in volts. The right column displays the measured power, in millivolts.
<b>CMB Revision or BUS revision</b>	Revision level of the chassis management bus device (M Series router) or bus (T Series routers).

## Sample Output

### show chassis environment fpc (M120 Router)

```

user@host> show chassis environment fpc
FPC 2 status:
  State                               Online
  Temperature Exhaust A               32 degrees C / 89 degrees F
  Temperature Exhaust B               31 degrees C / 87 degrees F
  Power A-Board
    1.2 V                             1202 mV
    1.5 V                             1508 mV
    1.8 V                             1798 mV
    2.5 V                             2507 mV
    3.3 V                             3351 mV
    5.0 V                             4995 mV
    3.3 V bias                         3296 mV
    1.2 V Rocket IO                   1205 mV
    1.5 V Rocket IO                   1501 mV
  I2C Slave Revision                 12
FPC 3 status:
  State                               Online
  Temperature Exhaust A               31 degrees C / 87 degrees F
  Temperature Exhaust B               33 degrees C / 91 degrees F
  Power A-Board
    1.2 V                             1211 mV
    1.5 V                             1501 mV
    1.8 V                             1798 mV
    2.5 V                             2471 mV
    3.3 V                             3293 mV
    5.0 V                             4930 mV
    3.3 V bias                         3296 mV
    1.2 V Rocket IO                   1205 mV
    1.5 V Rocket IO                   1501 mV
  Power B-Board
    1.2 V                             1214 mV

```

```

1.5 V          1501 mV
2.5 V          2471 mV
3.3 V          3300 mV
5.0 V          4943 mV
3.3 V bias     3296 mV
1.2 V Rocket IO 1205 mV
1.5 V Rocket IO 1501 mV
I2C Slave Revision 12
FPC 4 status:
State          Online
Temperature Exhaust A 32 degrees C / 89 degrees F
Temperature Exhaust B 30 degrees C / 86 degrees F
Power A-Board
1.2 V          1195 mV
1.5 V          1504 mV
1.8 V          1801 mV
2.5 V          2504 mV
3.3 V          3293 mV
5.0 V          4917 mV
3.3 V bias     3296 mV
1.2 V Rocket IO 1202 mV
1.5 V Rocket IO 1492 mV
I2C Slave Revision 12

```

#### show chassis environment fpc (M160 Router)

```

user@host> show chassis environment fpc
FPC 0 status:
State          Online
Temperature     42 degrees C / 107 degrees F
Power:
1.5 V          1500 mV
2.5 V          2509 mV
3.3 V          3308 mV
5.0 V          4991 mV
5.0 V bias     4952 mV
8.0 V bias     8307 mV
CMB Revision    12
FPC 1 status:
State          Online
Temperature     45 degrees C / 113 degrees F
Power:
1.5 V          1498 mV
2.5 V          2501 mV
3.3 V          3319 mV
5.0 V          5020 mV
5.0 V bias     5025 mV
8.0 V bias     8307 mV
CMB Revision    12

```

#### show chassis environment fpc (M320 Router)

```

user@host> show chassis environment fpc
FPC 0 status:
State          Online
Temperature Intake 27 degrees C / 80 degrees F
Temperature Exhaust 38 degrees C / 100 degrees F
Temperature MMB1   31 degrees C / 87 degrees F
Power:
1.5 V          1487 mV

```

```

1.5 V *          1494 mV
1.8 V            1821 mV
2.5 V            2533 mV
3.3 V            3323 mV
5.0 V            5028 mV
3.3 V bias       3296 mV
5.0 V bias       4984 mV
CMB Revision     16
FPC 1 status:
State            Online
Temperature Intake 27 degrees C / 80 degrees F
Temperature Exhaust 37 degrees C / 98 degrees F
Temperature MMB1   32 degrees C / 89 degrees F
Power:
1.5 V            1504 mV
1.5 V *          1499 mV
1.8 V            1820 mV
2.5 V            2529 mV
3.3 V            3328 mV
5.0 V            5013 mV
3.3 V bias       3294 mV
5.0 V bias       4984 mV
CMB Revision     16
FPC 2 status:
State            Online
Temperature Intake 28 degrees C / 82 degrees F
Temperature Exhaust 38 degrees C / 100 degrees F
Temperature MMB1   32 degrees C / 89 degrees F
Power:
1.5 V            1498 mV
1.5 V *          1487 mV
1.8 V            1816 mV
2.5 V            2531 mV
3.3 V            3324 mV
5.0 V            5025 mV
3.3 V bias       3277 mV
5.0 V bias       5013 mV
CMB Revision     17
FPC 3 status:
...

```

### show chassis environment fpc (MX2020 Router)

```

user@host> show chassis environment fpc
FPC 0 status:
State            Online
Temperature Intake 41 degrees C / 105 degrees F
Temperature Exhaust A 48 degrees C / 118 degrees F
Temperature Exhaust B 60 degrees C / 140 degrees F
Temperature LU 0 TSen 56 degrees C / 132 degrees F
Temperature LU 0 Chip 59 degrees C / 138 degrees F
Temperature LU 1 TSen 56 degrees C / 132 degrees F
Temperature LU 1 Chip 61 degrees C / 141 degrees F
Temperature LU 2 TSen 56 degrees C / 132 degrees F
Temperature LU 2 Chip 52 degrees C / 125 degrees F
Temperature LU 3 TSen 56 degrees C / 132 degrees F
Temperature LU 3 Chip 52 degrees C / 125 degrees F
Temperature MQ 0 TSen 49 degrees C / 120 degrees F
Temperature MQ 0 Chip 49 degrees C / 120 degrees F
Temperature MQ 1 TSen 49 degrees C / 120 degrees F
Temperature MQ 1 Chip 52 degrees C / 125 degrees F

```

Temperature MQ 2 TSen	49 degrees C / 120 degrees F
Temperature MQ 2 Chip	45 degrees C / 113 degrees F
Temperature MQ 3 TSen	49 degrees C / 120 degrees F
Temperature MQ 3 Chip	46 degrees C / 114 degrees F
Power	
AS-BIAS3V3-z12105	3299 mV
AS-VDD1V8-z12006	1807 mV
AS-VDD2V5-z12006	2512 mV
AS-AVDD1V0-z12004	997 mV
AS-PCIE_1V0-z12004	996 mV
AS-VDD3V3-z12004	3294 mV
AS-VDD_1V5A-z12004	1501 mV
AS-VDD_1V5B-z12004	1498 mV
AS-LU0_1V0-z12004	998 mV
AS-LU1_1V0-z12004	1002 mV
AS-MQ0_1V0-z12004	999 mV
AS-MQ1_1V0-z12004	994 mV
AS-LU2_1V0-z12004	1000 mV
AS-LU3_1V0-z12004	998 mV
AS-MQ2_1V0-z12004	1002 mV
AS-MQ3_1V0-z12004	999 mV
AS-PMB_1V1-z12006	1096 mV
I2C Slave Revision	68
FPC 1 status:	
State	Online
Temperature Intake	39 degrees C / 102 degrees F
Temperature Exhaust A	48 degrees C / 118 degrees F
Temperature Exhaust B	55 degrees C / 131 degrees F
Temperature LU 0 TSen	52 degrees C / 125 degrees F
Temperature LU 0 Chip	54 degrees C / 129 degrees F
Temperature LU 1 TSen	52 degrees C / 125 degrees F
Temperature LU 1 Chip	56 degrees C / 132 degrees F
Temperature LU 2 TSen	52 degrees C / 125 degrees F
Temperature LU 2 Chip	49 degrees C / 120 degrees F
Temperature LU 3 TSen	52 degrees C / 125 degrees F
Temperature LU 3 Chip	50 degrees C / 122 degrees F
Temperature MQ 0 TSen	48 degrees C / 118 degrees F
Temperature MQ 0 Chip	48 degrees C / 118 degrees F
Temperature MQ 1 TSen	48 degrees C / 118 degrees F
Temperature MQ 1 Chip	51 degrees C / 123 degrees F
Temperature MQ 2 TSen	48 degrees C / 118 degrees F
Temperature MQ 2 Chip	45 degrees C / 113 degrees F
Temperature MQ 3 TSen	48 degrees C / 118 degrees F
Temperature MQ 3 Chip	45 degrees C / 113 degrees F
Power	
AS-BIAS3V3-z12105	3291 mV
AS-VDD1V8-z12006	1786 mV
AS-VDD2V5-z12006	2496 mV
AS-AVDD1V0-z12004	1000 mV
AS-PCIE_1V0-z12004	1000 mV
AS-VDD3V3-z12004	3294 mV
AS-VDD_1V5A-z12004	1500 mV
AS-VDD_1V5B-z12004	1498 mV
AS-LU0_1V0-z12004	1003 mV
AS-LU1_1V0-z12004	1000 mV
AS-MQ0_1V0-z12004	1000 mV
AS-MQ1_1V0-z12004	995 mV
AS-LU2_1V0-z12004	1002 mV
AS-LU3_1V0-z12004	997 mV
AS-MQ2_1V0-z12004	1000 mV
AS-MQ3_1V0-z12004	998 mV

```

AS-PMB_1V1-z12006      1096 mV
I2C Slave Revision      68
FPC 2 status:
State                   Online
Temperature Intake      39 degrees C / 102 degrees F
Temperature Exhaust A   48 degrees C / 118 degrees F
Temperature Exhaust B   58 degrees C / 136 degrees F
Temperature LU 0 TSen    55 degrees C / 131 degrees F
Temperature LU 0 Chip    57 degrees C / 134 degrees F
Temperature LU 1 TSen    55 degrees C / 131 degrees F
Temperature LU 1 Chip    63 degrees C / 145 degrees F
Temperature LU 2 TSen    55 degrees C / 131 degrees F
Temperature LU 2 Chip    51 degrees C / 123 degrees F
Temperature LU 3 TSen    55 degrees C / 131 degrees F
Temperature LU 3 Chip    52 degrees C / 125 degrees F
Temperature MQ 0 TSen    48 degrees C / 118 degrees F
Temperature MQ 0 Chip    50 degrees C / 122 degrees F
Temperature MQ 1 TSen    48 degrees C / 118 degrees F
Temperature MQ 1 Chip    52 degrees C / 125 degrees F
Temperature MQ 2 TSen    48 degrees C / 118 degrees F
Temperature MQ 2 Chip    47 degrees C / 116 degrees F
Temperature MQ 3 TSen    48 degrees C / 118 degrees F
Temperature MQ 3 Chip    47 degrees C / 116 degrees F
Power
AS-BIAS3V3-z12105      3299 mV
AS-VDD1V8-z12006      1805 mV
AS-VDD2V5-z12006      2510 mV
AS-AVDD1V0-z12004      999 mV
AS-PCIE_1V0-z12004      998 mV
AS-VDD3V3-z12004      3296 mV
AS-VDD_1V5A-z12004     1492 mV
AS-VDD_1V5B-z12004     1497 mV
AS-LU0_1V0-z12004      997 mV
AS-LU1_1V0-z12004     1000 mV
AS-MQ0_1V0-z12004      998 mV
AS-MQ1_1V0-z12004     1001 mV
AS-LU2_1V0-z12004      996 mV
AS-LU3_1V0-z12004      995 mV
AS-MQ2_1V0-z12004      998 mV
AS-MQ3_1V0-z12004      997 mV
AS-PMB_1V1-z12006      1100 mV
I2C Slave Revision      68
FPC 3 status:
State                   Online
Temperature Intake      41 degrees C / 105 degrees F
Temperature Exhaust A   48 degrees C / 118 degrees F
Temperature Exhaust B   58 degrees C / 136 degrees F
Temperature LU 0 TSen    56 degrees C / 132 degrees F
Temperature LU 0 Chip    59 degrees C / 138 degrees F
Temperature LU 1 TSen    56 degrees C / 132 degrees F
Temperature LU 1 Chip    61 degrees C / 141 degrees F
Temperature LU 2 TSen    56 degrees C / 132 degrees F
Temperature LU 2 Chip    51 degrees C / 123 degrees F
Temperature LU 3 TSen    56 degrees C / 132 degrees F
Temperature LU 3 Chip    53 degrees C / 127 degrees F
Temperature MQ 0 TSen    50 degrees C / 122 degrees F
Temperature MQ 0 Chip    51 degrees C / 123 degrees F
Temperature MQ 1 TSen    50 degrees C / 122 degrees F
Temperature MQ 1 Chip    55 degrees C / 131 degrees F
Temperature MQ 2 TSen    50 degrees C / 122 degrees F
Temperature MQ 2 Chip    47 degrees C / 116 degrees F

```

```

Temperature MQ 3 TSen      50 degrees C / 122 degrees F
Temperature MQ 3 Chip      50 degrees C / 122 degrees F
Power
  AS-BIAS3V3-z12105      3305 mV
  AS-VDD1V8-z12006      1810 mV
  AS-VDD2V5-z12006      2508 mV
  AS-AVDD1V0-z12004      999 mV
  AS-PCIE_1V0-z12004     1001 mV
  AS-VDD3V3-z12004      3294 mV
  AS-VDD_1V5A-z12004     1500 mV
  AS-VDD_1V5B-z12004     1498 mV
  AS-LU0_1V0-z12004      998 mV
  AS-LU1_1V0-z12004      998 mV
  AS-MQ0_1V0-z12004      999 mV
  AS-MQ1_1V0-z12004      998 mV
  AS-LU2_1V0-z12004     1000 mV
  AS-LU3_1V0-z12004     1001 mV
  AS-MQ2_1V0-z12004      996 mV
  AS-MQ3_1V0-z12004      998 mV
  AS-PMB_1V1-z12006     1098 mV
I2C Slave Revision      68
FPC 4 status:
...
```

#### show chassis environment fpc (MX2010 Router)

```

user@host> show chassis environment fpc
FPC 0 status:
State      Online
Temperature Intake      36 degrees C / 96 degrees F
Temperature Exhaust A   42 degrees C / 107 degrees F
Temperature Exhaust B   51 degrees C / 123 degrees F
Temperature LU 0 TSen    49 degrees C / 120 degrees F
Temperature LU 0 Chip    50 degrees C / 122 degrees F
Temperature LU 1 TSen    49 degrees C / 120 degrees F
Temperature LU 1 Chip    54 degrees C / 129 degrees F
Temperature LU 2 TSen    49 degrees C / 120 degrees F
Temperature LU 2 Chip    45 degrees C / 113 degrees F
Temperature LU 3 TSen    49 degrees C / 120 degrees F
Temperature LU 3 Chip    46 degrees C / 114 degrees F
Temperature MQ 0 TSen    40 degrees C / 104 degrees F
Temperature MQ 0 Chip    41 degrees C / 105 degrees F
Temperature MQ 1 TSen    40 degrees C / 104 degrees F
Temperature MQ 1 Chip    44 degrees C / 111 degrees F
Temperature MQ 2 TSen    40 degrees C / 104 degrees F
Temperature MQ 2 Chip    38 degrees C / 100 degrees F
Temperature MQ 3 TSen    40 degrees C / 104 degrees F
Temperature MQ 3 Chip    41 degrees C / 105 degrees F
Power
  AS-BIAS3V3-z12105      3300 mV
  AS-VDD1V8-z12006      1805 mV
  AS-VDD2V5-z12006      2505 mV
  AS-AVDD1V0-z12004      998 mV
  AS-PCIE_1V0-z12004     999 mV
  AS-VDD3V3-z12004      3303 mV
  AS-VDD_1V5A-z12004     1497 mV
  AS-VDD_1V5B-z12004     1497 mV
  AS-LU0_1V0-z12004      998 mV
  AS-LU1_1V0-z12004     1003 mV
  AS-MQ0_1V0-z12004      998 mV
  AS-MQ1_1V0-z12004      998 mV
```



```

AS-LU2_1V0-z12004      997 mV
AS-LU3_1V0-z12004      1001 mV
AS-MQ2_1V0-z12004      996 mV
AS-MQ3_1V0-z12004      994 mV
AS-PMB_1V1-z12006      1097 mV
I2C Slave Revision      68
FPC 1 status:
State                   Online
Temperature Intake       34 degrees C / 93 degrees F
Temperature Exhaust A    46 degrees C / 114 degrees F
Temperature Exhaust B    54 degrees C / 129 degrees F
Temperature LU 0 TSen    45 degrees C / 113 degrees F
Temperature LU 0 Chip    55 degrees C / 131 degrees F
Temperature LU 1 TSen    45 degrees C / 113 degrees F
Temperature LU 1 Chip    44 degrees C / 111 degrees F
Temperature LU 2 TSen    45 degrees C / 113 degrees F
Temperature LU 2 Chip    50 degrees C / 122 degrees F
Temperature LU 3 TSen    45 degrees C / 113 degrees F
Temperature LU 3 Chip    58 degrees C / 136 degrees F
Temperature XM 0 TSen    45 degrees C / 113 degrees F
Temperature XM 0 Chip    51 degrees C / 123 degrees F
Temperature XF 0 TSen    45 degrees C / 113 degrees F
Temperature XF 0 Chip    63 degrees C / 145 degrees F
Temperature PLX Switch TSen45 degrees C / 113 degrees F
Temperature PLX Switch Chip47 degrees C / 116 degrees F
Power
MPC-BIAS3V3-z12105      3300 mV
MPC-VDD3V3-z16100       3294 mV
MPC-VDD2V5-z16100       2505 mV
MPC-VDD1V8-z12004       1796 mV
MPC-AVDD1V0-z12004      991 mV
MPC-VDD1V2-z16100       1196 mV
MPC-VDD1V5A-z12004      1491 mV
MPC-VDD1V5B-z12004      1492 mV
MPC-XF_0V9-z12004       996 mV
MPC-PCIE_1V0-z16100     1003 mV
MPC-LU0_1V0-z12004      996 mV
MPC-LU1_1V0-z12004      996 mV
MPC-LU2_1V0-z12004      998 mV
MPC-LU3_1V0-z12004      994 mV
MPC-12VA-BMR453         12031 mV
MPC-12VB-BMR453         12003 mV
MPC-PMB_1V1-z12006      1104 mV
MPC-PMB_1V2-z12106      1194 mV
MPC-XM_0V9-vt273m       911 mV
I2C Slave Revision      110
FPC 8 status:
State                   Online
Temperature Intake       32 degrees C / 89 degrees F
Temperature Exhaust A    44 degrees C / 111 degrees F
Temperature Exhaust B    37 degrees C / 98 degrees F
Temperature LU 0 TCAM TSen 41 degrees C / 105 degrees F
Temperature LU 0 TCAM Chip 49 degrees C / 120 degrees F
Temperature LU 0 TSen    41 degrees C / 105 degrees F
Temperature LU 0 Chip    52 degrees C / 125 degrees F
Temperature MQ 0 TSen    41 degrees C / 105 degrees F
Temperature MQ 0 Chip    47 degrees C / 116 degrees F
Temperature LU 1 TCAM TSen 39 degrees C / 102 degrees F
Temperature LU 1 TCAM Chip 42 degrees C / 107 degrees F
Temperature LU 1 TSen    39 degrees C / 102 degrees F
Temperature LU 1 Chip    46 degrees C / 114 degrees F

```

Temperature MQ 1 TSen	39 degrees C / 102 degrees F
Temperature MQ 1 Chip	45 degrees C / 113 degrees F
Power	
MPC-BIAS3V3-z12105	3296 mV
MPC-VDD3V3-z12006	3298 mV
MPC-VDD2V5-z12006	2505 mV
MPC-TCAM_1V0-z12004	997 mV
MPC-AVDD1V0-z12006	1007 mV
MPC-VDD1V8-z12006	1803 mV
MPC-PCIE_1V0-z12006	1004 mV
MPC-LU0_1V0-z12004	1000 mV
MPC-MQ0_1V0-z12004	999 mV
MPC-VDD_1V5-z12004	1498 mV
MPC-PMB_1V1-z12006	1102 mV
MPC-9VA-BMR453	9009 mV
MPC-9VB-BMR453	8960 mV
MPC-PMB_1V2-z12105	1202 mV
MPC-LU1_1V0-z12004	1005 mV
MPC-MQ1_1V0-z12004	1000 mV
I2C Slave Revision	70
FPC 9 status:	
State	Online
Temperature Intake	34 degrees C / 93 degrees F
Temperature Exhaust A	41 degrees C / 105 degrees F
Temperature Exhaust B	54 degrees C / 129 degrees F
Temperature LU 0 TSen	51 degrees C / 123 degrees F
Temperature LU 0 Chip	52 degrees C / 125 degrees F
Temperature LU 1 TSen	51 degrees C / 123 degrees F
Temperature LU 1 Chip	55 degrees C / 131 degrees F
Temperature LU 2 TSen	51 degrees C / 123 degrees F
Temperature LU 2 Chip	47 degrees C / 116 degrees F
Temperature LU 3 TSen	51 degrees C / 123 degrees F
Temperature LU 3 Chip	47 degrees C / 116 degrees F
Temperature MQ 0 TSen	40 degrees C / 104 degrees F
Temperature MQ 0 Chip	42 degrees C / 107 degrees F
Temperature MQ 1 TSen	40 degrees C / 104 degrees F
Temperature MQ 1 Chip	44 degrees C / 111 degrees F
Temperature MQ 2 TSen	40 degrees C / 104 degrees F
Temperature MQ 2 Chip	38 degrees C / 100 degrees F
Temperature MQ 3 TSen	40 degrees C / 104 degrees F
Temperature MQ 3 Chip	40 degrees C / 104 degrees F
Power	
AS-BIAS3V3-z12105	3302 mV
AS-VDD1V8-z12006	1808 mV
AS-VDD2V5-z12006	2513 mV
AS-AVDD1V0-z12004	997 mV
AS-PCIE_1V0-z12004	999 mV
AS-VDD3V3-z12004	3294 mV
AS-VDD_1V5A-z12004	1503 mV
AS-VDD_1V5B-z12004	1502 mV
AS-LU0_1V0-z12004	996 mV
AS-LU1_1V0-z12004	999 mV
AS-MQ0_1V0-z12004	997 mV
AS-MQ1_1V0-z12004	999 mV
AS-LU2_1V0-z12004	997 mV
AS-LU3_1V0-z12004	998 mV
AS-MQ2_1V0-z12004	1000 mV
AS-MQ3_1V0-z12004	1000 mV
AS-PMB_1V1-z12006	1102 mV
I2C Slave Revision	68

## show chassis environment fpc (MX2008 Router)

```

user@host> show chassis environment fpc
FPC 0 status:
State                               Online
Temperature Intake                  29 degrees C / 84 degrees F
Temperature Exhaust A               43 degrees C / 109 degrees F
Temperature Exhaust B               42 degrees C / 107 degrees F
Temperature XL 0 TSen                38 degrees C / 100 degrees F
Temperature XL 0 Chip                53 degrees C / 127 degrees F
Temperature XL 0 XR2 0 TSen38 degrees C / 100 degrees F
Temperature XL 0 XR2 0 Chip60 degrees C / 140 degrees F
Temperature XL 0 XR2 1 TSen38 degrees C / 100 degrees F
Temperature XL 0 XR2 1 Chip60 degrees C / 140 degrees F
Temperature XL 1 TSen                30 degrees C / 86 degrees F
Temperature XL 1 Chip                43 degrees C / 109 degrees F
Temperature XL 1 XR2 0 TSen30 degrees C / 86 degrees F
Temperature XL 1 XR2 0 Chip50 degrees C / 122 degrees F
Temperature XL 1 XR2 1 TSen30 degrees C / 86 degrees F
Temperature XL 1 XR2 1 Chip50 degrees C / 122 degrees F
Temperature XM 0 TSen                42 degrees C / 107 degrees F
Temperature XM 0 Chip                49 degrees C / 120 degrees F
Temperature XM 1 TSen                42 degrees C / 107 degrees F
Temperature XM 1 Chip                42 degrees C / 107 degrees F
Temperature XM 2 TSen                42 degrees C / 107 degrees F
Temperature XM 2 Chip                42 degrees C / 107 degrees F
Temperature XM 3 TSen                42 degrees C / 107 degrees F
Temperature XM 3 Chip                40 degrees C / 104 degrees F
Temperature PCIE Switch TSen42 degrees C / 107 degrees F
Temperature PCIE Switch Chip22 degrees C / 71 degrees F
Power
MPC-VDD_3V3-vt273m                 3304 mV
MPC-VDD_2V5-vt273m                 2503 mV
MPC-VDD_1V5-vt273m                 1499 mV
MPC-PCIE_0V9-vt273m                 900 mV
MPC-VDD_1V8-vt273m                 1799 mV
MPC-VDD_1V2-vt273m                 1203 mV
MPC-XM01_AVDD_1V0-vt273            1001 mV
MPC-XM23_AVDD_1V0-vt273            1001 mV
MPC-XM0_0V9-vt273m                 900 mV
MPC-XM1_0V9-vt273m                 901 mV
MPC-XM2_0V9-vt273m                 903 mV
MPC-XM3_0V9-vt273m                 899 mV
MPC-XL0_XR0_0V9-vt273m             899 mV
MPC-XL0_XR1_0V9-vt273m             903 mV
MPC-XL0_0V9-vt273m                 899 mV
MPC-XL0_AVDD_1V0-vt273m            1000 mV
MPC-XL0_VDD_1V5-vt273m             1498 mV
MPC-XL0_XR_1V2-vt273m              1200 mV
MPC-XL1_XR0_0V9-vt273m             899 mV
MPC-XL1_XR1_0V9-vt273m             899 mV
MPC-XL1_0V9-vt273m                 900 mV
MPC-XL1_AVDD_1V0-vt273m            1000 mV
MPC-XL1_VDD_1V5-vt273m             1501 mV
MPC-XL1_XR_1V2-vt273m              1199 mV
MPC-PMB-1V05-ltc2978               1049 mV
MPC-PMB-1V5-ltc2978                1500 mV
MPC-PMB-2V5-ltc2978                2500 mV
MPC-PMB-3V3-ltc2978                3298 mV
I2C Slave Revision                  20

```

## FPC 1 status:

State	Online
Temperature Intake	29 degrees C / 84 degrees F
Temperature Exhaust A	52 degrees C / 125 degrees F
Temperature Exhaust B	44 degrees C / 111 degrees F
Temperature EA0 TSen	55 degrees C / 131 degrees F
Temperature EA0 Chip	48 degrees C / 118 degrees F
Temperature EA0_XR0 TSen	55 degrees C / 131 degrees F
Temperature EA0_XR0 Chip	57 degrees C / 134 degrees F
Temperature EA0_XR1 TSen	55 degrees C / 131 degrees F
Temperature EA0_XR1 Chip	54 degrees C / 129 degrees F
Temperature EA1 TSen	55 degrees C / 131 degrees F
Temperature EA1 Chip	50 degrees C / 122 degrees F
Temperature EA1_XR0 TSen	55 degrees C / 131 degrees F
Temperature EA1_XR0 Chip	59 degrees C / 138 degrees F
Temperature EA1_XR1 TSen	55 degrees C / 131 degrees F
Temperature EA1_XR1 Chip	59 degrees C / 138 degrees F
Temperature PEX TSen	55 degrees C / 131 degrees F
Temperature PEX Chip	39 degrees C / 102 degrees F
Temperature EA2 TSen	43 degrees C / 109 degrees F
Temperature EA2 Chip	39 degrees C / 102 degrees F
Temperature EA2_XR0 TSen	43 degrees C / 109 degrees F
Temperature EA2_XR0 Chip	45 degrees C / 113 degrees F
Temperature EA2_XR1 TSen	43 degrees C / 109 degrees F
Temperature EA2_XR1 Chip	43 degrees C / 109 degrees F
Temperature EA3 TSen	43 degrees C / 109 degrees F
Temperature EA3 Chip	41 degrees C / 105 degrees F
Temperature EA3_XR0 TSen	43 degrees C / 109 degrees F
Temperature EA3_XR0 Chip	50 degrees C / 122 degrees F
Temperature EA3_XR1 TSen	43 degrees C / 109 degrees F
Temperature EA3_XR1 Chip	46 degrees C / 114 degrees F
Temperature EA0_HMC0 Logic die	61 degrees C / 141 degrees F
Temperature EA0_HMC0 DRAM botm	58 degrees C / 136 degrees F
Temperature EA0_HMC1 Logic die	62 degrees C / 143 degrees F
Temperature EA0_HMC1 DRAM botm	59 degrees C / 138 degrees F
Temperature EA0_HMC2 Logic die	59 degrees C / 138 degrees F
Temperature EA0_HMC2 DRAM botm	56 degrees C / 132 degrees F
Temperature EA1_HMC0 Logic die	67 degrees C / 152 degrees F
Temperature EA1_HMC0 DRAM botm	64 degrees C / 147 degrees F
Temperature EA1_HMC1 Logic die	65 degrees C / 149 degrees F
Temperature EA1_HMC1 DRAM botm	62 degrees C / 143 degrees F
Temperature EA1_HMC2 Logic die	63 degrees C / 145 degrees F
Temperature EA1_HMC2 DRAM botm	60 degrees C / 140 degrees F
Temperature EA2_HMC0 Logic die	51 degrees C / 123 degrees F
Temperature EA2_HMC0 DRAM botm	48 degrees C / 118 degrees F
Temperature EA2_HMC1 Logic die	55 degrees C / 131 degrees F
Temperature EA2_HMC1 DRAM botm	52 degrees C / 125 degrees F
Temperature EA2_HMC2 Logic die	52 degrees C / 125 degrees F
Temperature EA2_HMC2 DRAM botm	49 degrees C / 120 degrees F
Temperature EA3_HMC0 Logic die	51 degrees C / 123 degrees F
Temperature EA3_HMC0 DRAM botm	48 degrees C / 118 degrees F
Temperature EA3_HMC1 Logic die	52 degrees C / 125 degrees F
Temperature EA3_HMC1 DRAM botm	49 degrees C / 120 degrees F
Temperature EA3_HMC2 Logic die	52 degrees C / 125 degrees F
Temperature EA3_HMC2 DRAM botm	49 degrees C / 120 degrees F
Power	
MPC-EA0_0V9-vt1527mb	950 mV
MPC-EA1_0V9-vt1527mb	950 mV
MPC-EA2_0V9-vt1527mb	925 mV
MPC-EA3_0V9-vt1527mb	924 mV
MAX20751-1V0	1020 mV

MAX20731-0V9	891 mV
MAX20751-EA0-AVDD1V0	1000 mV
MAX20731-EA0-1V2	1189 mV
MAX20731-EA0-HMC-1V2	1182 mV
MAX20731-EA0-0V906	899 mV
MAX20731-EA0-HMC-0V9	891 mV
MAX20751-EA1-AVDD1V0	1000 mV
MAX20731-EA1-1V2	1189 mV
MAX20731-EA1-HMC-1V2	1182 mV
MAX20731-EA1-0V906	899 mV
MAX20731-EA1-HMC-0V9	889 mV
MAX20751-EA2-AVDD1V0	1000 mV
MAX20731-EA2-1V2	1186 mV
MAX20731-EA2-HMC-1V2	1193 mV
MAX20731-EA2-0V906	899 mV
MAX20731-EA2-HMC-0V9	889 mV
MAX20751-EA3-AVDD1V0	1000 mV
MAX20731-EA3-1V2	1186 mV
MAX20731-EA3-HMC-1V2	1193 mV
MAX20731-EA3-0V906	897 mV
MAX20731-EA3-HMC-0V9	894 mV
MAX20731-3V3	3268 mV
UCD9090_0-CH_1-EA0_PLL_	1010 mV
UCD9090_0-CH_2-EA0_1V04	1038 mV
UCD9090_0-CH_3-EA0_2V5	2499 mV
UCD9090_0-CH_4-EA0_1V5	1494 mV
UCD9090_0-CH_5-EA1_PLL_	1012 mV
UCD9090_0-CH_6-EA1_1V04	1038 mV
UCD9090_0-CH_7-EA1_2V5	2497 mV
UCD9090_0-CH_8-EA1_1V5	1498 mV
UCD9090_0-CH_9-VDD_1V8	1804 mV
UCD9090_0-CH_10-VDD_2V5	2499 mV
UCD9090_1-CH_1-EA2_PLL_	1017 mV
UCD9090_1-CH_2-EA2_1V04	1041 mV
UCD9090_1-CH_3-EA2_2V5	2499 mV
UCD9090_1-CH_4-EA2_1V5	1503 mV
UCD9090_1-CH_5-EA3_PLL_	1015 mV
UCD9090_1-CH_6-EA3_1V04	1048 mV
UCD9090_1-CH_7-EA3_2V5	2499 mV
UCD9090_1-CH_8-EA3_1V5	1500 mV
UCD9090_1-CH_9-VDD_1V5	1497 mV
UCD9090_1-CH_10-VDD_1V2	1216 mV
PMB PVCC 0.7V - 1.05V	802 mV
PMB PVNN 0V - 1.02V	976 mV
PMB 1.0V	1002 mV
PMB 1.1V	1076 mV
PMB 1.35V	1347 mV
PMB VDDQ 1.5V	1504 mV
PMB 1.8V	1804 mV
PMB VDD 3.3V	3292 mV
PMB BIAS 5.0V	5008 mV
PMB USB 5.0V	5000 mV
PMB 12V	10866 mV
I2C Slave Revision	112
FPC 7 status:	
State	Online
Temperature Intake	31 degrees C / 87 degrees F
Temperature Exhaust A	46 degrees C / 114 degrees F
Temperature Exhaust B	38 degrees C / 100 degrees F
Temperature QX 0 TSen	49 degrees C / 120 degrees F
Temperature QX 0 Chip	52 degrees C / 125 degrees F

```

Temperature LU 0 TCAM TSen 49 degrees C / 120 degrees F
Temperature LU 0 TCAM Chip 52 degrees C / 125 degrees F
Temperature LU 0 TSen 49 degrees C / 120 degrees F
Temperature LU 0 Chip 51 degrees C / 123 degrees F
Temperature MQ 0 TSen 49 degrees C / 120 degrees F
Temperature MQ 0 Chip 55 degrees C / 131 degrees F
Temperature QX 1 TSen 41 degrees C / 105 degrees F
Temperature QX 1 Chip 42 degrees C / 107 degrees F
Temperature LU 1 TCAM TSen 41 degrees C / 105 degrees F
Temperature LU 1 TCAM Chip 43 degrees C / 109 degrees F
Temperature LU 1 TSen 41 degrees C / 105 degrees F
Temperature LU 1 Chip 46 degrees C / 114 degrees F
Temperature MQ 1 TSen 41 degrees C / 105 degrees F
Temperature MQ 1 Chip 47 degrees C / 116 degrees F
Power
MPC-BIAS3V3-z12105 3302 mV
MPC-VDD3V3-z12006 3307 mV
MPC-VDD2V5-z12006 2505 mV
MPC-TCAM_1V0-z12004 1000 mV
MPC-AVDD1V0-z12006 1006 mV
MPC-VDD1V8-z12006 1800 mV
MPC-PCIE_1V0-z12006 1000 mV
MPC-LU0_1V0-z12004 997 mV
MPC-MQ0_1V0-z12004 999 mV
MPC-VDD_1V5-z12004 1495 mV
MPC-PMB_1V1-z12006 1096 mV
MPC-9VA-BMR453 9051 mV
MPC-9VB-BMR453 8990 mV
MPC-PMB_1V2-z12106 1200 mV
MPC-LU1_1V0-z12004 997 mV
MPC-MQ1_1V0-z12004 998 mV
MPC-QXM0_1V0-z12006 1000 mV
MPC-QXM1_1V0-z12006 999 mV
I2C Slave Revision 70

```

### show chassis environment fpc (MX240 Router)

```

user@host> show chassis environment fpc
FPC 1 status:
State Online
Temperature Intake 34 degrees C / 93 degrees F
Temperature Exhaust A 39 degrees C / 102 degrees F
Temperature Exhaust B 53 degrees C / 127 degrees F
Temperature I3 0 TSensor 51 degrees C / 123 degrees F
Temperature I3 0 Chip 54 degrees C / 129 degrees F
Temperature I3 1 TSensor 50 degrees C / 122 degrees F
Temperature I3 1 Chip 53 degrees C / 127 degrees F
Temperature I3 2 TSensor 48 degrees C / 118 degrees F
Temperature I3 2 Chip 51 degrees C / 123 degrees F
Temperature I3 3 TSensor 45 degrees C / 113 degrees F
Temperature I3 3 Chip 48 degrees C / 118 degrees F
Temperature IA 0 TSensor 45 degrees C / 113 degrees F
Temperature IA 0 Chip 45 degrees C / 113 degrees F
Temperature IA 1 TSensor 45 degrees C / 113 degrees F
Temperature IA 1 Chip 49 degrees C / 120 degrees F
Power
1.5 V 1492 mV
2.5 V 2507 mV
3.3 V 3306 mV
1.8 V PFE 0 1801 mV
1.8 V PFE 1 1804 mV

```

```

1.8 V PFE 2          1798 mV
1.8 V PFE 3          1798 mV
1.2 V PFE 0          1169 mV
1.2 V PFE 1          1189 mV
1.2 V PFE 2          1182 mV
1.2 V PFE 3          1176 mV
I2C Slave Revision   42
FPC 2 status:
State                Online
Temperature Intake    33 degrees C / 91 degrees F
Temperature Exhaust A 41 degrees C / 105 degrees F
Temperature Exhaust B 53 degrees C / 127 degrees F
Temperature I3 0 TSensor 53 degrees C / 127 degrees F
Temperature I3 0 Chip  58 degrees C / 136 degrees F
Temperature I3 1 TSensor 52 degrees C / 125 degrees F
Temperature I3 1 Chip  56 degrees C / 132 degrees F
Temperature I3 2 TSensor 50 degrees C / 122 degrees F
Temperature I3 2 Chip  52 degrees C / 125 degrees F
Temperature I3 3 TSensor 46 degrees C / 114 degrees F
Temperature I3 3 Chip  49 degrees C / 120 degrees F
Temperature IA 0 TSensor 51 degrees C / 123 degrees F
Temperature IA 0 Chip  49 degrees C / 120 degrees F
Temperature IA 1 TSensor 48 degrees C / 118 degrees F
Temperature IA 1 Chip  53 degrees C / 127 degrees F
Power
1.5 V                1492 mV
2.5 V                2445 mV
3.3 V                3293 mV
1.8 V PFE 0          1827 mV
1.8 V PFE 1          1775 mV
1.8 V PFE 2          1788 mV
1.8 V PFE 3          1798 mV
1.2 V PFE 0          1250 mV
1.2 V PFE 1          1234 mV
1.2 V PFE 2          1231 mV
1.2 V PFE 3          1192 mV
I2C Slave Revision   42

```

### show chassis environment fpc (MX480 Router)

```

user@host> show chassis environment fpc
FPC 1 status:
State                Online
Temperature Intake    36 degrees C / 96 degrees F
Temperature Exhaust A 41 degrees C / 105 degrees F
Temperature Exhaust B 55 degrees C / 131 degrees F
Temperature I3 0 TSensor 55 degrees C / 131 degrees F
Temperature I3 0 Chip  57 degrees C / 134 degrees F
Temperature I3 1 TSensor 53 degrees C / 127 degrees F
Temperature I3 1 Chip  53 degrees C / 127 degrees F
Temperature I3 2 TSensor 52 degrees C / 125 degrees F
Temperature I3 2 Chip  49 degrees C / 120 degrees F
Temperature I3 3 TSensor 47 degrees C / 116 degrees F
Temperature I3 3 Chip  47 degrees C / 116 degrees F
Temperature IA 0 TSensor 54 degrees C / 129 degrees F
Temperature IA 0 Chip  58 degrees C / 136 degrees F
Temperature IA 1 TSensor 48 degrees C / 118 degrees F
Temperature IA 1 Chip  53 degrees C / 127 degrees F
Power
1.5 V                1479 mV
2.5 V                2542 mV

```

3.3 V	3319 mV
1.8 V PFE 0	1811 mV
1.8 V PFE 1	1804 mV
1.8 V PFE 2	1804 mV
1.8 V PFE 3	1814 mV
1.2 V PFE 0	1192 mV
1.2 V PFE 1	1202 mV
1.2 V PFE 2	1205 mV
1.2 V PFE 3	1189 mV
I2C Slave Revision	40

### show chassis environment fpc (MX960 Router)

```
user@host> show chassis environment fpc
```

```
FPC 5 status:
```

State	Online
Temperature Intake	27 degrees C / 80 degrees F
Temperature Exhaust A	34 degrees C / 93 degrees F
Temperature Exhaust B	40 degrees C / 104 degrees F
Temperature I3 0 TSensor	39 degrees C / 102 degrees F
Temperature I3 0 Chip	41 degrees C / 105 degrees F
Temperature I3 1 TSensor	38 degrees C / 100 degrees F
Temperature I3 1 Chip	37 degrees C / 98 degrees F
Temperature I3 2 TSensor	37 degrees C / 98 degrees F
Temperature I3 2 Chip	34 degrees C / 93 degrees F
Temperature I3 3 TSensor	32 degrees C / 89 degrees F
Temperature I3 3 Chip	33 degrees C / 91 degrees F
Temperature IA 0 TSensor	39 degrees C / 102 degrees F
Temperature IA 0 Chip	44 degrees C / 111 degrees F
Temperature IA 1 TSensor	36 degrees C / 96 degrees F
Temperature IA 1 Chip	44 degrees C / 111 degrees F
Power	
1.5 V	1479 mV
2.5 V	2523 mV
3.3 V	3254 mV
1.8 V PFE 0	1798 mV
1.8 V PFE 1	1798 mV
1.8 V PFE 2	1807 mV
1.8 V PFE 3	1791 mV
1.2 V PFE 0	1173 mV
1.2 V PFE 1	1179 mV
1.2 V PFE 2	1179 mV
1.2 V PFE 3	1185 mV
I2C Slave Revision	6

```
FPC 6 status:
```

State	Online
Temperature Intake	25 degrees C / 77 degrees F
Temperature Exhaust A	38 degrees C / 100 degrees F
Temperature Exhaust B	38 degrees C / 100 degrees F
Temperature I3 0 TSensor	40 degrees C / 104 degrees F
Temperature I3 0 Chip	40 degrees C / 104 degrees F
Temperature I3 1 TSensor	40 degrees C / 104 degrees F
Temperature I3 1 Chip	38 degrees C / 100 degrees F
Temperature I3 2 TSensor	37 degrees C / 98 degrees F
Temperature I3 2 Chip	32 degrees C / 89 degrees F
Temperature I3 3 TSensor	34 degrees C / 93 degrees F
Temperature I3 3 Chip	33 degrees C / 91 degrees F
Temperature IA 0 TSensor	45 degrees C / 113 degrees F
Temperature IA 0 Chip	47 degrees C / 116 degrees F
Temperature IA 1 TSensor	37 degrees C / 98 degrees F
Temperature IA 1 Chip	42 degrees C / 107 degrees F



```

Power
 1.5 V          1485 mV
 2.5 V          2510 mV
 3.3 V          3332 mV
 1.8 V PFE 0    1801 mV
 1.8 V PFE 1    1814 mV
 1.8 V PFE 2    1804 mV
 1.8 V PFE 3    1820 mV
 1.2 V PFE 0    1192 mV
 1.2 V PFE 1    1189 mV
 1.2 V PFE 2    1202 mV
 1.2 V PFE 3    1156 mV
I2C Slave Revision 40

```

### show chassis environment fpc (MX480 Router with 100-Gigabit Ethernet CFP)

```

user@host> show chassis environment fpc
FPC 0 status:
State      Online
Temperature Intake      32 degrees C / 89 degrees F
Temperature Exhaust A   39 degrees C / 102 degrees F
Temperature Exhaust B   37 degrees C / 98 degrees F
Temperature QX 0 TSen    44 degrees C / 111 degrees F
Temperature QX 0 Chip    48 degrees C / 118 degrees F
Temperature LU 0 TCAM TSen 44 degrees C / 111 degrees F
Temperature LU 0 TCAM Chip 47 degrees C / 116 degrees F
Temperature LU 0 TSen    44 degrees C / 111 degrees F
Temperature LU 0 Chip    48 degrees C / 118 degrees F
Temperature MQ 0 TSen    44 degrees C / 111 degrees F
Temperature MQ 0 Chip    47 degrees C / 116 degrees F
Power
MPC-BIAS3V3-z12105      3297 mV
MPC-VDD3V3-z12105      3306 mV
MPC-VDD2V5-z12105      2498 mV
MPC-TCAM_1V0-z12004     999 mV
MPC-AVDD1V0-z12006     999 mV
MPC-VDD1V8-z12006      1796 mV
MPC-PCIE_1V0-z12006     1002 mV
MPC-LU0_1V0-z12004      997 mV
MPC-MQ0_1V0-z12004      995 mV
MPC-VDD_1V5-z12004      1496 mV
MPC-PMB_1V1-z12006      1094 mV
MPC-9VA-BMR453          9054 mV
MPC-9VB-BMR453          9037 mV
MPC-PMB_1V2-z12106      1191 mV
MPC-QXM0_1V0-z12006     1000 mV
I2C Slave Revision      66
FPC 1 status:
State      Online
Temperature Intake      35 degrees C / 95 degrees F
Temperature Exhaust A   50 degrees C / 122 degrees F
Temperature Exhaust B   56 degrees C / 132 degrees F
Temperature LU 0 TSen    46 degrees C / 114 degrees F
Temperature LU 0 Chip    59 degrees C / 138 degrees F
Temperature LU 1 TSen    46 degrees C / 114 degrees F
Temperature LU 1 Chip    45 degrees C / 113 degrees F
Temperature LU 2 TSen    46 degrees C / 114 degrees F
Temperature LU 2 Chip    60 degrees C / 140 degrees F
Temperature LU 3 TSen    46 degrees C / 114 degrees F
Temperature LU 3 Chip    71 degrees C / 159 degrees F
Temperature XM 0 TSen    46 degrees C / 114 degrees F

```

```

Temperature XM 0 Chip      -18 degrees C / 0 degrees F
Temperature XF 0 TSen      46 degrees C / 114 degrees F
Temperature XF 0 Chip      76 degrees C / 168 degrees F
Power
MPC-BIAS3V3-z12105        3292 mV
MPC-VDD3V3-z16100         3303 mV
MPC-VDD2V5-z16100         2501 mV
MPC-VDD1V8-z12004         1801 mV
MPC-AVDD1V0-z12006         996 mV
MPC-VDD1V2-z16100         1199 mV
MPC-VDD1V5A-z12004        1493 mV
MPC-VDD1V5B-z12004        1498 mV
MPC-XF_0V9-z12006         996 mV
MPC-PCIE_1V0-z16100       1000 mV
MPC-LU0_1V0-z12004         994 mV
MPC-LU1_1V0-z12004         994 mV
MPC-LU2_1V0-z12004         992 mV
MPC-LU3_1V0-z12004         993 mV
MPC-12VA-BMR453           12003 mV
MPC-12VB-BMR453           12043 mV
MPC-PMB_1V1-z12006        1091 mV
MPC-PMB_1V2-z12106        1196 mV
MPC-XM_0V9-vt273m         899 mV
I2C Slave Revision        106

```

#### show chassis environment fpc (MX240, MX480, MX960 with Application Services Modular Line Card)

```

user@host>show chassis environment fpc 1
FPC 1 status:
State                               Online
Temperature Intake                  36 degrees C / 96 degrees F
Temperature Exhaust A               39 degrees C / 102 degrees F
Temperature LU TSen                  52 degrees C / 125 degrees F
Temperature LU Chip                  54 degrees C / 129 degrees F
Temperature XM TSen                  52 degrees C / 125 degrees F
Temperature XM Chip                  60 degrees C / 140 degrees F
Temperature PCIE TSen                52 degrees C / 125 degrees F
Temperature PCIE Chip                69 degrees C / 156 degrees F
Power
MPC-BIAS3V3-z12106                 3302 mV
MPC-VDD3V3-z16100                   3325 mV
MPC-AVDD1V0-z16100                   1007 mV
MPC-PCIE_1V0-z16100                   904 mV
MPC-LU0_1V0-z12004                   996 mV
MPC-VDD_1V5-z12004                   1498 mV
MPC-12VA-BMR453                      11733 mV
MPC-12VB-BMR453                      11728 mV
MPC-XM_0V9-vt273m                     900 mV
I2C Slave Revision                   81

```

#### show chassis environment fpc (MX10003 Router)

```

user@host> show chassis environment fpc

FPC 0 status:
State                               Online
FPC 0 Intake Temp Sensor            29 degrees C / 84 degrees F
FPC 0 Exhaust-A Temp Sensor         56 degrees C / 132 degrees F
FPC 0 Exhaust-B Temp Sensor         44 degrees C / 111 degrees F
FPC 0 EA0 Chip                       58 degrees C / 136 degrees F

```

FPC 0 EA0-XR0 Chip	61 degrees C / 141 degrees F
FPC 0 EA0-XR1 Chip	62 degrees C / 143 degrees F
FPC 0 EA1 Chip	67 degrees C / 152 degrees F
FPC 0 EA1-XR0 Chip	72 degrees C / 161 degrees F
FPC 0 EA1-XR1 Chip	72 degrees C / 161 degrees F
FPC 0 PEX Chip	77 degrees C / 170 degrees F
FPC 0 EA2 Chip	48 degrees C / 118 degrees F
FPC 0 EA2-XR0 Chip	54 degrees C / 129 degrees F
FPC 0 EA2-XR1 Chip	56 degrees C / 132 degrees F
FPC 0 PF Chip	68 degrees C / 154 degrees F
FPC 0 EA0_HMC0 Logic die	72 degrees C / 161 degrees F
FPC 0 EA0_HMC0 DRAM botm	69 degrees C / 156 degrees F
FPC 0 EA0_HMC1 Logic die	71 degrees C / 159 degrees F
FPC 0 EA0_HMC1 DRAM botm	68 degrees C / 154 degrees F
FPC 0 EA0_HMC2 Logic die	75 degrees C / 167 degrees F
FPC 0 EA0_HMC2 DRAM botm	72 degrees C / 161 degrees F
FPC 0 EA1_HMC0 Logic die	81 degrees C / 177 degrees F
FPC 0 EA1_HMC0 DRAM botm	78 degrees C / 172 degrees F
FPC 0 EA1_HMC1 Logic die	80 degrees C / 176 degrees F
FPC 0 EA1_HMC1 DRAM botm	77 degrees C / 170 degrees F
FPC 0 EA1_HMC2 Logic die	82 degrees C / 179 degrees F
FPC 0 EA1_HMC2 DRAM botm	79 degrees C / 174 degrees F
FPC 0 EA2_HMC0 Logic die	60 degrees C / 140 degrees F
FPC 0 EA2_HMC0 DRAM botm	57 degrees C / 134 degrees F
FPC 0 EA2_HMC1 Logic die	61 degrees C / 141 degrees F
FPC 0 EA2_HMC1 DRAM botm	58 degrees C / 136 degrees F
FPC 0 EA2_HMC2 Logic die	63 degrees C / 145 degrees F
FPC 0 EA2_HMC2 DRAM botm	60 degrees C / 140 degrees F

## Power

LTC3887-PF-VDD0V9-RAIL	898 mV
LTC3887-PF-VDD0V9-DEV0-	898 mV
LTC3887-PF-VDD0V9-DEV0-	900 mV
LTC3887-PF-VDD0V9-DEV1-	899 mV
LTC3887-PF-VDD0V9-DEV1-	901 mV
LTC3887-PF-AVDD1V0-RAIL	998 mV
LTC3887-PF-AVDD1V0-CH0	998 mV
LTC3887-PF-AVDD1V0-CH1	999 mV
LTC3887-ETHSW-VDD1V0	1000 mV
LTC3887-VDD2V5	2499 mV
LTC3887-PCIE-VDD0V9	899 mV
LTC3887-V1P0	999 mV
LTC3887-PHY-VDD1V0-A	999 mV
LTC3887-3V3	3300 mV
LTC3887-VDD1V8	1799 mV
UCD9090_0-CH_1-EA0_PLL_	1005 mV
UCD9090_0-CH_2-EA0_1V4	1049 mV
UCD9090_0-CH_3-EA0_2V5	2499 mV
UCD9090_0-CH_4-EA0_1V5	1499 mV
UCD9090_0-CH_5-EA1_PLL_	999 mV
UCD9090_0-CH_6-EA1_1V4	1037 mV
UCD9090_0-CH_7-EA1_2V5	2499 mV
UCD9090_0-CH_8-EA1_1V5	1510 mV
UCD9090_0-CH_9-PVCC	797 mV
UCD9090_0-CH_10-PVNN	991 mV
UCD9090_1-CH_1-EA2_PLL_	1008 mV
UCD9090_1-CH_2-EA2_1V4	1009 mV
UCD9090_1-CH_3-EA2_2V5	2499 mV
UCD9090_1-CH_4-EA2_1V5	1513 mV
UCD9090_1-CH_5-1V0-PFPL	1009 mV
UCD9090_1-CH_6-V1P1	1075 mV
UCD9090_1-CH_7-V1P5	1531 mV

UCD9090_1-CH_8-V1P35	1359 mV
UCD9090_1-CH_9-VDD1V5	1511 mV
UCD9090_1-CH_10-VDD1V2	1210 mV
LTC3887-EA0-VDD0V9-RAIL	949 mV
LTC3887-EA0-VDD0V9-DEV0	949 mV
LTC3887-EA0-VDD0V9-DEV0	951 mV
LTC3887-EA0-VDD0V9-DEV1	949 mV
LTC3887-EA0-VDD0V9-DEV1	951 mV
LTC3887-EA0-VDD0V9R2-RA	947 mV
LTC3887-EA0-VDD0V9R2-CH	947 mV
LTC3887-EA0-VDD0V9R2-CH	949 mV
LTC3887-EA0-VDD1V0-RAIL	999 mV
LTC3887-EA0-VDD1V0-CH0	999 mV
LTC3887-EA0-VDD1V0-CH1	1001 mV
LTC3887-EA0-XR-VDD0V9	900 mV
LTC3887-EA0-XR-VDD1V2	1199 mV
LTC3887-EA0-HM1-VDD0V9	899 mV
LTC3887-EA0-HM-VDD1V2	1200 mV
LTC3887-EA0-HM-VDDM1V2	1199 mV
LTC3887-EA1-VDD0V9-RAIL	949 mV
LTC3887-EA1-VDD0V9-DEV0	952 mV
LTC3887-EA1-VDD0V9-DEV0	952 mV
LTC3887-EA1-VDD0V9-DEV1	951 mV
LTC3887-EA1-VDD0V9-DEV1	951 mV
LTC3887-EA1-VDD0V9R2-RA	948 mV
LTC3887-EA1-VDD0V9R2-CH	948 mV
LTC3887-EA1-VDD0V9R2-CH	950 mV
LTC3887-EA1-VDD1V0-RAIL	1000 mV
LTC3887-EA1-VDD1V0-CH0	1000 mV
LTC3887-EA1-VDD1V0-CH1	1001 mV
I2C Slave Revision	13
FPC 1 status:	
State	Online
FPC 1 Intake Temp Sensor	27 degrees C / 80 degrees F
FPC 1 Exhaust-A Temp Sensor	60 degrees C / 140 degrees F
FPC 1 Exhaust-B Temp Sensor	46 degrees C / 114 degrees F
FPC 1 EA0 Chip	63 degrees C / 145 degrees F
FPC 1 EA0-XR0 Chip	67 degrees C / 152 degrees F
FPC 1 EA0-XR1 Chip	68 degrees C / 154 degrees F
FPC 1 EA1 Chip	70 degrees C / 158 degrees F
FPC 1 EA1-XR0 Chip	75 degrees C / 167 degrees F
FPC 1 EA1-XR1 Chip	75 degrees C / 167 degrees F
FPC 1 PEX Chip	89 degrees C / 192 degrees F
FPC 1 EA2 Chip	49 degrees C / 120 degrees F
FPC 1 EA2-XR0 Chip	53 degrees C / 127 degrees F
FPC 1 EA2-XR1 Chip	56 degrees C / 132 degrees F
FPC 1 PF Chip	71 degrees C / 159 degrees F
FPC 1 EA0_HMC0 Logic die	74 degrees C / 165 degrees F
FPC 1 EA0_HMC0 DRAM botm	71 degrees C / 159 degrees F
FPC 1 EA0_HMC1 Logic die	78 degrees C / 172 degrees F
FPC 1 EA0_HMC1 DRAM botm	75 degrees C / 167 degrees F
FPC 1 EA0_HMC2 Logic die	78 degrees C / 172 degrees F
FPC 1 EA0_HMC2 DRAM botm	75 degrees C / 167 degrees F
FPC 1 EA1_HMC0 Logic die	84 degrees C / 183 degrees F
FPC 1 EA1_HMC0 DRAM botm	81 degrees C / 177 degrees F
FPC 1 EA1_HMC1 Logic die	82 degrees C / 179 degrees F
FPC 1 EA1_HMC1 DRAM botm	79 degrees C / 174 degrees F
FPC 1 EA1_HMC2 Logic die	85 degrees C / 185 degrees F
FPC 1 EA1_HMC2 DRAM botm	82 degrees C / 179 degrees F
FPC 1 EA2_HMC0 Logic die	62 degrees C / 143 degrees F
FPC 1 EA2_HMC0 DRAM botm	59 degrees C / 138 degrees F

FPC 1 EA2_HMC1 Logic die	60 degrees C / 140 degrees F
FPC 1 EA2_HMC1 DRAM botm	57 degrees C / 134 degrees F
FPC 1 EA2_HMC2 Logic die	65 degrees C / 149 degrees F
FPC 1 EA2_HMC2 DRAM botm	62 degrees C / 143 degrees F
Power	
LTC3887-PF-VDD0V9-RAIL	899 mV
LTC3887-PF-VDD0V9-DEV0-	899 mV
LTC3887-PF-VDD0V9-DEV0-	901 mV
LTC3887-PF-VDD0V9-DEV1-	899 mV
LTC3887-PF-VDD0V9-DEV1-	901 mV
LTC3887-PF-AVDD1V0-RAIL	998 mV
LTC3887-PF-AVDD1V0-CH0	998 mV
LTC3887-PF-AVDD1V0-CH1	999 mV
LTC3887-ETHSW-VDD1V0	999 mV
LTC3887-VDD2V5	2499 mV
LTC3887-PCIE-VDD0V9	900 mV
LTC3887-V1P0	1000 mV
LTC3887-PHY-VDD1V0-A	1000 mV
LTC3887-3V3	3300 mV
LTC3887-VDD1V8	1799 mV
UCD9090_0-CH_1-EA0_PLL_	1004 mV
UCD9090_0-CH_2-EA0_1V4	1004 mV
UCD9090_0-CH_3-EA0_2V5	2499 mV
UCD9090_0-CH_4-EA0_1V5	1511 mV
UCD9090_0-CH_5-EA1_PLL_	999 mV
UCD9090_0-CH_6-EA1_1V4	1008 mV
UCD9090_0-CH_7-EA1_2V5	2499 mV
UCD9090_0-CH_8-EA1_1V5	1510 mV
UCD9090_0-CH_9-PVCC	839 mV
UCD9090_0-CH_10-PVNN	1016 mV
UCD9090_1-CH_1-EA2_PLL_	1011 mV
UCD9090_1-CH_2-EA2_1V4	1046 mV
UCD9090_1-CH_3-EA2_2V5	2499 mV
UCD9090_1-CH_4-EA2_1V5	1501 mV
UCD9090_1-CH_5-1V0_PFP1	1000 mV
UCD9090_1-CH_6-V1P1	1037 mV
UCD9090_1-CH_7-V1P5	1530 mV
UCD9090_1-CH_8-V1P35	1360 mV
UCD9090_1-CH_9-VDD1V5	1513 mV
UCD9090_1-CH_10-VDD1V2	1217 mV
LTC3887-EA0-VDD0V9-RAIL	949 mV
LTC3887-EA0-VDD0V9-DEV0	949 mV
LTC3887-EA0-VDD0V9-DEV0	951 mV
LTC3887-EA0-VDD0V9-DEV1	949 mV
LTC3887-EA0-VDD0V9-DEV1	952 mV
LTC3887-EA0-VDD0V9R2-RA	947 mV
LTC3887-EA0-VDD0V9R2-CH	947 mV
LTC3887-EA0-VDD0V9R2-CH	949 mV
LTC3887-EA0-VDD1V0-RAIL	1000 mV
LTC3887-EA0-VDD1V0-CH0	1000 mV
LTC3887-EA0-VDD1V0-CH1	1001 mV
LTC3887-EA0-XR-VDD0V9	899 mV
LTC3887-EA0-XR-VDD1V2	1200 mV
LTC3887-EA0-HM1-VDD0V9	899 mV
LTC3887-EA0-HM-VDD1V2	1199 mV
LTC3887-EA0-HM-VDDM1V2	1199 mV
LTC3887-EA1-VDD0V9-RAIL	948 mV
LTC3887-EA1-VDD0V9-DEV0	950 mV
LTC3887-EA1-VDD0V9-DEV0	950 mV
LTC3887-EA1-VDD0V9-DEV1	951 mV
LTC3887-EA1-VDD0V9-DEV1	951 mV

```

LTC3887-EA1-VDD0V9R2-RA      947 mV
LTC3887-EA1-VDD0V9R2-CH      947 mV
LTC3887-EA1-VDD0V9R2-CH      949 mV
LTC3887-EA1-VDD1V0-RAIL      1000 mV
LTC3887-EA1-VDD1V0-CH0       1000 mV
LTC3887-EA1-VDD1V0-CH1       1002 mV
I2C Slave Revision            99

```

### show chassis environment fpc (MX204 Router)

```
user@host> show chassis environment fpc
```

```

FPC 0 status:
State                               Online
FPC 0 EA0_HMC0 Logic die           77 degrees C / 170 degrees F
FPC 0 EA0_HMC0 DRAM botm           74 degrees C / 165 degrees F
FPC 0 EA0_HMC1 Logic die           80 degrees C / 176 degrees F
FPC 0 EA0_HMC1 DRAM botm           77 degrees C / 170 degrees F
FPC 0 EA0 Chip                      93 degrees C / 199 degrees F
FPC 0 EA0_XR0 Chip                  63 degrees C / 145 degrees F
FPC 0 EA0_XR1 Chip                  64 degrees C / 147 degrees F
Power
I2C Slave Revision                  0

```

### show chassis environment fpc (MX10008 Router)

```
user@host> show chassis environment fpc
```

```

FPC 0 status:
State                               Online
FPC 0 Intake-A Temp Sensor          32 degrees C / 89 degrees F
FPC 0 Exhaust-A Temp Sensor         44 degrees C / 111 degrees F
FPC 0 Exhaust-B Temp Sensor         50 degrees C / 122 degrees F
FPC 0 EA0 Temp Sensor               67 degrees C / 152 degrees F
FPC 0 EA0_XR0 Temp Sensor           69 degrees C / 156 degrees F
FPC 0 EA0_XR1 Temp Sensor           73 degrees C / 163 degrees F
FPC 0 EA1 Temp Sensor               61 degrees C / 141 degrees F
FPC 0 EA1_XR0 Temp Sensor           65 degrees C / 149 degrees F
FPC 0 EA1_XR1 Temp Sensor           63 degrees C / 145 degrees F
FPC 0 EA2 Temp Sensor               69 degrees C / 156 degrees F
FPC 0 EA2_XR0 Temp Sensor           73 degrees C / 163 degrees F
FPC 0 EA2_XR1 Temp Sensor           72 degrees C / 161 degrees F
FPC 0 EA3 Temp Sensor               64 degrees C / 147 degrees F
FPC 0 EA3_XR0 Temp Sensor           66 degrees C / 150 degrees F
FPC 0 EA3_XR1 Temp Sensor           66 degrees C / 150 degrees F
FPC 0 EA4 Temp Sensor               70 degrees C / 158 degrees F
FPC 0 EA4_XR0 Temp Sensor           72 degrees C / 161 degrees F
FPC 0 EA4_XR1 Temp Sensor           72 degrees C / 161 degrees F
FPC 0 EA5 Temp Sensor               58 degrees C / 136 degrees F
FPC 0 EA5_XR0 Temp Sensor           61 degrees C / 141 degrees F
FPC 0 EA5_XR1 Temp Sensor           64 degrees C / 147 degrees F
FPC 0 EA0_HMC0 Logic die            75 degrees C / 167 degrees F
FPC 0 EA0_HMC0 DRAM botm            72 degrees C / 161 degrees F
FPC 0 EA0_HMC1 Logic die            76 degrees C / 168 degrees F
FPC 0 EA0_HMC1 DRAM botm            73 degrees C / 163 degrees F
FPC 0 EA0_HMC2 Logic die            77 degrees C / 170 degrees F
FPC 0 EA0_HMC2 DRAM botm            74 degrees C / 165 degrees F
FPC 0 EA1_HMC0 Logic die            72 degrees C / 161 degrees F
FPC 0 EA1_HMC0 DRAM botm            69 degrees C / 156 degrees F
FPC 0 EA1_HMC1 Logic die            73 degrees C / 163 degrees F

```

FPC 0 EA1_HMC1 DRAM botm	70 degrees C / 158 degrees F
FPC 0 EA1_HMC2 Logic die	72 degrees C / 161 degrees F
FPC 0 EA1_HMC2 DRAM botm	69 degrees C / 156 degrees F
FPC 0 EA2_HMC0 Logic die	80 degrees C / 176 degrees F
FPC 0 EA2_HMC0 DRAM botm	77 degrees C / 170 degrees F
FPC 0 EA2_HMC1 Logic die	81 degrees C / 177 degrees F
FPC 0 EA2_HMC1 DRAM botm	78 degrees C / 172 degrees F
FPC 0 EA2_HMC2 Logic die	80 degrees C / 176 degrees F
FPC 0 EA2_HMC2 DRAM botm	77 degrees C / 170 degrees F
FPC 0 EA3_HMC0 Logic die	77 degrees C / 170 degrees F
FPC 0 EA3_HMC0 DRAM botm	74 degrees C / 165 degrees F
FPC 0 EA3_HMC1 Logic die	78 degrees C / 172 degrees F
FPC 0 EA3_HMC1 DRAM botm	75 degrees C / 167 degrees F
FPC 0 EA3_HMC2 Logic die	77 degrees C / 170 degrees F
FPC 0 EA3_HMC2 DRAM botm	74 degrees C / 165 degrees F
FPC 0 EA4_HMC0 Logic die	80 degrees C / 176 degrees F
FPC 0 EA4_HMC0 DRAM botm	77 degrees C / 170 degrees F
FPC 0 EA4_HMC1 Logic die	81 degrees C / 177 degrees F
FPC 0 EA4_HMC1 DRAM botm	78 degrees C / 172 degrees F
FPC 0 EA4_HMC2 Logic die	80 degrees C / 176 degrees F
FPC 0 EA4_HMC2 DRAM botm	77 degrees C / 170 degrees F
FPC 0 EA5_HMC0 Logic die	69 degrees C / 156 degrees F
FPC 0 EA5_HMC0 DRAM botm	66 degrees C / 150 degrees F
FPC 0 EA5_HMC1 Logic die	68 degrees C / 154 degrees F
FPC 0 EA5_HMC1 DRAM botm	65 degrees C / 149 degrees F
FPC 0 EA5_HMC2 Logic die	68 degrees C / 154 degrees F
FPC 0 EA5_HMC2 DRAM botm	65 degrees C / 149 degrees F

## Power

12V SS 1	12259 mV	9841 mA	120642 mW
12V SS 2	12259 mV	21054 mA	258104 mW
12V SS 3	12285 mV	9841 mA	120902 mW
12V SS 4	12232 mV	20968 mA	256496 mW
12V SS 5	12179 mV	14993 mA	182614 mW
VDD 1.0V_A	1000 mV	95375 mA	95375 mW
VDD 1.0V_B	0 mV	0 mA	0 mW
VDD 3.3V	3298 mV	12500 mA	41235 mW
VDD 0.9V	894 mV	3569 mA	3192 mW
ETH SW 1V	980 mV	4500 mA	4410 mW
VDD 1.8V	1809 mV	895 mA	1619 mW
PVCC	951 mV	0 mA	0 mW
PVNN	1009 mV	0 mA	0 mW
V1P0	1006 mV	0 mA	0 mW
V1P1	1070 mV	0 mA	0 mW
V1P3	1351 mV	0 mA	0 mW
VDDQ	1500 mV	0 mA	0 mW
V1P8	1816 mV	0 mA	0 mW
VDD3V3	3296 mV	0 mA	0 mW
V5V0_BIAS	5025 mV	0 mA	0 mW
VDD12V0	12174 mV	0 mA	0 mW
EA0 Core 0.9V	900 mV	40625 mA	36578 mW
EA0 AVDD 1.0V	1000 mV	32500 mA	32500 mW
EA0 HMC Core 0.9V	894 mV	10081 mA	9017 mW
EA0 1.2V	1189 mV	15081 mA	17945 mW
EA01_HMC_VDDM 1.2V	1193 mV	-151 mA	-180 mW
EA0_XR 0.906V	905 mV	13802 mA	12496 mW
EA1 Core 0.9V	900 mV	41000 mA	36916 mW
EA1 AVDD 1.0V	1000 mV	28000 mA	28000 mW
EA1 HMC Core 0.9V	897 mV	9848 mA	8835 mW
EA1 1.2V	1197 mV	15313 mA	18332 mW
EA0_PLL_1V0	1003 mV	0 mA	0 mW
EA0_1V04	1032 mV	0 mA	0 mW

EA0_2V5	2445 mV	0 mA	0 mW
EA0_1V5	1512 mV	0 mA	0 mW
EA1_PLL_1V0	1000 mV	0 mA	0 mW
EA1_1V04	1051 mV	0 mA	0 mW
EA1_2V5	2516 mV	0 mA	0 mW
EA1_1V5	1503 mV	0 mA	0 mW
EA1_XR 0.906V	908 mV	14151 mA	12850 mW
EA2 Core 0.9V	899 mV	40625 mA	36538 mW
EA2 AVDD 1.0V	1000 mV	27250 mA	27276 mW
EA2 HMC Core 0.9V	897 mV	9616 mA	8627 mW
EA2 1.2V	1193 mV	15779 mA	18832 mW
EA23_HMC_VDDM 1.2V	1197 mV	81 mA	97 mW
EA2_XR 0.906V	908 mV	14848 mA	13484 mW
EA3 Core 0.9V	899 mV	40625 mA	36538 mW
EA3 AVDD 1.0V	1000 mV	28000 mA	28000 mW
EA3 HMC Core 0.9V	897 mV	10546 mA	9461 mW
EA3 1.2V	1197 mV	15895 mA	19028 mW
EA2_PLL_1V0	1025 mV	0 mA	0 mW
EA2_1V04	1048 mV	0 mA	0 mW
EA2_2V5	2516 mV	0 mA	0 mW
EA2_1V5	1500 mV	0 mA	0 mW
EA3_PLL_1V0	1009 mV	0 mA	0 mW
EA3_1V04	1032 mV	0 mA	0 mW
EA3_2V5	2551 mV	0 mA	0 mW
EA3_1V5	1496 mV	0 mA	0 mW
EA3_XR 0.906V	908 mV	15895 mA	14434 mW
EA4 Core 0.9V	900 mV	41000 mA	36916 mW
EA4 AVDD 1.0V	999 mV	31250 mA	31219 mW
EA4 HMC Core 0.9V	894 mV	9965 mA	8913 mW
EA4 1.2V	1197 mV	15779 mA	18889 mW
EA45_HMC_VDDM 1.2V	1197 mV	546 mA	654 mW
EA4_XR 0.906V	908 mV	15197 mA	13801 mW
EA5 Core 0.9V	900 mV	39750 mA	35790 mW
EA5 AVDD 1.0V	1000 mV	28000 mA	28000 mW
EA5 HMC Core 0.9V	897 mV	9965 mA	8940 mW
EA5 1.2V	1197 mV	15546 mA	18610 mW
EA4_PLL_1V0	1003 mV	0 mA	0 mW
EA4_1V04	1041 mV	0 mA	0 mW
EA4_2V5	2541 mV	0 mA	0 mW
EA4_1V5	1506 mV	0 mA	0 mW
EA5_PLL_1V0	1022 mV	0 mA	0 mW
EA5_1V04	1048 mV	0 mA	0 mW
EA5_2V5	2532 mV	0 mA	0 mW
EA5_1V5	1509 mV	0 mA	0 mW
VDD2V5	2503 mV	0 mA	0 mW
VDD1V5	1509 mV	0 mA	0 mW
VDD1V2	1206 mV	0 mA	0 mW
EA5_XR 0.906V	902 mV	14500 mA	13088 mW

FPC 2 status:

State	Online
FPC 2 Intake-A Temp Sensor	33 degrees C / 91 degrees F
FPC 2 Exhaust-A Temp Sensor	52 degrees C / 125 degrees F
FPC 2 Exhaust-B Temp Sensor	50 degrees C / 122 degrees F
FPC 2 EA0 Temp Sensor	72 degrees C / 161 degrees F
FPC 2 EA0_XR0 Temp Sensor	76 degrees C / 168 degrees F
FPC 2 EA0_XR1 Temp Sensor	79 degrees C / 174 degrees F
FPC 2 EA1 Temp Sensor	64 degrees C / 147 degrees F
FPC 2 EA1_XR0 Temp Sensor	68 degrees C / 154 degrees F
FPC 2 EA1_XR1 Temp Sensor	66 degrees C / 150 degrees F
FPC 2 EA2 Temp Sensor	75 degrees C / 167 degrees F
FPC 2 EA2_XR0 Temp Sensor	81 degrees C / 177 degrees F



FPC 2 EA2_XR1 Temp Sensor	81 degrees C / 177 degrees F
FPC 2 EA3 Temp Sensor	67 degrees C / 152 degrees F
FPC 2 EA3_XR0 Temp Sensor	69 degrees C / 156 degrees F
FPC 2 EA3_XR1 Temp Sensor	69 degrees C / 156 degrees F
FPC 2 EA4 Temp Sensor	76 degrees C / 168 degrees F
FPC 2 EA4_XR0 Temp Sensor	77 degrees C / 170 degrees F
FPC 2 EA4_XR1 Temp Sensor	76 degrees C / 168 degrees F
FPC 2 EA5 Temp Sensor	60 degrees C / 140 degrees F
FPC 2 EA5_XR0 Temp Sensor	65 degrees C / 149 degrees F
FPC 2 EA5_XR1 Temp Sensor	65 degrees C / 149 degrees F
FPC 2 EA0_HMC0 Logic die	84 degrees C / 183 degrees F
FPC 2 EA0_HMC0 DRAM botm	81 degrees C / 177 degrees F
FPC 2 EA0_HMC1 Logic die	86 degrees C / 186 degrees F
FPC 2 EA0_HMC1 DRAM botm	83 degrees C / 181 degrees F
FPC 2 EA0_HMC2 Logic die	83 degrees C / 181 degrees F
FPC 2 EA0_HMC2 DRAM botm	80 degrees C / 176 degrees F
FPC 2 EA1_HMC0 Logic die	76 degrees C / 168 degrees F
FPC 2 EA1_HMC0 DRAM botm	73 degrees C / 163 degrees F
FPC 2 EA1_HMC1 Logic die	77 degrees C / 170 degrees F
FPC 2 EA1_HMC1 DRAM botm	74 degrees C / 165 degrees F
FPC 2 EA1_HMC2 Logic die	76 degrees C / 168 degrees F
FPC 2 EA1_HMC2 DRAM botm	73 degrees C / 163 degrees F
FPC 2 EA2_HMC0 Logic die	87 degrees C / 188 degrees F
FPC 2 EA2_HMC0 DRAM botm	84 degrees C / 183 degrees F
FPC 2 EA2_HMC1 Logic die	89 degrees C / 192 degrees F
FPC 2 EA2_HMC1 DRAM botm	86 degrees C / 186 degrees F
FPC 2 EA2_HMC2 Logic die	88 degrees C / 190 degrees F
FPC 2 EA2_HMC2 DRAM botm	85 degrees C / 185 degrees F
FPC 2 EA3_HMC0 Logic die	80 degrees C / 176 degrees F
FPC 2 EA3_HMC0 DRAM botm	77 degrees C / 170 degrees F
FPC 2 EA3_HMC1 Logic die	81 degrees C / 177 degrees F
FPC 2 EA3_HMC1 DRAM botm	78 degrees C / 172 degrees F
FPC 2 EA3_HMC2 Logic die	81 degrees C / 177 degrees F
FPC 2 EA3_HMC2 DRAM botm	78 degrees C / 172 degrees F
FPC 2 EA4_HMC0 Logic die	88 degrees C / 190 degrees F
FPC 2 EA4_HMC0 DRAM botm	85 degrees C / 185 degrees F
FPC 2 EA4_HMC1 Logic die	90 degrees C / 194 degrees F
FPC 2 EA4_HMC1 DRAM botm	87 degrees C / 188 degrees F
FPC 2 EA4_HMC2 Logic die	81 degrees C / 177 degrees F
FPC 2 EA4_HMC2 DRAM botm	78 degrees C / 172 degrees F
FPC 2 EA5_HMC0 Logic die	73 degrees C / 163 degrees F
FPC 2 EA5_HMC0 DRAM botm	70 degrees C / 158 degrees F
FPC 2 EA5_HMC1 Logic die	69 degrees C / 156 degrees F
FPC 2 EA5_HMC1 DRAM botm	66 degrees C / 150 degrees F
FPC 2 EA5_HMC2 Logic die	73 degrees C / 163 degrees F
FPC 2 EA5_HMC2 DRAM botm	70 degrees C / 158 degrees F

## Power

12V SS 1	12285 mV	9408 mA	115582 mW
12V SS 2	12338 mV	20881 mA	257637 mW
12V SS 3	12351 mV	10317 mA	127430 mW
12V SS 4	12285 mV	21054 mA	258660 mW
12V SS 5	12153 mV	13954 mA	169591 mW
VDD 1.0V_A	1000 mV	91000 mA	91000 mW
VDD 1.0V_B	0 mV	0 mA	0 mW
VDD 3.3V	3298 mV	9125 mA	30101 mW
VDD 0.9V	897 mV	3337 mA	2993 mW
ETH SW 1V	0 mV	0 mA	0 mW
VDD 1.8V	1809 mV	1127 mA	2040 mW
PVCC	835 mV	0 mA	0 mW
PVNN	1000 mV	0 mA	0 mW
V1P0	1003 mV	0 mA	0 mW

V1P1	1070 mV	0 mA	0 mW
V1P3	1348 mV	0 mA	0 mW
VDDQ	1493 mV	0 mA	0 mW
V1P8	1806 mV	0 mA	0 mW
VDD3V3	3303 mV	0 mA	0 mW
V5V0_BIAS	5000 mV	0 mA	0 mW
VDD12V0	12116 mV	0 mA	0 mW
EA0 Core 0.9V	900 mV	38875 mA	35002 mW
EA0 AVDD 1.0V	999 mV	31875 mA	31843 mW
EA0 HMC Core 0.9V	894 mV	9034 mA	8081 mW
EA0 1.2V	1197 mV	15430 mA	18471 mW
EA01_HMC_VDDM 1.2V	1200 mV	-267 mA	-321 mW
EA0_XR 0.906V	908 mV	15430 mA	14012 mW
EA1 Core 0.9V	900 mV	38875 mA	35002 mW
EA1 AVDD 1.0V	1000 mV	28250 mA	28250 mW
EA1 HMC Core 0.9V	899 mV	8802 mA	7920 mW
EA1 1.2V	1197 mV	15081 mA	18054 mW
EA0_PLL_1V0	1003 mV	0 mA	0 mW
EA0_1V04	1048 mV	0 mA	0 mW
EA0_2V5	2425 mV	0 mA	0 mW
EA0_1V5	1483 mV	0 mA	0 mW
EA1_PLL_1V0	1019 mV	0 mA	0 mW
EA1_1V04	1019 mV	0 mA	0 mW
EA1_2V5	2490 mV	0 mA	0 mW
EA1_1V5	1480 mV	0 mA	0 mW
EA1_XR 0.906V	908 mV	14965 mA	13590 mW
EA2 Core 0.9V	900 mV	44000 mA	39617 mW
EA2 AVDD 1.0V	1000 mV	28625 mA	28625 mW
EA2 HMC Core 0.9V	891 mV	10546 mA	9404 mW
EA2 1.2V	1200 mV	15313 mA	18387 mW
EA23_HMC_VDDM 1.2V	1193 mV	-267 mA	-319 mW
EA2_XR 0.906V	908 mV	15197 mA	13801 mW
EA3 Core 0.9V	900 mV	39750 mA	35790 mW
EA3 AVDD 1.0V	1000 mV	27750 mA	27750 mW
EA3 HMC Core 0.9V	897 mV	9267 mA	8314 mW
EA3 1.2V	1197 mV	15430 mA	18471 mW
EA2_PLL_1V0	1009 mV	0 mA	0 mW
EA2_1V04	1041 mV	0 mA	0 mW
EA2_2V5	2496 mV	0 mA	0 mW
EA2_1V5	1493 mV	0 mA	0 mW
EA3_PLL_1V0	1003 mV	0 mA	0 mW
EA3_1V04	1041 mV	0 mA	0 mW
EA3_2V5	2490 mV	0 mA	0 mW
EA3_1V5	1500 mV	0 mA	0 mW
EA3_XR 0.906V	908 mV	15081 mA	13695 mW
EA4 Core 0.9V	899 mV	45750 mA	41148 mW
EA4 AVDD 1.0V	1000 mV	32250 mA	32250 mW
EA4 HMC Core 0.9V	897 mV	10779 mA	9670 mW
EA4 1.2V	1193 mV	16011 mA	19110 mW
EA45_HMC_VDDM 1.2V	1200 mV	-267 mA	-321 mW
EA4_XR 0.906V	905 mV	15779 mA	14286 mW
EA5 Core 0.9V	900 mV	38375 mA	34552 mW
EA5 AVDD 1.0V	1000 mV	27750 mA	27777 mW
EA5 HMC Core 0.9V	899 mV	8453 mA	7606 mW
EA5 1.2V	1200 mV	14732 mA	17689 mW
EA4_PLL_1V0	1012 mV	0 mA	0 mW
EA4_1V04	1029 mV	0 mA	0 mW
EA4_2V5	2496 mV	0 mA	0 mW
EA4_1V5	1490 mV	0 mA	0 mW
EA5_PLL_1V0	1003 mV	0 mA	0 mW
EA5_1V04	1032 mV	0 mA	0 mW

EA5_2V5	2503 mV	0 mA	0 mW
EA5_1V5	1480 mV	0 mA	0 mW
VDD2V5	2461 mV	0 mA	0 mW
VDD1V5	1490 mV	0 mA	0 mW
VDD1V2	1212 mV	0 mA	0 mW
EA5_XR 0.906V	910 mV	13686 mA	12466 mW

FPC 3 status:

State	Online	
FPC 3 Intake-A Temp Sensor		30 degrees C / 86 degrees F
FPC 3 Exhaust-A Temp Sensor		48 degrees C / 118 degrees F
FPC 3 Exhaust-B Temp Sensor		45 degrees C / 113 degrees F
FPC 3 EA0 Temp Sensor		60 degrees C / 140 degrees F
FPC 3 EA0_XR0 Temp Sensor		65 degrees C / 149 degrees F
FPC 3 EA0_XR1 Temp Sensor		67 degrees C / 152 degrees F
FPC 3 EA1 Temp Sensor		54 degrees C / 129 degrees F
FPC 3 EA1_XR0 Temp Sensor		60 degrees C / 140 degrees F
FPC 3 EA1_XR1 Temp Sensor		58 degrees C / 136 degrees F
FPC 3 EA2 Temp Sensor		62 degrees C / 143 degrees F
FPC 3 EA2_XR0 Temp Sensor		67 degrees C / 152 degrees F
FPC 3 EA2_XR1 Temp Sensor		67 degrees C / 152 degrees F
FPC 3 EA3 Temp Sensor		55 degrees C / 131 degrees F
FPC 3 EA3_XR0 Temp Sensor		57 degrees C / 134 degrees F
FPC 3 EA3_XR1 Temp Sensor		57 degrees C / 134 degrees F
FPC 3 EA4 Temp Sensor		69 degrees C / 156 degrees F
FPC 3 EA4_XR0 Temp Sensor		71 degrees C / 159 degrees F
FPC 3 EA4_XR1 Temp Sensor		70 degrees C / 158 degrees F
FPC 3 EA5 Temp Sensor		55 degrees C / 131 degrees F
FPC 3 EA5_XR0 Temp Sensor		58 degrees C / 136 degrees F
FPC 3 EA5_XR1 Temp Sensor		59 degrees C / 138 degrees F
FPC 3 EA0_HMC0 Logic die		69 degrees C / 156 degrees F
FPC 3 EA0_HMC0 DRAM botm		66 degrees C / 150 degrees F
FPC 3 EA0_HMC1 Logic die		70 degrees C / 158 degrees F
FPC 3 EA0_HMC1 DRAM botm		67 degrees C / 152 degrees F
FPC 3 EA0_HMC2 Logic die		70 degrees C / 158 degrees F
FPC 3 EA0_HMC2 DRAM botm		67 degrees C / 152 degrees F
FPC 3 EA1_HMC0 Logic die		68 degrees C / 154 degrees F
FPC 3 EA1_HMC0 DRAM botm		65 degrees C / 149 degrees F
FPC 3 EA1_HMC1 Logic die		65 degrees C / 149 degrees F
FPC 3 EA1_HMC1 DRAM botm		62 degrees C / 143 degrees F
FPC 3 EA1_HMC2 Logic die		64 degrees C / 147 degrees F
FPC 3 EA1_HMC2 DRAM botm		61 degrees C / 141 degrees F
FPC 3 EA2_HMC0 Logic die		74 degrees C / 165 degrees F
FPC 3 EA2_HMC0 DRAM botm		71 degrees C / 159 degrees F
FPC 3 EA2_HMC1 Logic die		77 degrees C / 170 degrees F
FPC 3 EA2_HMC1 DRAM botm		74 degrees C / 165 degrees F
FPC 3 EA2_HMC2 Logic die		74 degrees C / 165 degrees F
FPC 3 EA2_HMC2 DRAM botm		71 degrees C / 159 degrees F
FPC 3 EA3_HMC0 Logic die		70 degrees C / 158 degrees F
FPC 3 EA3_HMC0 DRAM botm		67 degrees C / 152 degrees F
FPC 3 EA3_HMC1 Logic die		68 degrees C / 154 degrees F
FPC 3 EA3_HMC1 DRAM botm		65 degrees C / 149 degrees F
FPC 3 EA3_HMC2 Logic die		68 degrees C / 154 degrees F
FPC 3 EA3_HMC2 DRAM botm		65 degrees C / 149 degrees F
FPC 3 EA4_HMC0 Logic die		82 degrees C / 179 degrees F
FPC 3 EA4_HMC0 DRAM botm		79 degrees C / 174 degrees F
FPC 3 EA4_HMC1 Logic die		80 degrees C / 176 degrees F
FPC 3 EA4_HMC1 DRAM botm		77 degrees C / 170 degrees F
FPC 3 EA4_HMC2 Logic die		81 degrees C / 177 degrees F
FPC 3 EA4_HMC2 DRAM botm		78 degrees C / 172 degrees F
FPC 3 EA5_HMC0 Logic die		69 degrees C / 156 degrees F
FPC 3 EA5_HMC0 DRAM botm		66 degrees C / 150 degrees F

FPC 3 EA5_HMC1 Logic die	70 degrees C / 158 degrees F		
FPC 3 EA5_HMC1 DRAM botm	67 degrees C / 152 degrees F		
FPC 3 EA5_HMC2 Logic die	69 degrees C / 156 degrees F		
FPC 3 EA5_HMC2 DRAM botm	66 degrees C / 150 degrees F		
Power			
12V SS 1	12259 mV	9538 mA	116927 mW
12V SS 2	12259 mV	20491 mA	251202 mW
12V SS 3	12298 mV	9711 mA	119433 mW
12V SS 4	12219 mV	20491 mA	250391 mW
12V SS 5	12206 mV	10447 mA	127520 mW
VDD 1.0V_A	1000 mV	42250 mA	42291 mW
VDD 1.0V_B	996 mV	8918 mA	8890 mW
VDD 3.3V	3301 mV	10375 mA	34255 mW
VDD 0.9V	897 mV	3569 mA	3202 mW
ETH SW 1V	983 mV	4267 mA	4195 mW
VDD 1.8V	1812 mV	1825 mA	3309 mW
PVCC	974 mV	0 mA	0 mW
PVNN	1003 mV	0 mA	0 mW
V1P0	1003 mV	0 mA	0 mW
V1P1	1070 mV	0 mA	0 mW
V1P3	1351 mV	0 mA	0 mW
VDDQ	1496 mV	0 mA	0 mW
V1P8	1809 mV	0 mA	0 mW
VDD3V3	3309 mV	0 mA	0 mW
V5V0_BIAS	4987 mV	0 mA	0 mW
VDD12V0	12212 mV	0 mA	0 mW
EA0 Core 0.9V	900 mV	38125 mA	34327 mW
EA0 AVDD 1.0V	999 mV	31125 mA	31094 mW
EA0 HMC Core 0.9V	897 mV	9500 mA	8522 mW
EA0 1.2V	1193 mV	15430 mA	18416 mW
EA01_HMC_VDDM 1.2V	1193 mV	313 mA	374 mW
EA0_XR 0.906V	913 mV	14965 mA	13671 mW
EA1 Core 0.9V	900 mV	39750 mA	35790 mW
EA1 AVDD 1.0V	1000 mV	26000 mA	26000 mW
EA1 HMC Core 0.9V	897 mV	8918 mA	8001 mW
EA1 1.2V	1200 mV	15779 mA	18946 mW
EA0_PLL_1V0	1003 mV	0 mA	0 mW
EA0_1V04	1019 mV	0 mA	0 mW
EA0_2V5	2448 mV	0 mA	0 mW
EA0_1V5	1470 mV	0 mA	0 mW
EA1_PLL_1V0	1016 mV	0 mA	0 mW
EA1_1V04	1035 mV	0 mA	0 mW
EA1_2V5	2506 mV	0 mA	0 mW
EA1_1V5	1483 mV	0 mA	0 mW
EA1_XR 0.906V	908 mV	13918 mA	12639 mW
EA2 Core 0.9V	900 mV	38625 mA	34777 mW
EA2 AVDD 1.0V	1000 mV	26375 mA	26400 mW
EA2 HMC Core 0.9V	897 mV	9383 mA	8418 mW
EA2 1.2V	1200 mV	15779 mA	18946 mW
EA23_HMC_VDDM 1.2V	1193 mV	81 mA	97 mW
EA2_XR 0.906V	908 mV	13918 mA	12639 mW
EA3 Core 0.9V	899 mV	40250 mA	36201 mW
EA3 AVDD 1.0V	1000 mV	26750 mA	26776 mW
EA3 HMC Core 0.9V	894 mV	9267 mA	8289 mW
EA3 1.2V	1197 mV	16127 mA	19306 mW
EA2_PLL_1V0	993 mV	0 mA	0 mW
EA2_1V04	1045 mV	0 mA	0 mW
EA2_2V5	2474 mV	0 mA	0 mW
EA2_1V5	1490 mV	0 mA	0 mW
EA3_PLL_1V0	980 mV	0 mA	0 mW
EA3_1V04	1032 mV	0 mA	0 mW

EA3_2V5	2506 mV	0 mA	0 mW
EA3_1V5	1474 mV	0 mA	0 mW
EA3_XR 0.906V	910 mV	14732 mA	13419 mW
EA4 Core 0.9V	900 mV	42500 mA	38266 mW
EA4 AVDD 1.0V	1000 mV	32250 mA	32281 mW
EA4 HMC Core 0.9V	899 mV	10081 mA	9071 mW
EA4 1.2V	1193 mV	16360 mA	19526 mW
EA45_HMC_VDDM 1.2V	1193 mV	662 mA	791 mW
EA4_XR 0.906V	908 mV	15430 mA	14012 mW
EA5 Core 0.9V	899 mV	37000 mA	33278 mW
EA5 AVDD 1.0V	1000 mV	26125 mA	26150 mW
EA5 HMC Core 0.9V	897 mV	9267 mA	8314 mW
EA5 1.2V	1197 mV	15662 mA	18750 mW
EA4_PLL_1V0	1000 mV	0 mA	0 mW
EA4_1V04	1029 mV	0 mA	0 mW
EA4_2V5	2487 mV	0 mA	0 mW
EA4_1V5	1496 mV	0 mA	0 mW
EA5_PLL_1V0	1009 mV	0 mA	0 mW
EA5_1V04	1032 mV	0 mA	0 mW
EA5_2V5	2503 mV	0 mA	0 mW
EA5_1V5	1496 mV	0 mA	0 mW
VDD2V5	2483 mV	0 mA	0 mW
VDD1V5	1470 mV	0 mA	0 mW
VDD1V2	1203 mV	0 mA	0 mW
EA5_XR 0.906V	908 mV	14500 mA	13167 mW

#### show chassis environment fpc (T320, T640, and T1600 Routers)

```

user@host> show chassis environment fpc
FPC 0 status:
  State                               Online
  Temperature Top                     42 degrees C / 107 degrees F
  Temperature Bottom                  36 degrees C / 96 degrees F
  Temperature MMB1                    39 degrees C / 102 degrees F
  Power:
    1.8 V                             1959 mV
    2.5 V                             2495 mV
    3.3 V                             3344 mV
    5.0 V                             5047 mV
    1.8 V bias                        1787 mV
    3.3 V bias                        3291 mV
    5.0 V bias                        4998 mV
    8.0 V bias                        7343 mV
  BUS Revision                        40
FPC 1 status:
  State                               Online
  Temperature Top                     42 degrees C / 107 degrees F
  Temperature Bottom                  39 degrees C / 102 degrees F
  Temperature MMB1                    40 degrees C / 104 degrees F
  Power:
    1.8 V                             1956 mV
    2.5 V                             2498 mV
    3.3 V                             3340 mV
    5.0 V                             5023 mV
    1.8 V bias                        1782 mV
    3.3 V bias                        3277 mV
    5.0 V bias                        4989 mV
    8.0 V bias                        7289 mV
  BUS Revision                        40
FPC 2 status:
  State                               Online

```

Temperature Top	43 degrees C / 109 degrees F
Temperature Bottom	39 degrees C / 102 degrees F
Temperature MMB1	41 degrees C / 105 degrees F
Power:	
1.8 V	1963 mV
2.5 V	2503 mV
3.3 V	3340 mV
5.0 V	5042 mV
1.8 V bias	1797 mV
3.3 V bias	3311 mV
5.0 V bias	5013 mV
8.0 V bias	7221 mV
BUS Revision	40

### show chassis environment fpc (T4000 Router)

```

user@host> show chassis environment fpc
FPC 0 status:
State Online
Fan Intake 34 degrees C / 93 degrees F
Fan Exhaust 48 degrees C / 118 degrees F
PMB 47 degrees C / 116 degrees F
LMB0 50 degrees C / 122 degrees F
LMB1 41 degrees C / 105 degrees F
LMB2 35 degrees C / 95 degrees F
PFE1 LU2 46 degrees C / 114 degrees F
PFE1 LU0 41 degrees C / 105 degrees F
PFE0 LU0 57 degrees C / 134 degrees F
XF1 47 degrees C / 116 degrees F
XF0 52 degrees C / 125 degrees F
XM1 41 degrees C / 105 degrees F
XM0 50 degrees C / 122 degrees F
PFE0 LU1 56 degrees C / 132 degrees F
PFE0 LU2 45 degrees C / 113 degrees F
PFE1 LU1 37 degrees C / 98 degrees F
Power 1
1.0 V 991 mV
1.2 V bias 1195 mV
1.8 V 1788 mV
2.5 V 2483 mV
3.3 V 3289 mV
3.3 V bias 3299 mV
12.0 V A 10608 mV
12.0 V B 10637 mV
Power 2
0.9 V 881 mV
0.9 V PFE0 916 mV
0.9 V PFE1 903 mV
1.0 V PFE0 1012 mV
1.0 V PFE1 1002 mV
1.1 V 1095 mV
1.5 V_0 1494 mV
1.5 V_1 1479 mV
Power 3
1.0 V PFE0 1000 mV
1.0 V PFE1 1002 mV
1.0 V PFE0 * 995 mV
1.0 V PFE1 * 995 mV
1.8 V PFE 0 1788 mV
1.8 V PFE 1 1789 mV
2.5 V 2482 mV

```

```

12.0 V                               11614 mV
Power 4
1.0 V PFE0 LU0                       1003 mV
1.0 V PFE1 LU0                       1003 mV
1.0 V PFE1 LU2                       1004 mV
1.0 V PFE0 LU0 *                     995 mV
1.0 V PFE1 LU0 *                     998 mV
1.0 V PFE1 LU2 *                     996 mV
12.0 V                               11643 mV
12.0 V C                             11711 mV
Power (Base/PMB/MMB)
LMB0 VDD2V5                          2488 mV
LMB0 VDD1V8                          1788 mV
LMB0 VDD1V5                          1496 mV
LMB0 PFE0 LU0 AVDD1V0                1002 mV
LMB0 PFE0 LU0 VDD1V0                1000 mV
LMB0 VDD12V0                        10752 mV
LMB1 VDD2V5                          2472 mV
LMB1 VDD1V8                          1792 mV
LMB1 VDD1V5                          1480 mV
LMB1 PFE0 LU2 AVDD1V0                994 mV
LMB1 PFE0 LU2 VDD1V0                1002 mV
LMB1 VDD12V0                        10800 mV
LMB2 VDD2V5                          2472 mV
LMB2 VDD1V8                          1792 mV
LMB2 VDD1V5                          1486 mV
LMB2 PFE1 LU1 AVDD1V0                996 mV
LMB2 PFE1 LU1 VDD1V0                998 mV
LMB2 VDD12V0                        10704 mV
PMB 1.05v                           1049 mV
PMB 1.5v                             1500 mV
PMB 2.5v                             2500 mV
PMB 3.3v                             3299 mV
Bus Revision                         113
FPC 3 status:
State                               Online
Fan Intake                          37 degrees C / 98 degrees F
Fan Exhaust                          51 degrees C / 123 degrees F
PMB                                 43 degrees C / 109 degrees F
LMB0                                57 degrees C / 134 degrees F
LMB1                                54 degrees C / 129 degrees F
LMB2                                38 degrees C / 100 degrees F
PFE1 LU2                            63 degrees C / 145 degrees F
PFE1 LU0                            45 degrees C / 113 degrees F
PFE0 LU0                            69 degrees C / 156 degrees F
XF1                                 62 degrees C / 143 degrees F
XF0                                 63 degrees C / 145 degrees F
XM1                                 43 degrees C / 109 degrees F
XM0                                 67 degrees C / 152 degrees F
PFE0 LU1                            63 degrees C / 145 degrees F
PFE0 LU2                            66 degrees C / 150 degrees F
PFE1 LU1                            41 degrees C / 105 degrees F
Power 1
1.0 V                               1002 mV
1.2 V bias                          1201 mV
1.8 V                               1785 mV
2.5 V                               2485 mV
3.3 V                               3288 mV
3.3 V bias                          3285 mV
12.0 V A                            10412 mV
12.0 V B                            10515 mV

```

```

Power 2
0.9 V                882 mV
0.9 V PFE0          920 mV
0.9 V PFE1          905 mV
1.0 V PFE0          1015 mV
1.0 V PFE1          1001 mV
1.1 V                1094 mV
1.5 V_0             1495 mV
1.5 V_1             1478 mV
Power 3
0.92 V PFE1         998 mV
1.0 V PFE0          997 mV
1.0 V PFE0 *        992 mV
1.0 V PFE1 *        991 mV
1.8 V PFE 0         1780 mV
1.8 V PFE 1         1797 mV
2.5 V               2492 mV
12.0 V              11604 mV
Power 4
1.0 V PFE0 LU0      1003 mV
1.0 V PFE1 LU0      1004 mV
1.0 V PFE1 LU2      1003 mV
1.0 V PFE0 LU0 *    1000 mV
1.0 V PFE1 LU0 *    1001 mV
1.0 V PFE1 LU2 *    1003 mV
12.0 V              11653 mV
12.0 V C             11672 mV
Power (Base/PMB/MMB)
LMB0 VDD2V5         2512 mV
LMB0 VDD1V8         1790 mV
LMB0 VDD1V5         1500 mV
LMB0 PFE0 LU0 AVDD1V0 1004 mV
LMB0 PFE0 LU0 VDD1V0 1002 mV
LMB0 VDD12V0        10608 mV
LMB1 VDD2V5         2472 mV
LMB1 VDD1V8         1788 mV
LMB1 VDD1V5         1480 mV
LMB1 PFE0 LU2 AVDD1V0 1000 mV
LMB1 PFE0 LU2 VDD1V0 1004 mV
LMB1 VDD12V0        10672 mV
LMB2 VDD2V5         2488 mV
LMB2 VDD1V8         1798 mV
LMB2 VDD1V5         1494 mV
LMB2 PFE1 LU1 AVDD1V0 1000 mV
LMB2 PFE1 LU1 VDD1V0 1004 mV
LMB2 VDD12V0        10528 mV
PMB 1.05v           1050 mV
PMB 1.5v            1500 mV
PMB 2.5v            2499 mV
PMB 3.3v            3299 mV
Bus Revision         113
FPC 5 status:
State                Online
Temperature Top       39 degrees C / 102 degrees F
Temperature Bottom    38 degrees C / 100 degrees F
Power
1.8 V                1804 mV
1.8 V bias           1802 mV
3.3 V                3294 mV
3.3 V bias           3277 mV
5.0 V bias           5008 mV

```



5.0 V TOP	5067 mV
8.0 V bias	6642 mV
Power (Base/PMB/MMB)	
1.2 V	1202 mV
1.5 V	1504 mV
5.0 V BOT	5079 mV
12.0 V TOP Base	11848 mV
12.0 V BOT Base	11780 mV
1.1 V PMB	1111 mV
1.2 V PMB	1189 mV
1.5 V PMB	1494 mV
1.8 V PMB	1819 mV
2.5 V PMB	2503 mV
3.3 V PMB	3294 mV
5.0 V PMB	5035 mV
12.0 V PMB	11788 mV
0.75 MMB TOP	766 mV
1.5 V MMB TOP	1484 mV
1.8 V MMB TOP	1772 mV
2.5 V MMB TOP	2485 mV
1.2 V MMB TOP	1137 mV
5.0 V MMB TOP	4946 mV
12.0 V MMB TOP	11772 mV
3.3 V MMB TOP	3289 mV
0.75 MMB BOT	759 mV
1.5 V MMB BOT	1482 mV
1.8 V MMB BOT	1792 mV
2.5 V MMB BOT	2490 mV
1.2 V MMB BOT	1145 mV
5.0 V MMB BOT	4922 mV
12.0 V MMB BOT	11625 mV
3.3 V MMB BOT	3282 mV
APS 00	2495 mV
APS 01	3308 mV
APS 02	3301 mV
5.0 V PIC 0	4967 mV
APS 10	2512 mV
APS 11	3316 mV
APS 12	3304 mV
5.0 V PIC 1	5081 mV
Bus Revision	49
FPC 6 status:	
State	Online
Fan Intake	34 degrees C / 93 degrees F
Fan Exhaust	49 degrees C / 120 degrees F
PMB	40 degrees C / 104 degrees F
LMB0	60 degrees C / 140 degrees F
LMB1	58 degrees C / 136 degrees F
LMB2	40 degrees C / 104 degrees F
PFE1 LU2	69 degrees C / 156 degrees F
PFE1 LU0	45 degrees C / 113 degrees F
PFE0 LU0	71 degrees C / 159 degrees F
XF1	58 degrees C / 136 degrees F
XF0	65 degrees C / 149 degrees F
XM1	40 degrees C / 104 degrees F
XM0	66 degrees C / 150 degrees F
PFE0 LU1	69 degrees C / 156 degrees F
PFE0 LU2	68 degrees C / 154 degrees F
PFE1 LU1	42 degrees C / 107 degrees F
Power 1	
1.0 V	998 mV

1.2 V bias	1191 mV
1.8 V	1781 mV
2.5 V	2487 mV
3.3 V	3302 mV
3.3 V bias	3300 mV
12.0 V A	10388 mV
12.0 V B	10388 mV
Power 2	
0.9 V	902 mV
0.9 V PFE0	921 mV
0.9 V PFE1	907 mV
1.0 V PFE0	996 mV
1.0 V PFE1	974 mV
1.1 V	1095 mV
1.5 V_0	1495 mV
1.5 V_1	1478 mV
Power 3	
1.0 V PFE0	997 mV
1.0 V PFE1	998 mV
1.0 V PFE0 *	993 mV
1.0 V PFE1 *	991 mV
1.8 V PFE 0	1796 mV
1.8 V PFE 1	1789 mV
2.5 V	2465 mV
12.0 V	11609 mV
Power 4	
1.0 V PFE0 LU0	1003 mV
1.0 V PFE1 LU0	1006 mV
1.0 V PFE1 LU2	1002 mV
1.0 V PFE0 LU0 *	1000 mV
1.0 V PFE1 LU0 *	998 mV
1.0 V PFE1 LU2 *	998 mV
12.0 V	11638 mV
12.0 V C	11702 mV
Power (Base/PMB/MMB)	
LMB0 VDD2V5	2484 mV
LMB0 VDD1V8	1780 mV
LMB0 VDD1V5	1496 mV
LMB0 PFE0 LU0 AVDD1V0	998 mV
LMB0 PFE0 LU0 VDD1V0	1004 mV
LMB0 VDD12V0	10528 mV
LMB1 VDD2V5	2472 mV
LMB1 VDD1V8	1776 mV
LMB1 VDD1V5	1474 mV
LMB1 PFE0 LU2 AVDD1V0	994 mV
LMB1 PFE0 LU2 VDD1V0	1004 mV
LMB1 VDD12V0	10544 mV
LMB2 VDD2V5	2476 mV
LMB2 VDD1V8	1790 mV
LMB2 VDD1V5	1492 mV
LMB2 PFE1 LU1 AVDD1V0	996 mV
LMB2 PFE1 LU1 VDD1V0	1010 mV
LMB2 VDD12V0	10528 mV
PMB 1.05v	1050 mV
PMB 1.5v	1499 mV
PMB 2.5v	2500 mV
PMB 3.3v	3300 mV
Bus Revision	80

**show chassis environment fpc lcc (TX Matrix Router)**

```
user@host> show chassis environment fpc lcc 0
lcc0-re0:
```

-----  
**FPC 1 status:**

State	Online
Temperature Top	30 degrees C / 86 degrees F
Temperature Bottom	25 degrees C / 77 degrees F
Temperature MMB0	Absent
Temperature MMB1	27 degrees C / 80 degrees F

**Power:**

1.8 V	1813 mV
2.5 V	2504 mV
3.3 V	3338 mV
5.0 V	5037 mV
1.8 V bias	1797 mV
3.3 V bias	3301 mV
5.0 V bias	5013 mV
8.0 V bias	7345 mV

BUS Revision 40

**FPC 2 status:**

State	Online
Temperature Top	37 degrees C / 98 degrees F
Temperature Bottom	26 degrees C / 78 degrees F
Temperature MMB0	32 degrees C / 89 degrees F
Temperature MMB1	27 degrees C / 80 degrees F

**Power:**

1.8 V	1791 mV
2.5 V	2517 mV
3.3 V	3308 mV
5.0 V	5052 mV
1.8 V bias	1797 mV
3.3 V bias	3289 mV
5.0 V bias	4991 mV
8.0 V bias	7477 mV

BUS Revision 40

**show chassis environment fpc lcc (TX Matrix Plus Router)**

```
user@host> show chassis environment fpc lcc 0
lcc0-re0:
```

-----  
**FPC 1 status:**

State	Online
Temperature Top	46 degrees C / 114 degrees F
Temperature Bottom	47 degrees C / 116 degrees F

**Power**

1.8 V	1788 mV
1.8 V bias	1787 mV
3.3 V	3321 mV
3.3 V bias	3306 mV
5.0 V bias	5018 mV
5.0 V TOP	5037 mV
8.0 V bias	7223 mV

**Power (Base/PMB/MMB)**

1.2 V	1205 mV
1.5 V	1503 mV
5.0 V BOT	5084 mV
12.0 V TOP Base	11775 mV

12.0 V BOT Base	11794 mV
1.1 V PMB	1108 mV
1.2 V PMB	1196 mV
1.5 V PMB	1499 mV
1.8 V PMB	1811 mV
2.5 V PMB	2515 mV
3.3 V PMB	3318 mV
5.0 V PMB	5030 mV
12.0 V PMB	11832 mV
0.75 MMB TOP	752 mV
1.5 V MMB TOP	1489 mV
1.8 V MMB TOP	1782 mV
2.5 V MMB TOP	2498 mV
1.2 V MMB TOP	1155 mV
5.0 V MMB TOP	4902 mV
12.0 V MMB TOP	11721 mV
3.3 V MMB TOP	3316 mV
0.75 MMB BOT	754 mV
1.5 V MMB BOT	1482 mV
1.8 V MMB BOT	1758 mV
2.5 V MMB BOT	2488 mV
1.2 V MMB BOT	1157 mV
5.0 V MMB BOT	4962 mV
12.0 V MMB BOT	11691 mV
3.3 V MMB BOT	3308 mV
APS 00	1484 mV
APS 01	2503 mV
APS 02	3313 mV
5.0 V PIC 0	5025 mV
APS 10	1501 mV
APS 11	2466 mV
APS 12	3311 mV
5.0 V PIC 1	5081 mV
Bus Revision	49

#### show chassis environment fpc (QFX Series and OCX Series)

```

user@switch> show chassis environment fpc 0
FPC 0 status:
State                Online
Temperature           42 degrees C / 107 degrees F

```

#### show chassis environment fpc interconnect-device (QFabric Systems)

```

user@switch> show chassis environment fpc interconnect-device interconnect1 0
FC 0 FPC 0 status:
State                Online
Left Intake Temperature  24 degrees C / 75 degrees F
Right Intake Temperature 24 degrees C / 75 degrees F
Left Exhaust Temperature 27 degrees C / 80 degrees F
Right Exhaust Temperature 27 degrees C / 80 degrees F
Power
  BIAS 3V3              3330 mV
  VDD 3V3                3300 mV
  VDD 2V5                2502 mV
  VDD 1V5                1496 mV
  VDD 1V2                1194 mV
  VDD 1V0                1000 mV
  SW0 VDD 1V0            1020 mV
  SW0 CVDD 1V025         1032 mV

```

SW1 VDD 1V0	1022 mV
SW1 CVDD 1V025	1030 mV
VDD 12V0 DIV3_33	3414 mV

#### show chassis environment fpc 5 (PTX3000 Packet Transport Router)

```

user@host> show chassis environment fpc 5
FPC 5 status:
State                               Online
Intake Temperature                  31 degrees C / 87 degrees F
Exhaust Temperature                 41 degrees C / 105 degrees F
Power
  FPC 12.0v                         12221 mV
  FPC VCC 0.5-1.3v                  1640 mV
  FPC VNN 0.5-1.3v                  1640 mV
  FPC 1.0v                           1640 mV
  FPC 1.1v                           1640 mV
  FPC 1.35v                          1640 mV
  FPC VDDQ 1.5v                     1640 mV
  FPC 1.8v                           1640 mV
  FPC 3.3v                           3280 mV
  FPC 5.0v bias                      5143 mV
  FPC 5.0v usb                       5143 mV
  FPC VCC 12.0v                     12289 mV
  FPC Vref 3.3v                     3280 mV
  MAIN 12.0v-i                      2265 mA

```

#### show chassis environment fpc 0 (PTX5000 Packet Transport Router)

```

user@host> show chassis environment fpc 0
FPC 0 status:
State                               Online
PMB Temperature                     35 degrees C / 95 degrees F
Intake Temperature                   33 degrees C / 91 degrees F
Exhaust A Temperature               51 degrees C / 123 degrees F
Exhaust B Temperature              43 degrees C / 109 degrees F
TL0 Temperature                     48 degrees C / 118 degrees F
TQ0 Temperature                     53 degrees C / 127 degrees F
TL1 Temperature                     56 degrees C / 132 degrees F
TQ1 Temperature                     58 degrees C / 136 degrees F
TL2 Temperature                     55 degrees C / 131 degrees F
TQ2 Temperature                     57 degrees C / 134 degrees F
TL3 Temperature                     59 degrees C / 138 degrees F
TQ3 Temperature                     59 degrees C / 138 degrees F
Power
  PMB 1.05v                         1049 mV
  PMB 1.5v                           1500 mV
  PMB 2.5v                           2500 mV
  PMB 3.3v                           3299 mV
  PFE0 1.5v                          1500 mV
  PFE0 1.0v                           999 mV
  TQ0 0.9v                            900 mV
  TL0 0.9v                            900 mV
  PFE1 1.5v                          1499 mV
  PFE1 1.0v                           999 mV
  TQ1 0.9v                            899 mV
  TL1 0.9v                            900 mV
  PFE2 1.5v                          1500 mV
  PFE2 1.0v                           1000 mV
  TQ2 0.9v                            900 mV

```

TL2	0.9v	900 mV
PFE3	1.5v	1499 mV
PFE3	1.0v	1000 mV
TQ3	0.9v	900 mV
TL3	0.9v	900 mV
Bias	3.3v	3327 mV
FPC	3.3v	3300 mV
FPC	2.5v	2500 mV
SAM	0.9v	900 mV
A	12.0v	2014 mV
B	12.0v	2030 mV

**show chassis environment fpc 07 (PTX5000 Packet Transport Router with FPC2-PTX-P1A)**

```
user@host> show chassis environment fpc 07
```

```
FPC 7 status:
```

State	Online
PMB TEMPO Temperature	32 degrees C / 89 degrees F
PMB TEMP1 Temperature	28 degrees C / 82 degrees F
PMB CPU Temperature	46 degrees C / 114 degrees F
Intake Temperature	35 degrees C / 95 degrees F
Exhaust A Temperature	55 degrees C / 131 degrees F
Exhaust B Temperature	54 degrees C / 129 degrees F
TL5 Temperature	59 degrees C / 138 degrees F
TQ5 Temperature	57 degrees C / 134 degrees F
TL6 Temperature	57 degrees C / 134 degrees F
TQ6 Temperature	51 degrees C / 123 degrees F
TL1 Temperature	76 degrees C / 168 degrees F
TQ1 Temperature	58 degrees C / 136 degrees F
TL2 Temperature	75 degrees C / 167 degrees F
TQ2 Temperature	57 degrees C / 134 degrees F
TL4 Temperature	52 degrees C / 125 degrees F
TQ4 Temperature	66 degrees C / 150 degrees F
TL7 Temperature	52 degrees C / 125 degrees F
TQ7 Temperature	60 degrees C / 140 degrees F
TL0 Temperature	72 degrees C / 161 degrees F
TQ0 Temperature	73 degrees C / 163 degrees F
TL3 Temperature	64 degrees C / 147 degrees F
TQ3 Temperature	70 degrees C / 158 degrees F

```
Power
```

PMB	1.05v	1049 mV
PMB	3.3v	3299 mV
PMB	1.1v-a	1100 mV
PMB	1.5v	1499 mV
PMB	1.1v-b	1100 mV
Base	3.3v	3300 mV
FPC Base	2.5v	2499 mV
TL1	0.9v	897 mV
TQ1	0.9v	897 mV
PFE1	1.0v	999 mV
PFE1	1.5v	1499 mV
TL2	0.9v	897 mV
TQ2	0.9v	897 mV
PFE2	1.0v	999 mV
PFE2	1.5v	1499 mV
FPC Base	1.0v	1000 mV
FPC Base	1.2v	1199 mV
TL5	0.9v	898 mV
TQ5	0.9v	898 mV
PFE5	1.0v	1000 mV
PFE5	1.5v	1500 mV

TL6	0.9v	897 mV
TQ6	0.9v	897 mV
PFE6	1.0v	1000 mV
PFE6	1.5v	1499 mV
Mezz Base	2.5v	2500 mV
TL0	0.9v	896 mV
TQ0	0.9v	896 mV
PFE0	1.0v	999 mV
PFE0	1.5v	1499 mV

### show chassis environment fpc (PTX10008 router)

```
user@host> show chassis environment fpc
```

```
FPC 0 status:
```

State	Online
FPC 0 Intake-A Temp Sensor	37 degrees C / 98 degrees F
FPC 0 Intake-B Temp Sensor	34 degrees C / 93 degrees F
FPC 0 Exhaust-A Temp Sensor	37 degrees C / 98 degrees F
FPC 0 Exhaust-B Temp Sensor	38 degrees C / 100 degrees F
FPC 0 Exhaust-C Temp Sensor	40 degrees C / 104 degrees F
FPC 0 PE0 Temp Sensor	41 degrees C / 105 degrees F
FPC 0 PE1 Temp Sensor	42 degrees C / 107 degrees F
FPC 0 PE2 Temp Sensor	44 degrees C / 111 degrees F
FPC 0 LCPU Temp Sensor	40 degrees C / 104 degrees F

```
Power
```

PE0 Core 0.9V	872 mV	28777 mA	25146 mW
PE0 HMC0 Core 0.9V	899 mV	10359 mA	9328 mW
PE1 Core 0.9V	896 mV	29476 mA	26414 mW
PE1 HMC0 Core 0.9V	899 mV	10218 mA	9187 mW
PE2 Core 0.9V	872 mV	28839 mA	25199 mW
PE2 HMC0 Core 0.9V	900 mV	10296 mA	9265 mW
PE0 Serdes 1.0V	1020 mV	29000 mA	29593 mW
PE1 Serdes 1.0V	1019 mV	29109 mA	29718 mW
PE2 Serdes 1.0V	1019 mV	28484 mA	29078 mW
LCPU Platform 1.1V	1099 mV	3515 mA	3867 mW
LCPU Core 1.0V	1000 mV	8750 mA	8703 mW
PHY VDD B 1.0V	1000 mV	17062 mA	17031 mW
PHY VDD A 1.0V	999 mV	15640 mA	15625 mW
BCM Core 1.0V	999 mV	7054 mA	7054 mW
BCM PEX 1.0V	999 mV	3562 mA	3558 mW
HMC Core 1.2V	1199 mV	1280 mA	1513 mW
HMC Serdes 1.2V	1199 mV	32937 mA	39500 mW
VDD 1.5V	1500 mV	2824 mA	4234 mW
VDD 2.5V	2449 mV	3812 mA	9343 mW
VDD 3.3V	3299 mV	5085 mA	16796 mW
12V	12259 mV	29609 mA	368196 mW

```
FPC 1 status:
```

State	Online
FPC 1 Intake-A Temp Sensor	37 degrees C / 98 degrees F
FPC 1 Intake-B Temp Sensor	34 degrees C / 93 degrees F
FPC 1 Exhaust-A Temp Sensor	38 degrees C / 100 degrees F
FPC 1 Exhaust-B Temp Sensor	38 degrees C / 100 degrees F
FPC 1 Exhaust-C Temp Sensor	40 degrees C / 104 degrees F
FPC 1 PE0 Temp Sensor	41 degrees C / 105 degrees F
FPC 1 PE1 Temp Sensor	42 degrees C / 107 degrees F
FPC 1 PE2 Temp Sensor	44 degrees C / 111 degrees F
FPC 1 LCPU Temp Sensor	39 degrees C / 102 degrees F

```
Power
```

PE0 Core 0.9V	898 mV	29351 mA	26421 mW
PE0 HMC0 Core 0.9V	899 mV	9734 mA	8750 mW
PE1 Core 0.9V	873 mV	28539 mA	24933 mW

PE1 HMC0 Core 0.9V	899 mV	9937 mA	8937 mW
PE2 Core 0.9V	875 mV	28906 mA	25316 mW
PE2 HMC0 Core 0.9V	899 mV	10140 mA	9125 mW
PE0 Serdes 1.0V	1019 mV	28312 mA	28890 mW
PE1 Serdes 1.0V	1020 mV	28656 mA	29234 mW
PE2 Serdes 1.0V	1020 mV	29437 mA	30015 mW
LCPU Platform 1.1V	1100 mV	4617 mA	5078 mW
LCPU Core 1.0V	1000 mV	8781 mA	8781 mW
PHY VDD B 1.0V	1000 mV	15953 mA	15984 mW
PHY VDD A 1.0V	1000 mV	15484 mA	15484 mW
BCM Core 1.0V	999 mV	7945 mA	7937 mW
BCM PEX 1.0V	999 mV	3515 mA	3515 mW
HMC Core 1.2V	1199 mV	1269 mA	1521 mW
HMC Serdes 1.2V	1199 mV	33000 mA	39593 mW
VDD 1.5V	1500 mV	2691 mA	4062 mW
VDD 2.5V	2449 mV	3582 mA	8781 mW
VDD 3.3V	3300 mV	2563 mA	8458 mW
12V	12311 mV	29002 mA	357577 mW

## FPC 2 status:

State	Online
FPC 2 Intake-A Temp Sensor	43 degrees C / 109 degrees F
FPC 2 Intake-B Temp Sensor	30 degrees C / 86 degrees F
FPC 2 Exhaust-A Temp Sensor	50 degrees C / 122 degrees F
FPC 2 Exhaust-B Temp Sensor	52 degrees C / 125 degrees F
FPC 2 Exhaust-C Temp Sensor	51 degrees C / 123 degrees F
FPC 2 PE0 Temp Sensor	48 degrees C / 118 degrees F
FPC 2 PE1 Temp Sensor	56 degrees C / 132 degrees F
FPC 2 PE2 Temp Sensor	48 degrees C / 118 degrees F
FPC 2 PE3 Temp Sensor	57 degrees C / 134 degrees F
FPC 2 PE4 Temp Sensor	48 degrees C / 118 degrees F
FPC 2 PE5 Temp Sensor	60 degrees C / 140 degrees F
FPC 2 LCPU Temp Sensor	47 degrees C / 116 degrees F
Power	

PE0 Core 0.9V	874 mV	28117 mA	24617 mW
PE1 Core 0.9V	899 mV	29601 mA	26632 mW
PE0 Serdes 1.0V	1019 mV	41031 mA	41843 mW
PE1 Serdes 1.0V	1019 mV	35656 mA	36343 mW
PE0 HMC Core 0.9V	899 mV	8125 mA	7312 mW
PE0,1 HMC Memory 1.2V	1199 mV	565 mA	688 mW
PE1 HMC Core 0.9V	899 mV	7921 mA	7125 mW
PE0,1 HMC Serdes 1.2V	1199 mV	21281 mA	25562 mW
PE2 Core 0.9V	899 mV	29187 mA	26242 mW
PE3 Core 0.9V	899 mV	29976 mA	27074 mW
PE2 Serdes 1.0V	1019 mV	38562 mA	39343 mW
PE3 Serdes 1.0V	1019 mV	34937 mA	35656 mW
PE2 HMC Core 0.9V	899 mV	8093 mA	7281 mW
PE2,3 HMC Memory 1.2V	1199 mV	610 mA	732 mW
PE3 HMC Core 0.9V	899 mV	7710 mA	6937 mW
PE2,3 HMC Serdes 1.2V	1199 mV	21500 mA	25812 mW
VDD 3.3V	3300 mV	7937 mA	26187 mW
VDD 1.5V	1499 mV	3234 mA	4851 mW
VDD 2.5V	2449 mV	4539 mA	11109 mW
PE4 Core 0.9V	874 mV	29914 mA	26183 mW
PE5 Core 0.9V	874 mV	29820 mA	26031 mW
PE4 Serdes 1.0V	1020 mV	43968 mA	44843 mW
PE5 Serdes 1.0V	1019 mV	27453 mA	28031 mW
PE4 HMC Core 0.9V	900 mV	7937 mA	7140 mW
PE4,5 HMC Memory 1.2V	1200 mV	1185 mA	1421 mW
PE5 HMC Core 0.9V	899 mV	8718 mA	7843 mW
PE4,5 HMC Serdes 1.2V	1199 mV	21125 mA	25343 mW
LCPU platform 1.1V	1099 mV	3777 mA	4156 mW



LCPU core 1.0V	1000 mV	9062 mA	9062 mW
BCM core 1.0V	1000 mV	9328 mA	9328 mW
BCM & PEX Serdes 1.0V	999 mV	4125 mA	4125 mW
12V	12311 mV	53347 mA	660345 mW

## FPC 3 status:

State	Online
FPC 3 Intake-A Temp Sensor	43 degrees C / 109 degrees F
FPC 3 Intake-B Temp Sensor	30 degrees C / 86 degrees F
FPC 3 Exhaust-A Temp Sensor	48 degrees C / 118 degrees F
FPC 3 Exhaust-B Temp Sensor	49 degrees C / 120 degrees F
FPC 3 Exhaust-C Temp Sensor	47 degrees C / 116 degrees F
FPC 3 PE0 Temp Sensor	48 degrees C / 118 degrees F
FPC 3 PE1 Temp Sensor	55 degrees C / 131 degrees F
FPC 3 PE2 Temp Sensor	47 degrees C / 116 degrees F
FPC 3 PE3 Temp Sensor	54 degrees C / 129 degrees F
FPC 3 PE4 Temp Sensor	48 degrees C / 118 degrees F
FPC 3 PE5 Temp Sensor	58 degrees C / 136 degrees F
FPC 3 LCPU Temp Sensor	46 degrees C / 114 degrees F
Power	

PE0 Core 0.9V	899 mV	29695 mA	26718 mW
PE1 Core 0.9V	899 mV	29695 mA	26710 mW
PE0 Serdes 1.0V	1020 mV	40156 mA	40906 mW
PE1 Serdes 1.0V	1020 mV	35281 mA	35968 mW
PE0 HMC Core 0.9V	900 mV	7492 mA	6742 mW
PE0,1 HMC Memory 1.2V	1199 mV	569 mA	683 mW
PE1 HMC Core 0.9V	899 mV	7570 mA	6812 mW
PE0,1 HMC Serdes 1.2V	1199 mV	20562 mA	24656 mW
PE2 Core 0.9V	899 mV	29734 mA	26765 mW
PE3 Core 0.9V	900 mV	29960 mA	26968 mW
PE2 Serdes 1.0V	1019 mV	37718 mA	38500 mW
PE3 Serdes 1.0V	1020 mV	35250 mA	35937 mW
PE2 HMC Core 0.9V	899 mV	7750 mA	6976 mW
PE2,3 HMC Memory 1.2V	1200 mV	546 mA	656 mW
PE3 HMC Core 0.9V	899 mV	7718 mA	6945 mW
PE2,3 HMC Serdes 1.2V	1199 mV	20625 mA	24750 mW
VDD 3.3V	3299 mV	5917 mA	19515 mW
VDD 1.5V	1499 mV	4015 mA	6015 mW
VDD 2.5V	2449 mV	4335 mA	10625 mW
PE4 Core 0.9V	899 mV	29835 mA	26875 mW
PE5 Core 0.9V	924 mV	30554 mA	28277 mW
PE4 Serdes 1.0V	1019 mV	43281 mA	44187 mW
PE5 Serdes 1.0V	1020 mV	27140 mA	27703 mW
PE4 HMC Core 0.9V	899 mV	7476 mA	6726 mW
PE4,5 HMC Memory 1.2V	1199 mV	531 mA	637 mW
PE5 HMC Core 0.9V	899 mV	7539 mA	6781 mW
PE4,5 HMC Serdes 1.2V	1199 mV	20375 mA	24468 mW
LCPU platform 1.1V	1099 mV	3453 mA	3796 mW
LCPU core 1.0V	999 mV	8984 mA	8984 mW
BCM core 1.0V	999 mV	7929 mA	7921 mW
BCM & PEX Serdes 1.0V	1000 mV	4046 mA	4046 mW
12V	12351 mV	51918 mA	644880 mW

## FPC 5 status:

State	Online
FPC 5 Intake-A Temp Sensor	Failed
FPC 5 Intake-B Temp Sensor	Failed
FPC 5 Exhaust-A Temp Sensor	41 degrees C / 105 degrees F
FPC 5 Exhaust-B Temp Sensor	41 degrees C / 105 degrees F
FPC 5 Exhaust-C Temp Sensor	42 degrees C / 107 degrees F
FPC 5 PE0 Temp Sensor	47 degrees C / 116 degrees F
FPC 5 PE1 Temp Sensor	49 degrees C / 120 degrees F
FPC 5 PE2 Temp Sensor	53 degrees C / 127 degrees F

```

FPC 5 LCPU Temp Sensor      Failed
Power
  PE0 Core 0.9V              923 mV   30976 mA   28578 mW
  PE0 HMC0 Core 0.9V         899 mV   10093 mA    9078 mW
  PE1 Core 0.9V              897 mV   29398 mA   26414 mW
  PE1 HMC0 Core 0.9V         899 mV    9734 mA    8750 mW
  PE2 Core 0.9V              922 mV   30226 mA   27886 mW
  PE2 HMC0 Core 0.9V         899 mV    9984 mA    8968 mW
  PE0 Serdes 1.0V            1019 mV  29296 mA   29890 mW
  PE1 Serdes 1.0V            1020 mV  28687 mA   29296 mW
  PE2 Serdes 1.0V            1020 mV  28187 mA   28765 mW
  LCPU Platform 1.1V         1100 mV   3664 mA    4031 mW
  LCPU Core 1.0V             999 mV   9125 mA    9125 mW
  PHY VDD B 1.0V             999 mV  15593 mA   15593 mW
  PHY VDD A 1.0V            1000 mV  15453 mA   15453 mW
  BCM Core 1.0V              999 mV   7773 mA    7765 mW
  BCM PEX 1.0V               1000 mV   3460 mA    3464 mW
  HMC Core 1.2V              1199 mV   1328 mA    1628 mW
  HMC Serdes 1.2V            1199 mV  32203 mA   38625 mW
  VDD 1.5V                   1499 mV   2675 mA    4007 mW
  VDD 2.5V                   2450 mV   3675 mA    9000 mW
  VDD 3.3V                   3300 mV   1814 mA    5980 mW
  12V                        12272 mV  29045 mA  361369 mW

FPC 6 status:
State                               Online
FPC 6 Intake-A Temp Sensor 41 degrees C / 105 degrees F
FPC 6 Intake-B Temp Sensor 37 degrees C / 98 degrees F
FPC 6 Exhaust-A Temp Sensor40 degrees C / 104 degrees F
FPC 6 Exhaust-B Temp Sensor40 degrees C / 104 degrees F
FPC 6 Exhaust-C Temp Sensor40 degrees C / 104 degrees F
FPC 6 PE0 Temp Sensor       45 degrees C / 113 degrees F
FPC 6 PE1 Temp Sensor       47 degrees C / 116 degrees F
FPC 6 PE2 Temp Sensor       51 degrees C / 123 degrees F
FPC 6 LCPU Temp Sensor      41 degrees C / 105 degrees F

Power
  PE0 Core 0.9V              897 mV   30214 mA   27179 mW
  PE0 HMC0 Core 0.9V         899 mV   10000 mA    8984 mW
  PE1 Core 0.9V              873 mV   29332 mA   25601 mW
  PE1 HMC0 Core 0.9V         899 mV    9828 mA    8828 mW
  PE2 Core 0.9V              898 mV   30781 mA   27675 mW
  PE2 HMC0 Core 0.9V         899 mV   10328 mA    9296 mW
  PE0 Serdes 1.0V            1019 mV  28921 mA   29531 mW
  PE1 Serdes 1.0V            1020 mV  29437 mA   30046 mW
  PE2 Serdes 1.0V            1019 mV  29671 mA   30281 mW
  LCPU Platform 1.1V         1100 mV   3671 mA    4039 mW
  LCPU Core 1.0V             1000 mV   8218 mA    8187 mW
  PHY VDD B 1.0V             1000 mV  15984 mA   15984 mW
  PHY VDD A 1.0V             999 mV   16093 mA   16093 mW
  BCM Core 1.0V              1000 mV   8046 mA    8062 mW
  BCM PEX 1.0V               1000 mV   3500 mA    3500 mW
  HMC Core 1.2V              1199 mV   1327 mA    1579 mW
  HMC Serdes 1.2V            1199 mV  33031 mA   39593 mW
  VDD 1.5V                   1499 mV   2722 mA    4078 mW
  VDD 2.5V                   2449 mV   3539 mA    8671 mW
  VDD 3.3V                   3299 mV   8082 mA   26656 mW
  12V                        12311 mV  31124 mA  385270 mW

```

`show chassis environment fpc (PTX10016 router)`

```
user@host> show chassis environment fpc
```

## FPC 1 status:

State Online

FPC 1 Intake-A Temp Sensor 36 degrees C / 96 degrees F

FPC 1 Intake-B Temp Sensor 32 degrees C / 89 degrees F

FPC 1 Exhaust-A Temp Sensor 37 degrees C / 98 degrees F

FPC 1 Exhaust-B Temp Sensor 36 degrees C / 96 degrees F

FPC 1 Exhaust-C Temp Sensor 36 degrees C / 96 degrees F

FPC 1 PE0 Temp Sensor 45 degrees C / 113 degrees F

FPC 1 PE1 Temp Sensor 46 degrees C / 114 degrees F

FPC 1 PE2 Temp Sensor 53 degrees C / 127 degrees F

FPC 1 LCPU Temp Sensor 35 degrees C / 95 degrees F

## Power

PE0 Core 0.9V	897 mV	28992 mA	26027 mW
PE0 HMC0 Core 0.9V	899 mV	10156 mA	9156 mW
PE1 Core 0.9V	871 mV	28800 mA	25164 mW
PE1 HMC0 Core 0.9V	899 mV	10125 mA	9109 mW
PE2 Core 0.9V	898 mV	29914 mA	26906 mW
PE2 HMC0 Core 0.9V	899 mV	10343 mA	9296 mW
PE0 Serdes 1.0V	1019 mV	27515 mA	28093 mW
PE1 Serdes 1.0V	1020 mV	27968 mA	28546 mW
PE2 Serdes 1.0V	1019 mV	27796 mA	28359 mW
LCPU Platform 1.1V	1100 mV	3347 mA	3289 mW
LCPU Core 1.0V	1000 mV	7960 mA	7960 mW
PHY VDD B 1.0V	1000 mV	16437 mA	16437 mW
PHY VDD A 1.0V	999 mV	15656 mA	15656 mW
BCM Core 1.0V	1000 mV	7289 mA	7335 mW
BCM PEX 1.0V	999 mV	3453 mA	3453 mW
HMC Core 1.2V	1199 mV	1218 mA	1453 mW
HMC Serdes 1.2V	1199 mV	32093 mA	38562 mW
VDD 1.5V	1500 mV	2859 mA	4289 mW
VDD 2.5V	2449 mV	3875 mA	9500 mW
VDD 3.3V	3299 mV	2806 mA	9257 mW
12V	12351 mV	28569 mA	354877 mW

## FPC 3 status:

State Online

FPC 3 Intake-A Temp Sensor 35 degrees C / 95 degrees F

FPC 3 Intake-B Temp Sensor 31 degrees C / 87 degrees F

FPC 3 Exhaust-A Temp Sensor 36 degrees C / 96 degrees F

FPC 3 Exhaust-B Temp Sensor 34 degrees C / 93 degrees F

FPC 3 Exhaust-C Temp Sensor 33 degrees C / 91 degrees F

FPC 3 PE0 Temp Sensor 43 degrees C / 109 degrees F

FPC 3 PE1 Temp Sensor 45 degrees C / 113 degrees F

FPC 3 PE2 Temp Sensor 49 degrees C / 120 degrees F

FPC 3 LCPU Temp Sensor 35 degrees C / 95 degrees F

## Power

PE0 Core 0.9V	897 mV	28832 mA	25871 mW
PE0 HMC0 Core 0.9V	899 mV	10359 mA	9328 mW
PE1 Core 0.9V	873 mV	28230 mA	24671 mW
PE1 HMC0 Core 0.9V	899 mV	10468 mA	9421 mW
PE2 Core 0.9V	898 mV	29539 mA	26539 mW
PE2 HMC0 Core 0.9V	899 mV	10656 mA	9593 mW
PE0 Serdes 1.0V	1020 mV	27484 mA	28031 mW
PE1 Serdes 1.0V	1019 mV	27515 mA	28078 mW
PE2 Serdes 1.0V	1020 mV	27625 mA	28187 mW
LCPU Platform 1.1V	1099 mV	3050 mA	3355 mW
LCPU Core 1.0V	999 mV	7820 mA	7804 mW
PHY VDD B 1.0V	999 mV	15406 mA	15406 mW
PHY VDD A 1.0V	1000 mV	14953 mA	14953 mW
BCM Core 1.0V	1000 mV	7648 mA	7648 mW
BCM PEX 1.0V	1000 mV	3531 mA	3531 mW
HMC Core 1.2V	1200 mV	1234 mA	1476 mW

HMC Serdes 1.2V	1199 mV	34671 mA	41593 mW
VDD 1.5V	1499 mV	3484 mA	5226 mW
VDD 2.5V	2449 mV	3218 mA	7890 mW
VDD 3.3V	3299 mV	2468 mA	8148 mW
12V	12311 mV	28785 mA	355950 mW

## FPC 6 status:

State	Online
FPC 6 Intake-A Temp Sensor	34 degrees C / 93 degrees F
FPC 6 Intake-B Temp Sensor	31 degrees C / 87 degrees F
FPC 6 Exhaust-A Temp Sensor	34 degrees C / 93 degrees F
FPC 6 Exhaust-B Temp Sensor	35 degrees C / 95 degrees F
FPC 6 Exhaust-C Temp Sensor	35 degrees C / 95 degrees F
FPC 6 PE0 Temp Sensor	42 degrees C / 107 degrees F
FPC 6 PE1 Temp Sensor	43 degrees C / 109 degrees F
FPC 6 PE2 Temp Sensor	47 degrees C / 116 degrees F
FPC 6 LCPU Temp Sensor	34 degrees C / 93 degrees F

## Power

PE0 Core 0.9V	922 mV	29394 mA	27160 mW
PE0 HMC0 Core 0.9V	899 mV	10078 mA	9062 mW
PE1 Core 0.9V	923 mV	29636 mA	27304 mW
PE1 HMC0 Core 0.9V	899 mV	9890 mA	8890 mW
PE2 Core 0.9V	898 mV	29734 mA	26757 mW
PE2 HMC0 Core 0.9V	899 mV	9968 mA	8968 mW
PE0 Serdes 1.0V	1020 mV	26968 mA	27515 mW
PE1 Serdes 1.0V	1019 mV	27421 mA	27984 mW
PE2 Serdes 1.0V	1019 mV	27625 mA	28171 mW
LCPU Platform 1.1V	1099 mV	3230 mA	4742 mW
LCPU Core 1.0V	999 mV	8171 mA	8171 mW
PHY VDD B 1.0V	1000 mV	15671 mA	15687 mW
PHY VDD A 1.0V	999 mV	15703 mA	15703 mW
BCM Core 1.0V	999 mV	7500 mA	7492 mW
BCM PEX 1.0V	1000 mV	3480 mA	3468 mW
HMC Core 1.2V	1199 mV	1199 mA	1440 mW
HMC Serdes 1.2V	1199 mV	31046 mA	37250 mW
VDD 1.5V	1499 mV	2804 mA	4203 mW
VDD 2.5V	2449 mV	3746 mA	9171 mW
VDD 3.3V	3300 mV	3173 mA	10476 mW
12V	12311 mV	28786 mA	355654 mW

## FPC 8 status:

State	Online
FPC 8 Intake-A Temp Sensor	34 degrees C / 93 degrees F
FPC 8 Intake-B Temp Sensor	30 degrees C / 86 degrees F
FPC 8 Exhaust-A Temp Sensor	37 degrees C / 98 degrees F
FPC 8 Exhaust-B Temp Sensor	37 degrees C / 98 degrees F
FPC 8 Exhaust-C Temp Sensor	37 degrees C / 98 degrees F
FPC 8 PE0 Temp Sensor	42 degrees C / 107 degrees F
FPC 8 PE1 Temp Sensor	44 degrees C / 111 degrees F
FPC 8 PE2 Temp Sensor	47 degrees C / 116 degrees F
FPC 8 LCPU Temp Sensor	33 degrees C / 91 degrees F

## Power

PE0 Core 0.9V	897 mV	29382 mA	26437 mW
PE0 HMC0 Core 0.9V	899 mV	10265 mA	9250 mW
PE1 Core 0.9V	872 mV	28867 mA	25175 mW
PE1 HMC0 Core 0.9V	899 mV	10171 mA	9109 mW
PE2 Core 0.9V	899 mV	30210 mA	27214 mW
PE2 HMC0 Core 0.9V	900 mV	10187 mA	9171 mW
PE0 Serdes 1.0V	1020 mV	27843 mA	28421 mW
PE1 Serdes 1.0V	1020 mV	28265 mA	28828 mW
PE2 Serdes 1.0V	1019 mV	28406 mA	29000 mW
LCPU Platform 1.1V	1099 mV	3000 mA	3300 mW
LCPU Core 1.0V	1000 mV	7937 mA	7937 mW

```

PHY VDD B 1.0V          1000 mV   15843 mA   15843 mW
PHY VDD A 1.0V          1000 mV   15250 mA   15250 mW
BCM Core 1.0V           999 mV    6914 mA    6898 mW
BCM PEX 1.0V            999 mV    3445 mA    3445 mW
HMC Core 1.2V           1199 mV    1162 mA    1390 mW
HMC Serdes 1.2V          1199 mV   33437 mA   40125 mW
VDD 1.5V                1499 mV    2851 mA    4273 mW
VDD 2.5V                2450 mV    3867 mA    9484 mW
VDD 3.3V                3300 mV    3258 mA   10753 mW
12V                    12338 mV   28656 mA  356171 mW
FPC 9 status:
State                   Online
FPC 9 Intake-A Temp Sensor 44 degrees C / 111 degrees F
FPC 9 Intake-B Temp Sensor 28 degrees C / 82 degrees F
FPC 9 Exhaust-A Temp Sensor51 degrees C / 123 degrees F
FPC 9 Exhaust-B Temp Sensor52 degrees C / 125 degrees F
FPC 9 Exhaust-C Temp Sensor48 degrees C / 118 degrees F
FPC 9 PE0 Temp Sensor      52 degrees C / 125 degrees F
FPC 9 PE1 Temp Sensor      65 degrees C / 149 degrees F
FPC 9 PE2 Temp Sensor      50 degrees C / 122 degrees F
FPC 9 PE3 Temp Sensor      65 degrees C / 149 degrees F
FPC 9 PE4 Temp Sensor      50 degrees C / 122 degrees F
FPC 9 PE5 Temp Sensor      67 degrees C / 152 degrees F
FPC 9 LCPU Temp Sensor     45 degrees C / 113 degrees F
Power
PE0 Core 0.9V            875 mV   28316 mA   24808 mW
PE1 Core 0.9V            875 mV   28546 mA   24996 mW
PE0 Serdes 1.0V          1019 mV   38906 mA   39687 mW
PE1 Serdes 1.0V          1020 mV   33078 mA   33781 mW
PE0 HMC Core 0.9V        899 mV    7718 mA    6945 mW
PE0,1 HMC Memory 1.2V    1199 mV    579 mA     695 mW
PE1 HMC Core 0.9V        899 mV    7289 mA    6570 mW
PE0,1 HMC Serdes 1.2V    1199 mV   20187 mA   24250 mW
PE2 Core 0.9V            924 mV   29062 mA   26894 mW
PE3 Core 0.9V            900 mV   28914 mA   26039 mW
PE2 Serdes 1.0V          1020 mV   36375 mA   37093 mW
PE3 Serdes 1.0V          1019 mV   32640 mA   33296 mW
PE2 HMC Core 0.9V        900 mV    7695 mA    6921 mW
PE2,3 HMC Memory 1.2V    1199 mV    562 mA     674 mW
PE3 HMC Core 0.9V        899 mV    7554 mA    6796 mW
PE2,3 HMC Serdes 1.2V    1199 mV   20156 mA   24218 mW
VDD 3.3V                 3300 mV    8964 mA    29609 mW
VDD 1.5V                 1499 mV    3968 mA    5945 mW
VDD 2.5V                 2449 mV    4414 mA   10890 mW
PE4 Core 0.9V            900 mV   28527 mA   25679 mW
PE5 Core 0.9V            899 mV   28902 mA   26035 mW
PE4 Serdes 1.0V          1019 mV   41281 mA   42125 mW
PE5 Serdes 1.0V          1019 mV   25781 mA   26328 mW
PE4 HMC Core 0.9V        900 mV    7382 mA    6648 mW
PE4,5 HMC Memory 1.2V    1199 mV    626 mA     750 mW
PE5 HMC Core 0.9V        899 mV    7562 mA    6796 mW
PE4,5 HMC Serdes 1.2V    1199 mV   20312 mA   24375 mW
LCPU platform 1.1V       1099 mV    3687 mA    4054 mW
LCPU core 1.0V           1000 mV    9000 mA    9000 mW
BCM core 1.0V            999 mV    7843 mA    7835 mW
BCM & PEX Serdes 1.0V     999 mV    4062 mA    4062 mW
12V                    12417 mV   51659 mA  643215 mW

```

show chassis environment FPC 1 (MX Routers with Media Services Blade [MSB])

```
user@switch> show chassis environment fpc 1
```

```
FPC 1 status:
State                               Online
Temperature Intake                  36 degrees C / 96 degrees F
Temperature Exhaust A               39 degrees C / 102 degrees F
Temperature LU TSen                  52 degrees C / 125 degrees F
Temperature LU Chip                  54 degrees C / 129 degrees F
Temperature XM TSen                  52 degrees C / 125 degrees F
Temperature XM Chip                  60 degrees C / 140 degrees F
Temperature PCIe TSen                52 degrees C / 125 degrees F
Temperature PCIe Chip                69 degrees C / 156 degrees F
Power
MPC-BIAS3V3-z12106                  3302 mV
MPC-VDD3V3-z16100                   3325 mV
MPC-AVDD1V0-z16100                   1007 mV
MPC-PCIE_1V0-z16100                   904 mV
MPC-LU0_1V0-z12004                   996 mV
MPC-VDD_1V5-z12004                   1498 mV
MPC-12VA-BMR453                      11733 mV
MPC-12VB-BMR453                      11728 mV
MPC-XM_0V9-vt273m                    900 mV
I2C Slave Revision                   81
```

#### show chassis environment fpc (EX9251 Switches)

```
user@switch> show chassis environment fpc
FPC 0 status:
State                               Online
Power
I2C Slave Revision                   0
```

#### show chassis environment fpc (EX9253 Switches)

```
user@switch> show chassis environment fpc
FPC 0 status:
State                               Online
FPC 0 Intake Temp Sensor             32 degrees C / 89 degrees F
FPC 0 Exhaust-A Temp Sensor          60 degrees C / 140 degrees F
FPC 0 Exhaust-B Temp Sensor          48 degrees C / 118 degrees F
Power
I2C Slave Revision                   13
FPC 1 status:
State                               Online
FPC 1 Intake Temp Sensor             30 degrees C / 86 degrees F
FPC 1 Exhaust-A Temp Sensor          60 degrees C / 140 degrees F
FPC 1 Exhaust-B Temp Sensor          50 degrees C / 122 degrees F
Power
I2C Slave Revision                   13
```

## show chassis environment pem

<b>List of Syntax</b>	<a href="#">Syntax on page 319</a> <a href="#">Syntax (ACX4000 Router) on page 319</a> <a href="#">Syntax (TX Matrix Routers) on page 319</a> <a href="#">Syntax (TX Matrix Plus Routers) on page 319</a> <a href="#">Syntax (MX Series Router) on page 319</a> <a href="#">Syntax (PTX Series Router) on page 319</a> <a href="#">Syntax (MX104 Universal Routing Platforms) on page 319</a> <a href="#">Syntax (MX10003, MX204, and MX10008 Universal Routing Platforms) on page 319</a> <a href="#">Syntax (QFX Series) on page 320</a> <a href="#">Syntax (OCX Series) on page 320</a> <a href="#">Syntax (EX9251, EX9253 Switches) on page 320</a>
<b>Syntax</b>	show chassis environment pem <slot>
<b>Syntax (ACX4000 Router)</b>	show chassis environment pem
<b>Syntax (TX Matrix Routers)</b>	show chassis environment pem <lcc number   scc> <slot>
<b>Syntax (TX Matrix Plus Routers)</b>	show chassis environment pem <lcc number   sfc number> <slot>
<b>Syntax (MX Series Router)</b>	show chassis environment pem <slot> <all-members> <local> <member member-id>
<b>Syntax (PTX Series Router)</b>	show chassis environment pem <slot> <all-members> <local> <member member-id>
<b>Syntax (MX104 Universal Routing Platforms)</b>	show chassis environment pem <slot> <satellite [fpc-slot slot-id   device-alias alias-name]
<b>Syntax (MX10003, MX204, and MX10008 Universal Routing Platforms)</b>	show chassis environment pem <slot>

**Syntax (QFX Series)**    `show chassis environment pem`  
                              `<slot (interconnect-device name slot ) | (node-device name)>`

**Syntax (OCX Series)**    `show chassis environment pem`  
                              `<slot>`

**Syntax (EX9251,  
EX9253 Switches)**    `show chassis environment pem`  
                              `<slot>`

**Release Information**    Command introduced before Junos OS Release 7.4.  
                              Command introduced in Junos OS Release 11.3 for the QFX Series.  
                              Command introduced in Junos OS Release 12.3R2 for EX Series.  
                              Command introduced in Junos OS Release 13.2 for MX104 Universal Routing Platforms.  
                              Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.  
                              **satellite** option introduced in Junos OS Release 14.2R3.  
                              Command introduced in Junos OS Release 17.2 for PTX10008 Routers.  
                              Command introduced in Junos OS Release 17.3 for MX10003 Universal Routing Platforms.  
                              Command introduced in Junos OS Release 17.4 for MX204 Universal Routing Platforms.  
                              Command introduced in Junos OS Release 17.3 for MX150 Router Appliance.  
                              Command introduced in Junos OS Release 18.1R1 for EX9251 Switches.  
                              Command introduced in Junos OS Release 18.2 for EX9253 Switches.  
                              Command introduced in Junos OS Release 18.2R1 for MX10008 Routers

**Description**    Display Power Entry Module (PEM) environmental status information.



**NOTE:** The new high-capacity (4100W) enhanced DC PEM on MX960 routers includes a new design that can condition the input voltage. This results in the output voltage differing from the input voltage. The earlier generation of DC PEMs coupled the input power directly to the output, thereby making it safe to assume that the output voltage was equal to the input voltage.

---

**Options**    **none**—Display environmental information about both PEMs. For the TX Matrix router, display environmental information about the PEMs, the TX Matrix router, and its attached T640 routers. For the TX Matrix Plus router, display environmental information about the PEMs, the TX Matrix Plus router, and its attached routers.

**all-members**—(MX Series routers only) (Optional) Display environmental information about the PEMs in all the member routers of the Virtual Chassis configuration.

**interconnect-device *name***—(QFabric systems only) (Optional) Display chassis environmental information about the PEMs in the Interconnect device.

**lcc *number***—(TX Matrix router and TX Matrix Plus router only) (Optional) Line-card chassis number.



Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(MX Series routers only) (Optional) Display environmental information about the PEM in the local Virtual Chassis member.

**member *member-id***—(MX Series routers only) (Optional) Display environmental information about the PEM in the specified member of the Virtual Chassis configuration. Replace *member-id* with a value of 0 or 1.

**node-device *name***—(QFabric systems only) (Optional) Display chassis environmental information about the PEMs in the Node device.

**satellite [*fpc-slot slot-id* | device-alias *alias-name*]**—(Junos Fusion only)(Optional) Display environmental information about the PEM in the specified satellite device in a Junos Fusion, or for all satellite devices in the Junos Fusion if no satellite devices are specified.

**scc**—(TX Matrix routers only) (Optional) Display environmental information about the PEM in the TX Matrix router (or switch-card chassis).

**sfc**—(TX Matrix Plus routers only) (Optional) Display environmental information about the PEM in the TX Matrix Plus router (or switch-fabric chassis).

**slot** —(Optional) Display environmental information about an individual PEM. Replace *slot* with 0 or 1.

**Required Privilege Level**

view

**Related Documentation**

- [show chassis hardware on page 624](#)

**List of Sample Output**

[show chassis environment pem \(M40e Router\) on page 323](#)  
[show chassis environment pem \(M120 Router\) on page 323](#)  
[show chassis environment pem \(M160 Router\) on page 323](#)  
[show chassis environment pem \(M320 Router\) on page 324](#)  
[show chassis environment pem \(MX150\) on page 324](#)  
[show chassis environment pem \(MX104 Router\) on page 324](#)  
[show chassis environment pem \(MX240 Router\) on page 324](#)

[show chassis environment pem \(MX480 Router\) on page 325](#)  
[show chassis environment pem \(MX960 Router\) on page 325](#)  
[show chassis environment pem \(MX10003 Router\) on page 325](#)  
[show chassis environment pem \(MX204 Router\) on page 326](#)  
[show chassis environment pem \(MX10008 Router\) on page 326](#)  
[show chassis environment pem \(PTX10016 Router\) on page 327](#)  
[show chassis environment pem \(T320 Router\) on page 328](#)  
[show chassis environment pem \(T640 Router\) on page 328](#)  
[show chassis environment pem \(T4000 Router\) on page 328](#)  
[show chassis environment pem \(T640/T1600/T4000 Routers With Six-Input DC Power Supply\) on page 328](#)  
[show chassis environment pem lcc \(TX Matrix Routing Matrix\) on page 329](#)  
[show chassis environment pem scc \(TX Matrix Routing Matrix\) on page 329](#)  
[show chassis environment pem sfc \(TX Matrix Plus Routing Matrix\) on page 329](#)  
[show chassis environment pem lcc \(TX Matrix Plus Routing Matrix\) on page 330](#)  
[show chassis environment pem node-device \(QFabric System\) on page 330](#)  
[show chassis environment pem \(QFX Series and OCX Series\) on page 331](#)  
[show chassis environment pem interconnect-device \(QFabric System\) on page 331](#)  
[show chassis environment pem \(EX9251 Switches\) on page 331](#)  
[show chassis environment pem \(EX9253 Switches\) on page 331](#)

**Output Fields** [Table 11 on page 322](#) lists the output fields for the **show chassis environment pem** command. Output fields are listed in the approximate order in which they appear.

*Table 11: show chassis environment pem Output Fields*

Field Name	Field Description
PEMslotstatus	Number of the PEM slot.
State	Status of the PEM.
Temperature	Temperature of the air flowing past the PEM.
AC Input	Status of the AC input for the specified component
AC Output	Status of the AC output for the specified component.
DC input	Status of the DC input for the specified component.
DC output	Status of the DC output for the specified component.
Load	(Not available on M40e or M160 routers) Information about the load on supply, in percentage of rated current being used.
Voltage	(M120, M160, M320, T640, T1600, TX Matrix, and TX Matrix Plus routers only) Information about voltage supplied to the PEM.  (MX104 routers only) Information about voltage supplied by the PEM to the system.
Current	(T640, T1600, TX Matrix, and TX Matrix Plus routers only) Information about the PEM current.

Table 11: show chassis environment pem Output Fields (continued)

Field Name	Field Description
Power	(T640, T1600, TX Matrix, and TX Matrix Plus routers only) Information about the PEM power.
SCG/CB/SIB	(T640, T1600, TX Matrix, and TX Matrix Plus routers only) SONET Clock Generator/Control Board/Switch Interface Board.
FAN	(T640, T1600, and T4000 routers with six-input DC power supply only) Information about the DC output to the fan.

## Sample Output

### show chassis environment pem (M40e Router)

```
user@host> show chassis environment pem
PEM 0 status:
  State                Online
  Temperature           OK
  AC input              OK
  DC output             OK
```

### show chassis environment pem (M120 Router)

```
user@host> show chassis environment pem
PEM 0 status:
  State                Online
  Temperature           OK
  DC Input:            OK
  DC Output:           OK
  Load                Less than 20 percent
  Voltage:
    48.0 V input       52864 mV
    48.0 V fan supply  41655 mV
    3.3 V              3399 mV
PEM 1 status:
  State                Online
  Temperature           OK
  DC Input:            OK
  DC Output:           OK
  Load                Less than 20 percent
  Voltage:
    48.0 V input       54537 mV
    48.0 V fan supply  42910 mV
    3.3 V              3506 mV
```

### show chassis environment pem (M160 Router)

```
user@host> show chassis environment pem
PEM 0 status:
  State                Online
  Temperature           OK
  DC input             OK
  DC output            OK
  Load                Less than 20 percent
  Voltage:
```

48.0 V input	54833 mV
48.0 V fan supply	50549 mV
8.0 V bias	8239 mV
5.0 V bias	5006 mV

#### show chassis environment pem (M320 Router)

```
user@host> show chassis environment pem
PEM 2 status:
  State                Online
  Temperature           OK
  DC input              OK
  Load                 Less than 40 percent
    48.0 V input        51853 mV
    48.0 V fan supply   48877 mV
    8.0 V bias          8449 mV
    5.0 V bias          4998 mV
PEM 3 status:
  State                Online
  Temperature           OK
  DC input              OK
  Load                 Less than 40 percent
    48.0 V input        51717 mV
    48.0 V fan supply   49076 mV
    8.0 V bias          8442 mV
    5.0 V bias          4998 mV
```

#### show chassis environment pem (MX150)

```
user@host> show chassis environment pem
FPC 0 PEM 0 status:
  State                Online
  Airflow              Front to Back
  Temperature           OK
```

#### show chassis environment pem (MX104 Router)

```
user@host> show chassis environment pem
PEM 0 status:
  State                Online
  Temperature           OK
  DC Output:           OK
  Voltage:
    12.0 V output       12281 mV
    3.3 V output        3353 mV
PEM 1 status:
  State                Empty
```

#### show chassis environment pem (MX240 Router)

```
user@host> show chassis environment pem
PEM 0 status:
  State                Online
  Temperature           OK
  DC Output:           OK
PEM 1 status:
  State                Online
  Temperature           OK
  DC Output:           OK
```

**show chassis environment pem (MX480 Router)**

```

user@host> show chassis environment pem
PEM 0 status:
  State           Online
  Temperature      OK
  DC Input:        OK
  DC Output:       OK
  Voltage:
PEM 1 status:
  State           Online
  Temperature      OK
  DC Input:        OK
  DC Output:       OK
  Voltage:

```

**show chassis environment pem (MX960 Router)**

```

user@host> show chassis environment pem
PEM 2 status:
  State           Present
PEM 3 status:
  State           Online
  Temperature      OK
  DC Output:       OK

```

**show chassis environment pem (MX10003 Router)**

```

user@host> show chassis environment pem

PEM 0 status:
  State           Online
  Airflow          Front to Back
  Temperature      OK    34 degrees C / 93 degrees F
  Temperature      OK    26 degrees C / 78 degrees F
  Temperature      OK    24 degrees C / 75 degrees F
  Firmware version 0x22
  Cooling Fan      8752 RPM
  DC Output        Voltage(V) Current(A) Power(W) Load(%)
                   12.00      26          312      10

PEM 1 status:
  State           Online
  Airflow          Front to Back
  Temperature      OK    35 degrees C / 95 degrees F
  Temperature      OK    26 degrees C / 78 degrees F
  Temperature      OK    25 degrees C / 77 degrees F
  Firmware version 0x22
  Cooling Fan      8480 RPM
  DC Output        Voltage(V) Current(A) Power(W) Load(%)
                   12.00      27          324      11

PEM 2 status:
  State           Online
  Airflow          Front to Back
  Temperature      OK    37 degrees C / 98 degrees F
  Temperature      OK    29 degrees C / 84 degrees F
  Temperature      OK    25 degrees C / 77 degrees F
  Firmware version 0x22
  Cooling Fan      8656 RPM
  DC Output        Voltage(V) Current(A) Power(W) Load(%)
                   12.00      25          300      10

```

```

PEM 3 status:
  State                Online
  Airflow              Front to Back
  Temperature          OK   35 degrees C / 95 degrees F
  Temperature          OK   26 degrees C / 78 degrees F
  Temperature          OK   25 degrees C / 77 degrees F
  Firmware version     0x22
  Cooling Fan          8448 RPM
  DC Output            Voltage(V) Current(A) Power(W) Load(%)
                       12.00      26          312      10
PEM 4 status:
  State                Empty
PEM 5 status:
  State                Empty

```

### show chassis environment pem (MX204 Router)

```
user@host> show chassis environment pem
```

```

PEM 0 status:
  State                Empty
PEM 1 status:
  State                Online
  Airflow              Front to Back
  Temperature          OK   48 degrees C / 118 degrees F
  Temperature          OK   51 degrees C / 123 degrees F
  Fan Sensor           5400 RPM
  DC Output            Voltage(V) Current(A) Power(W) Load(%)
                       11.94      16          191      29

```

### show chassis environment pem (MX10008 Router)

```
user@host> show chassis environment pem
```

```

PEM 0 status:
  State                Online
  Airflow              Front to Back
  Temperature          OK   29 degrees C / 84 degrees F
  Firmware version     0x36
  Fan 0                5880 RPM
  DC Output            Voltage(V) Current(A) Power(W) Load(%)
                       12.00      104          1248      46
PEM 1 status:
  State                Online
  Airflow              Front to Back
  Temperature          OK   27 degrees C / 80 degrees F
  Firmware version     0x36
  Fan 0                5940 RPM
  DC Output            Voltage(V) Current(A) Power(W) Load(%)
                       12.00      104          1248      46
PEM 2 status:
  State                Online
  Airflow              Front to Back
  Temperature          OK   30 degrees C / 86 degrees F
  Firmware version     0x36
  Fan 0                5940 RPM
  DC Output            Voltage(V) Current(A) Power(W) Load(%)
                       12.00      105          1260      46
PEM 3 status:
  State                Present
PEM 4 status:

```

```

State                               Present
PEM 5 status:
State                               Present

```

### show chassis environment pem (PTX10016 Router)

```

user@host> show chassis environment pem
PEM 0 status:
State                               Online
Airflow                            Front to Back
Temperature                          OK   21 degrees C / 69 degrees F
Firmware version                     0x36
Fan 0                                5760 RPM
DC Output                           Voltage(V) Current(A) Power(W) Load(%)
                                   12.00      51      612      22
PEM 1 status:
State                               Online
Airflow                            Front to Back
Temperature                          OK   23 degrees C / 73 degrees F
Firmware version                     0x36
Fan 0                                5760 RPM
DC Output                           Voltage(V) Current(A) Power(W) Load(%)
                                   12.00      52      624      23
PEM 2 status:
State                               Online
Airflow                            Front to Back
Temperature                          OK   23 degrees C / 73 degrees F
Firmware version                     0x36
Fan 0                                5760 RPM
DC Output                           Voltage(V) Current(A) Power(W) Load(%)
                                   12.00      51      612      22
PEM 3 status:
State                               Online
Airflow                            Front to Back
Temperature                          OK   21 degrees C / 69 degrees F
Firmware version                     0x36
Fan 0                                5760 RPM
DC Output                           Voltage(V) Current(A) Power(W) Load(%)
                                   12.00      51      612      22
PEM 4 status:
State                               Online
Airflow                            Front to Back
Temperature                          OK   22 degrees C / 71 degrees F
Firmware version                     0x36
Fan 0                                5760 RPM
DC Output                           Voltage(V) Current(A) Power(W) Load(%)
                                   12.00      52      624      23
PEM 5 status:
State                               Online
Airflow                            Front to Back
Temperature                          OK   24 degrees C / 75 degrees F
Firmware version                     0x36
Fan 0                                5700 RPM
DC Output                           Voltage(V) Current(A) Power(W) Load(%)
                                   12.00      51      612      22
PEM 6 status:
State                               Online
Airflow                            Front to Back
Temperature                          OK   21 degrees C / 69 degrees F
Firmware version                     0x36
Fan 0                                5700 RPM

```

DC Output	Voltage(V)	Current(A)	Power(W)	Load(%)
	12.00	50	600	22

#### show chassis environment pem (T320 Router)

```
user@host> show chassis environment pem
```

```
PEM 0 status:
```

State	Online
Temperature	OK
DC input:	OK

#### show chassis environment pem (T640 Router)

```
user@host> show chassis environment pem
```

```
PEM 0 status:
```

State	Online
Temperature	22 degrees C / 71 degrees F
AC input:	OK

DC output:	Voltage	Current	Power	Load
FPC 0	56875	606	34	4
FPC 1	57016	525	29	3
FPC 2	0	0	0	0
FPC 3	0	0	0	0
FPC 4	0	0	0	0
FPC 5	0	0	0	0
FPC 6	57158	1581	90	12
FPC 7	0	0	0	0
SCG/CB/SIB	56750	1125	63	5

#### show chassis environment pem (T4000 Router)

```
user@host> show chassis environment pem
```

```
PEM 0 status:
```

State	Online
Temperature	33 degrees C / 91 degrees F
DC Input:	OK

	Voltage(V)	Current(A)	Power(W)	Load(%)
INPUT 0	54.625	9.812	535	22
INPUT 1	54.625	10.250	559	23
INPUT 2	55.125	0.125	6	0
INPUT 3	54.500	10.062	548	22
INPUT 4	54.750	9.375	513	21
INPUT 5	54.750	10.187	557	23
DC Output	Voltage(V)	Current(A)	Power(W)	Load(%)
FPC 0	55.750	10.125	564	37
FPC 1	51.625	0.000	0	0
FPC 2	52.000	0.000	0	0
FPC 3	55.062	10.437	574	38
FPC 4	52.125	0.000	0	0
FPC 5	55.000	9.375	515	34
FPC 6	55.187	9.687	534	35
FPC 7	51.437	0.000	0	0
SCG/CB/SIB	55.375	15.750	872	35
FAN	54.562	14.750	804	42

#### show chassis environment pem (T640/T1600/T4000 Routers With Six-Input DC Power Supply)

```
user@host> show chassis environment pem
```

```
PEM 1 status:
```

State	Online
-------	--------



```

Temperature          36 degrees C / 96 degrees F
DC Input:            OK
                    Voltage(V) Current(A) Power(W) Load(%)
INPUT 0              0.000      0.000      0       0
INPUT 1              54.875      3.812     209     27
INPUT 2              55.375      3.937     218     29
INPUT 3              54.625      3.750     204     27
INPUT 4              55.125      3.375     186     24
INPUT 5              55.125      3.375     186     24
DC Output            Voltage(V) Current(A) Power(W) Load(%)
FPC 0                52.312      0.000      0       0
FPC 1                52.687      0.000      0       0
FPC 2                52.812      0.000      0       0
FPC 3                55.812      7.062     394     52
FPC 4                52.625      0.000      0       0
FPC 5                52.625      0.000      0       0
FPC 6                52.750      0.000      0       0
FPC 7                52.750      0.000      0       0
SCG/CB/SIB           55.937     11.937     667     55
FAN                  55.812      4.937     275     36

```

#### show chassis environment pem lcc (TX Matrix Routing Matrix)

```

user@host> show chassis environment pem 0 lcc 0
lcc0-re0:

```

```

-----
PEM 0 status:
State          Present
Temperature    27 degrees C / 80 degrees F
DC input:      Check
DC output:     Voltage Current Power Load
FPC 0          0       0       0       0
FPC 1          0       0       0       0
FPC 2          0       0       0       0
FPC 3          0       0       0       0
FPC 4          0       0       0       0
FPC 5          0       0       0       0
FPC 6          0       0       0       0
FPC 7          0       0       0       0
SCG/CB/SIB     0       0       0       0

```

#### show chassis environment pem scc (TX Matrix Routing Matrix)

```

user@host> show chassis environment pem scc
scc-re0:

```

```

-----
PEM 1 status:
State          Online
Temperature    24 degrees C / 75 degrees F
DC input:      OK
DC output:     Voltage Current Power Load
SIB 0          0       0       0       0
SIB 1          0       0       0       0
SIB 2          0       0       0       0
SIB 3          56550    0       0       0
SIB 4          55958    6912    386     51

```

#### show chassis environment pem sfc (TX Matrix Plus Routing Matrix)

```

user@host> show chassis environment pem sfc 0

```

sfc0-re0:

```

-----
PEM 0 status:
  State                Online
  Temperature          35 degrees C / 95 degrees F
  DC Input:            OK
  DC Output            Voltage    Current    Power    Load
    Channel 0          53820      14140      761      59
    Channel 1          53550      12720      681      53
    Channel 2          53840      12930      696      54
    Channel 3          53690      14990      804      63
    Channel 4          53620      15070      808      63
    Channel 5          53900      14820      798      62
    Channel 6          54120      5020       271      21

```

### show chassis environment pem lcc (TX Matrix Plus Routing Matrix)

user@host> show chassis environment lcc 0

lcc0-re1:

```

-----
PEM 0 status:
  State                Online
  Temperature          38 degrees C / 100 degrees F
  DC Input:            OK
  DC Output            Voltage    Current    Power    Load
    FPC 0              0          0          0        0
    FPC 1              0          0          0        0
    FPC 2              0          0          0        0
    FPC 3              0          0          0        0
    FPC 4              56408      7575      427      56
    FPC 5              0          0          0        0
    FPC 6              56266      7956      447      59
    FPC 7              56283      6100      343      45
    SCG/CB/SIB         55916      8950      500      41

PEM 1 status:
  State                Present
  Temperature          35 degrees C / 95 degrees F
  DC Input:            Check
  DC Output            Voltage    Current    Power    Load
    FPC 0              0          0          0        0
    FPC 1              0          0          0        0
    FPC 2              0          0          0        0
    FPC 3              0          0          0        0
    FPC 4              0          0          0        0
    FPC 5              0          0          0        0
    FPC 6              0          0          0        0
    FPC 7              0          0          0        0
    SCG/CB/SIB         0          0          0        0

```

### show chassis environment pem node-device (QFabric System)

user@switch> show chassis environment pem node-device node1

```

FPC 0 PEM 0 status:
  State                Check
  Airflow              Front to Back
  Temperature          OK
  AC Input:            OK
  DC Output            Voltage(V)  Current(A)  Power(W)   Load(%)
                     12          10          120        18

```

```
FPC 0 PEM 1 status:
State                Online
Airflow              Back to Front
Temperature          OK
AC Input:            OK
DC Output            Voltage(V) Current(A) Power(W) Load(%)
                   11          10       110      17
```

#### show chassis environment pem (QFX Series and OCX Series)

```
user@switch> show chassis environment pem
FPC 0 PEM 1 status:
State                Online
Airflow              Front to Back
Temperature          OK
AC Input:            OK
DC Output            Voltage(V) Current(A) Power(W) Load(%)
                   12          17       204      31
```

#### show chassis environment pem interconnect-device (QFabric System)

```
user@switch> show chassis environment pem interconnect-device IC11
IC1 PEM 1 status:
State                Online
Airflow              Front to Back
Temperature          OK
AC Input:            OK
DC Output            Voltage(V) Current(A) Power(W) Load(%)
                   12          18       216      33
```

#### show chassis environment pem (EX9251 Switches)

```
user@switch> show chassis environment pem
PEM 0 status:
State                Present
PEM 1 status:
State                Online
Airflow              Front to Back
Temperature          OK    36 degrees C / 96 degrees F
Temperature          OK    35 degrees C / 95 degrees F
Fan Sensor           5940 RPM
DC Output            Voltage(V) Current(A) Power(W) Load(%)
                   11.85       17       201      30
```

#### show chassis environment pem (EX9253 Switches)

```
user@switch> show chassis environment pem
PEM 0 status:
State                Online
Airflow              Front to Back
Temperature          OK    56 degrees C / 132 degrees F
Temperature          OK    46 degrees C / 114 degrees F
Temperature          OK    28 degrees C / 82 degrees F
Firmware version     04.10
Cooling Fan          9056 RPM
DC Output            Voltage(V) Current(A) Power(W) Load(%)
                   12.00       47       564      19

PEM 1 status:
State                Present
PEM 2 status:
```

State	Empty
PEM 3 status:	
State	Empty
PEM 4 status:	
State	Present
PEM 5 status:	
State	Online
Airflow	Front to Back
Temperature	OK 61 degrees C / 141 degrees F
Temperature	OK 49 degrees C / 120 degrees F
Temperature	OK 28 degrees C / 82 degrees F
Firmware version	04.10
Cooling Fan	8656 RPM
DC Output	Voltage(V) Current(A) Power(W) Load(%)
	12.00 51 612 21

## show chassis environment power-supply-unit

<b>Syntax</b>	<b>show chassis environment power-supply-unit</b>
<b>Release Information</b>	Command introduced in Junos OS Release 10.2 for EX Series switches.
<b>Description</b>	(On EX4500 switches only) Display the state of the power supply and the direction of the airflow through the power supply.
<b>Required Privilege Level</b>	view
<b>Related Documentation</b>	<ul style="list-style-type: none"> <li><i>Monitoring Chassis Information</i></li> </ul>
<b>List of Sample Output</b>	<a href="#">show chassis environment power-supply-unit on page 333</a>
<b>Output Fields</b>	<a href="#">Table 12 on page 333</a> lists the output fields for the <b>show chassis environment power-supply-unit</b> command. Output fields are listed in the approximate order in which they appear.

*Table 12: show chassis environment power-supply-unit Output Fields*

Field Name	Field Description
<b>State</b>	State of the power supply: Online or Offline.
<b>Airflow</b>	Direction of airflow of the power supply. One of the following: Front to back or Back to front.

## Sample Output

### show chassis environment power-supply-unit

```
user@switch> show chassis environment power-supply-unit
```

```
FPC 0 PSU 1 status:
```

```
State           Online
Airflow         Front to back
```

## show chassis environment psu

<b>Syntax</b>	<b>show chassis environment psu</b> <i>&lt;slot-number&gt;</i>
<b>Release Information</b>	Command introduced in Junos OS Release 10.3 for EX Series switches.
<b>Description</b>	(On EX8200 switches only) Display the state of the power supply.
<b>Options</b>	<p><b>none</b>—Display the state of the power supply for all power supplies.</p> <p><b>slot-number</b>—(Optional) Display the state of the power supply for a specific power supply slot number (0–5).</p>
<b>Required Privilege Level</b>	view
<b>Related Documentation</b>	<ul style="list-style-type: none"> <li>• <i>Verifying Power Configuration and Use</i></li> <li>• <i>show chassis power-budget-statistics</i></li> </ul>
<b>List of Sample Output</b>	<a href="#">show chassis environment psu on page 334</a> <a href="#">show chassis environment psu (for PSU 1) on page 335</a>
<b>Output Fields</b>	<p><a href="#">Table 12 on page 333</a> lists the output fields for the <b>show chassis environment psu</b> command. Output fields are listed in the approximate order in which they appear.</p>

*Table 13: show chassis environment psu Output Fields*

Field Name	Field Description
<b>State</b>	State of the power supply: Online, Offline, or Empty.
<b>Temperature</b>	Temperature for the online power supply: OK or Out of Range.
<b>DC Output</b>	DC output for the online power supply: OK or Out of Range.

## Sample Output

### show chassis environment psu

```

user@switch> show chassis environment psu

PSU 0 status:
  State                Offline
PSU 1 status:
  State                Online
  Temperature          OK
  DC Output:           OK

```

```
PSU 2 status:
  State           Online
  Temperature      OK
  DC Output:      OK
PSU 3 status:
  State           Offline
PSU 4 status:
  State           Offline
PSU 5 status:
  State           Offline
```

#### show chassis environment psu (for PSU 1)

```
user@switch> show chassis environment psu 1
PSU 1 status:
  State           Online
  Temperature      OK
  DC Output:      OK
```

## show chassis environment routing-engine

---

<b>List of Syntax</b>	<a href="#">Syntax on page 336</a> <a href="#">Syntax (TX Matrix Routers) on page 336</a> <a href="#">Syntax (TX Matrix Plus Routers) on page 336</a> <a href="#">Syntax (MX104, MX2010, MX2020, MX10003, MX204, and MX2008 Universal Routing Platforms) on page 336</a> <a href="#">Syntax (MX Series Routers) on page 336</a> <a href="#">Syntax (PTX Series Routers) on page 336</a> <a href="#">Syntax (QFX Series) on page 336</a> <a href="#">Syntax (OCX Series) on page 336</a> <a href="#">Syntax (ACX5048 and ACX5096 Routers) on page 337</a> <a href="#">Syntax (ACX500 Routers) on page 337</a> <a href="#">Syntax (EX9251, EX9253 Switches) on page 337</a>
<b>Syntax</b>	show chassis environment routing-engine <slot>
<b>Syntax (TX Matrix Routers)</b>	show chassis environment routing-engine <lcc number   scc> <slot>
<b>Syntax (TX Matrix Plus Routers)</b>	show chassis environment routing-engine <lcc number   sfc number> <slot>
<b>Syntax (MX104, MX2010, MX2020, MX10003, MX204, and MX2008 Universal Routing Platforms)</b>	show chassis environment routing-engine <slot> <satellite [fpc-slot slot-id   device-alias alias-name]
<b>Syntax (MX Series Routers)</b>	show chassis environment routing-engine <slot> <all-members> <local> <member member-id>
<b>Syntax (PTX Series Routers)</b>	show chassis environment routing-engine <slot> <all-members> <local> <member member-id>
<b>Syntax (QFX Series)</b>	show chassis environment routing-engine interconnect-device name
<b>Syntax (OCX Series)</b>	show chassis environment routing-engine



	<code>interconnect-device <i>name</i></code>
<b>Syntax (ACX5048 and ACX5096 Routers)</b>	<code>show chassis environment routing-engine</code>
<b>Syntax (ACX500 Routers)</b>	<code>show chassis environment routing-engine</code>
<b>Syntax (EX9251, EX9253 Switches)</b>	<code>show chassis environment routing-engine</code>
<b>Release Information</b>	<p>Command introduced before Junos OS Release 7.4.</p> <p>Command introduced in Junos OS Release 9.0 for EX Series switches.</p> <p><code>sfc</code> option introduced in Junos OS Release 9.6 for the TX Matrix Plus router.</p> <p>Command introduced in Junos OS Release 11.1 for the QFX Series.</p> <p>Command introduced in Junos OS Release 12.1 for the PTX Series Packet Transport Routers and T4000 Core Routers.</p> <p>Command introduced in Junos OS Release 12.3 for MX2010 and MX2020 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 13.2 for MX104 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 15.1X54-D20 for ACX5048 and ACX5096 Routers.</p> <p>Command introduced in Junos OS Release 17.2 for MX2008 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 17.2 for PTX10008 Routers.</p> <p>Command introduced in Junos OS Release 17.3 for MX150 Router Appliance.</p> <p>Command introduced in Junos OS Release 17.4 for MX204 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 17.3 for MX10003 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 18.1R1 for EX9251 Switches.</p> <p>Command introduced in Junos OS Release 18.2 for EX9253 Switches.</p> <p>Command introduced in Junos OS Release 18.2R1 for MX10008 Routers.</p>
<b>Description</b>	Display Routing Engine environmental status information.
<b>Options</b>	<p><b>none</b>—Display environmental information about all Routing Engines. For a TX Matrix router, display environmental information about all Routing Engines on the TX Matrix router and its attached T640 routers. For a TX Matrix Plus router, display environmental information about all Routing Engines on the TX Matrix Plus router and its attached routers.</p> <p><b>all-members</b>—(MX Series routers only) (Optional) Display environmental information about the Routing Engines in all member routers in the Virtual Chassis configuration.</p> <p><b>interconnect-device <i>name</i></b>—(QFabric systems only) (Optional) Display environmental information about the Routing Engines for the Interconnect device.</p> <p><b>lcc <i>number</i></b>—(TX Matrix router and TX Matrix Plus router only) (Optional) Line-card chassis number.</p>

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(MX Series routers only) (Optional) Display environmental information about the Routing Engines in the local Virtual Chassis member.

**member *member-id***—(MX Series routers only) (Optional) Display environmental information about the Routing Engines in the specified member in the Virtual Chassis configuration. Replace *member-id* with the value of 0 or 1.

**satellite [*fpc-slot slot-id* | *device-alias alias-name*]**—(Junos Fusion only)(Optional) Display environmental information for the specified satellite device in a Junos Fusion, or for all satellite devices in the Junos Fusion if no satellite devices are specified.

**scc**—(TX Matrix router only) (Optional) Display environmental information about the Routing Engine in the TX Matrix router (switch-card chassis).

**sfc**—(TX Matrix Plus router only) (Optional) Display environmental information about the Routing Engine in the TX Matrix Plus router (or switch-fabric chassis).

**slot**—(Optional) Display environmental information about an individual Routing Engine. On M10i, M20, M40e, M120, M160, M320, MX Series, MX104 routers, MX2010 routers, MX2020 routers, MX2008 routers, and T Series routers, replace *slot* with 0 or 1. On M5, M7i, M10, and M40 routers, replace *slot* with 0. On EX3200 and EX4200 standalone switches, replace *slot* with 0. On EX4200 switches in a Virtual Chassis configuration and on EX8208 and EX8216 switches, replace *slot* with 0 or 1. On the QFX3500 switch, there is only one Routing Engine, so you do not need to specify the slot number. On PTX Series Packet Transport Routers, replace *slot* with 0 or 1

**Required Privilege Level** view

**Related Documentation**

- [request chassis routing-engine master on page 139](#)
- [show chassis routing-engine on page 947](#)

**List of Sample Output**

- [show chassis environment routing-engine \(Nonredundant\) on page 339](#)
- [show chassis environment routing-engine \(Redundant\) on page 340](#)
- [show chassis environment routing-engine \(MX150\) on page 340](#)

[show chassis environment routing-engine \(MX104 Router\) on page 340](#)  
[show chassis environment routing-engine \(MX2010 Router\) on page 340](#)  
[show chassis environment routing-engine \(MX2020 Router\) on page 340](#)  
[show chassis environment routing-engine \(MX2008 Router\) on page 341](#)  
[show chassis environment routing-engine \(TX Matrix Plus Router\) on page 341](#)  
[show chassis environment routing-engine \(T4000 Core Router\) on page 341](#)  
[show chassis environment routing-engine \(QFX Series and OCX Series\) on page 341](#)  
[show chassis environment routing-engine interconnect-device \(QFabric System\) on page 341](#)  
[show chassis environment routing-engine \(PTX5000 Packet Transport Router\) on page 342](#)  
[show chassis environment routing-engine \(PTX10008 Router\) on page 342](#)  
[show chassis environment routing-engine \(PTX10016 Router\) on page 342](#)  
[show chassis environment routing-engine \(ACX5048 and ACX5096 Routers\) on page 342](#)  
[show chassis environment routing-engine \(ACX500 Routers\) on page 342](#)  
[show chassis environment routing-engine \(PTX5000 \(RE-PTX-X8-64G\), MX240 \(RE-S-X6-64G\), MX480 \(RE-S-X6-64G\), MX960 \(RE-S-X6-64G\), MX2010 \(RE-MX2K-X8-64G\), MX2020 \(RE-MX2K-X8-64G\) on page 342](#)  
[show chassis environment routing-engine \(MX204 Routers\) on page 343](#)  
[show chassis environment routing-engine \(MX10008 Routers\) on page 343](#)  
[show chassis environment routing-engine \(EX9251 Switches\) on page 343](#)  
[show chassis environment routing-engine \(EX9253 Switches\) on page 343](#)

**Output Fields** Table 14 on page 339 lists the output fields for the **show chassis environment routing-engine** command. Output fields are listed in the approximate order in which they appear.

*Table 14: show chassis environment routing-engine Output Fields*

Field Name	Field Description
Routing engine <i>slot</i> status	Number of the Routing Engine slot: 0 or 1.
State	Status of the Routing Engine: <ul style="list-style-type: none"> <li>• Online Master—Routing Engine is online, operating as Master.</li> <li>• Online Standby—Routing Engine is online, operating as Standby.</li> <li>• Offline—Routing Engine is offline.</li> </ul>
Temperature	Temperature of the air flowing past the Routing Engine.
CPU Temperature	(PTX Series and T4000 Core Routers only) Temperature of the air flowing past the Routing Engine CPU.

## Sample Output

**show chassis environment routing-engine (Nonredundant)**

```
user@host> show chassis environment routing-engine
```

```
Routing Engine 0 status:
  State           Online Master
  Temperature      27 degrees C / 80 degrees
```

#### show chassis environment routing-engine (Redundant)

```
user@host> show chassis environment routing-engine
Route Engine 0 status:
  State           Online Master
  Temperature      26 degrees C / 78 degrees F
Route Engine 1 status:
  State           Online Standby
  Temperature      26 degrees C / 78 degrees F
```

#### show chassis environment routing-engine (MX150)

```
user@ host >show chassis environment routing-engine
Routing Engine 0 status:
  State           Online Master
  CPU Temperature  42 degrees C / 107 degrees F
```

#### show chassis environment routing-engine (MX104 Router)

```
user@ host >show chassis environment routing-engine
Routing Engine 0 status:
  State           Online Master
  Temperature      34 degrees C / 93 degrees F
  CPU Temperature  43 degrees C / 109 degrees F
Routing Engine 1 status:
  State           Online Standby
  Temperature      33 degrees C / 91 degrees F
  CPU Temperature  39 degrees C / 102 degrees F
```

#### show chassis environment routing-engine (MX2010 Router)

```
user@host> show chassis environment routing-engine
Routing Engine 0 status:
  State           Online Master
  Temperature      37 degrees C / 98 degrees F
  CPU Temperature  37 degrees C / 98 degrees F
Routing Engine 1 status:
  State           Online Standby
  Temperature      35 degrees C / 95 degrees F
  CPU Temperature  34 degrees C / 93 degrees F
```

#### show chassis environment routing-engine (MX2020 Router)

```
user@host> show chassis environment routing-engine
Routing Engine 0 status:
  State           Online Master
  Temperature      35 degrees C / 95 degrees F
  CPU Temperature  34 degrees C / 93 degrees F
Routing Engine 1 status:
  State           Online Standby
  Temperature      44 degrees C / 111 degrees F
  CPU Temperature  43 degrees C / 109 degrees F
```

**show chassis environment routing-engine (MX2008 Router)**

```

user@host> show chassis environment routing-engine
Routing Engine 0 status:
  State           Online Master
  CPU Temperature 75 degrees C / 167 degrees F
Routing Engine 1 status:
  State           Online Standby
  CPU Temperature 47 degrees C / 116 degrees F

```

**show chassis environment routing-engine (TX Matrix Plus Router)**

```

user@host> show chassis environment routing-engine
sfc0-re0:
-----
Routing Engine 0 status:
  State           Online Master
  Temperature      26 degrees C / 78 degrees F
Routing Engine 1 status:
  State           Online Standby
  Temperature      28 degrees C / 82 degrees F

lcc0-re0:
-----
Routing Engine 0 status:
  State           Online Master
  Temperature      30 degrees C / 86 degrees F
Routing Engine 1 status:
  State           Online Standby
  Temperature      29 degrees C / 84 degrees F

```

**show chassis environment routing-engine (T4000 Core Router)**

```

user@host> show chassis environment routing-engine
Routing Engine 0 status:
  State           Online Master
  Temperature      33 degrees C / 91 degrees F
  CPU Temperature  50 degrees C / 122 degrees F
Routing Engine 1 status:
  State           Online Standby
  Temperature      33 degrees C / 91 degrees F
  CPU Temperature  46 degrees C / 114 degrees F

```

**show chassis environment routing-engine (QFX Series and OCX Series)**

```

user@switch> show chassis environment routing-engine
Routing Engine 0 status:
  State           Online Master
  Temperature      42 degrees C / 107 degrees F

```

**show chassis environment routing-engine interconnect-device (QFabric System)**

```

user@switch> show chassis environment routing-engine interconnect-device interconnect1
routing-engine interconnect-device interconnect1
Routing Engine 0 status:
  State           Online Standby
  Temperature      52 degrees C / 125 degrees F
Routing Engine 1 status:

```

State	Online Master
Temperature	57 degrees C / 134 degrees F

#### show chassis environment routing-engine (PTX5000 Packet Transport Router)

```
user@switch> show chassis environment routing-engine
Routing Engine 0 status:
  State      Online Master
  Temperature 55 degrees C / 131 degrees F
  CPU Temperature 66 degrees C / 150 degrees F
Routing Engine 1 status:
  State      Online Standby
  Temperature 52 degrees C / 125 degrees F
  CPU Temperature 64 degrees C / 147 degrees F
```

#### show chassis environment routing-engine (PTX10008 Router)

```
user@switch> show chassis environment routing-engine
Routing Engine 0 status:
  State      Online Master
  CPU Temperature 40 degrees C / 104 degrees F
Routing Engine 1 status:
  State      Online Standby
  CPU Temperature 40 degrees C / 104 degrees F
```

#### show chassis environment routing-engine (PTX10016 Router)

```
user@switch> show chassis environment routing-engine
Routing Engine 0 status:
  State      Online Master
  CPU Temperature 33 degrees C / 91 degrees F
Routing Engine 1 status:
  State      Online Standby
  CPU Temperature 38 degrees C / 100 degrees F
```

#### show chassis environment routing-engine (ACX5048 and ACX5096 Routers)

```
user@host> show chassis environment routing-engine
Routing Engine 0 status:
  State      Online Master
  Temperature 33 degrees C / 91 degrees F
```

#### show chassis environment routing-engine (ACX500 Routers)

```
user@host> show chassis environment routing-engine
Routing Engine 0 status:
  State      Online Master
  Temperature 54 degrees C / 129 degrees F
```

## Sample Output

#### show chassis environment routing-engine (PTX5000 (RE-PTX-X8-64G), MX240 (RE-S-X6-64G), MX480 (RE-S-X6-64G), MX960 (RE-S-X6-64G), MX2010 (RE-MX2K-X8-64G), MX2020 (RE-MX2K-X8-64G))

```
user@switch> show chassis environment routing-engine
Routing Engine 0 status:
  State      Online Master
  Temperature 37 degrees C / 98 degrees F
  CPU Temperature 52 degrees C / 125 degrees F
```

```
Routing Engine 1 status:
  State           Online Standby
  Temperature      37 degrees C / 98 degrees F
  CPU Temperature  51 degrees C / 123 degrees F
```

#### show chassis environment routing-engine (MX204 Routers)

```
user@host> show chassis environment routing-engine
Routing Engine 0 status:
  State           Online Master
```

#### show chassis environment routing-engine (MX10008 Routers)

```
Routing Engine 0 status:
  State           Online Master
  CPU Temperature  41 degrees C / 105 degrees F
Routing Engine 1 status:
  State           Online Standby
  CPU Temperature  40 degrees C / 104 degrees F
```

#### show chassis environment routing-engine (EX9251 Switches)

```
user@switch> show chassis environment routing-engine
Routing Engine 0 status:
  State           Online Master
```

#### show chassis environment routing-engine (EX9253 Switches)

```
user@switch> show chassis environment routing-engine
Routing Engine 0 status:
  State           Online Master
Routing Engine 1 status:
  State           Present
```

## show chassis ethernet-switch

---

<b>List of Syntax</b>	<a href="#">Syntax on page 344</a> <a href="#">Syntax (EX8200 Switch) on page 344</a> <a href="#">Syntax (T4000 Router) on page 344</a> <a href="#">Syntax (TX Matrix Router) on page 344</a> <a href="#">Syntax (TX Matrix Plus Router) on page 344</a> <a href="#">Syntax (MX Series Router) on page 344</a> <a href="#">Syntax (MX2010, MX2020, and MX2008 Universal Routing Platforms) on page 344</a> <a href="#">Syntax (MX10008 Universal Routing Platforms) on page 344</a> <a href="#">Syntax (PTX Series Packet Transport Routers) on page 344</a>
<b>Syntax</b>	show chassis ethernet-switch <errors <port>>
<b>Syntax (EX8200 Switch)</b>	show chassis ethernet-switch <statistics <port>   switch <number>
<b>Syntax (T4000 Router)</b>	show chassis ethernet-switch <errors <port>   statistics <port>>
<b>Syntax (TX Matrix Router)</b>	show chassis ethernet-switch <errors <port>   statistics <port>> <lcc <number>   scc>
<b>Syntax (TX Matrix Plus Router)</b>	show chassis ethernet-switch <errors <port>   switch <number> <lcc number   sfc number> <statistics <port>   switch <number>
<b>Syntax (MX Series Router)</b>	show chassis ethernet-switch <all-members> <errors <port>> <local> <member member-id>
<b>Syntax (MX2010, MX2020, and MX2008 Universal Routing Platforms)</b>	show chassis ethernet-switch <errors <port>   statistics <port>> <old-rom-packet-count>
<b>Syntax (MX10008 Universal Routing Platforms)</b>	statistics <port>>
<b>Syntax (PTX Series Packet Transport Routers)</b>	show chassis ethernet-switch <errors <port>> <statistics <port>>



`<port-state <port>>`

<b>Release Information</b>	<p>Command introduced before Junos OS Release 7.4.</p> <p>Command introduced in Junos OS Release 9.4 for EX Series switches.</p> <p><b>sfc</b> option introduced in Junos OS Release 9.6 for the TX Matrix Plus router.</p> <p>Command introduced in Junos OS Release 12.1x48 for PTX Series Packet Transport Routers.</p> <p>Command introduced in Junos OS Release 12.3 for MX2020 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 12.3 for MX2010 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 17.2 for MX2008 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 17.2 for PTX10008 Routers.</p> <p>Command introduced in Junos OS Release 18.2 for MX10008 Universal Routing Platforms.</p>
<b>Description</b>	<p>(M10i, M40e, M120, M160, M320, MX Series, and T Series routers and EX8200 and PTX Series routers only) Display information about the ports on the Control Board (CB) Ethernet switch.</p>
<b>Options</b>	<p><b>none</b>—Display information about each connected port on the Ethernet switch. On a TX Matrix router, display information about each connected port on the Ethernet switch on the TX Matrix router and its attached T640 routers. On a TX Matrix Plus router, display information about each connected port on the Ethernet switch on the TX Matrix Plus router and its attached routers.</p> <p><b>all-members</b>—(MX Series routers only) (Optional) Display information about the ports on the CB Ethernet switch on all the members of the Virtual Chassis configuration.</p> <p><b>errors</b>—(Optional) Display the numbers and types of errors accumulated on all ports of the Ethernet switch.</p> <p><b>errors port</b>—(Optional) Display the numbers and types of errors accumulated on the specified port (0 through 15) of the Ethernet switch. On the TX Matrix router, replace <b>port</b> with a value from 0 through 15. On the TX Matrix Plus router and EX8200 switch, replace <b>port</b> with a value from 0 through 27. On the PTX Series Packet Transport Routers, replace <b>port</b> with a value from 0 through 25. On the T4000 routers, MX2020 routers, MX2010 routers, and MX2008 routers, replace <b>port</b> with a value from 0 through 27.</p> <p><b>errors switch number</b>—(TX Matrix Plus router only) (Optional) Display the numbers and types of errors accumulated on the specified switch. Replace <b>number</b> with a value from 0 through 2.</p> <p><b>lcc number</b>—(TX Matrix router and TX Matrix Plus router only) (Optional) Line-card chassis number.</p>

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(MX Series routers only) (Optional) Display information about the ports on the CB Ethernet switch on the local Virtual Chassis member.

**member *member-id***—(MX Series routers only) (Optional) Display information about the ports on the CB Ethernet switch on the specified member of the Virtual Chassis configuration. Replace *member-id* with a value of 0 or 1.

**old-rom-packet-count**—(MX 2020 Routers only) (Optional) Display information about installed linecards. A non-zero number indicates that the bootrom on that linecard needs to be updated.

**port-state**—(PTX Series only) (Optional) Display information about current port operation (**Blocking**, **Listening**, or **Disabled**).

**scc**—(TX Matrix router only) (Optional) Display information about the ports on the CB's Ethernet switch on the TX Matrix router (switch-card chassis).

**sfc *number***—(TX Matrix Plus router only) (Optional) Display information about the ports on the CB's Ethernet switch on the TX Matrix Plus router (or switch-fabric chassis). Replace *number* with 0.

**statistics**—(Optional) Display traffic statistics for each connected port on the Ethernet switch.

**statistics *port***—(Optional) Display traffic statistics for the specified port on the Ethernet switch. On the TX Matrix router, replace *port* with a value from 0 through 25. On the TX Matrix Plus router or EX8200 switch, replace *port* with a value from 0 through 27. On the PTX Series Packet Transport Routers, replace *port* with a value from 0 through 25. On the T4000 routers, MX2020 routers, MX2010 routers, and MX2008 routers, replace *port* with a value from 0 through 27.

**statistics switch *number***—(TX Matrix Plus routers and EX8200 switch only) (Optional) Display traffic statistics for the specified Ethernet switch number. On the TX Matrix Plus router and EX8216 switch, replace *number* with a value from 0 through 2. On the EX8208 switch, replace *number* with a value from 0 through 1.

**Required Privilege Level** view

**List of Sample Output**

- [show chassis ethernet-switch on page 351](#)
- [show chassis ethernet-switch \(MX480 Router with MPC4E\) on page 352](#)
- [show chassis ethernet-switch \(MX2010 Router\) on page 353](#)
- [show chassis ethernet-switch statistics \(MX2010 Router\) on page 354](#)
- [show chassis ethernet-switch \(MX2020 Router\) on page 361](#)
- [show chassis ethernet-switch statistics \(MX2020 Router\) on page 364](#)
- [show chassis ethernet-switch \(MX2020 Router with MPC4E\) on page 371](#)
- [show chassis ethernet-switch \(MX2008 Router\) on page 373](#)
- [show chassis ethernet-switch statistics \(Mx10008 Router\) on page 374](#)
- [show chassis ethernet-switch \(TX Matrix Router\) on page 375](#)
- [show chassis ethernet-switch errors on page 376](#)
- [show chassis ethernet-switch statistics on page 377](#)
- [show chassis ethernet-switch errors \(TX Matrix Plus Router\) on page 378](#)
- [show chassis ethernet-switch sfc errors \(TX Matrix Plus Router\) on page 379](#)
- [show chassis ethernet-switch statistics \(TX Matrix Plus Router\) on page 380](#)
- [show chassis ethernet-switch \(T4000 Router\) on page 384](#)
- [show chassis ethernet-switch errors \(T4000 Router\) on page 385](#)
- [show chassis ethernet-switch \(PTX5000 Packet Transport Router\) on page 386](#)
- [show chassis ethernet-switch statistics \(PTX5000 Packet Transport Router\) on page 387](#)
- [show chassis ethernet-switch port-state \(PTX5000 Packet Transport Router\) on page 390](#)

**Output Fields** [Table 15 on page 347](#) lists the output fields for the **show chassis ethernet-switch** command. Output fields are listed in the approximate order in which they appear.

*Table 15: show chassis ethernet-switch Output Fields*

Field Name	Field Description
Link is good on port n connected to device	Information about the link between each port on the CB's Ethernet switch and one of the following devices:
or	<ul style="list-style-type: none"> <li>FPC0 (Flexible PIC Concentrator 0) through FPC7</li> </ul>
Link is good on Fast Ethernet port n connected to device	<ul style="list-style-type: none"> <li>Local controller</li> <li>Routing Engine</li> <li>Other Routing Engine (on a system with two Routing Engines)</li> <li>SPMB (Switch Processor Mezzanine Board)</li> </ul>
or	<ul style="list-style-type: none"> <li>(TX Matrix router only) LCC0 (line-card chassis 0) through LCC3</li> </ul>
Link is good on Gigabit Ethernet port n connected to device	
or	
Link is down on Gigabit Ethernet port connected to device	

Table 15: show chassis ethernet-switch Output Fields (continued)

Field Name	Field Description
Speed is	Speed at which the Ethernet link is running: <b>10 Mb</b> or <b>100 Mb</b> . When the device is <b>RE</b> or <b>Other RE</b> on the TX Matrix router, the speed is <b>1000 Mb</b> .  <b>NOTE:</b> Irrespective of the device, the speed is <b>1000 Mb</b> on the MX2010, MX2020, and MX2008 routers.
Duplex is	Duplex type of the Ethernet link: <b>full</b> or <b>half</b> .
Autonegotiate is Enabled (or Disabled)	By default, built-in Fast Ethernet ports on a PIC autonegotiate whether to operate at 10 Mbps or 100 Mbps. All other interfaces automatically choose the correct speed based on the PIC type and whether the PIC is configured to operate in multiplexed mode (using the <b>no-concatenate</b> statement at the <b>[edit chassis]</b> hierarchy level, as described in the <i>Junos OS System Basics Configuration Guide</i> ).
Flow Control TX is Enabled (or Disabled)	(MX2010 routers, MX2020 routers, MX2008 routers, and PTX Series) Flow control in the transmit direction is enabled (or disabled). Flow control regulates the flow of packets from the switch to the remote side of the connection.
Flow Control RX is Enabled (or Disabled)	(MX2010 routers, MX2020 routers, MX2008 routers, and PTX Series) Flow control in the receive direction is enabled (or disabled). Flow control regulates the flow of packets from the remote side of the connection to the switch.
MLT3	Number of multilevel threshold-3 (MLT-3) Fast Ethernet errors detected.
Accumulated error counts for port <i>n</i> connected to device FPC <i>n</i> : (error output only)	
Lock	Number of lock errors detected.
Xmit	Number of transmission errors detected.
ESD	Number of electrostatic discharge (ESD) errors detected.
False Carrier	Number of false carrier errors detected. This number is increased by one if a FRU is removed.
Disconnects	Number of disconnect errors detected.
FX mode	Number of errors detected on an Ethernet link over optical fiber.
Statistics for port <i>n</i> connected to device FPC <i>n</i> (statistics output only)	
TX Packets 64 Octets	(MX2010, MX2020, and MX2008 routers) Number of packets of size 64 octets transmitted.
TX Packets 65 - 127 Octets	(MX2010, MX2020, and MX2008 routers) Number of packets of size 65 through 127 octets transmitted.
TX Packets 128 - 255 Octets	(MX2010, MX2020, and MX2008 routers) Number of packets of size 128 through 255 octets transmitted.
TX Packets 256 - 511 Octets	(MX2010, MX2020, and MX2008 routers) Number of packets of size 256 through 511 octets transmitted.

*Table 15: show chassis ethernet-switch Output Fields (continued)*

Field Name	Field Description
<b>TX Packets 512 - 1023 Octets</b>	(MX2010, MX2020, and MX2008 routers) Number of packets of size 512 through 1023 octets transmitted.
<b>TX Packets 1024 - 1518 Octets</b>	(MX2010, MX2020, and MX2008 routers) Number of packets of size 1024 through 1518 octets transmitted.
<b>TX Packets 1519 - 2047 Octets</b>	(MX2010, MX2020, and MX2008 routers) Number of packets of size 1519 through 2047 octets transmitted.
<b>TX Packets 2048 - 4095 Octets</b>	(MX2010, MX2020, and MX2008 routers) Number of packets of size 2048 through 4095 octets transmitted.
<b>TX Packets 4096 - 9216 Octets</b>	(MX2010, MX2020, and MX2008 routers) Number of packets of size 4096 through 9216 octets transmitted.
<b>TX 1519 - 1522 Good Vlan frms</b>	(MX2010, MX2020, and MX2008 routers) Number of transmitted frames of size 1519 through 1522 octets that are good VLAN frames.
<b>TX Octets</b>	Number of octets sent.
<b>TX Unicast packets</b>	Number of unicast packets sent.
<b>TX Multicast packets</b>	Number of multicast packets sent.
<b>TX Broadcast packets</b>	Number of broadcast packets sent.
<b>TX Single Collision frames</b>	(MX2010, MX2020, and MX2008 routers) Number of packets sent after one collision.
<b>TX Mult. Collision frames</b>	(MX2010, MX2020, and MX2008 routers) Number of packets sent after multiple collisions.
<b>TX Late collisions</b>	Number of packets aborted during sending because of collisions after 64 bytes.
<b>TX Excessive collisions</b>	Number of packets not sent because of too many collisions.
<b>TX Dropped packets</b>	Number of transmitted packets that were dropped.
<b>TX PAUSEMAC Ctrl Frames</b>	Number of Media Access Control (MAC) frames containing PAUSE commands that were sent.
<b>TX Oversize Packets</b>	Number of oversize packets that were sent.
<b>TX FCS Error Counter</b>	Number of packets discarded because of frame check sequence errors.
<b>TX Fragment Counter</b>	Number of fragmented packets sent.
<b>TX Byte Counter</b>	Number of bytes sent.

Table 15: show chassis ethernet-switch Output Fields (continued)

Field Name	Field Description
<b>TX Packet OK Counter</b>	Number of viable packets sent.
<b>TX Pause Packet Counter</b>	Number of PAUSE packets sent.
<b>RX Packets 64 Octets</b>	(MX2010, MX2020, and MX2008 routers) Number of packets of size 64 octets received.
<b>RX Packets 65 - 127 Octets</b>	(MX2010, MX2020, and MX2008 routers) Number of packets of size 65 through 127 octets received.
<b>RX Packets 128 - 255 Octets</b>	(MX2010, MX2020, and MX2008 routers) Number of packets of size 128 through 255 octets received.
<b>RX Packets 256 - 511 Octets</b>	(MX2010, MX2020, and MX2008 routers) Number of packets of size 256 through 511 octets received.
<b>RX Packets 512 - 1023 Octets</b>	(MX2010, MX2020, and MX2008 routers) Number of packets of size 512 through 1023 octets received.
<b>RX Packets 1024 - 1518 Octets</b>	(MX2010, MX2020, and MX2008 routers) Number of packets of size 1024 through 1518 octets received.
<b>RX Packets 1519 - 2047 Octets</b>	(MX2010, MX2020, and MX2008 routers) Number of packets of size 1519 through 2047 octets received.
<b>RX Packets 2048 - 4095 Octets</b>	(MX2010, MX2020, and MX2008 routers) Number of packets of size 2048 through 4095 octets received.
<b>RX Packets 4096 - 9216 Octets</b>	(MX2010, MX2020, and MX2008 routers) Number of packets of size 4096 through 9216 octets received.
<b>RX Octets</b>	Number of octets received.
<b>RX Unicast packets</b>	Number of unicast packets received.
<b>RX Multicast packets</b>	Number of multicast packets received.
<b>RX Broadcast packets</b>	Number of broadcast packets received.
<b>RX FCS Errors</b>	Number of packets discarded because of frame check sequence errors.
<b>RX Alignment Errors</b>	Number of incomplete octets received.
<b>RX Dropped Packets</b>	Number of incoming packets that were dropped.
<b>RX Fragments</b>	Number of fragmented packets received.
<b>RX Symbol Errors</b>	Number of symbols received that the router did not correctly decode.

Table 15: show chassis ethernet-switch Output Fields (continued)

Field Name	Field Description
RX MAC Control	Number of Media Access Control (MAC) packets received.
RX Oversize Packets	Number of oversize packets received.
RX Undersize Packets	Number of undersize packets received.
RX Jabbers	Total number of frames received that exceed the maximum byte count and contain CRC errors .
RX Control Frame Counter	Number of control frames received.
RX Pause Frame Counter	Number of pause frames received.
RX FCS Errors	Number of packets discarded because of frame check sequence errors.
RX Fragments	Number of fragmented packets received.
RX Byte Counter	Number of bytes received.
RX Packet OK Counter	Number of viable packets received.

## Sample Output

### show chassis ethernet-switch

```

user@host> show chassis ethernet-switch
Link is good on port 0 connected to device: FPC0
  Speed is 100 MB
  Duplex is full

Link is good on port 1 connected to device: FPC1
  Speed is 100 MB
  Duplex is full

Link is good on port 2 connected to device: FPC2
  Speed is 100 MB
  Duplex is full

Link is good on port 3 connected to device: FPC3
  Speed is 100 MBb
  Duplex is full

Link is good on port 7 connected to device: Local controller
  Speed is 100 MB
  Duplex is full

Link is good on port 9 connected to device: SPMB
  Speed is 100 MB
  Duplex is full

```

```
Link is good on port 13 connected to device: FPC5
Speed is 100 MB
Duplex is full
```

#### show chassis ethernet-switch (MX480 Router with MPC4E)

```
user@host > show chassis ethernet-switch
Displaying summary for switch 0
Link is down on GE port 0 connected to device: FPC0

Link is down on GE port 1 connected to device: FPC1

Link is good on GE port 2 connected to device: FPC2
Speed is 1000Mb
Duplex is full
Autonegotiate is Enabled
Flow Control TX is Disabled
Flow Control RX is Disabled

Link is good on GE port 3 connected to device: FPC3
Speed is 1000Mb
Duplex is full
Autonegotiate is Enabled
Flow Control TX is Disabled
Flow Control RX is Disabled

Link is good on GE port 4 connected to device: FPC4
Speed is 1000Mb
Duplex is full
Autonegotiate is Enabled
Flow Control TX is Disabled
Flow Control RX is Disabled

Link is down on GE port 5 connected to device: FPC5

Link is down on GE port 6 connected to device: FPC6

Link is down on GE port 7 connected to device: FPC7

Link is down on GE port 8 connected to device: FPC8

Link is down on GE port 9 connected to device: FPC9

Link is down on GE port 10 connected to device: FPC10

Link is down on GE port 11 connected to device: FPC11

Link is good on GE port 12 connected to device: Other RE
Speed is 1000Mb
Duplex is full
Autonegotiate is Enabled
Flow Control TX is Disabled
Flow Control RX is Disabled

Link is good on GE port 13 connected to device: RE-GigE
Speed is 1000Mb
Duplex is full
Autonegotiate is Enabled
Flow Control TX is Disabled
Flow Control RX is Disabled
```



Link is down on GE port 14 connected to device: Debug-GigE

#### show chassis ethernet-switch (MX2010 Router)

```
user@host > show chassis ethernet-switch
Displaying summary for switch 0
Link is good on GE port 0 connected to device: FPC0
  Speed is 1000Mb
  Duplex is full
  Autonegotiate is Enabled
  Flow Control TX is Disabled
  Flow Control RX is Disabled

Link is good on GE port 1 connected to device: FPC1
  Speed is 1000Mb
  Duplex is full
  Autonegotiate is Enabled
  Flow Control TX is Disabled
  Flow Control RX is Disabled

Link is good on GE port 2 connected to device: FPC3
  Speed is 1000Mb
  Duplex is full
  Autonegotiate is Enabled
  Flow Control TX is Disabled
  Flow Control RX is Disabled

Link is good on GE port 3 connected to device: FPC2
  Speed is 1000Mb
  Duplex is full
  Autonegotiate is Enabled
  Flow Control TX is Disabled
  Flow Control RX is Disabled

Link is good on GE port 4 connected to device: FPC5
  Speed is 1000Mb
  Duplex is full
  Autonegotiate is Enabled
  Flow Control TX is Disabled
  Flow Control RX is Disabled

Link is good on GE port 5 connected to device: FPC4
  Speed is 1000Mb
  Duplex is full
  Autonegotiate is Enabled
  Flow Control TX is Disabled
  Flow Control RX is Disabled

Link is good on GE port 6 connected to device: FPC6
  Speed is 1000Mb
  Duplex is full
  Autonegotiate is Enabled
  Flow Control TX is Disabled
  Flow Control RX is Disabled

Link is good on GE port 7 connected to device: FPC7
  Speed is 1000Mb
  Duplex is full
  Autonegotiate is Enabled
  Flow Control TX is Disabled
```

Flow Control RX is Disabled

Link is good on GE port 8 connected to device: FPC8

Speed is 1000Mb

Duplex is full

Autonegotiate is Enabled

Flow Control TX is Disabled

Flow Control RX is Disabled

Link is good on GE port 9 connected to device: FPC9

Speed is 1000Mb

Duplex is full

Autonegotiate is Enabled

Flow Control TX is Disabled

Flow Control RX is Disabled

Link is good on GE port 20 connected to device: Other RE-GigE

Speed is 1000Mb

Duplex is full

Autonegotiate is Enabled

Flow Control TX is Disabled

Flow Control RX is Disabled

Link is good on GE port 21 connected to device: RE-GigE

Speed is 1000Mb

Duplex is full

Autonegotiate is Enabled

Flow Control TX is Disabled

Flow Control RX is Disabled

Link is down on GE port 22 connected to device: Debug-GigE

Link is good on GE port 23 connected to device: SPMB

Speed is 1000Mb

Duplex is full

Autonegotiate is Enabled

Flow Control TX is Disabled

Flow Control RX is Disabled

Link is down on XE port 24 connected to device: SFP+ 0

Link is down on XE port 25 connected to device: SFP+ 1

Link is down on XE port 26 connected to device: RE-10GigE

Link is down on XE port 27 connected to device: Other RE-10GigE

### show chassis ethernet-switch statistics (MX2010 Router)

```
user@host > show chassis ethernet-switch statistics
```

```
Displaying port statistics for switch 0
```

```
Statistics for port 0 connected to device FPC0:
```

TX Packets 64 Octets	5088623
TX Packets 65-127 Octets	2637257
TX Packets 128-255 Octets	84829
TX Packets 256-511 Octets	120193
TX Packets 512-1023 Octets	252371
TX Packets 1024-1518 Octets	7189736
TX Packets 1519-2047 Octets	0
TX Packets 2048-4095 Octets	0
TX Packets 4096-9216 Octets	0

```

TX 1519-1522 Good Vlan frms 0
TX Octets 15373009
TX Multicast Packets 14
TX Broadcast Packets 1679654
TX Single Collision frames 0
TX Mult. Collision frames 0
TX Late Collisions 0
TX Excessive Collisions 0
TX Collision frames 0
TX PAUSEMAC Ctrl Frames 0
TX MAC ctrl frames 0
TX Frame deferred Xmsns 0
TX Frame excessive deferl 0
TX Oversize Packets 0
TX Jabbers 0
TX FCS Error Counter 0
TX Fragment Counter 0
TX Byte Counter 3041239292
RX Packets 64 Octets 874260
RX Packets 65-127 Octets 26066124
RX Packets 128-255 Octets 1386532
RX Packets 256-511 Octets 150539
RX Packets 512-1023 Octets 4636799
RX Packets 1024-1518 Octets 92601
RX Packets 1519-2047 Octets 0
RX Packets 2048-4095 Octets 0
RX Packets 4096-9216 Octets 0
RX Octets 33206855
RX Multicast Packets 0
RX Broadcast Packets 279416
RX FCS Errors 0
RX Align Errors 0
RX Fragments 0
RX Symbol errors 0
RX Unsupported opcodes 0
RX Out of Range Length 0
RX False Carrier Errors 0
RX Undersize Packets 0
RX Oversize Packets 0
RX Jabbers 0
RX 1519-1522 Good Vlan frms 0
RX MTU Exceed Counter 0
RX Control Frame Counter 0
RX Pause Frame Counter 0
RX Byte Counter 958929187
Statistics for port 1 connected to device FPC1:
TX Packets 64 Octets 5109146
TX Packets 65-127 Octets 2779473
TX Packets 128-255 Octets 2441286
TX Packets 256-511 Octets 173102
TX Packets 512-1023 Octets 1547504
TX Packets 1024-1518 Octets 7190581
TX Packets 1519-2047 Octets 0
TX Packets 2048-4095 Octets 0
TX Packets 4096-9216 Octets 0
TX 1519-1522 Good Vlan frms 0
TX Octets 19241092
TX Multicast Packets 14
TX Broadcast Packets 1673369
TX Single Collision frames 0
TX Mult. Collision frames 0

```

TX Late Collisions	0
TX Excessive Collisions	0
TX Collision frames	0
TX PAUSEMAC Ctrl Frames	0
TX MAC ctrl frames	0
TX Frame deferred Xtns	0
TX Frame excessive deferl	0
TX Oversize Packets	0
TX Jabbers	0
TX FCS Error Counter	0
TX Fragment Counter	0
TX Byte Counter	4213380187
RX Packets 64 Octets	865914
RX Packets 65-127 Octets	26612151
RX Packets 128-255 Octets	1090153
RX Packets 256-511 Octets	25126
RX Packets 512-1023 Octets	101158
RX Packets 1024-1518 Octets	78092
RX Packets 1519-2047 Octets	0
RX Packets 2048-4095 Octets	0
RX Packets 4096-9216 Octets	0
RX Octets	28772594
RX Multicast Packets	0
RX Broadcast Packets	285669
RX FCS Errors	0
RX Align Errors	0
RX Fragments	0
RX Symbol errors	0
RX Unsupported opcodes	0
RX Out of Range Length	0
RX False Carrier Errors	0
RX Undersize Packets	0
RX Oversize Packets	0
RX Jabbers	0
RX 1519-1522 Good Vlan frms	0
RX MTU Exceed Counter	0
RX Control Frame Counter	0
RX Pause Frame Counter	0
RX Byte Counter	2327283837

Link is down on GE port 2 connected to device: FPC3

Link is down on GE port 3 connected to device: FPC2

Link is down on GE port 4 connected to device: FPC5

Link is down on GE port 5 connected to device: FPC4

Link is down on GE port 6 connected to device: FPC6

Link is down on GE port 7 connected to device: FPC7

Statistics for port 8 connected to device FPC8:

TX Packets 64 Octets	5341094
TX Packets 65-127 Octets	2625310
TX Packets 128-255 Octets	3315158
TX Packets 256-511 Octets	174805
TX Packets 512-1023 Octets	976908
TX Packets 1024-1518 Octets	7181498
TX Packets 1519-2047 Octets	0
TX Packets 2048-4095 Octets	0

```

TX Packets 4096-9216 Octets 0
TX 1519-1522 Good Vlan frms 0
TX Octets 19614773
TX Multicast Packets 14
TX Broadcast Packets 1673831
TX Single Collision frames 0
TX Mult. Collision frames 0
TX Late Collisions 0
TX Excessive Collisions 0
TX Collision frames 0
TX PAUSEMAC Ctrl Frames 0
TX MAC ctrl frames 0
TX Frame deferred Xmsns 0
TX Frame excessive deferl 0
TX Oversize Packets 0
TX Jabbers 0
TX FCS Error Counter 0
TX Fragment Counter 0
TX Byte Counter 3946762991
RX Packets 64 Octets 955509
RX Packets 65-127 Octets 27568588
RX Packets 128-255 Octets 1460936
RX Packets 256-511 Octets 153248
RX Packets 512-1023 Octets 2856206
RX Packets 1024-1518 Octets 76419
RX Packets 1519-2047 Octets 0
RX Packets 2048-4095 Octets 0
RX Packets 4096-9216 Octets 0
RX Octets 33070906
RX Multicast Packets 0
RX Broadcast Packets 285183
RX FCS Errors 0
RX Align Errors 0
RX Fragments 0
RX Symbol errors 0
RX Unsupported opcodes 0
RX Out of Range Length 0
RX False Carrier Errors 0
RX Undersize Packets 0
RX Oversize Packets 0
RX Jabbers 0
RX 1519-1522 Good Vlan frms 0
RX MTU Exceed Counter 0
RX Control Frame Counter 0
RX Pause Frame Counter 0
RX Byte Counter 4256093824

```

Statistics for port 9 connected to device FPC9:

```

TX Packets 64 Octets 5237213
TX Packets 65-127 Octets 3268775
TX Packets 128-255 Octets 2320476
TX Packets 256-511 Octets 1789844
TX Packets 512-1023 Octets 501022
TX Packets 1024-1518 Octets 7800455
TX Packets 1519-2047 Octets 0
TX Packets 2048-4095 Octets 0
TX Packets 4096-9216 Octets 0
TX 1519-1522 Good Vlan frms 0
TX Octets 20917785
TX Multicast Packets 14
TX Broadcast Packets 1673368

```

TX Single Collision frames	0
TX Mult. Collision frames	0
TX Late Collisions	0
TX Excessive Collisions	0
TX Collision frames	0
TX PAUSEMAC Ctrl Frames	0
TX MAC ctrl frames	0
TX Frame deferred Xms	0
TX Frame excessive deferl	0
TX Oversize Packets	0
TX Jabbers	0
TX FCS Error Counter	0
TX Fragment Counter	0
TX Byte Counter	747012161
RX Packets 64 Octets	1036527
RX Packets 65-127 Octets	27590367
RX Packets 128-255 Octets	1590059
RX Packets 256-511 Octets	328257
RX Packets 512-1023 Octets	75975
RX Packets 1024-1518 Octets	73556
RX Packets 1519-2047 Octets	0
RX Packets 2048-4095 Octets	0
RX Packets 4096-9216 Octets	0
RX Octets	30694741
RX Multicast Packets	0
RX Broadcast Packets	285586
RX FCS Errors	0
RX Align Errors	0
RX Fragments	0
RX Symbol errors	0
RX Unsupported opcodes	0
RX Out of Range Length	0
RX False Carrier Errors	0
RX Undersize Packets	0
RX Oversize Packets	0
RX Jabbers	0
RX 1519-1522 Good Vlan frms	0
RX MTU Exceed Counter	0
RX Control Frame Counter	0
RX Pause Frame Counter	0
RX Byte Counter	2727836941

## Statistics for port 20 connected to device Other RE-GigE:

TX Packets 64 Octets	1682540
TX Packets 65-127 Octets	3454
TX Packets 128-255 Octets	659
TX Packets 256-511 Octets	0
TX Packets 512-1023 Octets	1
TX Packets 1024-1518 Octets	0
TX Packets 1519-2047 Octets	0
TX Packets 2048-4095 Octets	0
TX Packets 4096-9216 Octets	0
TX 1519-1522 Good Vlan frms	0
TX Octets	1686654
TX Multicast Packets	6
TX Broadcast Packets	1673798
TX Single Collision frames	0
TX Mult. Collision frames	0
TX Late Collisions	0
TX Excessive Collisions	0
TX Collision frames	0

TX PAUSEMAC Ctrl Frames	0
TX MAC ctrl frames	0
TX Frame deferred Xtns	0
TX Frame excessive deferl	0
TX Oversize Packets	0
TX Jabbers	0
TX FCS Error Counter	0
TX Fragment Counter	0
TX Byte Counter	108042476
RX Packets 64 Octets	710214
RX Packets 65-127 Octets	35785510
RX Packets 128-255 Octets	4616
RX Packets 256-511 Octets	232
RX Packets 512-1023 Octets	565
RX Packets 1024-1518 Octets	28798
RX Packets 1519-2047 Octets	0
RX Packets 2048-4095 Octets	0
RX Packets 4096-9216 Octets	0
RX Octets	36529935
RX Multicast Packets	8
RX Broadcast Packets	285546
RX FCS Errors	0
RX Align Errors	0
RX Fragments	0
RX Symbol errors	0
RX Unsupported opcodes	0
RX Out of Range Length	0
RX False Carrier Errors	0
RX Undersize Packets	0
RX Oversize Packets	0
RX Jabbers	0
RX 1519-1522 Good Vlan frms	0
RX MTU Exceed Counter	0
RX Control Frame Counter	0
RX Pause Frame Counter	0
RX Byte Counter	2676440958

Statistics for port 21 connected to device RE-GigE:

TX Packets 64 Octets	4805310
TX Packets 65-127 Octets	143798628
TX Packets 128-255 Octets	5532385
TX Packets 256-511 Octets	671059
TX Packets 512-1023 Octets	7684123
TX Packets 1024-1518 Octets	344021
TX Packets 1519-2047 Octets	0
TX Packets 2048-4095 Octets	0
TX Packets 4096-9216 Octets	0
TX 1519-1522 Good Vlan frms	0
TX Octets	162835526
TX Multicast Packets	8
TX Broadcast Packets	1673409
TX Single Collision frames	0
TX Mult. Collision frames	0
TX Late Collisions	0
TX Excessive Collisions	0
TX Collision frames	0
TX PAUSEMAC Ctrl Frames	0
TX MAC ctrl frames	0
TX Frame deferred Xtns	0
TX Frame excessive deferl	0
TX Oversize Packets	0

TX Jabbers	0
TX FCS Error Counter	0
TX Fragment Counter	0
TX Byte Counter	105857355
RX Packets 64 Octets	14537137
RX Packets 65-127 Octets	11445505
RX Packets 128-255 Octets	8161767
RX Packets 256-511 Octets	2257944
RX Packets 512-1023 Octets	3277807
RX Packets 1024-1518 Octets	29373209
RX Packets 1519-2047 Octets	0
RX Packets 2048-4095 Octets	0
RX Packets 4096-9216 Octets	0
RX Octets	69053369
RX Multicast Packets	6
RX Broadcast Packets	285935
RX FCS Errors	0
RX Align Errors	0
RX Fragments	0
RX Symbol errors	0
RX Unsupported opcodes	0
RX Out of Range Length	0
RX False Carrier Errors	0
RX Undersize Packets	0
RX Oversize Packets	0
RX Jabbers	0
RX 1519-1522 Good Vlan frms	0
RX MTU Exceed Counter	0
RX Control Frame Counter	0
RX Pause Frame Counter	0
RX Byte Counter	2980410755

Link is down on GE port 22 connected to device: Debug-GigE  
 Statistics for port 23 connected to device SPMB:

TX Packets 64 Octets	1885878
TX Packets 65-127 Octets	138845
TX Packets 128-255 Octets	18
TX Packets 256-511 Octets	1
TX Packets 512-1023 Octets	2
TX Packets 1024-1518 Octets	16391
TX Packets 1519-2047 Octets	0
TX Packets 2048-4095 Octets	0
TX Packets 4096-9216 Octets	0
TX 1519-1522 Good Vlan frms	0
TX Octets	2041135
TX Multicast Packets	14
TX Broadcast Packets	1707267
TX Single Collision frames	0
TX Mult. Collision frames	0
TX Late Collisions	0
TX Excessive Collisions	0
TX Collision frames	0
TX PAUSEMAC Ctrl Frames	0
TX MAC ctrl frames	0
TX Frame deferred Xms	0
TX Frame excessive deferl	0
TX Oversize Packets	0
TX Jabbers	0
TX FCS Error Counter	0
TX Fragment Counter	0
TX Byte Counter	148066476



```

RX Packets 64 Octets      374994
RX Packets 65-127 Octets 183398
RX Packets 128-255 Octets 749
RX Packets 256-511 Octets 13658
RX Packets 512-1023 Octets 13421
RX Packets 1024-1518 Octets 9
RX Packets 1519-2047 Octets 0
RX Packets 2048-4095 Octets 0
RX Packets 4096-9216 Octets 0
RX Octets                586229
RX Multicast Packets      0
RX Broadcast Packets      252034
RX FCS Errors             0
RX Align Errors           0
RX Fragments              0
RX Symbol errors          0
RX Unsupported opcodes    0
RX Out of Range Length    0
RX False Carrier Errors   0
RX Undersize Packets      0
RX Oversize Packets       0
RX Jabbers                0
RX 1519-1522 Good Vlan frms 0
RX MTU Exceed Counter     0
RX Control Frame Counter  0
RX Pause Frame Counter    0
RX Byte Counter           51431942

```

Link is down on XE port 24 connected to device: SFP+ 0

Link is down on XE port 25 connected to device: SFP+ 1

Link is down on XE port 26 connected to device: RE-10GigE

Link is down on XE port 27 connected to device: Other RE-10GigE

#### show chassis ethernet-switch (MX2020 Router)

```

user@host > show chassis ethernet-switch
Displaying summary for switch 0
Link is good on GE port 0 connected to device: FPC0
  Speed is 1000Mb
  Duplex is full
  Autonegotiate is Enabled
  Flow Control TX is Disabled
  Flow Control RX is Disabled

Link is good on GE port 1 connected to device: FPC1
  Speed is 1000Mb
  Duplex is full
  Autonegotiate is Enabled
  Flow Control TX is Disabled
  Flow Control RX is Disabled

Link is good on GE port 2 connected to device: FPC3
  Speed is 1000Mb
  Duplex is full
  Autonegotiate is Enabled
  Flow Control TX is Disabled
  Flow Control RX is Disabled

```

Link is good on GE port 3 connected to device: FPC2  
Speed is 1000Mb  
Duplex is full  
Autonegotiate is Enabled  
Flow Control TX is Disabled  
Flow Control RX is Disabled

Link is good on GE port 4 connected to device: FPC5  
Speed is 1000Mb  
Duplex is full  
Autonegotiate is Enabled  
Flow Control TX is Disabled  
Flow Control RX is Disabled

Link is good on GE port 5 connected to device: FPC4  
Speed is 1000Mb  
Duplex is full  
Autonegotiate is Enabled  
Flow Control TX is Disabled  
Flow Control RX is Disabled

Link is good on GE port 6 connected to device: FPC6  
Speed is 1000Mb  
Duplex is full  
Autonegotiate is Enabled  
Flow Control TX is Disabled  
Flow Control RX is Disabled

Link is good on GE port 7 connected to device: FPC7  
Speed is 1000Mb  
Duplex is full  
Autonegotiate is Enabled  
Flow Control TX is Disabled  
Flow Control RX is Disabled

Link is good on GE port 8 connected to device: FPC8  
Speed is 1000Mb  
Duplex is full  
Autonegotiate is Enabled  
Flow Control TX is Disabled  
Flow Control RX is Disabled

Link is good on GE port 9 connected to device: FPC9  
Speed is 1000Mb  
Duplex is full  
Autonegotiate is Enabled  
Flow Control TX is Disabled  
Flow Control RX is Disabled

Link is good on GE port 10 connected to device: FPC10  
Speed is 1000Mb  
Duplex is full  
Autonegotiate is Enabled  
Flow Control TX is Disabled  
Flow Control RX is Disabled

Link is good on GE port 11 connected to device: FPC11  
Speed is 1000Mb  
Duplex is full  
Autonegotiate is Enabled  
Flow Control TX is Disabled

Flow Control RX is Disabled

Link is good on GE port 12 connected to device: FPC13  
Speed is 1000Mb  
Duplex is full  
Autonegotiate is Enabled  
Flow Control TX is Disabled  
Flow Control RX is Disabled

Link is good on GE port 13 connected to device: FPC12  
Speed is 1000Mb  
Duplex is full  
Autonegotiate is Enabled  
Flow Control TX is Disabled  
Flow Control RX is Disabled

Link is good on GE port 14 connected to device: FPC14  
Speed is 1000Mb  
Duplex is full  
Autonegotiate is Enabled  
Flow Control TX is Disabled  
Flow Control RX is Disabled

Link is good on GE port 15 connected to device: FPC15  
Speed is 1000Mb  
Duplex is full  
Autonegotiate is Enabled  
Flow Control TX is Disabled  
Flow Control RX is Disabled

Link is good on GE port 16 connected to device: FPC17  
Speed is 1000Mb  
Duplex is full  
Autonegotiate is Enabled  
Flow Control TX is Disabled  
Flow Control RX is Disabled

Link is good on GE port 17 connected to device: FPC16  
Speed is 1000Mb  
Duplex is full  
Autonegotiate is Enabled  
Flow Control TX is Disabled  
Flow Control RX is Disabled

Link is good on GE port 18 connected to device: FPC18  
Speed is 1000Mb  
Duplex is full  
Autonegotiate is Enabled  
Flow Control TX is Disabled  
Flow Control RX is Disabled

Link is good on GE port 19 connected to device: FPC19  
Speed is 1000Mb  
Duplex is full  
Autonegotiate is Enabled  
Flow Control TX is Disabled  
Flow Control RX is Disabled

Link is good on GE port 20 connected to device: Other RE-GigE  
Speed is 1000Mb  
Duplex is full

```
Autonegotiate is Enabled
Flow Control TX is Disabled
Flow Control RX is Disabled

Link is good on GE port 21 connected to device: RE-GigE
Speed is 1000Mb
Duplex is full
Autonegotiate is Enabled
Flow Control TX is Disabled
Flow Control RX is Disabled

Link is down on GE port 22 connected to device: Debug-GigE

Link is good on GE port 23 connected to device: SPMB
Speed is 1000Mb
Duplex is full
Autonegotiate is Enabled
Flow Control TX is Disabled
Flow Control RX is Disabled

Link is down on XE port 24 connected to device: SFP+ 0

Link is down on XE port 25 connected to device: SFP+ 1

Link is down on XE port 26 connected to device: RE-10GigE

Link is down on XE port 27 connected to device: Other RE-10GigE
```

#### show chassis ethernet-switch statistics (MX2020 Router)

```
user@host > show chassis ethernet-switch statistics
Displaying port statistics for switch 0
Statistics for port 0 connected to device FPC0:
TX Packets 64 Octets      1468564
TX Packets 65-127 Octets  153896
TX Packets 128-255 Octets 237
TX Packets 256-511 Octets 286
TX Packets 512-1023 Octets 599
TX Packets 1024-1518 Octets 22803
TX Packets 1519-2047 Octets 0
TX Packets 2048-4095 Octets 0
TX Packets 4096-9216 Octets 0
TX 1519-1522 Good Vlan frms 0
TX Octets                1646385
TX Multicast Packets      6
TX Broadcast Packets      970939
TX Single Collision frames 0
TX Mult. Collision frames 0
TX Late Collisions        0
TX Excessive Collisions   0
TX Collision frames       0
TX PAUSEMAC Ctrl Frames   0
TX MAC ctrl frames        0
TX Frame deferred Xmsns   0
TX Frame excessive deferl 0
TX Oversize Packets       0
TX Jabbers                0
TX FCS Error Counter      0
TX Fragment Counter       0
TX Byte Counter           130470290
RX Packets 64 Octets      180266
```

```

RX Packets 65-127 Octets      519030
RX Packets 128-255 Octets    1390
RX Packets 256-511 Octets    42857
RX Packets 512-1023 Octets   3482
RX Packets 1024-1518 Octets  8147
RX Packets 1519-2047 Octets  0
RX Packets 2048-4095 Octets  0
RX Packets 4096-9216 Octets  0
RX Octets                    755172
RX Multicast Packets         0
RX Broadcast Packets         42822
RX FCS Errors                0
RX Align Errors              0
RX Fragments                 0
RX Symbol errors             0
RX Unsupported opcodes       0
RX Out of Range Length       0
RX False Carrier Errors      0
RX Undersize Packets         0
RX Oversize Packets          0
RX Jabbers                   0
RX 1519-1522 Good Vlan frms 0
RX MTU Exceed Counter        0
RX Control Frame Counter     0
RX Pause Frame Counter       0
RX Byte Counter              75374021
Statistics for port 1 connected to device FPC1:
TX Packets 64 Octets         1493739
TX Packets 65-127 Octets    126996
TX Packets 128-255 Octets   241
TX Packets 256-511 Octets   283
TX Packets 512-1023 Octets  604
TX Packets 1024-1518 Octets 33687
TX Packets 1519-2047 Octets 0
TX Packets 2048-4095 Octets 0
TX Packets 4096-9216 Octets 0
TX 1519-1522 Good Vlan frms 0
TX Octets                   1655550
TX Multicast Packets        6
TX Broadcast Packets        969032
TX Single Collision frames  0
TX Mult. Collision frames   0
TX Late Collisions          0
TX Excessive Collisions     0
TX Collision frames         0
TX PAUSEMAC Ctrl Frames    0
TX MAC ctrl frames         0
TX Frame deferred Xtns      0
TX Frame excessive deferl   0
TX Oversize Packets         0
TX Jabbers                  0
TX FCS Error Counter        0
TX Fragment Counter         0
TX Byte Counter             141832690
RX Packets 64 Octets        155655
RX Packets 65-127 Octets    545561
RX Packets 128-255 Octets   1394
RX Packets 256-511 Octets   42811
RX Packets 512-1023 Octets  3514
RX Packets 1024-1518 Octets 8171
RX Packets 1519-2047 Octets 0

```

```
RX Packets 2048-4095 Octets 0
RX Packets 4096-9216 Octets 0
RX Octets 757106
RX Multicast Packets 0
RX Broadcast Packets 44509
RX FCS Errors 0
RX Align Errors 0
RX Fragments 0
RX Symbol errors 0
RX Unsupported opcodes 0
RX Out of Range Length 0
RX False Carrier Errors 0
RX Undersize Packets 0
RX Oversize Packets 0
RX Jabbers 0
RX 1519-1522 Good Vlan frms 0
RX MTU Exceed Counter 0
RX Control Frame Counter 0
RX Pause Frame Counter 0
RX Byte Counter 75691392
Statistics for port 2 connected to device FPC3:
TX Packets 64 Octets 1465749
TX Packets 65-127 Octets 152849
TX Packets 128-255 Octets 238
TX Packets 256-511 Octets 289
TX Packets 512-1023 Octets 602
TX Packets 1024-1518 Octets 38903
TX Packets 1519-2047 Octets 0
TX Packets 2048-4095 Octets 0
TX Packets 4096-9216 Octets 0
TX 1519-1522 Good Vlan frms 0
TX Octets 1658630
TX Multicast Packets 6
TX Broadcast Packets 968873
TX Single Collision frames 0
TX Mult. Collision frames 0
TX Late Collisions 0
TX Excessive Collisions 0
TX Collision frames 0
TX PAUSEMAC Ctrl Frames 0
TX MAC ctrl frames 0
TX Frame deferred Xmsns 0
TX Frame excessive deferl 0
TX Oversize Packets 0
TX Jabbers 0
TX FCS Error Counter 0
TX Fragment Counter 0
TX Byte Counter 147427010
RX Packets 64 Octets 181636
RX Packets 65-127 Octets 517526
RX Packets 128-255 Octets 1405
RX Packets 256-511 Octets 42806
RX Packets 512-1023 Octets 3515
RX Packets 1024-1518 Octets 8168
RX Packets 1519-2047 Octets 0
RX Packets 2048-4095 Octets 0
RX Packets 4096-9216 Octets 0
RX Octets 755056
RX Multicast Packets 0
RX Broadcast Packets 44490
RX FCS Errors 0
```

```

RX Align Errors          0
RX Fragments             0
RX Symbol errors         0
RX Unsupported opcodes   0
RX Out of Range Length   0
RX False Carrier Errors  0
RX Undersize Packets     0
RX Oversize Packets      0
RX Jabbers               0
RX 1519-1522 Good Vlan frms 0
RX MTU Exceed Counter    0
RX Control Frame Counter 0
RX Pause Frame Counter   0
RX Byte Counter          75381869
Statistics for port 3 connected to device FPC2:
TX Packets 64 Octets     1473828
TX Packets 65-127 Octets 145643
TX Packets 128-255 Octets 253
TX Packets 256-511 Octets 285
TX Packets 512-1023 Octets 612
TX Packets 1024-1518 Octets 26603
TX Packets 1519-2047 Octets 0
TX Packets 2048-4095 Octets 0
TX Packets 4096-9216 Octets 0
TX 1519-1522 Good Vlan frms 0
TX Octets                1647224
TX Multicast Packets      6
TX Broadcast Packets      968925
TX Single Collision frames 0
TX Mult. Collision frames 0
TX Late Collisions        0
TX Excessive Collisions   0
TX Collision frames       0
TX PAUSEMAC Ctrl Frames   0
TX MAC ctrl frames        0
TX Frame deferred Xtns    0
TX Frame excessive deferl 0
TX Oversize Packets       0
TX Jabbers                0
TX FCS Error Counter      0
TX Fragment Counter       0
TX Byte Counter           134293832
RX Packets 64 Octets      174230
RX Packets 65-127 Octets  525756
RX Packets 128-255 Octets 1404
RX Packets 256-511 Octets 42815
RX Packets 512-1023 Octets 3530
RX Packets 1024-1518 Octets 8176
RX Packets 1519-2047 Octets 0
RX Packets 2048-4095 Octets 0
RX Packets 4096-9216 Octets 0
RX Octets                 755911
RX Multicast Packets      0
RX Broadcast Packets      44499
RX FCS Errors             0
RX Align Errors          0
RX Fragments             0
RX Symbol errors         0
RX Unsupported opcodes   0
RX Out of Range Length   0
RX False Carrier Errors  0

```

```

RX Undersize Packets      0
RX Oversize Packets      0
RX Jabbers                0
RX 1519-1522 Good Vlan frms 0
RX MTU Exceed Counter    0
RX Control Frame Counter  0
RX Pause Frame Counter    0
RX Byte Counter          75517355
Statistics for port 4 connected to device FPC5:
TX Packets 64 Octets      1466664
TX Packets 65-127 Octets  151155
TX Packets 128-255 Octets 238
TX Packets 256-511 Octets 277
TX Packets 512-1023 Octets 615
TX Packets 1024-1518 Octets 54674
TX Packets 1519-2047 Octets 0
TX Packets 2048-4095 Octets 0
TX Packets 4096-9216 Octets 0
TX 1519-1522 Good Vlan frms 0
TX Octets                 1673623
TX Multicast Packets      6
TX Broadcast Packets      968610
TX Single Collision frames 0
TX Mult. Collision frames 0
TX Late Collisions        0
TX Excessive Collisions   0
TX Collision frames       0
TX PAUSEMAC Ctrl Frames   0
TX MAC ctrl frames        0
TX Frame deferred Xmsns   0
TX Frame excessive deferl 0
TX Oversize Packets       0
TX Jabbers                0
TX FCS Error Counter      0
TX Fragment Counter       0
TX Byte Counter           164247790
RX Packets 64 Octets      180006
RX Packets 65-127 Octets  518217
RX Packets 128-255 Octets 1406
RX Packets 256-511 Octets 42787
RX Packets 512-1023 Octets 3515
RX Packets 1024-1518 Octets 8164
RX Packets 1519-2047 Octets 0
RX Packets 2048-4095 Octets 0
RX Packets 4096-9216 Octets 0
RX Octets                 754095
RX Multicast Packets      0
RX Broadcast Packets      44457
RX FCS Errors             0
RX Align Errors           0
RX Fragments              0
RX Symbol errors          0
RX Unsupported opcodes    0
RX Out of Range Length    0
RX False Carrier Errors   0
RX Undersize Packets      0
RX Oversize Packets       0
RX Jabbers                0
RX 1519-1522 Good Vlan frms 0
RX MTU Exceed Counter    0
RX Control Frame Counter  0

```



```

RX Pause Frame Counter      0
RX Byte Counter             75311970
Statistics for port 5 connected to device FPC4:
TX Packets 64 Octets        1464770
TX Packets 65-127 Octets    154498
TX Packets 128-255 Octets   225
TX Packets 256-511 Octets   280
TX Packets 512-1023 Octets  637
TX Packets 1024-1518 Octets 26355
TX Packets 1519-2047 Octets 0
TX Packets 2048-4095 Octets 0
TX Packets 4096-9216 Octets 0
TX 1519-1522 Good Vlan frms 0
TX Octets                   1646765
TX Multicast Packets        6
TX Broadcast Packets        968730
TX Single Collision frames  0
TX Mult. Collision frames   0
TX Late Collisions          0
TX Excessive Collisions     0
TX Collision frames         0
TX PAUSEMAC Ctrl Frames    0
TX MAC ctrl frames         0
TX Frame deferred Xmsns     0
TX Frame excessive deferl   0
TX Oversize Packets         0
TX Jabbers                  0
TX FCS Error Counter        0
TX Fragment Counter         0
TX Byte Counter             134058606
RX Packets 64 Octets        169269
RX Packets 65-127 Octets    515285
RX Packets 128-255 Octets   1527
RX Packets 256-511 Octets   42804
RX Packets 512-1023 Octets  3521
RX Packets 1024-1518 Octets 9142
RX Packets 1519-2047 Octets 0
RX Packets 2048-4095 Octets 0
RX Packets 4096-9216 Octets 0
RX Octets                   741548
RX Multicast Packets        0
RX Broadcast Packets        44470
RX FCS Errors               0
RX Align Errors             0
RX Fragments                0
RX Symbol errors            0
RX Unsupported opcodes      0
RX Out of Range Length      0
RX False Carrier Errors     0
RX Undersize Packets        0
RX Oversize Packets         0
RX Jabbers                  0
RX 1519-1522 Good Vlan frms 0
RX MTU Exceed Counter       0
RX Control Frame Counter    0
RX Pause Frame Counter      0
RX Byte Counter             75498393
Statistics for port 6 connected to device FPC6:
TX Packets 64 Octets        1475260
TX Packets 65-127 Octets    143324
TX Packets 128-255 Octets   260

```

```

TX Packets 256-511 Octets    274
TX Packets 512-1023 Octets   603
TX Packets 1024-1518 Octets  40631
TX Packets 1519-2047 Octets  0
TX Packets 2048-4095 Octets  0
TX Packets 4096-9216 Octets  0
TX 1519-1522 Good Vlan frms 0
TX Octets                    1660352
TX Multicast Packets         6
TX Broadcast Packets         968466
TX Single Collision frames   0
TX Mult. Collision frames    0
TX Late Collisions           0
TX Excessive Collisions      0
TX Collision frames          0
TX PAUSEMAC Ctrl Frames     0
TX MAC ctrl frames          0
TX Frame deferred Xmsns     0
TX Frame excessive deferl    0
TX Oversize Packets          0
TX Jabbers                   0
TX FCS Error Counter         0
TX Fragment Counter          0
TX Byte Counter              149212764
RX Packets 64 Octets         172275
RX Packets 65-127 Octets     526519
RX Packets 128-255 Octets    1394
RX Packets 256-511 Octets    42777
RX Packets 512-1023 Octets   3514
RX Packets 1024-1518 Octets  8161
RX Packets 1519-2047 Octets  0
RX Packets 2048-4095 Octets  0
RX Packets 4096-9216 Octets  0
RX Octets                    754640
RX Multicast Packets         0
RX Broadcast Packets         44443
RX FCS Errors                0
RX Align Errors              0
RX Fragments                 0
RX Symbol errors             0
RX Unsupported opcodes       0
RX Out of Range Length       0
RX False Carrier Errors      0
RX Undersize Packets         0
RX Oversize Packets          0
RX Jabbers                   0
RX 1519-1522 Good Vlan frms 0
RX MTU Exceed Counter        0
RX Control Frame Counter     0
RX Pause Frame Counter       0
RX Byte Counter              75386517
Statistics for port 7 connected to device FPC7:
TX Packets 64 Octets         1472361
TX Packets 65-127 Octets     145646
TX Packets 128-255 Octets    251
TX Packets 256-511 Octets    250
TX Packets 512-1023 Octets   580
TX Packets 1024-1518 Octets  49530
TX Packets 1519-2047 Octets  0
TX Packets 2048-4095 Octets  0
TX Packets 4096-9216 Octets  0

```

```

TX 1519-1522 Good Vlan frms 0
TX Octets 1668618
TX Multicast Packets 6
TX Broadcast Packets 968317
TX Single Collision frames 0
TX Mult. Collision frames 0
TX Late Collisions 0
TX Excessive Collisions 0
TX Collision frames 0
TX PAUSEMAC Ctrl Frames 0
TX MAC ctrl frames 0
TX Frame deferred Xmsns 0
TX Frame excessive deferl 0
TX Oversize Packets 0
TX Jabbers 0
TX FCS Error Counter 0
TX Fragment Counter 0
TX Byte Counter 158689814
RX Packets 64 Octets 174618
RX Packets 65-127 Octets 523421
RX Packets 128-255 Octets 1393
RX Packets 256-511 Octets 42764
RX Packets 512-1023 Octets 3514
RX Packets 1024-1518 Octets 8158
RX Packets 1519-2047 Octets 0
RX Packets 2048-4095 Octets 0
RX Packets 4096-9216 Octets 0
RX Octets 753868
RX Multicast Packets 0
RX Broadcast Packets 44429
RX FCS Errors 0
RX Align Errors 0
RX Fragments 0
RX Symbol errors 0
RX Unsupported opcodes 0
RX Out of Range Length 0
RX False Carrier Errors 0
RX Undersize Packets 0
RX Oversize Packets 0
RX Jabbers 0
RX 1519-1522 Good Vlan frms 0
RX MTU Exceed Counter 0
RX Control Frame Counter 0
RX Pause Frame Counter 0
RX Byte Counter 75309863
Statistics for port 8 connected to device FPC8:
...
```

#### show chassis ethernet-switch (MX2020 Router with MPC4E)

```

user@ host > show chassis ethernet-switch
Displaying summary for switch 0
Link is good on GE port 0 connected to device: FPC0
Speed is 1000Mb
Duplex is full
Autonegotiate is Enabled
Flow Control TX is Disabled
Flow Control RX is Disabled

Link is down on GE port 1 connected to device: FPC1
```

Link is down on GE port 2 connected to device: FPC3

Link is down on GE port 3 connected to device: FPC2

Link is down on GE port 4 connected to device: FPC5

Link is down on GE port 5 connected to device: FPC4

Link is down on GE port 6 connected to device: FPC6

Link is down on GE port 7 connected to device: FPC7

Link is down on GE port 8 connected to device: FPC8

Link is good on GE port 9 connected to device: FPC9  
Speed is 1000Mb  
Duplex is full  
Autonegotiate is Enabled  
Flow Control TX is Disabled  
Flow Control RX is Disabled

Link is good on GE port 10 connected to device: FPC10  
Speed is 1000Mb  
Duplex is full  
Autonegotiate is Enabled  
Flow Control TX is Disabled  
Flow Control RX is Disabled

Link is down on GE port 11 connected to device: FPC11

Link is down on GE port 12 connected to device: FPC13

Link is down on GE port 13 connected to device: FPC12

Link is good on GE port 14 connected to device: FPC14  
Speed is 1000Mb  
Duplex is full  
Autonegotiate is Enabled  
Flow Control TX is Disabled  
Flow Control RX is Disabled

Link is down on GE port 15 connected to device: FPC15

Link is down on GE port 16 connected to device: FPC17

Link is down on GE port 17 connected to device: FPC16

Link is down on GE port 18 connected to device: FPC18

Link is good on GE port 19 connected to device: FPC19  
Speed is 1000Mb  
Duplex is full  
Autonegotiate is Enabled  
Flow Control TX is Disabled  
Flow Control RX is Disabled

Link is good on GE port 20 connected to device: Other RE-GigE  
Speed is 1000Mb  
Duplex is full  
Autonegotiate is Enabled  
Flow Control TX is Disabled

```

Flow Control RX is Disabled

Link is good on GE port 21 connected to device: RE-GigE
Speed is 1000Mb
Duplex is full
Autonegotiate is Enabled
Flow Control TX is Disabled
Flow Control RX is Disabled

Link is down on GE port 22 connected to device: Debug-GigE

Link is good on GE port 23 connected to device: SPMB
Speed is 1000Mb
Duplex is full
Autonegotiate is Enabled
Flow Control TX is Disabled
Flow Control RX is Disabled

Link is down on XE port 24 connected to device: SFP+ 0

Link is down on XE port 25 connected to device: SFP+ 1

Link is down on XE port 26 connected to device: RE-10GigE

Link is down on XE port 27 connected to device: Other RE-10GigE

```

#### show chassis ethernet-switch (MX2008 Router)

```

user@host> show chassis ethernet-switch
Displaying summary for switch 0
Link is good on GE port 0 connected to device: FPC0
Speed is 1000Mb
Duplex is full
Autonegotiate is Enabled
Flow Control TX is Disabled
Flow Control RX is Disabled

Link is down on GE port 1 connected to device: FPC1

Link is good on GE port 2 connected to device: FPC3
Speed is 1000Mb
Duplex is full
Autonegotiate is Enabled
Flow Control TX is Disabled
Flow Control RX is Disabled

Link is down on GE port 3 connected to device: FPC2

Link is good on GE port 4 connected to device: FPC5
Speed is 1000Mb
Duplex is full
Autonegotiate is Enabled
Flow Control TX is Disabled
Flow Control RX is Disabled

Link is down on GE port 5 connected to device: FPC4

Link is down on GE port 6 connected to device: FPC6

Link is good on GE port 7 connected to device: FPC7
Speed is 1000Mb

```

```
Duplex is full
Autonegotiate is Enabled
Flow Control TX is Disabled
Flow Control RX is Disabled

Link is down on GE port 8 connected to device: FPC8

Link is good on GE port 9 connected to device: FPC9
Speed is 1000Mb
Duplex is full
Autonegotiate is Enabled
Flow Control TX is Disabled
Flow Control RX is Disabled

Link is good on GE port 20 connected to device: CB-to-CB-GigE 1
Speed is 1000Mb
Duplex is full
Autonegotiate is Enabled
Flow Control TX is Disabled
Flow Control RX is Disabled

Link is good on GE port 21 connected to device: CB-to-CB-GigE 2
Speed is 1000Mb
Duplex is full
Autonegotiate is Enabled
Flow Control TX is Disabled
Flow Control RX is Disabled

Link is down on GE port 22 connected to device: (null)

Link is down on GE port 23 connected to device: (null)

Link is good on XE port 24 connected to device: Other RE-10GigE
Speed is 10000Mb
Duplex is full
Autonegotiate is Disabled
Flow Control TX is Disabled
Flow Control RX is Disabled

Link is good on XE port 25 connected to device: RE-10GigE
Speed is 10000Mb
Duplex is full
Autonegotiate is Disabled
Flow Control TX is Disabled
Flow Control RX is Disabled

Link is down on XE port 26 connected to device: SFP+ 0

Link is down on XE port 27 connected to device: SFP+ 1
```

#### show chassis ethernet-switch statistics (Mx10008 Router)

```
user@host> show chassis ethernet-switch statistics
Switch Status: Online
Link is Disabled on port connected to QPHY_0
Link is Disabled on port connected to QPHY_1
Link is Down on port connected to PTP_FPGA
Link is Disabled on port connected to Unused
Link is Up on port connected to LC0
Speed      : 10G
Duplexity  : FD
```

```

Autoneg      : No
tx_packets   : 2835539
rx_packets   : 2624197
tx_errors    : 0
rx_errors    : 0
Link is Down on port connected to LC1
Link is Up on port connected to LC2
Speed        : 10G
Duplexity    : FD
Autoneg      : No
tx_packets   : 2889426
rx_packets   : 2441270
tx_errors    : 0
rx_errors    : 0
Link is Up on port connected to LC3
Speed        : 10G
Duplexity    : FD
Autoneg      : No
tx_packets   : 2776323
rx_packets   : 2322320
tx_errors    : 0
rx_errors    : 0
Link is Disabled on port connected to LC8
Link is Down on port connected to LC4
Link is Disabled on port connected to LC12
Link is Disabled on port connected to LC9
Link is Down on port connected to LC5
Link is Disabled on port connected to LC13
Link is Disabled on port connected to LC10
Link is Down on port connected to LC6
Link is Disabled on port connected to LC14
Link is Disabled on port connected to LC11
Link is Down on port connected to LC7
Link is Disabled on port connected to LC15
Link is Disabled on port connected to OCB_SW
Link is Disabled on port connected to Unused
Link is Disabled on port connected to Fortville_1
Link is Up on port connected to Fortville_0
Speed        : 10G
Duplexity    : FD
Autoneg      : Yes
tx_packets   : 7387765
rx_packets   : 8348292
tx_errors    : 0
rx_errors    : 0

```

#### show chassis ethernet-switch (TX Matrix Router)

```

user@host> show chassis ethernet-switch
scc-re0:
-----
Link is good on FE port 4 connected to device: LCC0
Speed is 100 MB
Duplex is full
Autonegotiate is Enabled

Link is good on FE port 6 connected to device: LCC2
Speed is 100 MB
Duplex is full
Autonegotiate is Enabled

```

```
Link is good on FE port 8 connected to device: SPMB
Speed is 100 MB
Duplex is full
Autonegotiate is Enabled
```

```
lcc0-re0:
```

```
-----
Link is good on FE port 1 connected to device: FPC1
Speed is 100 MB
Duplex is full
Autonegotiate is Enabled
```

```
Link is good on FE port 2 connected to device: FPC2
Speed is 100 MB
Duplex is full
Autonegotiate is Enabled
```

```
Link is good on FE port 8 connected to device: SPMB
Speed is 100 MB
Duplex is full
Autonegotiate is Enabled
```

```
Link is good on FE port 10 connected to device: SCC
Speed is 100 MB
Duplex is full
Autonegotiate is Enabled
```

```
lcc2-re0:
```

```
-----
Link is good on FE port 0 connected to device: FPC0
Speed is 100 MB
Duplex is full
Autonegotiate is Enabled
```

```
Link is good on FE port 1 connected to device: FPC1
Speed is 100 MB
Duplex is full
Autonegotiate is Enabled
```

```
Link is good on FE port 2 connected to device: FPC2
Speed is 100 MB
Duplex is full
Autonegotiate is Enabled
```

```
Link is good on FE port 8 connected to device: SPMB
Speed is 100 MB
Duplex is full
Autonegotiate is Enabled
```

```
Link is good on FE port 10 connected to device: SCC
Speed is 100 MB
Duplex is full
Autonegotiate is Enabled
```

### show chassis ethernet-switch errors

```
user@host> show chassis ethernet-switch errors
Accumulated error counts for port 0 connected to device FPC0:
MLT3          2
Lock          0
Xmit          0
```



```

ESD                0
False carrier      2
Disconnects        0
FX mode            0
Accumulated error counts for port 1 connected to device FPC1:
MLT3               2
Lock               0
Xmit               0
ESD               0
False carrier      2
Disconnects        0
FX mode            0
Accumulated error counts for port 2 connected to device FPC2:
MLT3               2
Lock               0
Xmit               0
ESD               0
False carrier      3
Disconnects        0
FX mode            0
Accumulated error counts for port 3 connected to device FPC3:
MLT3               0
Lock               0
Xmit               0
ESD               0
False carrier      0
Disconnects        0
Accumulated error counts for port 4 connected to device Nothing:
MLT3               0
Lock               0
Xmit               0
ESD               0
False carrier      0
Disconnects        0
FX mode            0
...

```

#### show chassis ethernet-switch statistics

```

user@host> show chassis ethernet-switch statistics
Statistics for port 0 connected to device FPC0:
TX Unicast packets      68113
TX Multicast packets    0
TX Broadcast packets    20851
TX Late collisions      0
TX Excessive collisions 0
TX Dropped packets      0

RX Unicast packets      67410
RX Multicast packets    0
RX Broadcast packets    20852
RX FCS Errors           0
RX Alignment Errors     0
RX Dropped Packets      0
RX Fragments            0
RX Symbol Errors        0

Statistics for port 1 connected to device FPC1:
TX Unicast packets      66496
TX Multicast packets    0
TX Broadcast packets    20080

```

```

TX Late collisions          0
TX Excessive collisions    0
TX Dropped packets        0

RX Unicast packets        66037
RX Multicast packets      0
RX Broadcast packets      20080
RX FCS Errors             0
RX Alignment Errors       0
RX Dropped Packets        0
RX Fragments              0
RX Symbol Errors          0

Statistics for port 2 connected to device FPC2:
TX Unicast packets        64206
TX Multicast packets      0
TX Broadcast packets      21183
TX Late collisions        0
TX Excessive collisions   0
TX Dropped packets        0

RX Unicast packets        63671
RX Multicast packets      0
RX Broadcast packets      21183
RX FCS Errors             0
RX Alignment Errors       0
RX Dropped Packets        0
RX Fragments              0
RX Symbol Errors          0

Statistics for port 3 connected to device FPC3:
...

```

### show chassis ethernet-switch errors (TX Matrix Plus Router)

```

user@host> show chassis ethernet-switch errors
sfc0-re0:
-----
Displaying error for switch 0

Displaying error for switch 1
Accumulated error counts for port 0 connected to device LCC0:
MLT3          0
Lock          0
Xmit          0
ESD           0
False carrier 0
Disconnects   0
FX mode       0

lcc0-re0:
-----
Displaying error for switch 0
Accumulated error counts for port 6 connected to device FPC0:
MLT3          0
Lock          0
Xmit          0
ESD           0
False carrier 5
Disconnects   0
FX mode       0
Accumulated error counts for port 7 connected to device FPC1:

```

```

MLT3          0
Lock          0
Xmit          0
ESD           0
False carrier 7
Disconnects   0
FX mode       0
Accumulated error counts for port 19 connected to device 0ther RE:
MLT3          0
Lock          0
Xmit          0
ESD           0
False carrier 0
Disconnects   0
FX mode       0
Accumulated error counts for port 20 connected to device SFC0:
MLT3          0
Lock          0
Xmit          0
ESD           0
False carrier 0
Disconnects   0
FX mode       0

```

#### show chassis ethernet-switch sfc errors (TX Matrix Plus Router)

```

user@host> show chassis ethernet-switch errors switch sfc
sfc0-re0:
-----
Displaying error for switch 1
Accumulated error counts for port 0 connected to device LCC0:
MLT3          0
Lock          0
Xmit          0
ESD           0
False carrier 0
Disconnects   0
FX mode       0
Accumulated error counts for port 2 connected to device LCC1:
MLT3          0
Lock          0
Xmit          0
ESD           0
False carrier 0
Disconnects   0
FX mode       0
Accumulated error counts for port 4 connected to device LCC2:
MLT3          0
Lock          0
Xmit          0
ESD           0
False carrier 0
Disconnects   0
FX mode       0
Accumulated error counts for port 6 connected to device LCC3:
MLT3          0
Lock          0
Xmit          0
ESD           0
False carrier 0
Disconnects   0

```

```

FX mode          0

lcc0-re0:
-----
error: command is not valid on the t1600

lcc1-re0:
-----
error: command is not valid on the t1600

lcc2-re0:
-----
error: command is not valid on the t1600

lcc3-re0:
-----
error: command is not valid on the t1600

```

#### show chassis ethernet-switch statistics (TX Matrix Plus Router)

```

user@host> show chassis ethernet-switch statistics
sfc0-re0:
-----
Displaying port statistics for switch 0
Statistics for port 1 connected to device 1GSW:
TX Packets 64 Octets      5183577
TX Packets 65-127 Octets  67820
TX Packets 128-255 Octets 772
TX Packets 256-511 Octets 136
TX Packets 512-1023 Octets 68
TX Packets 1024-1518 Octets 10881
TX Packets 1519-2047 Octets 0
TX Packets 2048-4095 Octets 0
TX Packets 4096-9216 Octets 0
TX Packets 9217-16383 Octets 0
TX Octets      5263254
TX Multicast Packets 16
TX Broadcast Packets 723403
TX PAUSEMAC Ctrl Frames 0
TX Oversize Packets 0
TX FCS Error Counter 0
TX Fragment Counter 0
TX Byte Counter 349922253
TX Packet OK Counter 5263254
TX Pause Packet Counter 0
TX Unicast Counter 4539835
RX Packets 64 Octets      6513629
RX Packets 65-127 Octets  88761
RX Packets 128-255 Octets 6382
RX Packets 256-511 Octets 22027
RX Packets 512-1023 Octets 4319
RX Packets 1024-1518 Octets 49922
RX Packets 1519-2047 Octets 0
RX Packets 2048-4095 Octets 0
RX Packets 4096-9216 Octets 0
RX Packets 9217-16383 Octets 0
RX Octets      6685040
RX Multicast Packets 4
RX Broadcast Packets 2137376
RX FCS Errors 0
RX Fragments 0

```

```

RX MAC Control Packets      0
RX Out of Range Length      0
RX Undersize Packets        0
RX Oversize Packets         0
RX Jabbers                  0
RX Control Frame Counter    0
RX Pause Frame Counter      0
RX Byte Counter             509224602
RX Unicast Frame Count      4547660
RX Packet OK Count          6685040
Statistics for port 9 connected to device RE1:
TX Packets 64 Octets        2500318
TX Packets 65-127 Octets    443
TX Packets 128-255 Octets   0
TX Packets 256-511 Octets   0
TX Packets 512-1023 Octets  0
TX Packets 1024-1518 Octets 0
TX Packets 1519-2047 Octets 0
TX Packets 2048-4095 Octets 0
TX Packets 4096-9216 Octets 0
TX Packets 9217-16383 Octets 0
TX Octets                   2500761
TX Multicast Packets        4
TX Broadcast Packets        2500757
TX PAUSEMAC Ctrl Frames    0
TX Oversize Packets         0
TX FCS Error Counter        0
TX Fragment Counter         0
TX Byte Counter             160049670
TX Packet OK Counter        0
TX Pause Packet Counter     0
TX Unicast Counter          0
RX Packets 64 Octets        701191
RX Packets 65-127 Octets    5882
RX Packets 128-255 Octets   2
RX Packets 256-511 Octets   0
RX Packets 512-1023 Octets  17965
RX Packets 1024-1518 Octets  7
RX Packets 1519-2047 Octets  0
RX Packets 2048-4095 Octets  0
RX Packets 4096-9216 Octets  0
RX Packets 9217-16383 Octets 0
RX Octets                   725047
RX Multicast Packets        8
RX Broadcast Packets        2500757
RX FCS Errors               0
RX Fragments                0
RX MAC Control Packets      0
RX Out of Range Length      0
RX Undersize Packets        0
RX Oversize Packets         0
RX Jabbers                  0
RX Control Frame Counter    0
RX Pause Frame Counter      0
RX Byte Counter             62402656
RX Unicast Frame Count      0
RX Packet OK Count          0
Statistics for port 17 connected to device RE0:
TX Packets 64 Octets        7214818
TX Packets 65-127 Octets    94640
TX Packets 128-255 Octets   6384

```

```

TX Packets 256-511 Octets 22027
TX Packets 512-1023 Octets 22284
TX Packets 1024-1518 Octets 49929
TX Packets 1519-2047 Octets 0
TX Packets 2048-4095 Octets 0
TX Packets 4096-9216 Octets 0
TX Packets 9217-16383 Octets 0
TX Octets 7410082
TX Multicast Packets 12
TX Broadcast Packets 2497247
TX PAUSEMAC Ctrl Frames 0
TX Oversize Packets 0
TX FCS Error Counter 0
TX Fragment Counter 0
TX Byte Counter 571626932
TX Packet OK Counter 0
TX Pause Packet Counter 0
TX Unicast Counter 0
RX Packets 64 Octets 4823701
RX Packets 65-127 Octets 67812
RX Packets 128-255 Octets 772
RX Packets 256-511 Octets 136
RX Packets 512-1023 Octets 68
RX Packets 1024-1518 Octets 10881
RX Packets 1519-2047 Octets 0
RX Packets 2048-4095 Octets 0
RX Packets 4096-9216 Octets 0
RX Packets 9217-16383 Octets 0
RX Octets 4903370
RX Multicast Packets 8
RX Broadcast Packets 2497247
RX FCS Errors 0
RX Fragments 0
RX MAC Control Packets 0
RX Out of Range Length 0
RX Undersize Packets 0
RX Oversize Packets 0
RX Jabbers 0
RX Control Frame Counter 0
RX Pause Frame Counter 0
RX Byte Counter 326889517
RX Unicast Frame Count 0
RX Packet OK Count 0

```

Displaying port statistics for switch 1  
 Statistics for port 0 connected to device LCC0:

```

TX Packets 64 Octets 5053443
TX Packets 65-127 Octets 59737
TX Packets 128-255 Octets 768
TX Packets 256-511 Octets 87
TX Packets 512-1023 Octets 68
TX Packets 1024-1518 Octets 85
TX Packets 1519-2047 Octets 0
TX Packets 2048-4095 Octets 0
TX Packets 4096-9216 Octets 0
TX 1519-1522 Good Vlan frms 0
TX Octets 5114188
TX Multicast Packets 16
TX Broadcast Packets 1125742
TX Single Collision frames 0
TX Mult. Collision frames 0

```

```

TX Late Collisions          0
TX Excessive Collisions    0
TX Collision frames        0
TX PAUSEMAC Ctrl Frames    0
TX MAC ctrl frames         0
TX Frame deferred Xmsns    0
TX Frame excessive deferl   0
TX Oversize Packets        0
TX Jabbers                 0
TX FCS Error Counter       0
TX Fragment Counter        0
TX Byte Counter            329291449
RX Packets 64 Octets       5640175
RX Packets 65-127 Octets   79875
RX Packets 128-255 Octets  6338
RX Packets 256-511 Octets  165
RX Packets 512-1023 Octets 4317
RX Packets 1024-1518 Octets 10
RX Packets 1519-2047 Octets 0
RX Packets 2048-4095 Octets 0
RX Packets 4096-9216 Octets 0
RX Octets                   5730880
RX Multicast Packets       4
RX Broadcast Packets       1735007
RX FCS Errors              0
RX Align Errors            0
RX Fragments               0
RX Symbol errors           0
RX Unsupported opcodes     0
RX Out of Range Length     0
RX False Carrier Errors    0
RX Undersize Packets       0
RX Oversize Packets       0
RX Jabbers                 0
RX 1519-1522 Good Vlan frms 0
RX MTU Exceed Counter      0
RX Control Frame Counter   0
RX Pause Frame Counter     0
RX Byte Counter            371282850
Statistics for port 18 connected to device SPMB:
TX Packets 64 Octets       2990326
TX Packets 65-127 Octets   8572
TX Packets 128-255 Octets  4
TX Packets 256-511 Octets  49
TX Packets 512-1023 Octets 0
TX Packets 1024-1518 Octets 10793
TX Packets 1519-2047 Octets 0
TX Packets 2048-4095 Octets 0
TX Packets 4096-9216 Octets 0
TX 1519-1522 Good Vlan frms 0
TX Octets                   3009744
TX Multicast Packets       20
TX Broadcast Packets       2458322
TX Single Collision frames 0
TX Mult. Collision frames  0
TX Late Collisions         0
TX Excessive Collisions    0
TX Collision frames        0
TX PAUSEMAC Ctrl Frames    0
TX MAC ctrl frames         0
TX Frame deferred Xmsns    0

```

```
TX Frame excessive deferl 0
TX Oversize Packets      0
TX Jabbers                0
TX FCS Error Counter     0
TX Fragment Counter      0
TX Byte Counter           203712524
RX Packets 64 Octets     873454
RX Packets 65-127 Octets 8886
RX Packets 128-255 Octets 44
RX Packets 256-511 Octets 21862
RX Packets 512-1023 Octets 2
RX Packets 1024-1518 Octets 49912
RX Packets 1519-2047 Octets 0
RX Packets 2048-4095 Octets 0
RX Packets 4096-9216 Octets 0
RX Octets                954160
RX Multicast Packets     0
RX Broadcast Packets     402369
RX FCS Errors            0
RX Align Errors          0
RX Fragments             0
RX Symbol errors         0
RX Unsupported opcodes   0
RX Out of Range Length   0
RX False Carrier Errors  0
RX Undersize Packets     0
RX Oversize Packets      0
RX Jabbers                0
RX 1519-1522 Good Vlan frms 0
RX MTU Exceed Counter    0
RX Control Frame Counter 0
RX Pause Frame Counter   0
RX Byte Counter          137941752
...
```

#### show chassis ethernet-switch (T4000 Router)

```
user@host> show chassis ethernet-switch
Displaying summary for switch 0
Link is good on GE port 6 connected to device: FPC0
  Speed is 100Mb
  Duplex is full
  Autonegotiate is Enabled
  False carrier sense count = 04

Link is good on GE port 9 connected to device: FPC3
  Speed is 100Mb
  Duplex is full
  Autonegotiate is Enabled
  False carrier sense count = 03

Link is good on GE port 11 connected to device: FPC5
  Speed is 100Mb
  Duplex is full
  Autonegotiate is Enabled
  False carrier sense count = 03

Link is good on GE port 12 connected to device: FPC6
  Speed is 100Mb
  Duplex is full
  Autonegotiate is Enabled
```



```

False carrier sense count = 03

Link is good on GE port 14 connected to device: SPMB
Speed is 1000Mb
Duplex is full
Autonegotiate is Enabled

Link is good on GE port 18 connected to device: RE
Speed is 1000Mb
Duplex is full
Autonegotiate is Disabled

Link is good on GE port 19 connected to device: Other RE
Speed is 1000Mb
Duplex is full
Autonegotiate is Enabled

```

### show chassis ethernet-switch errors (T4000 Router)

```

user@host> show chassis ethernet-switch errors

Displaying error for switch 0
Accumulated error counts for port 6 connected to device FPC0:
MLT3          0
Lock          0
Xmit          0
ESD           0
False carrier 4
Disconnects    0
FX mode       0
Accumulated error counts for port 9 connected to device FPC3:
MLT3          0
Lock          0
Xmit          0
ESD           0
False carrier 3
Disconnects    0
FX mode       0
Accumulated error counts for port 11 connected to device FPC5:
MLT3          0
Lock          0
Xmit          0
ESD           0
False carrier 3
Disconnects    0
FX mode       0
Accumulated error counts for port 12 connected to device FPC6:
MLT3          0
Lock          0
Xmit          0
ESD           0
False carrier 3
Disconnects    0
FX mode       0
Accumulated error counts for port 19 connected to device Other RE:
MLT3          0
Lock          0
Xmit          0
ESD           0
False carrier 0

```

```
Disconnects    0
FX mode        0
```

### show chassis ethernet-switch (PTX5000 Packet Transport Router)

```
user@host> show chassis ethernet-switch
Displaying summary for switch 0
Link is good on XE port 2 connected to device: SPMB
  Speed is 1000Mb
  Duplex is full
  Autonegotiate is Disabled
  Flow Control TX is Disabled
  Flow Control RX is Disabled

Link is good on XE port 11 connected to device: FPC7
  Speed is 1000Mb
  Duplex is full
  Autonegotiate is Disabled
  Flow Control TX is Disabled
  Flow Control RX is Disabled

Link is good on XE port 12 connected to device: FPC6
  Speed is 1000Mb
  Duplex is full
  Autonegotiate is Disabled
  Flow Control TX is Disabled
  Flow Control RX is Disabled

Link is good on XE port 13 connected to device: FPC5
  Speed is 1000Mb
  Duplex is full
  Autonegotiate is Disabled
  Flow Control TX is Disabled
  Flow Control RX is Disabled

Link is good on XE port 15 connected to device: FPC3
  Speed is 1000Mb
  Duplex is full
  Autonegotiate is Disabled
  Flow Control TX is Disabled
  Flow Control RX is Disabled

Link is good on XE port 16 connected to device: FPC2
  Speed is 1000Mb
  Duplex is full
  Autonegotiate is Disabled
  Flow Control TX is Disabled
  Flow Control RX is Disabled

Link is good on XE port 18 connected to device: FPC0
  Speed is 1000Mb
  Duplex is full
  Autonegotiate is Disabled
  Flow Control TX is Disabled
  Flow Control RX is Disabled

Link is good on XE port 19 connected to device: OTHER RE
  Speed is 1000Mb
  Duplex is full
  Autonegotiate is Disabled
  Flow Control TX is Disabled
```

Flow Control RX is Disabled

Link is good on XE port 20 connected to device: RE  
 Speed is 1000Mb  
 Duplex is full  
 Autonegotiate is Disabled  
 Flow Control TX is Disabled  
 Flow Control RX is Disabled

### show chassis ethernet-switch statistics (PTX5000 Packet Transport Router)

```
user@host> show chassis ethernet-switch statistics
Displaying port statistics for switch 0
Statistics for port 2 connected to device SPMB:
TX Packets 64 Octets      10942
TX Packets 65-127 Octets  843
TX Packets 128-255 Octets 2
TX Packets 256-511 Octets 2
TX Packets 512-1023 Octets 0
TX Packets 1024-1518 Octets 6862
TX Packets 1519-2047 Octets 0
TX Packets 2048-4095 Octets 0
TX Packets 4096-9216 Octets 0
TX Packets 9217-16383 Octets 0
TX Octets      18651
TX Multicast Packets 6
TX Broadcast Packets 10331
TX PAUSEMAC Ctrl Frames 0
TX Oversize Packets 0
TX FCS Error Counter 0
TX Fragment Counter 0
TX Byte Counter 8105166
TX Packet OK Counter 0
TX Pause Packet Counter 0
TX Unicast Counter 0
RX Packets 64 Octets      8679
RX Packets 65-127 Octets 2364
RX Packets 128-255 Octets 531
RX Packets 256-511 Octets 112
RX Packets 512-1023 Octets 26
RX Packets 1024-1518 Octets 8
RX Packets 1519-2047 Octets 0
RX Packets 2048-4095 Octets 0
RX Packets 4096-9216 Octets 0
RX Packets 9217-16383 Octets 0
RX Octets      11720
RX Multicast Packets 0
RX Broadcast Packets 10331
RX FCS Errors 0
RX Fragments 0
RX MAC Control Packets 0
RX Out of Range Length 0
RX Undersize Packets 0
RX Oversize Packets 0
RX Jabbers 0
RX Control Frame Counter 0
RX Pause Frame Counter 0
RX Byte Counter 938105
RX Unicast Frame Count 0
RX Packet OK Count 0
Statistics for port 11 connected to device FPC7:
```

TX Packets 64 Octets	14492
TX Packets 65-127 Octets	3542
TX Packets 128-255 Octets	6
TX Packets 256-511 Octets	45
TX Packets 512-1023 Octets	60

Continued...

Statistics for port 18 connected to device FPC0:

TX Packets 64 Octets	15212
TX Packets 65-127 Octets	3810
TX Packets 128-255 Octets	6
TX Packets 256-511 Octets	43
TX Packets 512-1023 Octets	66
TX Packets 1024-1518 Octets	169
TX Packets 1519-2047 Octets	0
TX Packets 2048-4095 Octets	0
TX Packets 4096-9216 Octets	0
TX Packets 9217-16383 Octets	0
TX Octets	19306
TX Multicast Packets	0
TX Broadcast Packets	10886
TX PAUSEMAC Ctrl Frames	0
TX Oversize Packets	0
TX FCS Error Counter	0
TX Fragment Counter	0
TX Byte Counter	1569412
TX Packet OK Counter	0
TX Pause Packet Counter	0
TX Unicast Counter	0
RX Packets 64 Octets	17994
RX Packets 65-127 Octets	8006
RX Packets 128-255 Octets	230
RX Packets 256-511 Octets	19
RX Packets 512-1023 Octets	53
RX Packets 1024-1518 Octets	11
RX Packets 1519-2047 Octets	0
RX Packets 2048-4095 Octets	0
RX Packets 4096-9216 Octets	0
RX Packets 9217-16383 Octets	0
RX Octets	26313
RX Multicast Packets	0
RX Broadcast Packets	10886
RX FCS Errors	0
RX Fragments	0
RX MAC Control Packets	0
RX Out of Range Length	0
RX Undersize Packets	0
RX Oversize Packets	0
RX Jabbers	0
RX Control Frame Counter	2
RX Pause Frame Counter	2
RX Byte Counter	1836287
RX Unicast Frame Count	0
RX Packet OK Count	0

Statistics for port 19 connected to device OTHER RE:

TX Packets 64 Octets	10234
TX Packets 65-127 Octets	162
TX Packets 128-255 Octets	0
TX Packets 256-511 Octets	0
TX Packets 512-1023 Octets	0

```

TX Packets 1024-1518 Octets 0
TX Packets 1519-2047 Octets 0
TX Packets 2048-4095 Octets 0
TX Packets 4096-9216 Octets 0
TX Packets 9217-16383 Octets 0
TX Octets 10396
TX Multicast Packets 8
TX Broadcast Packets 10317
TX PAUSEMAC Ctrl Frames 0
TX Oversize Packets 0
TX FCS Error Counter 0
TX Fragment Counter 0
TX Byte Counter 666260
TX Packet OK Counter 0
TX Pause Packet Counter 0
TX Unicast Counter 0
RX Packets 64 Octets 4073
RX Packets 65-127 Octets 325
RX Packets 128-255 Octets 1
RX Packets 256-511 Octets 0
RX Packets 512-1023 Octets 0
RX Packets 1024-1518 Octets 72
RX Packets 1519-2047 Octets 0
RX Packets 2048-4095 Octets 0
RX Packets 4096-9216 Octets 0
RX Packets 9217-16383 Octets 0
RX Octets 4471
RX Multicast Packets 0
RX Broadcast Packets 10317
RX FCS Errors 0
RX Fragments 0
RX MAC Control Packets 0
RX Out of Range Length 0
RX Undersize Packets 0
RX Oversize Packets 0
RX Jabbers 0
RX Control Frame Counter 0
RX Pause Frame Counter 0
RX Byte Counter 387333
RX Unicast Frame Count 0
RX Packet OK Count 0
Statistics for port 20 connected to device RE:
TX Packets 64 Octets 658856
TX Packets 65-127 Octets 45535
TX Packets 128-255 Octets 1900
TX Packets 256-511 Octets 532
TX Packets 512-1023 Octets 372
TX Packets 1024-1518 Octets 191
TX Packets 1519-2047 Octets 0
TX Packets 2048-4095 Octets 0
TX Packets 4096-9216 Octets 0
TX Packets 9217-16383 Octets 0
TX Octets 707386
TX Multicast Packets 0
TX Broadcast Packets 10421
TX PAUSEMAC Ctrl Frames 0
TX Oversize Packets 0
TX FCS Error Counter 0
TX Fragment Counter 0
TX Byte Counter 46608676
TX Packet OK Counter 0

```

TX Pause Packet Counter	0
TX Unicast Counter	0
RX Packets 64 Octets	27394
RX Packets 65-127 Octets	20271
RX Packets 128-255 Octets	78
RX Packets 256-511 Octets	215
RX Packets 512-1023 Octets	269
RX Packets 1024-1518 Octets	253370
RX Packets 1519-2047 Octets	0
RX Packets 2048-4095 Octets	0
RX Packets 4096-9216 Octets	0
RX Packets 9217-16383 Octets	0
RX Octets	301597
RX Multicast Packets	8
RX Broadcast Packets	10421
RX FCS Errors	0
RX Fragments	0
RX MAC Control Packets	0
RX Out of Range Length	0
RX Undersize Packets	0
RX Oversize Packets	0
RX Jabbers	0
RX Control Frame Counter	0
RX Pause Frame Counter	0
RX Byte Counter	275043436
RX Unicast Frame Count	0
RX Packet OK Count	0

Continued ...

#### show chassis ethernet-switch port-state (PTX5000 Packet Transport Router)

```
user@host> show chassis ethernet-switch port-state
Displaying port state for switch 0
Port      : 02
Target    : SPMB

Error reading port 2 connected to device: SPMB
```

## show chassis fan

---

**List of Syntax**    [Syntax on page 391](#)  
                           [Syntax \(ACX4000 Series Router\) on page 391](#)  
                           [Syntax \(ACX5048 and ACX5096 Routers\) on page 391](#)  
                           [Syntax \(MX Series Routers\) on page 391](#)  
                           [Syntax \(T Series Routers\) on page 391](#)  
                           [Syntax \(MX104, MX204, MX2010, MX2020, MX2008, and MX10003 Universal Routing Platform\) on page 391](#)  
                           [Syntax \(MX10003 Universal Routing Platform\) on page 391](#)  
                           [Syntax \(PTX Series\) on page 391](#)  
                           [Syntax \(QFX Series\) on page 391](#)  
                           [Syntax \(OCX Series\) on page 392](#)  
                           [Syntax \(TX Matrix Router\) on page 392](#)  
                           [Syntax \(TX Matrix Plus Router\) on page 392](#)  
                           [Syntax \(EX9251, EX9253 Switches\) on page 392](#)

**Syntax**    show chassis fan

**Syntax (ACX4000 Series Router)**    show chassis fan

**Syntax (ACX5048 and ACX5096 Routers)**    show chassis fan

**Syntax (MX Series Routers)**    show chassis fan  
   <all-members>  
   <local>  
   <member *member-id*>

**Syntax (T Series Routers)**    show chassis fan

**Syntax (MX104, MX204, MX2010, MX2020, MX2008, and MX10003 Universal Routing Platform)**    show chassis fan  
   <satellite [*slot-id slot-id* [*device-alias alias-name*]]>

**Syntax (MX10003 Universal Routing Platform)**    show chassis fan

**Syntax (PTX Series)**    show chassis fan

**Syntax (QFX Series)**    show chassis fan  
                                   <interconnect-device *name*>

<b>Syntax (OCX Series)</b>	show chassis fan
<b>Syntax (TX Matrix Router)</b>	show chassis fan <lcc <i>number</i>   scc>
<b>Syntax (TX Matrix Plus Router)</b>	show chassis fan <lcc <i>number</i>   sfc <i>number</i> >
<b>Syntax (EX9251, EX9253 Switches)</b>	show chassis fan
<b>Release Information</b>	<p>Command introduced in Junos OS Release 10.0 on MX Series 5G Universal Routing Platforms, M120 routers, and M320 routers, T320 routers, T640 routers, T1600 routers, TX Matrix Routers, and TX Matrix Plus routers.</p> <p>Command introduced in Junos OS Release 11.1 for the QFX Series.</p> <p>Command introduced in Junos OS Release 11.4 for EX Series switches.</p> <p>Command introduced in Junos OS Release 12.1 for T4000 routers.</p> <p>Command introduced in Junos OS Release 12.3 for PTX5000 Packet Transport Routers.</p> <p>Command introduced in Junos OS Release 12.3 for MX2010 and MX2020 Universal Routing Platforms, and ACX Series Routers.</p> <p>Command introduced in Junos OS Release 13.2 for MX104 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.</p> <p><b>satellite</b> option introduced in Junos OS Release 14.2R3.</p> <p>Command introduced in Junos OS Release 17.2 for MX2008 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 17.3 for MX150 Router Appliance.</p> <p>Command introduced in Junos OS Release 17.2 for PTX10008 Routers.</p> <p>Command introduced in Junos OS Release 17.4 for MX204 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 18.1R1 for EX9251 Switches.</p> <p>Command introduced in Junos OS Release 18.2 for EX9253 Switches.</p> <p>Command introduced in Junos OS Release 18.2 for MX10008 Universal Routing Platforms.</p>
<b>Description</b>	(T Series routers, TX Matrix routers, TX Matrix Plus routers, M120 routers, M320 routers, MX104 routers, MX2010 routers, MX2020 routers, MX2008 routers, MX Series 5G Universal Routing Platforms, QFX3008-I Interconnect devices, QFX Series, OCX Series, EX Series switches, and PTX Series Packet Transport Routers only) Show information about the fan tray and fans.
<b>Options</b>	<p><b>all-members</b>—(MX Series routers only) (Optional) Display information about the fan tray and fans for all members of the Virtual Chassis configuration.</p> <p><b>local</b>—(MX Series routers only) (Optional) Display information about the fan tray and fans for the local Virtual Chassis member.</p> <p><b>member <i>member-id</i></b>—(MX Series routers only) (Optional) Display information about the fan tray and fans for the specified member of the Virtual Chassis configuration. For an MX Series Virtual Chassis, replace <i>member-id</i> variable with a value 0 or 1.</p>



**interconnect-device *name***—(QFX3000-G QFabric systems only) (Optional) Display information about the fan tray and fans for the specified QFX3008-I Interconnect device.

**lcc *number***—(TX Matrix and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display information about the fan tray and fans for the specified T640 router (line-card chassis) that is connected to a TX Matrix router. On a TX Matrix Plus router, display information about the fan tray and fans for the specified router (line-card chassis) that is connected to a TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**satellite [*slot-id slot-id* | device-alias *alias-name*]**—(Junos Fusion only) (Optional) Display information about the fan tray and fans for the specified satellite device or devices in a Junos Fusion, or for all satellite devices if no satellite devices are specified.

**scc**—(TX Matrix routers only) (Optional) Display information about the fan tray and fans for the TX Matrix router (switch-card chassis).

**sfc *number***—(TX Matrix Plus routers only) (Optional) Display information about the fan tray and fans for the TX Matrix Plus router (switch-fabric chassis). Replace *number* variable with 0.

**Required Privilege Level**

view

**List of Sample Output**

[show chassis fan on page 395](#)  
[show chassis fan \(QFabric Systems\) on page 395](#)  
[show chassis fan \(EX Series Switches\) on page 396](#)  
[show chassis fan \(T320 Router\) on page 397](#)  
[show chassis fan \(T640 Router\) on page 397](#)  
[show chassis fan \(T1600 Router\) on page 397](#)  
[show chassis fan \(T4000 Core Router\) on page 398](#)  
[show chassis fan \(TX Matrix Router\) on page 398](#)  
[show chassis fan \(TX Matrix Plus Router\) on page 399](#)  
[show chassis fan \(TX Matrix Plus Router with 3D SIBs\) on page 400](#)  
[show chassis fan \(PTX5000 Packet Transport Router\) on page 402](#)  
[show chassis fan \(PTX10008 Router\) on page 403](#)  
[show chassis fan \(MX150\) on page 403](#)

[show chassis fan \(MX104 Router\) on page 403](#)  
[show chassis fan \(MX2010 Router\) on page 404](#)  
[show chassis fan \(MX2020 Router\) on page 404](#)  
[show chassis fan \(MX2008 Router\) on page 405](#)  
[show chassis fan \(MX10003 Router\) on page 405](#)  
[show chassis fan \(MX204 Router\) on page 405](#)  
[show chassis fan \(MX10008 Router\) on page 406](#)  
[show chassis fan \(ACX4000 Router\) on page 406](#)  
[show chassis fan \(ACX5048 Router\) on page 406](#)  
[show chassis fan \(QFX5100 Switch and OCX Series\) on page 406](#)  
[show chassis fan \(EX9251 switches\) on page 407](#)  
[show chassis fan \(EX9253 switches\) on page 407](#)

**Output Fields** Table 16 on page 394 lists the output fields for the **show chassis fan** command. Output fields are listed in the approximate order in which they appear.

*Table 16: show chassis fan Output Fields*

Field Name	Field Description
<b>Item</b>	Fan item identifier.
<b>Status</b>	Status of the fan: <ul style="list-style-type: none"> <li>• <b>OK</b>—Fan is running properly and within the normal range.</li> <li>• <b>Check</b>—Fan is in <b>Check</b> state because of some fault or alarm condition.</li> </ul>
<b>RPM</b>	(T Series routers, TX Matrix routers, TX Matrix Plus routers, MX Series 5G Universal Routing Platforms, QFX3108 Interconnect devices, and EX Series switches only) Fan speed in revolutions per minute (RPM).
<b>% RPM</b>	(MX2010 routers, MX2020 routers, MX2008 routers, and PTX Series Packet Transport Routers only) Percentage of the fan speed being used.
<b>Measurement</b>	(T Series routers, TX Matrix routers, TX Matrix Plus routers, MX Series 5G Universal Routing Platforms, QFX3108 Interconnect devices, and EX Series switches only) Fan speed status based on different chassis cooling requirements: <ul style="list-style-type: none"> <li>• Spinning at high speed</li> <li>• Spinning at intermediate speed</li> <li>• Spinning at normal speed</li> <li>• Spinning at low speed (except EX Series switches)</li> </ul> (MX2010 routers, MX2020 routers, MX2008 routers, and PTX Series Packet Transport Routers only) Fan speed in revolutions per minute (RPM) for each fan in the fan tray.

## Sample Output

### show chassis fan

```
user@host> show chassis fan
```

Item	Status	RPM	Measurement
Top Tray Fan 1	OK	3790	Spinning at normal speed
Top Tray Fan 2	OK	3769	Spinning at normal speed
Top Tray Fan 3	OK	3769	Spinning at normal speed
Top Tray Fan 4	OK	3790	Spinning at normal speed
Top Tray Fan 5	OK	3790	Spinning at normal speed
Top Tray Fan 6	OK	3769	Spinning at normal speed
Top Tray Fan 7	OK	3790	Spinning at normal speed
Top Tray Fan 8	OK	3769	Spinning at normal speed
Top Tray Fan 9	OK	3769	Spinning at normal speed
Top Tray Fan 10	OK	3790	Spinning at normal speed
Top Tray Fan 11	OK	3790	Spinning at normal speed
Top Tray Fan 12	OK	3769	Spinning at normal speed
Bottom Tray Fan 1	OK	2880	Spinning at normal speed
Bottom Tray Fan 2	OK	2912	Spinning at normal speed
Bottom Tray Fan 3	OK	2928	Spinning at normal speed
Bottom Tray Fan 4	OK	2896	Spinning at normal speed
Bottom Tray Fan 5	OK	2896	Spinning at normal speed
Bottom Tray Fan 6	OK	2928	Spinning at normal speed

### show chassis fan (QFabric Systems)

```
user@host> show chassis fan interconnect-device interconnect1
```

Item	Status	RPM	Measurement
TFT 0 Fan 0	OK	2849	Spinning at normal speed
TFT 0 Fan 1	OK	2821	Spinning at normal speed
TFT 0 Fan 2	OK	2735	Spinning at normal speed
TFT 0 Fan 3	OK	2815	Spinning at normal speed
TFT 0 Fan 4	OK	2828	Spinning at normal speed
TFT 0 Fan 5	OK	2863	Spinning at normal speed
BFT 1 Fan 0	OK	2941	Spinning at normal speed
BFT 1 Fan 1	OK	3008	Spinning at normal speed
BFT 1 Fan 2	OK	3073	Spinning at normal speed
BFT 1 Fan 3	OK	2925	Spinning at normal speed
BFT 1 Fan 4	OK	2863	Spinning at normal speed
BFT 1 Fan 5	OK	2933	Spinning at normal speed
SFT 0 Fan 0 Rotor 0	OK	15472	Spinning at normal speed
SFT 0 Fan 0 Rotor 1	OK	14477	Spinning at normal speed
SFT 0 Fan 1 Rotor 0	OK	15561	Spinning at normal speed
SFT 0 Fan 1 Rotor 1	OK	14210	Spinning at normal speed
SFT 0 Fan 2 Rotor 0	OK	16167	Spinning at normal speed
SFT 0 Fan 2 Rotor 1	OK	14248	Spinning at normal speed
SFT 0 Fan 3 Rotor 0	OK	16463	Spinning at normal speed
SFT 0 Fan 3 Rotor 1	OK	14099	Spinning at normal speed
SFT 1 Fan 0 Rotor 0	OK	15083	Spinning at normal speed
SFT 1 Fan 0 Rotor 1	OK	13533	Spinning at normal speed
SFT 1 Fan 1 Rotor 0	OK	16071	Spinning at normal speed
SFT 1 Fan 1 Rotor 1	OK	14400	Spinning at normal speed
SFT 1 Fan 2 Rotor 0	OK	15517	Spinning at normal speed
SFT 1 Fan 2 Rotor 1	OK	14210	Spinning at normal speed
SFT 1 Fan 3 Rotor 0	OK	16413	Spinning at normal speed
SFT 1 Fan 3 Rotor 1	OK	14400	Spinning at normal speed
SFT 2 Fan 0 Rotor 0	OK	15297	Spinning at normal speed

SFT 2 Fan 0 Rotor 1	OK	14634	Spinning at normal speed
SFT 2 Fan 1 Rotor 0	OK	15561	Spinning at normal speed
SFT 2 Fan 1 Rotor 1	OK	14285	Spinning at normal speed
SFT 2 Fan 2 Rotor 0	OK	15835	Spinning at normal speed
SFT 2 Fan 2 Rotor 1	OK	14400	Spinning at normal speed
SFT 2 Fan 3 Rotor 0	OK	15789	Spinning at normal speed
SFT 2 Fan 3 Rotor 1	OK	14323	Spinning at normal speed
SFT 3 Fan 0 Rotor 0	OK	16314	Spinning at normal speed
SFT 3 Fan 0 Rotor 1	OK	14876	Spinning at normal speed
SFT 3 Fan 1 Rotor 0	OK	15835	Spinning at normal speed
SFT 3 Fan 1 Rotor 1	OK	14323	Spinning at normal speed
SFT 3 Fan 2 Rotor 0	OK	16265	Spinning at normal speed
SFT 3 Fan 2 Rotor 1	OK	14594	Spinning at normal speed
SFT 3 Fan 3 Rotor 0	OK	16071	Spinning at normal speed
SFT 3 Fan 3 Rotor 1	OK	14323	Spinning at normal speed
SFT 4 Fan 0 Rotor 0	OK	15652	Spinning at normal speed
SFT 4 Fan 0 Rotor 1	OK	14438	Spinning at normal speed
SFT 4 Fan 1 Rotor 0	OK	16167	Spinning at normal speed
SFT 4 Fan 1 Rotor 1	OK	14555	Spinning at normal speed
SFT 4 Fan 2 Rotor 0	OK	16023	Spinning at normal speed
SFT 4 Fan 2 Rotor 1	OK	14361	Spinning at normal speed
SFT 4 Fan 3 Rotor 0	OK	16216	Spinning at normal speed
SFT 4 Fan 3 Rotor 1	OK	14438	Spinning at normal speed
SFT 5 Fan 0 Rotor 0	OK	15297	Spinning at normal speed
SFT 5 Fan 0 Rotor 1	OK	14173	Spinning at normal speed
SFT 5 Fan 1 Rotor 0	OK	15472	Spinning at normal speed
SFT 5 Fan 1 Rotor 1	OK	13846	Spinning at normal speed
SFT 5 Fan 2 Rotor 0	OK	15340	Spinning at normal speed
SFT 5 Fan 2 Rotor 1	OK	13917	Spinning at normal speed
SFT 5 Fan 3 Rotor 0	OK	15835	Spinning at normal speed
SFT 5 Fan 3 Rotor 1	OK	13917	Spinning at normal speed
SFT 6 Fan 0 Rotor 0	OK	15743	Spinning at normal speed
SFT 6 Fan 0 Rotor 1	OK	14594	Spinning at normal speed
SFT 6 Fan 1 Rotor 0	OK	16167	Spinning at normal speed
SFT 6 Fan 1 Rotor 1	OK	14634	Spinning at normal speed
SFT 6 Fan 2 Rotor 0	OK	16167	Spinning at normal speed
SFT 6 Fan 2 Rotor 1	OK	14516	Spinning at normal speed
SFT 6 Fan 3 Rotor 0	OK	16666	Spinning at normal speed
SFT 6 Fan 3 Rotor 1	OK	14438	Spinning at normal speed
SFT 7 Fan 0 Rotor 0	OK	15517	Spinning at normal speed
SFT 7 Fan 0 Rotor 1	OK	14438	Spinning at normal speed
SFT 7 Fan 1 Rotor 0	OK	15517	Spinning at normal speed
SFT 7 Fan 1 Rotor 1	OK	14361	Spinning at normal speed
SFT 7 Fan 2 Rotor 0	OK	16167	Spinning at normal speed
SFT 7 Fan 2 Rotor 1	OK	14555	Spinning at normal speed
SFT 7 Fan 3 Rotor 0	OK	15697	Spinning at normal speed
SFT 7 Fan 3 Rotor 1	OK	14361	Spinning at normal speed

### show chassis fan (EX Series Switches)

```
user@host> show chassis fan
```

Item	Status	RPM	Measurement
Fan 1	OK	3477	Spinning at normal speed
Fan 2	OK	3477	Spinning at normal speed
Fan 3	OK	3479	Spinning at normal speed
Fan 4	OK	3508	Spinning at normal speed
Fan 5	OK	3517	Spinning at normal speed
Fan 6	OK	3531	Spinning at normal speed
Fan 7	OK	3439	Spinning at normal speed
Fan 8	OK	3424	Spinning at normal speed

Fan 9	OK	3413	Spinning at normal speed
Fan 10	OK	3439	Spinning at normal speed
Fan 11	OK	3446	Spinning at normal speed
Fan 12	OK	3432	Spinning at normal speed

#### show chassis fan (T320 Router)

```
user@host> show chassis fan
```

Item	Status	RPM	Measurement
Top Left Front fan	OK	2850	Spinning at normal speed
Top Left Middle fan	OK	2820	Spinning at normal speed
Top Left Rear fan	OK	2970	Spinning at normal speed
Top Right Front fan	OK	2790	Spinning at normal speed
Top Right Middle fan	OK	2640	Spinning at normal speed
Top Right Rear fan	OK	2790	Spinning at normal speed
Bottom Left Front fan	OK	2520	Spinning at normal speed
Bottom Left Middle fan	OK	2610	Spinning at normal speed
Bottom Left Rear fan	OK	2550	Spinning at normal speed
Bottom Right Front fan	OK	2610	Spinning at normal speed
Bottom Right Middle fan	OK	2880	Spinning at normal speed
Bottom Right Rear fan	OK	2790	Spinning at normal speed
Rear Tray Top fan	OK	2130	Spinning at normal speed
Rear Tray Second fan	OK	2190	Spinning at normal speed
Rear Tray Middle fan	OK	2250	Spinning at normal speed
Rear Tray Fourth fan	OK	2220	Spinning at normal speed
Rear Tray Bottom fan	OK	2280	Spinning at normal speed

#### show chassis fan (T640 Router)

```
user@host> show chassis fan
```

Item	Status	RPM	Measurement
Top Left Front fan	OK	3420	Spinning at normal speed
Top Left Middle fan	OK	3420	Spinning at normal speed
Top Left Rear fan	OK	3420	Spinning at normal speed
Top Right Front fan	OK	3420	Spinning at normal speed
Top Right Middle fan	OK	3420	Spinning at normal speed
Top Right Rear fan	OK	3450	Spinning at normal speed
Bottom Left Front fan	OK	3390	Spinning at normal speed
Bottom Left Middle fan	OK	3420	Spinning at normal speed
Bottom Left Rear fan	OK	3390	Spinning at normal speed
Bottom Right Front fan	OK	3390	Spinning at normal speed
Bottom Right Middle fan	OK	3390	Spinning at normal speed
Bottom Right Rear fan	OK	3390	Spinning at normal speed
Rear Tray Top fan	OK	5220	Spinning at normal speed
Rear Tray Second fan	OK	5220	Spinning at normal speed
Rear Tray Third fan	OK	5220	Spinning at normal speed
Rear Tray Fourth fan	OK	5220	Spinning at normal speed
Rear Tray Fifth fan	OK	5220	Spinning at normal speed
Rear Tray Sixth fan	OK	5220	Spinning at normal speed
Rear Tray Seventh fan	OK	5220	Spinning at normal speed
Rear Tray Bottom fan	OK	5220	Spinning at normal speed

#### show chassis fan (T1600 Router)

```
user@host> show chassis fan
```

Item	Status	RPM	Measurement
Top Left Front fan	OK	3420	Spinning at normal speed

Top Left Middle fan	OK	3420	Spinning at normal speed
Top Left Rear fan	OK	3450	Spinning at normal speed
Top Right Front fan	OK	3420	Spinning at normal speed
Top Right Middle fan	OK	3420	Spinning at normal speed
Top Right Rear fan	OK	3390	Spinning at normal speed
Bottom Left Front fan	OK	3420	Spinning at normal speed
Bottom Left Middle fan	OK	3420	Spinning at normal speed
Bottom Left Rear fan	OK	3390	Spinning at normal speed
Bottom Right Front fan	OK	3390	Spinning at normal speed
Bottom Right Middle fan	OK	3420	Spinning at normal speed
Bottom Right Rear fan	OK	3390	Spinning at normal speed
Rear Tray Top fan	OK	5190	Spinning at normal speed
Rear Tray Second fan	OK	5190	Spinning at normal speed
Rear Tray Third fan	OK	5190	Spinning at normal speed
Rear Tray Fourth fan	OK	5190	Spinning at normal speed
Rear Tray Fifth fan	OK	5190	Spinning at normal speed
Rear Tray Sixth fan	OK	5190	Spinning at normal speed
Rear Tray Seventh fan	OK	5190	Spinning at normal speed
Rear Tray Bottom fan	OK	5190	Spinning at normal speed

**show chassis fan (T4000 Core Router)**

```
user@host> show chassis fan
```

Item	Status	RPM	Measurement
Top Left Front fan	OK	5190	Spinning at high speed
Top Left Middle fan	OK	5220	Spinning at high speed
Top Left Rear fan	OK	5190	Spinning at high speed
Top Right Front fan	OK	5160	Spinning at high speed
Top Right Middle fan	OK	5190	Spinning at high speed
Top Right Rear fan	OK	5160	Spinning at high speed
Bottom Left Front fan	OK	6030	Spinning at high speed
Bottom Left Middle fan	OK	6090	Spinning at high speed
Bottom Left Rear fan	OK	6090	Spinning at high speed
Bottom Right Front fan	OK	6030	Spinning at high speed
Bottom Right Middle fan	OK	6060	Spinning at high speed
Bottom Right Rear fan	OK	6060	Spinning at high speed
Rear Tray Top fan	OK	10000	Spinning at high speed
Rear Tray Second fan	OK	10000	Spinning at high speed
Rear Tray Third fan	OK	10000	Spinning at high speed
Rear Tray Fourth fan	OK	10000	Spinning at high speed
Rear Tray Fifth fan	OK	10000	Spinning at high speed
Rear Tray Sixth fan	OK	10000	Spinning at high speed
Rear Tray Seventh fan	OK	10000	Spinning at high speed
Rear Tray Bottom fan	OK	10000	Spinning at high speed

**show chassis fan (TX Matrix Router)**

```
user@host> show chassis fan
scc-re0:
```

Item	Status	RPM	Measurement
Top Left Front fan	OK	3420	Spinning at normal speed
Top Left Middle fan	OK	3390	Spinning at normal speed
Top Left Rear fan	OK	3420	Spinning at normal speed
Top Right Front fan	OK	3390	Spinning at normal speed
Top Right Middle fan	OK	3420	Spinning at normal speed
Top Right Rear fan	OK	3390	Spinning at normal speed
Bottom Left Front fan	OK	3420	Spinning at normal speed
Bottom Left Middle fan	OK	3450	Spinning at normal speed

Bottom Left Rear fan	OK	3420	Spinning at normal speed
Bottom Right Front fan	OK	3420	Spinning at normal speed
Bottom Right Middle fan	OK	3420	Spinning at normal speed
Bottom Right Rear fan	OK	3420	Spinning at normal speed
Rear Tray Top fan	OK	3420	Spinning at normal speed
Rear Tray Second fan	OK	5190	Spinning at normal speed
Rear Tray Third fan	OK	5190	Spinning at normal speed
Rear Tray Fourth fan	OK	5190	Spinning at normal speed
Rear Tray Fifth fan	OK	3420	Spinning at normal speed
Rear Tray Sixth fan	OK	3420	Spinning at normal speed
Rear Tray Seventh fan	OK	3420	Spinning at normal speed
Rear Tray Bottom fan	OK	3420	Spinning at normal speed

1cc2-re0:

Item	Status	RPM	Measurement
Top Left Front fan	OK	3420	Spinning at normal speed
Top Left Middle fan	OK	3420	Spinning at normal speed
Top Left Rear fan	OK	3450	Spinning at normal speed
Top Right Front fan	OK	3420	Spinning at normal speed
Top Right Middle fan	OK	3450	Spinning at normal speed
Top Right Rear fan	OK	3360	Spinning at normal speed
Bottom Left Front fan	OK	3420	Spinning at normal speed
Bottom Left Middle fan	OK	3480	Spinning at normal speed
Bottom Left Rear fan	OK	3420	Spinning at normal speed
Bottom Right Front fan	OK	3420	Spinning at normal speed
Bottom Right Middle fan	OK	3390	Spinning at normal speed
Bottom Right Rear fan	OK	3420	Spinning at normal speed
Rear Tray Top fan	OK	3420	Spinning at normal speed
Rear Tray Second fan	OK	3420	Spinning at normal speed
Rear Tray Third fan	OK	3420	Spinning at normal speed
Rear Tray Fourth fan	OK	3420	Spinning at normal speed
Rear Tray Fifth fan	OK	3420	Spinning at normal speed
Rear Tray Sixth fan	OK	3420	Spinning at normal speed
Rear Tray Seventh fan	OK	3420	Spinning at normal speed
Rear Tray Bottom fan	OK	3420	Spinning at normal speed

## show chassis fan (TX Matrix Plus Router)

```
user@host> show chassis fan
sfc0-re0:
```

Item	Status	RPM	Measurement
Fan Tray 0 Fan 1	OK	4350	Spinning at normal speed
Fan Tray 0 Fan 2	OK	4380	Spinning at normal speed
Fan Tray 0 Fan 3	OK	4410	Spinning at normal speed
Fan Tray 0 Fan 4	OK	4380	Spinning at normal speed
Fan Tray 0 Fan 5	OK	4350	Spinning at normal speed
Fan Tray 0 Fan 6	OK	4380	Spinning at normal speed
Fan Tray 1 Fan 1	OK	4410	Spinning at normal speed
Fan Tray 1 Fan 2	OK	4380	Spinning at normal speed
Fan Tray 1 Fan 3	OK	4410	Spinning at normal speed
Fan Tray 1 Fan 4	OK	4380	Spinning at normal speed
Fan Tray 1 Fan 5	OK	4410	Spinning at normal speed
Fan Tray 1 Fan 6	OK	4410	Spinning at normal speed
Fan Tray 2 Fan 1	OK	4380	Spinning at normal speed
Fan Tray 2 Fan 2	OK	4380	Spinning at normal speed
Fan Tray 2 Fan 3	OK	4380	Spinning at normal speed
Fan Tray 2 Fan 4	OK	4410	Spinning at normal speed
Fan Tray 2 Fan 5	OK	4380	Spinning at normal speed
Fan Tray 2 Fan 6	OK	4410	Spinning at normal speed

Fan Tray 2 Fan 7	OK	4410	Spinning at normal speed
Fan Tray 2 Fan 8	OK	4380	Spinning at normal speed
Fan Tray 2 Fan 9	OK	4380	Spinning at normal speed
Fan Tray 3 Fan 1	OK	4350	Spinning at normal speed
Fan Tray 3 Fan 2	OK	4380	Spinning at normal speed
Fan Tray 3 Fan 3	OK	4410	Spinning at normal speed
Fan Tray 3 Fan 4	OK	4440	Spinning at normal speed
Fan Tray 3 Fan 5	OK	4380	Spinning at normal speed
Fan Tray 3 Fan 6	OK	4410	Spinning at normal speed
Fan Tray 3 Fan 7	OK	4410	Spinning at normal speed
Fan Tray 3 Fan 8	OK	4380	Spinning at normal speed
Fan Tray 3 Fan 9	OK	4410	Spinning at normal speed
Fan Tray 4 Fan 1	OK	4410	Spinning at normal speed
Fan Tray 4 Fan 2	OK	4410	Spinning at normal speed
Fan Tray 4 Fan 3	OK	4380	Spinning at normal speed
Fan Tray 4 Fan 4	OK	4380	Spinning at normal speed
Fan Tray 4 Fan 5	OK	4410	Spinning at normal speed
Fan Tray 4 Fan 6	OK	4410	Spinning at normal speed
Fan Tray 4 Fan 7	OK	4410	Spinning at normal speed
Fan Tray 4 Fan 8	OK	4410	Spinning at normal speed
Fan Tray 4 Fan 9	OK	4410	Spinning at normal speed
Fan Tray 5 Fan 1	OK	4350	Spinning at normal speed
Fan Tray 5 Fan 2	OK	4380	Spinning at normal speed
Fan Tray 5 Fan 3	OK	4380	Spinning at normal speed
Fan Tray 5 Fan 4	OK	4350	Spinning at normal speed
Fan Tray 5 Fan 5	OK	4380	Spinning at normal speed
Fan Tray 5 Fan 6	OK	4410	Spinning at normal speed
Fan Tray 5 Fan 7	OK	4410	Spinning at normal speed
Fan Tray 5 Fan 8	OK	4380	Spinning at normal speed
Fan Tray 5 Fan 9	OK	4410	Spinning at normal speed

1cc0-re0:

Item	Status	RPM	Measurement
Top Left Front fan	OK	3420	Spinning at normal speed
Top Left Middle fan	OK	3420	Spinning at normal speed
Top Left Rear fan	OK	3420	Spinning at normal speed
Top Right Front fan	OK	3450	Spinning at normal speed
Top Right Middle fan	OK	3420	Spinning at normal speed
Top Right Rear fan	OK	3420	Spinning at normal speed
Bottom Left Front fan	OK	3420	Spinning at normal speed
Bottom Left Middle fan	OK	3420	Spinning at normal speed
Bottom Left Rear fan	OK	3390	Spinning at normal speed
Bottom Right Front fan	OK	3420	Spinning at normal speed
Bottom Right Middle fan	OK	3390	Spinning at normal speed
Bottom Right Rear fan	OK	3390	Spinning at normal speed
Rear Tray Top fan	OK	7050	Spinning at normal speed
Rear Tray Second fan	OK	7050	Spinning at normal speed
Rear Tray Third fan	OK	7050	Spinning at normal speed
Rear Tray Fourth fan	OK	7050	Spinning at normal speed
Rear Tray Fifth fan	OK	7050	Spinning at normal speed
Rear Tray Sixth fan	OK	7050	Spinning at normal speed
Rear Tray Seventh fan	OK	7050	Spinning at normal speed
Rear Tray Bottom fan	OK	7050	Spinning at normal speed

## show chassis fan (TX Matrix Plus Router with 3D SIBs)

```
user@host> show chassis fan
sfc0-re0:
```

Item	Status	RPM	Measurement
------	--------	-----	-------------



Fan Tray 0 Fan 1	OK	4830	Spinning at normal speed
Fan Tray 0 Fan 2	OK	4860	Spinning at normal speed
Fan Tray 0 Fan 3	OK	4830	Spinning at normal speed
Fan Tray 0 Fan 4	OK	4800	Spinning at normal speed
Fan Tray 0 Fan 5	OK	4830	Spinning at normal speed
Fan Tray 0 Fan 6	OK	4770	Spinning at normal speed
Fan Tray 1 Fan 1	OK	4800	Spinning at normal speed
Fan Tray 1 Fan 2	OK	4770	Spinning at normal speed
Fan Tray 1 Fan 3	OK	4800	Spinning at normal speed
Fan Tray 1 Fan 4	OK	4770	Spinning at normal speed
Fan Tray 1 Fan 5	OK	4770	Spinning at normal speed
Fan Tray 1 Fan 6	OK	4800	Spinning at normal speed
Fan Tray 2 Fan 1	OK	4800	Spinning at normal speed
Fan Tray 2 Fan 2	OK	4800	Spinning at normal speed
Fan Tray 2 Fan 3	OK	4830	Spinning at normal speed
Fan Tray 2 Fan 4	OK	4830	Spinning at normal speed
Fan Tray 2 Fan 5	OK	4830	Spinning at normal speed
Fan Tray 2 Fan 6	OK	4830	Spinning at normal speed
Fan Tray 2 Fan 7	OK	4800	Spinning at normal speed
Fan Tray 2 Fan 8	OK	4830	Spinning at normal speed
Fan Tray 2 Fan 9	OK	4800	Spinning at normal speed
Fan Tray 3 Fan 1	OK	4860	Spinning at normal speed
Fan Tray 3 Fan 2	OK	4860	Spinning at normal speed
Fan Tray 3 Fan 3	OK	4800	Spinning at normal speed
Fan Tray 3 Fan 4	OK	4830	Spinning at normal speed
Fan Tray 3 Fan 5	OK	4830	Spinning at normal speed
Fan Tray 3 Fan 6	OK	4830	Spinning at normal speed
Fan Tray 3 Fan 7	OK	4830	Spinning at normal speed
Fan Tray 3 Fan 8	OK	4800	Spinning at normal speed
Fan Tray 3 Fan 9	OK	4800	Spinning at normal speed
Fan Tray 4 Fan 1	OK	4830	Spinning at normal speed
Fan Tray 4 Fan 2	OK	4830	Spinning at normal speed
Fan Tray 4 Fan 3	OK	4830	Spinning at normal speed
Fan Tray 4 Fan 4	OK	4830	Spinning at normal speed
Fan Tray 4 Fan 5	OK	4830	Spinning at normal speed
Fan Tray 4 Fan 6	OK	4860	Spinning at normal speed
Fan Tray 4 Fan 7	OK	4800	Spinning at normal speed
Fan Tray 4 Fan 8	OK	4860	Spinning at normal speed
Fan Tray 4 Fan 9	OK	4770	Spinning at normal speed
Fan Tray 5 Fan 1	OK	4830	Spinning at normal speed
Fan Tray 5 Fan 2	OK	4830	Spinning at normal speed
Fan Tray 5 Fan 3	OK	4830	Spinning at normal speed
Fan Tray 5 Fan 4	OK	4800	Spinning at normal speed
Fan Tray 5 Fan 5	OK	4800	Spinning at normal speed
Fan Tray 5 Fan 6	OK	4800	Spinning at normal speed
Fan Tray 5 Fan 7	OK	4830	Spinning at normal speed
Fan Tray 5 Fan 8	OK	4830	Spinning at normal speed
Fan Tray 5 Fan 9	Check	2010	

1cc0-re0:

Item	Status	RPM	Measurement
Top Left Front fan	OK	3420	Spinning at normal speed
Top Left Middle fan	OK	3390	Spinning at normal speed
Top Left Rear fan	OK	3390	Spinning at normal speed
Top Right Front fan	OK	3420	Spinning at normal speed
Top Right Middle fan	OK	3420	Spinning at normal speed
Top Right Rear fan	OK	3450	Spinning at normal speed
Bottom Left Front fan	OK	3420	Spinning at normal speed
Bottom Left Middle fan	OK	3390	Spinning at normal speed
Bottom Left Rear fan	OK	3420	Spinning at normal speed

Bottom Right Front fan	OK	3420	Spinning at normal speed
Bottom Right Middle fan	OK	3390	Spinning at normal speed
Bottom Right Rear fan	OK	3420	Spinning at normal speed
Rear Tray fan 1 (Top)	OK	7740	Spinning at normal speed
Rear Tray fan 2	OK	7740	Spinning at normal speed
Rear Tray fan 3	OK	7740	Spinning at normal speed
Rear Tray fan 4	OK	7740	Spinning at normal speed
Rear Tray fan 5	OK	7740	Spinning at normal speed
Rear Tray fan 6	OK	7740	Spinning at normal speed
Rear Tray fan 7	OK	7740	Spinning at normal speed
Rear Tray fan 8	OK	7740	Spinning at normal speed
Rear Tray fan 9	OK	7740	Spinning at normal speed
Rear Tray fan 10	OK	7740	Spinning at normal speed
Rear Tray fan 11	OK	7740	Spinning at normal speed
Rear Tray fan 12	OK	7740	Spinning at normal speed
Rear Tray fan 13	OK	7740	Spinning at normal speed
Rear Tray fan 14	OK	7740	Spinning at normal speed
Rear Tray fan 15	OK	7740	Spinning at normal speed
Rear Tray fan 16 (Bottom)	OK	7740	Spinning at normal speed

```
lcc2-re0:
```

Item	Status	RPM	Measurement
Top Left Front fan	OK	3420	Spinning at normal speed
Top Left Middle fan	OK	3390	Spinning at normal speed
Top Left Rear fan	OK	3420	Spinning at normal speed
Top Right Front fan	OK	3420	Spinning at normal speed
Top Right Middle fan	OK	3420	Spinning at normal speed
Top Right Rear fan	OK	3450	Spinning at normal speed
Bottom Left Front fan	OK	3420	Spinning at normal speed
Bottom Left Middle fan	OK	3390	Spinning at normal speed
Bottom Left Rear fan	OK	3420	Spinning at normal speed
Bottom Right Front fan	OK	3420	Spinning at normal speed
Bottom Right Middle fan	OK	3390	Spinning at normal speed
Bottom Right Rear fan	OK	3420	Spinning at normal speed
Rear Tray fan 1 (Top)	OK	7740	Spinning at normal speed
Rear Tray fan 2	OK	7740	Spinning at normal speed
Rear Tray fan 3	OK	7740	Spinning at normal speed
Rear Tray fan 4	OK	7740	Spinning at normal speed
Rear Tray fan 5	OK	7740	Spinning at normal speed
Rear Tray fan 6	OK	7740	Spinning at normal speed
Rear Tray fan 7	OK	7740	Spinning at normal speed
Rear Tray fan 8	OK	7740	Spinning at normal speed
Rear Tray fan 9	OK	7740	Spinning at normal speed
Rear Tray fan 10	OK	7740	Spinning at normal speed
Rear Tray fan 11	OK	7740	Spinning at normal speed
Rear Tray fan 12	OK	7740	Spinning at normal speed
Rear Tray fan 13	OK	7740	Spinning at normal speed
Rear Tray fan 14	OK	7740	Spinning at normal speed
Rear Tray fan 15	OK	7740	Spinning at normal speed
Rear Tray fan 16 (Bottom)	OK	7740	Spinning at normal speed

#### show chassis fan (PTX5000 Packet Transport Router)

```
user@host> show chassis fan
user@host> show chassis fan
```

Item	Status	% RPM	Measurement
Fan Tray 0 Fan 1	OK	29%	2700 RPM
Fan Tray 0 Fan 2	OK	29%	2700 RPM
Fan Tray 0 Fan 3	OK	29%	2742 RPM
Fan Tray 0 Fan 4	OK	29%	2700 RPM

Fan Tray 0 Fan 5	OK	30%	2828 RPM
Fan Tray 0 Fan 6	OK	30%	2828 RPM
Fan Tray 0 Fan 7	OK	29%	2700 RPM
Fan Tray 0 Fan 8	OK	30%	2785 RPM
Fan Tray 0 Fan 9	OK	30%	2828 RPM
Fan Tray 0 Fan 10	OK	30%	2828 RPM
Fan Tray 0 Fan 11	OK	30%	2785 RPM
Fan Tray 0 Fan 12	OK	30%	2828 RPM
Fan Tray 0 Fan 13	OK	31%	2871 RPM
Fan Tray 0 Fan 14	OK	30%	2828 RPM
Fan Tray 1 Fan 1	OK	42%	3033 RPM
Fan Tray 1 Fan 2	OK	42%	3066 RPM
Fan Tray 1 Fan 3	OK	43%	3099 RPM
Fan Tray 1 Fan 4	OK	43%	3166 RPM
Fan Tray 1 Fan 5	OK	45%	3266 RPM
Fan Tray 1 Fan 6	OK	43%	3133 RPM
Fan Tray 2 Fan 1	OK	29%	2099 RPM
Fan Tray 2 Fan 2	OK	30%	2199 RPM
Fan Tray 2 Fan 3	OK	30%	2166 RPM
Fan Tray 2 Fan 4	OK	33%	2399 RPM
Fan Tray 2 Fan 5	OK	29%	2133 RPM
Fan Tray 2 Fan 6	OK	32%	2366 RPM

#### show chassis fan (PTX10008 Router)

```
user@host> show chassis fan
```

Item	Status	RPM	Measurement
Fan Tray 0 Fan 0	OK	9000	Spinning at normal speed
Fan Tray 0 Fan 1	OK	9000	Spinning at normal speed
Fan Tray 0 Fan 2	OK	9150	Spinning at normal speed
Fan Tray 0 Fan 3	OK	9150	Spinning at normal speed
Fan Tray 0 Fan 4	OK	9000	Spinning at normal speed
Fan Tray 0 Fan 5	OK	9150	Spinning at normal speed
Fan Tray 0 Fan 6	OK	9000	Spinning at normal speed
Fan Tray 0 Fan 7	OK	9150	Spinning at normal speed
Fan Tray 0 Fan 8	OK	8850	Spinning at normal speed
Fan Tray 0 Fan 9	OK	8850	Spinning at normal speed
Fan Tray 0 Fan 10	OK	9000	Spinning at normal speed
Fan Tray 1 Fan 0	OK	9150	Spinning at normal speed
Fan Tray 1 Fan 1	OK	9150	Spinning at normal speed
Fan Tray 1 Fan 2	OK	9000	Spinning at normal speed
Fan Tray 1 Fan 3	OK	9000	Spinning at normal speed
Fan Tray 1 Fan 4	OK	9000	Spinning at normal speed
Fan Tray 1 Fan 5	OK	9000	Spinning at normal speed
Fan Tray 1 Fan 6	OK	9000	Spinning at normal speed
Fan Tray 1 Fan 7	OK	9150	Spinning at normal speed
Fan Tray 1 Fan 8	OK	9000	Spinning at normal speed
Fan Tray 1 Fan 9	OK	9000	Spinning at normal speed
Fan Tray 1 Fan 10	OK	9000	Spinning at normal speed

#### show chassis fan (MX150)

```
user@host > show chassis fan
```

Item	Status	RPM	Measurement
FPC 0 Tray 0 Fan 0	OK	7419	Spinning at normal speed
FPC 0 Tray 1 Fan 0	OK	7419	Spinning at normal speed

#### show chassis fan (MX104 Router)

```
user@host > show chassis fan
```

Item	Status	RPM	Measurement
Fan 1	OK	5640	Spinning at normal speed
Fan 2	OK	5640	Spinning at normal speed
Fan 3	OK	5760	Spinning at normal speed
Fan 4	OK	5640	Spinning at normal speed
Fan 5	OK	5640	Spinning at normal speed

### show chassis fan (MX2010 Router)

```
user@host > show chassis fan
```

Item	Status	% RPM	Measurement
Fan Tray 0 Fan 1	OK	37%	3360 RPM
Fan Tray 0 Fan 2	OK	38%	3480 RPM
Fan Tray 0 Fan 3	OK	37%	3360 RPM
Fan Tray 0 Fan 4	OK	37%	3360 RPM
Fan Tray 0 Fan 5	OK	38%	3480 RPM
Fan Tray 0 Fan 6	OK	37%	3360 RPM
Fan Tray 1 Fan 1	OK	38%	3480 RPM
Fan Tray 1 Fan 2	OK	40%	3600 RPM
Fan Tray 1 Fan 3	OK	38%	3480 RPM
Fan Tray 1 Fan 4	OK	38%	3480 RPM
Fan Tray 1 Fan 5	OK	38%	3480 RPM
Fan Tray 1 Fan 6	OK	38%	3480 RPM
Fan Tray 2 Fan 1	OK	38%	3480 RPM
Fan Tray 2 Fan 2	OK	41%	3720 RPM
Fan Tray 2 Fan 3	OK	38%	3480 RPM
Fan Tray 2 Fan 4	OK	38%	3480 RPM
Fan Tray 2 Fan 5	OK	38%	3480 RPM
Fan Tray 2 Fan 6	OK	38%	3480 RPM
Fan Tray 3 Fan 1	OK	38%	3480 RPM
Fan Tray 3 Fan 2	OK	40%	3600 RPM
Fan Tray 3 Fan 3	OK	40%	3600 RPM
Fan Tray 3 Fan 4	OK	40%	3600 RPM
Fan Tray 3 Fan 5	OK	40%	3600 RPM
Fan Tray 3 Fan 6	OK	38%	3480 RPM

### show chassis fan (MX2020 Router)

```
user@host > show chassis fan
```

Item	Status	% RPM	Measurement
Fan Tray 0 Fan 1	OK	37%	3360 RPM
Fan Tray 0 Fan 2	OK	37%	3360 RPM
Fan Tray 0 Fan 3	OK	36%	3240 RPM
Fan Tray 0 Fan 4	OK	37%	3360 RPM
Fan Tray 0 Fan 5	OK	37%	3360 RPM
Fan Tray 0 Fan 6	OK	37%	3360 RPM
Fan Tray 1 Fan 1	OK	37%	3360 RPM
Fan Tray 1 Fan 2	OK	37%	3360 RPM
Fan Tray 1 Fan 3	OK	37%	3360 RPM
Fan Tray 1 Fan 4	OK	37%	3360 RPM
Fan Tray 1 Fan 5	OK	37%	3360 RPM
Fan Tray 1 Fan 6	OK	36%	3240 RPM
Fan Tray 2 Fan 1	OK	37%	3360 RPM
Fan Tray 2 Fan 2	OK	37%	3360 RPM
Fan Tray 2 Fan 3	OK	37%	3360 RPM
Fan Tray 2 Fan 4	OK	37%	3360 RPM
Fan Tray 2 Fan 5	OK	37%	3360 RPM
Fan Tray 2 Fan 6	OK	38%	3480 RPM
Fan Tray 3 Fan 1	OK	38%	3480 RPM
Fan Tray 3 Fan 2	OK	38%	3480 RPM

Fan Tray 3 Fan 3	OK	38%	3480 RPM
Fan Tray 3 Fan 4	OK	37%	3360 RPM
Fan Tray 3 Fan 5	OK	37%	3360 RPM
Fan Tray 3 Fan 6	OK	37%	3360 RPM

#### show chassis fan (MX2008 Router)

```
user@host > show chassis fan
```

Item	Status	% RPM	Measurement
Fan Tray 0 Fan 1	OK	64%	5760 RPM
Fan Tray 0 Fan 2	OK	62%	5640 RPM
Fan Tray 0 Fan 3	OK	64%	5760 RPM
Fan Tray 0 Fan 4	OK	60%	5400 RPM
Fan Tray 0 Fan 5	OK	61%	5520 RPM
Fan Tray 0 Fan 6	OK	62%	5640 RPM
Fan Tray 1 Fan 1	OK	61%	5520 RPM
Fan Tray 1 Fan 2	OK	61%	5520 RPM
Fan Tray 1 Fan 3	OK	61%	5520 RPM
Fan Tray 1 Fan 4	OK	62%	5640 RPM
Fan Tray 1 Fan 5	OK	62%	5640 RPM
Fan Tray 1 Fan 6	OK	64%	5760 RPM

#### show chassis fan (MX10003 Router)

```
user@host> show chassis fan
```

Item	Status	% RPM	Measurement
Fan Tray 0 Fan 0	OK	40%	7296 RPM
Fan Tray 0 Fan 1	OK	40%	6656 RPM
Fan Tray 0 Fan 2	OK	40%	7296 RPM
Fan Tray 0 Fan 3	OK	40%	6400 RPM
Fan Tray 1 Fan 0	OK	40%	7296 RPM
Fan Tray 1 Fan 1	OK	40%	6528 RPM
Fan Tray 1 Fan 2	OK	40%	7296 RPM
Fan Tray 1 Fan 3	OK	40%	6784 RPM
Fan Tray 2 Fan 0	OK	40%	7552 RPM
Fan Tray 2 Fan 1	OK	40%	6784 RPM
Fan Tray 2 Fan 2	OK	40%	7424 RPM
Fan Tray 2 Fan 3	OK	40%	6528 RPM
Fan Tray 3 Fan 0	OK	40%	7552 RPM
Fan Tray 3 Fan 1	OK	40%	6528 RPM
Fan Tray 3 Fan 2	OK	40%	7296 RPM
Fan Tray 3 Fan 3	OK	40%	6656 RPM

#### show chassis fan (MX204 Router)

```
user@host> show chassis fan
```

Item	Status	% RPM	Measurement
Fan Tray 0 Fan 0	OK	40%	9344 RPM
Fan Tray 0 Fan 1	OK	40%	8576 RPM
Fan Tray 1 Fan 0	OK	40%	9344 RPM
Fan Tray 1 Fan 1	OK	40%	8832 RPM
Fan Tray 2 Fan 0	OK	40%	9344 RPM
Fan Tray 2 Fan 1	OK	40%	8576 RPM

## show chassis fan (MX10008 Router)

```

user@host> show chassis fan
  Item                Status  RPM    Measurement
  Fan Tray 0 Fan 0    OK      9750    Spinning at normal speed
  Fan Tray 0 Fan 1    OK      9750    Spinning at normal speed
  Fan Tray 0 Fan 2    OK      9900    Spinning at normal speed
  Fan Tray 0 Fan 3    OK      9600    Spinning at normal speed
  Fan Tray 0 Fan 4    Failed
  Fan Tray 0 Fan 5    Failed
  Fan Tray 0 Fan 6    OK      9750    Spinning at normal speed
  Fan Tray 0 Fan 7    OK      9750    Spinning at normal speed
  Fan Tray 0 Fan 8    OK      9600    Spinning at normal speed
  Fan Tray 0 Fan 9    OK      9600    Spinning at normal speed
  Fan Tray 0 Fan 10   OK      9600    Spinning at normal speed
  Fan Tray 1 Fan 0    OK      9600    Spinning at normal speed
  Fan Tray 1 Fan 1    OK      9600    Spinning at normal speed
  Fan Tray 1 Fan 2    OK      9750    Spinning at normal speed
  Fan Tray 1 Fan 3    OK      9600    Spinning at normal speed
  Fan Tray 1 Fan 4    OK      9600    Spinning at normal speed
  Fan Tray 1 Fan 5    OK      9600    Spinning at normal speed
  Fan Tray 1 Fan 6    OK      9600    Spinning at normal speed
  Fan Tray 1 Fan 7    OK      9750    Spinning at normal speed
  Fan Tray 1 Fan 8    OK      9750    Spinning at normal speed
  Fan Tray 1 Fan 9    OK      9600    Spinning at normal speed
  Fan Tray 1 Fan 10   OK      9600    Spinning at normal speed

```

## show chassis fan (ACX4000 Router)

```

user@host > show chassis fan
  Item                Status  RPM    Measurement
  Fan 1                OK      4140    Spinning at normal speed
  Fan 2                OK      4200    Spinning at normal speed

```

## show chassis fan (ACX5048 Router)

```

user@host > show chassis fan
  Item                Status  RPM    Measurement
  FPC 0 Tray 0 Fan 0  OK      18305   Spinning at normal speed
  FPC 0 Tray 0 Fan 1  OK      15743   Spinning at normal speed
  FPC 0 Tray 1 Fan 0  OK      18305   Spinning at normal speed
  FPC 0 Tray 1 Fan 1  OK      15606   Spinning at normal speed
  FPC 0 Tray 2 Fan 0  OK      19014   Spinning at normal speed
  FPC 0 Tray 2 Fan 1  OK      16167   Spinning at normal speed
  FPC 0 Tray 3 Fan 0  OK      18947   Spinning at normal speed
  FPC 0 Tray 3 Fan 1  OK      16265   Spinning at normal speed
  FPC 0 Tray 4 Fan 0  OK      18120   Spinning at normal speed
  FPC 0 Tray 4 Fan 1  OK      15743   Spinning at normal speed

```

## show chassis fan (QFX5100 Switch and OCX Series)

```

user@switch > show chassis fan
  Item                Status  RPM    Measurement
  FPC 0 Tray 0 Fan 0  OK      6428    Spinning at normal speed
  FPC 0 Tray 0 Fan 1  OK      5515    Spinning at normal speed
  FPC 0 Tray 1 Fan 0  OK      6360    Spinning at normal speed
  FPC 0 Tray 1 Fan 1  OK      5532    Spinning at normal speed

```

**show chassis fan (EX9251 switches)**

```
user@switch > show chassis fan
```

Item	Status	% RPM	Measurement
Fan Tray 0 Fan 0	OK	40%	9600 RPM
Fan Tray 0 Fan 1	OK	40%	8832 RPM
Fan Tray 1 Fan 0	OK	40%	9728 RPM
Fan Tray 1 Fan 1	OK	40%	9088 RPM
Fan Tray 2	Absent		

**show chassis fan (EX9253 switches)**

```
user@switch > show chassis fan
```

Item	Status	% RPM	Measurement
Fan Tray 0 Fan 0	OK	40%	7552 RPM
Fan Tray 0 Fan 1	OK	40%	6272 RPM
Fan Tray 0 Fan 2	OK	40%	7552 RPM
Fan Tray 0 Fan 3	OK	40%	6272 RPM
Fan Tray 1 Fan 0	OK	40%	7552 RPM
Fan Tray 1 Fan 1	OK	40%	6272 RPM
Fan Tray 1 Fan 2	OK	40%	7552 RPM
Fan Tray 1 Fan 3	OK	40%	6272 RPM
Fan Tray 2 Fan 0	OK	40%	7552 RPM
Fan Tray 2 Fan 1	OK	40%	6400 RPM
Fan Tray 2 Fan 2	OK	40%	7552 RPM
Fan Tray 2 Fan 3	OK	40%	6272 RPM
Fan Tray 3 Fan 0	OK	40%	7552 RPM
Fan Tray 3 Fan 1	OK	40%	6400 RPM
Fan Tray 3 Fan 2	OK	40%	7552 RPM
Fan Tray 3 Fan 3	OK	40%	6272 RPM

## show chassis firmware

---

**List of Syntax**    [Syntax on page 408](#)  
                          [Syntax \(TX Matrix Routers\) on page 408](#)  
                          [Syntax \(TX Matrix Plus Routers\) on page 408](#)  
                          [Syntax \(MX Series Routers\) on page 408](#)  
                          [Syntax \(MX104, MX204, MX2010, MX2020, MX10003, and MX2008 Universal Routing Platforms\) on page 408](#)  
                          [Syntax \(MX10008 Universal Routing Platforms\) on page 408](#)  
                          [Syntax \(PTX Series\) on page 408](#)  
                          [Syntax \(QFX Series\) on page 408](#)  
                          [Syntax \(OCX Series\) on page 408](#)  
                          [Syntax \(ACX Series Universal Metro Routers\) on page 409](#)  
                          [Syntax \(ACX5048 and ACX5096 Routers\) on page 409](#)  
                          [Syntax \(ACX500 Routers\) on page 409](#)  
                          [Syntax \(EX Series Switches\) on page 409](#)

**Syntax**    show chassis firmware

**Syntax (TX Matrix Routers)**    show chassis firmware  
  <lcc *number* | scc>

**Syntax (TX Matrix Plus Routers)**    show chassis firmware  
  <lcc *number* | sfc *number*>

**Syntax (MX Series Routers)**    show chassis firmware  
  <all-members>  
  <local>  
  <member *member-id*>

**Syntax (MX104, MX204, MX2010, MX2020, MX10003, and MX2008 Universal Routing Platforms)**    show chassis firmware  
  <satellite [slot-id *slot-id* | device-alias *alias-name*]>

**Syntax (MX10008 Universal Routing Platforms)**    show chassis firmware

**Syntax (PTX Series)**    show chassis firmware

**Syntax (QFX Series)**    show chassis firmware  
                                  interconnect-device *name*  
                                  node-device *name*

**Syntax (OCX Series)**    show chassis firmware



<b>Syntax (ACX Series Universal Metro Routers)</b>	show chassis firmware
<b>Syntax (ACX5048 and ACX5096 Routers)</b>	show chassis firmware interconnect-device <i>name</i> node-device <i>name</i>
<b>Syntax (ACX500 Routers)</b>	show chassis firmware
<b>Syntax (EX Series Switches)</b>	show chassis firmware <detail> <satellite [slot-id <i>slot-id</i> [device-alias <i>alias-name</i> ]]>
<b>Release Information</b>	<p>Command introduced before Junos OS Release 7.4.</p> <p>Command introduced in Junos OS Release 9.4 for EX Series switches.</p> <p>sfc option introduced in Junos OS Release 9.6 for the TX Matrix Plus router.</p> <p>Command introduced for EX8200 switches in Junos OS Release 10.2 for EX Series switches.</p> <p>Command introduced in Junos OS Release 11.1 for QFX Series.</p> <p>Command introduced in Junos OS Release 12.2 for ACX Series Universal Metro Routers.</p> <p>Command introduced in Junos OS Release 12.3 for MX2010 and MX2020 Universal Routing Platforms, and ACX4000 Universal Metro Routers.</p> <p>Command introduced in Junos OS Release 13.2 for MX104 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.</p> <p>Command introduced in Junos OS Release 15.1X54-D20 for ACX5048 and ACX5096 Routers.</p> <p><b>satellite</b> option introduced in Junos OS Release 14.2R3.</p> <p>Command introduced in Junos OS Release 17.2 for MX2008 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 17.2 for PTX10008 Routers.</p> <p>Command introduced in Junos OS Release 17.3 for MX10003 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 17.4 for MX204 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 17.3 for MX150 Router Appliance.</p> <p>Command introduced in Junos OS Release 18.1R1 for EX9251 switches.</p> <p>Command introduced in Junos OS Release 18.2 for EX9253 Switches.</p> <p>Command introduced in Junos OS Release 18.2 for MX10008 Universal Routing Platforms.</p>
<b>Description</b>	<p>On routers and switches, display the version levels of the firmware running on the System Control Board (SCB), Switching and Forwarding Module (SFM), System and Switch Board (SSB), Forwarding Engine Board (FEB), Flexible PIC Concentrators (FPCs), and Routing Engines. On a TX Matrix Plus router, display the version levels of the firmware running on the FPCs and the Switch Processor Mezzanine Board (SPMBs).</p> <p>On EX2200, EX3200, EX4200, QFX Series, and OCX Series switches, display the version levels of the firmware running on the switch. On an EX8208 switch, display the version levels of the firmware running on the Switch Fabric and Routing Engine (SRE) modules and on the line cards (shown as FPCs). On an EX8216 switch, display the version levels</p>

of the firmware running on the Routing Engine (RE) modules and on the line cards (shown as FPCs).

**Options** **none**—Display the version levels of the firmware running. For an EX4200 switch that is a member of a Virtual Chassis, display version levels for all members. For a TX Matrix router, display version levels for the firmware on the TX Matrix router and on all the T640 routers connected to the TX Matrix router. For a TX Matrix Plus router, display version levels for the firmware on the TX Matrix Plus router and on all the routers connected to the TX Matrix Plus router.

**all-members**—(MX Series routers only) (Optional) Display the version levels of the firmware running for all members of the Virtual Chassis configuration.

**interconnect-device *name***—(QFabric systems) (Optional) Display the version levels of the firmware running on the Interconnect device.

**lcc *number***—(TX Matrix and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display version levels for the firmware on a specified T640 router (line-card chassis) that is connected to the TX Matrix router. On a TX Matrix Plus router, display the version levels for the firmware on a specified router (line-card chassis) that is connected to the TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(MX Series routers only) (Optional) Display the version levels of the firmware running for the local Virtual Chassis member.

**member *member-id***—(MX Series routers only) (Optional) Display the version levels of the firmware running for the specified member of the Virtual Chassis configuration. Replace *member-id* with a value of 0 or 1.

**node-device**—(QFabric systems only) (Optional) Display the version levels of the firmware running on the Node device.

**satellite [*slot-id slot-id* | *device-alias alias-name*]**—(Junos Fusion only) (Optional) Display version levels of the firmware running for the specified satellite device or devices in a Junos Fusion, or for all satellite devices if no satellite devices are specified.

**scc**—(TX Matrix router only) (Optional) Display version levels for the firmware on the TX Matrix router (switch-card chassis).

**sfc *number***—(TX Matrix Plus router only) (Optional) Display version levels for the firmware on the TX Matrix Plus router (or switch-fabric chassis). Replace *number* with 0.

**detail**—(EX3200, EX3300, EX4200, and EX4500 standalone and Virtual Chassis member switches only) (Optional) Display version levels of the firmware running on the switch for its programmable hardware components.

**Required Privilege Level** view

**List of Sample Output**

- [show chassis firmware \(M10 Router\) on page 412](#)
- [show chassis firmware \(M20 Router\) on page 412](#)
- [show chassis firmware \(M40 Router\) on page 413](#)
- [show chassis firmware \(M120 Router\) on page 413](#)
- [show chassis firmware \(M160 Router\) on page 413](#)
- [show chassis firmware \(MX150\) on page 413](#)
- [show chassis firmware \(MX104 Router\) on page 413](#)
- [show chassis firmware \(MX240 Router\) on page 414](#)
- [show chassis firmware \(MX480 Router\) on page 414](#)
- [show chassis firmware \(MX960 Router\) on page 414](#)
- [show chassis firmware \(MX2010 Router\) on page 414](#)
- [show chassis firmware \(MX2020 Router\) on page 415](#)
- [show chassis firmware \(MX2008 Router\) on page 415](#)
- [show chassis firmware \(MX10003\) on page 416](#)
- [show chassis firmware \(MX204 Router\) on page 416](#)
- [show chassis firmware \(MX10008 Router\) on page 416](#)
- [show chassis firmware \(MX240, MX480, MX960 Router with Application Services Modular Line Card\) on page 417](#)
- [show chassis firmware \(EX4200 Switch\) on page 417](#)
- [show chassis firmware \(EX8200 Switch\) on page 417](#)
- [show chassis firmware \(EX9200 Switch\) on page 418](#)
- [show chassis firmware \(EX9251 Switch\) on page 418](#)
- [show chassis firmware \(EX9253 Switch\) on page 418](#)
- [show chassis firmware lcc \(TX Matrix Router\) on page 418](#)
- [show chassis firmware scc \(TX Matrix Router\) on page 418](#)
- [show chassis firmware \(TX Matrix Plus Router\) on page 419](#)
- [show chassis firmware lcc \(TX Matrix Plus Router\) on page 420](#)
- [show chassis firmware sfc \(TX Matrix Plus Router\) on page 420](#)
- [show chassis firmware \(QFX Series and OCX Series\) on page 421](#)
- [show chassis firmware \(PTX1000 Packet Transport Routers\) on page 421](#)
- [show chassis firmware \(PTX10008 Routers\) on page 421](#)
- [show chassis firmware interconnect-device \(QFabric System\) on page 422](#)
- [show chassis firmware \(ACX2000 Universal Metro Router\) on page 422](#)
- [show chassis firmware detail \(EX3300 Switch\) on page 422](#)
- [show chassis firmware \(MX Routers with Media Services Blade \[MSB\]\) on page 422](#)
- [show chassis firmware \(ACX5048 Router\) on page 422](#)
- [show chassis firmware \(ACX5096 Router\) on page 423](#)
- [show chassis firmware \(ACX500 Router\) on page 423](#)

**Output Fields** Table 17 on page 412 lists the output fields for the show chassis firmware command. Output fields are listed in the approximate order in which they appear.

*Table 17: show chassis firmware Output Fields*

Field Name	Field Description
<b>Part</b>	(MX Series, MX2010, MX2020, and MX2008 routers) Chassis part name.
<b>Type</b>	(MX Series, MX2010, MX2020, and MX2008 routers) Type of firmware: On routers: ROM or O/S. On switches: uboot or loader.
<b>Version</b>	(MX Series, MX2010, MX2020, and MX2008 routers) Version of firmware running on the chassis part.
<b>FPC</b>	( <i>detail</i> option only) Number of FPC. For a standalone switch, the value is 0. For a Virtual Chassis configuration, value in the range of 0-9; refers to the member ID assigned to the switch.
<b>AFEB</b>	(MX104 routers) Version of the compact Forwarding Engine Board.
<b>Boot</b>	( <i>detail</i> option only) Version of the SYSPLD.
<b>PoE</b>	( <i>detail</i> option only) Version of the PoE firmware.
<b>PFE-&lt;number&gt;</b>	( <i>detail</i> option only) Version of the Packet Forwarding Engine used in the switch.
<b>PHY-</b>	( <i>detail</i> option only) Version of the physical layer device (PHY) used in the switch.
<b>microcode</b>	( <i>detail</i> option only) Microcode of the physical layer devices (PHY) used in the switch.
<b>uboot</b>	( <i>detail</i> option only) Version of the u-boot used in the switch.
<b>loader</b>	( <i>detail</i> option only) Version of the loader used in the switch.

## Sample Output

### show chassis firmware (M10 Router)

```
user@host> show chassis firmware
Part          Type      Version
Forwarding engine board  ROM      Juniper ROM Monitor Version 4.1b2
O/S           Version 4.1I1 by usera on 2000-04-24 11:27
```

### show chassis firmware (M20 Router)

```
user@host> show chassis firmware
Part          Type      Version
System switch board  ROM      Juniper ROM Monitor Version 3.4b26
```

	O/S	Version 3.4I16 by userc on 2000-02-29 2
FPC 1	ROM	Juniper ROM Monitor Version 3.0b1
	O/S	Version 3.4I4 by userc on 2000-02-25 21
FPC 2	ROM	Juniper ROM Monitor Version 3.0b1
	O/S	Version 3.4I4 by userc on 2000-02-25 21

#### show chassis firmware (M40 Router)

```
user@host> show chassis firmware
Part                Type      Version
System control board ROM      Juniper ROM Monitor Version 2.0i126Copyri
                  O/S      Version 2.0i1 by root on Thu Jul 23 00:51
FPC 5               ROM      Juniper ROM Monitor Version 2.0i49Copyrig
                  O/S      Version 2.0i1 by root on Thu Jul 23 00:59
```

#### show chassis firmware (M120 Router)

```
user@host> show chassis firmware
FPC 2               ROM      Juniper ROM Monitor Version 8.0b29
                  O/S      Version 8.2B1 by userb on 2006-10-18 16:2
FPC 3               ROM      Juniper ROM Monitor Version 8.0b29
                  O/S      Version 8.2B1 by userb on 2006-10-18 16:2
FPC 4               ROM      Juniper ROM Monitor Version 8.0b29
                  O/S      Version 8.2B1 by userb on 2006-10-18 16:2
FEB 3               ROM      Juniper ROM Monitor Version 8.0b29
                  O/S      Version 8.2B1 by userb on 2006-10-18 16:1
FEB 4               ROM      Juniper ROM Monitor Version 8.0b29
                  O/S      Version 8.2B1 by userb on 2006-10-18 16:1
```

#### show chassis firmware (M160 Router)

```
user@host> show chassis firmware
Part                Type      Version
SFM 0               ROM      Juniper ROM Monitor Version 4.0b2
                  O/S      Version 4.0I1 by usera on 2000-02-29 11:50
SFM 1               ROM      Juniper ROM Monitor Version 4.0b2
                  O/S      Version 4.0I1 by usera on 2000-02-29 11:50
FPC 0               ROM      Juniper ROM Monitor Version 4.0b2
                  O/S      Version 4.0I1 by usera on 2000-02-29 11:56
FPC 1               ROM      Juniper ROM Monitor Version 4.0b2
                  O/S      Version 4.0I1 by usera on 2000-02-29 11:56
FPC 2               ROM      Juniper ROM Monitor Version 4.0b3
                  O/S      Version 4.0I1 by usera on 2000-02-29 11:56
```

#### show chassis firmware (MX150)

```
user@host > show chassis firmware
Part                Type      Version
FPC                 ROM      PC Bios
                  O/S      Version 17.2I20170220_0929_rohitn by rohitn
on 2017-02-20 09:38:59 UTC
```

#### show chassis firmware (MX104 Router)

```
user@host > show chassis firmware
Part                Type      Version
FPC 0               ROM      Juniper ROM Monitor Version 13.1b24
                  O/S      Version 13.2-20130514.1 by userb on 2013-
FPC 1               ROM      Juniper ROM Monitor Version 13.1b24
```

	O/S	Version 13.2-20130514.1 by userb on 2013-
FPC 2	ROM	Juniper ROM Monitor Version 13.1b24
	O/S	Version 13.2-20130514.1 by userb on 2013-
AFEB	ROM	Juniper ROM Monitor Version 13.1b24
	O/S	Version 13.2-20130514.1 by userb on 2013-

**show chassis firmware (MX240 Router)**

```
user@host> show chassis firmware
```

Part	Type	Version
FPC 1	ROM	Juniper ROM Monitor Version 8.3b1
	O/S	Version 9.0-20080103.0 by userb on 2008-0
FPC 2	ROM	Juniper ROM Monitor Version 8.3b1
	O/S	Version 9.0-20080103.0 by userb on 2008-0

**show chassis firmware (MX480 Router)**

```
user@host> show chassis firmware
```

Part	Type	Version
FPC 1	ROM	Juniper ROM Monitor Version 8.3b1
	O/S	Version 9.0-20070916.3 by userb on 2007-0

**show chassis firmware (MX960 Router)**

```
user@host> show chassis firmware
```

Part	Type	Version
FPC 4	ROM	Juniper ROM Monitor Version 8.0b8
	O/S	Version 8.2I59 by user3 on 2006-10-31 19:22
FPC 7	ROM	Juniper ROM Monitor Version 8.2b1
	O/S	Version 8.2-20061026.1 by userb on 2006-1

**show chassis firmware (MX2010 Router)**

```
user@host> show chassis firmware
```

Part	Type	Version
FPC 0	ROM	Juniper ROM Monitor Version 12.3b1
	O/S	Version 12.3-20121220.0 by userb on 2012-
FPC 1	ROM	Juniper ROM Monitor Version 10.1b3
	O/S	Version 12.3-20121220.0 by userb on 2012-
FPC 2	ROM	Juniper ROM Monitor Version 10.1b3
	O/S	Version 12.3-20121220.0 by userb on 2012-
FPC 3	ROM	Juniper ROM Monitor Version 10.1b3
	O/S	Version 12.3-20121220.0 by userb on 2012-
FPC 4	ROM	Juniper ROM Monitor Version 10.0b39
	O/S	Version 12.3-20121220.0 by userb on 2012-
FPC 5	ROM	Juniper ROM Monitor Version 10.0b39
	O/S	Version 12.3-20121220.0 by userb on 2012-
FPC 6	ROM	Juniper ROM Monitor Version 10.4b1
	O/S	Version 12.3-20121220.0 by userb on 2012-
FPC 7	ROM	Juniper ROM Monitor Version 10.1b3
	O/S	Version 12.3-20121220.0 by userb on 2012-
FPC 8	ROM	Juniper ROM Monitor Version 10.4b1
	O/S	Version 12.3-20121220.0 by userb on 2012-
FPC 9	ROM	Juniper ROM Monitor Version 10.4b1
	O/S	Version 12.3-20121220.0 by userb on 2012-
SPMB 0	ROM	Juniper ROM Monitor Version 12.1b1
	O/S	Version 12.3-20121220.0 by userb on 2012-
SPMB 1	ROM	Juniper ROM Monitor Version 12.1b1
	O/S	Version 12.3-20121220.0 by userb on 2012-

## show chassis firmware (MX2020 Router)

```

user@host> show chassis firmware
Part      Type      Version
FPC 0     ROM       Juniper ROM Monitor Version 10.0b39
          O/S      Version 12.3-20130415.0 by userb on 2013-
FPC 1     ROM       Juniper ROM Monitor Version 10.0b39
          O/S      Version 12.3-20130415.0 by userb on 2013-
FPC 2     ROM       Juniper ROM Monitor Version 10.0b39
          O/S      Version 12.3-20130415.0 by userb on 2013-
FPC 3     ROM       Juniper ROM Monitor Version 10.0b39
          O/S      Version 12.3-20130415.0 by userb on 2013-
FPC 4     ROM       Juniper ROM Monitor Version 10.0b39
          O/S      Version 12.3-20130415.0 by userb on 2013-
FPC 5     ROM       Juniper ROM Monitor Version 10.0b39
          O/S      Version 12.3-20130415.0 by userb on 2013-
FPC 6     ROM       Juniper ROM Monitor Version 10.0b39
          O/S      Version 12.3-20130415.0 by userb on 2013-
FPC 7     ROM       Juniper ROM Monitor Version 10.0b39
          O/S      Version 12.3-20130415.0 by userb on 2013-
FPC 8     ROM       Juniper ROM Monitor Version 10.0b39
          O/S      Version 12.3-20130415.0 by userb on 2013-
FPC 9     ROM       Juniper ROM Monitor Version 10.0b39
          O/S      Version 12.3-20130415.0 by userb on 2013-
FPC 10    ROM       Juniper ROM Monitor Version 10.0b39
          O/S      Version 12.3-20130415.0 by userb on 2013-
FPC 11    ROM       Juniper ROM Monitor Version 10.0b39
          O/S      Version 12.3-20130415.0 by userb on 2013-
FPC 12    ROM       Juniper ROM Monitor Version 10.0b39
          O/S      Version 12.3-20130415.0 by userb on 2013-
FPC 13    ROM       Juniper ROM Monitor Version 10.0b39
          O/S      Version 12.3-20130415.0 by userb on 2013-
FPC 14    ROM       Juniper ROM Monitor Version 10.0b39
          O/S      Version 12.3-20130415.0 by userb on 2013-
FPC 15    ROM       Juniper ROM Monitor Version 10.0b39
          O/S      Version 12.3-20130415.0 by userb on 2013-
FPC 16    ROM       Juniper ROM Monitor Version 10.0b39
          O/S      Version 12.3-20130415.0 by userb on 2013-
FPC 17    ROM       Juniper ROM Monitor Version 10.0b39
          O/S      Version 12.3-20130415.0 by userb on 2013-
FPC 18    ROM       Juniper ROM Monitor Version 10.0b39
          O/S      Version 12.3-20130415.0 by userb on 2013-
FPC 19    ROM       Juniper ROM Monitor Version 10.0b39
          O/S      Version 12.3-20130415.0 by userb on 2013-
SPMB 0    ROM       Juniper ROM Monitor Version 12.1b1
          O/S      Version 12.3-20130415.0 by userb on 2013-
SPMB 1    ROM       Juniper ROM Monitor Version 12.1b1
          O/S      Version 12.3-20130415.0 by userb on 2013-

```

## show chassis firmware (MX2008 Router)

```

user@host> show chassis firmware

Part      Type      Version
FPC 0     ROM       Juniper ROM Monitor Version 10.1b3
          O/S      Version 17.2-20170412.0 by builder on
2017-04-12 01:15:48 UTC
FPC 3     ROM       Juniper ROM Monitor Version 13.3b1
          O/S      Version 17.2-20170412.0 by builder on
2017-04-12 01:16:31 UTC

```

```

FPC 5                ROM      Juniper ROM Monitor Version 13.3b1
                    O/S      Version 17.2-20170412.0 by builder on
2017-04-12 01:16:31 UTC
FPC 7                ROM      Juniper ROM Monitor Version 11.4b2
                    O/S      Version 17.2-20170412.0 by builder on
2017-04-12 01:15:48 UTC
FPC 9                ROM      Juniper ROM Monitor Version 13.2b1
                    O/S      Version 17.2-20170412.0 by builder on
2017-04-12 01:15:58 UTC

```

### show chassis firmware (MX10003)

```
user@host> show chassis firmware
```

```

Part                Type      Version
RE 0                PRI BIOS  CBEP_P_SUM0_00.11.01
                   RE-FPGA  402
RE 1                PRI BIOS  CBEP_P_SUM0_00.11.01
                   RE-FPGA  301
FPC 0                ROM      PC Bios
                   O/S      Version 17.3-20170719.0 by builder on
2017-07-19 01:27:58 UTC
FPC 1                ROM      PC Bios
                   O/S      Version 17.3-20170719.0 by builder on
2017-07-19 01:27:58 UTC

```

### show chassis firmware (MX204 Router)

```
user@host> show chassis firmware
```

```

Part                Type      Version
RE 0                PRI BIOS  CBEP_P_SUM1_00.11.01
                   RE-FPGA  300
FPC                  ROM      PC Bios
                   O/S      Version 17.4I20171105_0609_aahluwalia by
aahluwalia on 2017-11-05 06:09:28 UTC

```

### show chassis firmware (MX10008 Router)

```
user@host> show chassis firmware
```

```

Part                Type      Version
RE 0                PRI BIOS  CBEP_P_VAL0_00.14.1
                   FPGA      264.0
                   RE-FPGA  41.0
                   RE-SSD1  SF-SBR12050
                   RE-SSD2  SF-SBR12050
                   i40e-NVM  6.01
RE 1                PRI BIOS  CBEP_P_VAL0_00.13.01
                   FPGA      261.0
                   RE-FPGA  41.0
                   RE-SSD1  SF-SBR12034
                   RE-SSD2  SF-SBR12034
                   i40e-NVM  5.02
FPC 0                ROM      PC Bios
                   O/S      Version 18.4-20180716_dev_common.0 by builder
on 2018-07-16 00:43:35 UTC
                   ROM Monitor 0 9.14.0
                   PCIE Sw(0) 1.0.0
                   MPCS(0)   0.2.0
                   I2CS CPLD 0.4.0

```



```

FPC 2          BOOT CPLD  0.4.0
               ROM        PC Bios
               O/S        Version 18.4-20180716_dev_common.0 by builder
on 2018-07-16 00:43:35 UTC
               ROM Monitor 0 9.14.0
               PCIE Sw(0) 1.0.0
               MPCS(0)   0.2.0
               I2CS CPLD  0.4.0
               BOOT CPLD  0.4.0
FPC 3          ROM        PC Bios
               O/S        Version 18.4-20180716_dev_common.0 by builder
on 2018-07-16 00:43:35 UTC
               ROM Monitor 0 9.14.0
               PCIE Sw(0) 1.0.0
               MPCS(0)   0.4.0
               I2CS CPLD  0.8.0
               BOOT CPLD  0.8.0
FPM            FPGA       1.9
FTC 0          FPGA       2.0
FTC 1          FPGA       2.0
SFB 0          FPGA       3.0
SFB 1          FPGA       3.0
SFB 2          FPGA       3.0
SFB 3          FPGA       3.0
SFB 4          FPGA       3.0
SFB 5          FPGA       3.0

```

#### show chassis firmware (MX240, MX480, MX960 Router with Application Services Modular Line Card)

```
user@host> show chassis firmware
```

Part	Type	Version
FPC 1	ROM	Juniper ROM Monitor Version 12.1b1
	O/S	Version 12.2I21 by user1 on 2012-06-19 17:

#### show chassis firmware (EX4200 Switch)

```
user@switch> show chassis firmware
```

Part	Type	Version
FPC 0	uboot	U-Boot 1.1.6 (Feb 6 2008 - 11:27:42)
	loader	FreeBSD/PowerPC U-Boot bootstrap loader 2.1
FPC 1	uboot	U-Boot 1.1.6 (Feb 6 2008 - 11:27:42)
	loader	FreeBSD/PowerPC U-Boot bootstrap loader 2.1
FPC 2	uboot	U-Boot 1.1.6 (Feb 6 2008 - 11:27:42)
	loader	FreeBSD/PowerPC U-Boot bootstrap loader 2.1

#### show chassis firmware (EX8200 Switch)

```
user@switch> show chassis firmware
```

Part	Type	Version
FPC 0	U-Boot	U-Boot 1.1.6 (Mar 25 2009 - 06:13:12) 2.4.0
	loader	FreeBSD/PowerPC U-Boot bootstrap loader 2.2
FPC 3	U-Boot	U-Boot 1.1.6 (Dec 4 2009 - 13:17:34) 3.1.0
	loader	FreeBSD/PowerPC U-Boot bootstrap loader 2.2
FPC 5	U-Boot	U-Boot 1.1.6 (Mar 25 2009 - 06:13:12) 2.4.0
	loader	FreeBSD/PowerPC U-Boot bootstrap loader 2.2
FPC 7	U-Boot	U-Boot 1.1.6 (Feb 6 2009 - 05:31:46) 2.4.0
	loader	FreeBSD/PowerPC U-Boot bootstrap loader 2.2

Routing Engine 0	U-Boot	U-Boot 1.1.6 (Mar 25 2009 - 06:13:12) 2.4.0 FreeBSD/PowerPC U-Boot bootstrap loader 2.2
	loader	
Routing Engine 1	U-Boot	U-Boot 1.1.6 (Mar 25 2009 - 06:13:12) 2.4.0 FreeBSD/PowerPC U-Boot bootstrap loader 2.2
	loader	

**show chassis firmware (EX9200 Switch)**

```
user@switch> show chassis firmware
```

Part	Type	Version
FPC 2	ROM	Juniper ROM Monitor Version 11.4b2
	O/S	Version 14.1I20140312_0741 by userd o
FPC 3	ROM	Juniper ROM Monitor Version 10.4b1
	O/S	Version 14.1I20140312_0741 by userd o

**show chassis firmware (EX9251 Switch)**

```
user@switch> show chassis firmware
```

Part	Type	Version
RE 0	PRI BIOS	CBEP_P_SUM1_00.11.01
	RE-FPGA	301
FPC	ROM	PC Bios
	O/S	Version 18.1R1.4 by builder on 2018-03-06

00:31:54 UTC

**show chassis firmware (EX9253 Switch)**

```
user@switch> show chassis firmware
```

Part	Type	Version
RE 0	PRI BIOS	CBEP_P_SUM1_00.11.01
	RE-FPGA	402
RE 1	PRI BIOS	CBEP_P_SUM1_00.11.01
	RE-FPGA	402
FPC 0	ROM	PC Bios
	O/S	Version 18.2-20180129_dev_common.1 by builder
		on 2018-01-29 13:35:11 UTC
FPC 1	ROM	PC Bios
	O/S	Version 18.2-20180129_dev_common.1 by builder
		on 2018-01-29 13:35:11 UTC

**show chassis firmware lcc (TX Matrix Router)**

```
user@host> show chassis firmware lcc 0
```

lcc0-re0:

Part	Type	Version
FPC 1	ROM	Juniper ROM Monitor Version 6.4b18
	O/S	Version 7.0-20040804.0 by userb on 2004-0
FPC 2	ROM	Juniper ROM Monitor Version 6.4b20
	O/S	Version 7.0-20040804.0 by userb on 2004-0
SPMB 0	ROM	Juniper ROM Monitor Version 6.4b18
	O/S	Version 7.0-20040804.0 by userb on 2004-0

**show chassis firmware scc (TX Matrix Router)**

```
user@host> show chassis firmware scc
```

scc-re0:

Part	Type	Version
SPMB 0	ROM	Juniper ROM Monitor Version 6.4b18
	O/S	Version 7.0-20040804.0 by userb on 2004-0

#### show chassis firmware (TX Matrix Plus Router)

```
user@host> show chassis firmware
sfc0-re0:
```

Part	Type	Version
Global FPC 4		
Global FPC 6		
Global FPC 7		
Global FPC 12		
Global FPC 14		
Global FPC 15		
Global FPC 20		
Global FPC 21		
Global FPC 22		
Global FPC 23		
Global FPC 24		
Global FPC 25		
Global FPC 26		
Global FPC 28		
Global FPC 29		
Global FPC 31		
SPMB 0	ROM	Juniper ROM Monitor Version 9.5b1
	O/S	Version 9.6-20090507.0 by userb on 2009-0
SPMB 1	ROM	Juniper ROM Monitor Version 9.5b1
	O/S	Version 9.6-20090507.0 by userb on 2009-0

```
lcc0-re1:
```

Part	Type	Version
FPC 4	ROM	Juniper ROM Monitor Version 9.0b2
	O/S	Version 9.6-20090507.0 by userb on 2009-0
FPC 6	ROM	Juniper ROM Monitor Version 9.0b2
	O/S	Version 9.6-20090507.0 by userb on 2009-0
FPC 7	ROM	Juniper ROM Monitor Version 9.0b2
	O/S	Version 9.6-20090507.0 by userb on 2009-0
SPMB 0	ROM	Juniper ROM Monitor Version 9.5b1
	O/S	Version 9.6-20090507.0 by userb on 2009-0
SPMB 1	ROM	Juniper ROM Monitor Version 9.5b1
	O/S	Version 9.6-20090507.0 by userb on 2009-0

```
lcc1-re1:
```

Part	Type	Version
FPC 4	ROM	Juniper ROM Monitor Version 9.0b2
	O/S	Version 9.6-20090507.0 by userb on 2009-0
FPC 6	ROM	Juniper ROM Monitor Version 9.0b2
	O/S	Version 9.6-20090507.0 by userb on 2009-0
FPC 7	ROM	Juniper ROM Monitor Version 9.0b2
	O/S	Version 9.6-20090507.0 by userb on 2009-0
SPMB 0	ROM	Juniper ROM Monitor Version 9.5b1
	O/S	Version 9.6-20090507.0 by userb on 2009-0
SPMB 1	ROM	Juniper ROM Monitor Version 9.5b1
	O/S	Version 9.6-20090507.0 by userb on 2009-0

```
lcc2-re1:
```

Part	Type	Version
FPC 4	ROM	Juniper ROM Monitor Version 9.0b2
	O/S	Version 9.6-20090507.0 by userb on 2009-0
FPC 5	ROM	Juniper ROM Monitor Version 9.0b2
	O/S	Version 9.6-20090507.0 by userb on 2009-0
FPC 6	ROM	Juniper ROM Monitor Version 9.0b2
	O/S	Version 9.6-20090507.0 by userb on 2009-0
FPC 7	ROM	Juniper ROM Monitor Version 7.5b4
	O/S	Version 9.6-20090507.0 by userb on 2009-0
SPMB 0	ROM	Juniper ROM Monitor Version 9.5b1
	O/S	Version 9.6-20090507.0 by userb on 2009-0
SPMB 1	ROM	Juniper ROM Monitor Version 9.5b1
	O/S	Version 9.6-20090507.0 by userb on 2009-0

lcc3-re1:

Part	Type	Version
FPC 0	ROM	Juniper ROM Monitor Version 9.0b2
	O/S	Version 9.6-20090507.0 by userb on 2009-0
FPC 1	ROM	Juniper ROM Monitor Version 9.0b2
	O/S	Version 9.6-20090507.0 by userb on 2009-0
FPC 2	ROM	Juniper ROM Monitor Version 9.0b2
	O/S	Version 9.6-20090507.0 by userb on 2009-0
FPC 4	ROM	Juniper ROM Monitor Version 7.5b4
	O/S	Version 9.6-20090507.0 by userb on 2009-0
FPC 5	ROM	Juniper ROM Monitor Version 9.0b2
	O/S	Version 9.6-20090507.0 by userb on 2009-0
FPC 7	ROM	Juniper ROM Monitor Version 9.0b2
	O/S	Version 9.6-20090507.0 by userb on 2009-0
SPMB 0	ROM	Juniper ROM Monitor Version 9.5b1
	O/S	Version 9.6-20090507.0 by userb on 2009-0
SPMB 1	ROM	Juniper ROM Monitor Version 9.5b1
	O/S	Version 9.6-20090507.0 by userb on 2009-0

### show chassis firmware lcc (TX Matrix Plus Router)

```
user@host> show chassis firmware lcc 0
lcc0-re1:
```

Part	Type	Version
FPC 4	ROM	Juniper ROM Monitor Version 9.0b2
	O/S	Version 9.6-20090507.0 by userb on 2009-0
FPC 6	ROM	Juniper ROM Monitor Version 9.0b2
	O/S	Version 9.6-20090507.0 by userb on 2009-0
FPC 7	ROM	Juniper ROM Monitor Version 9.0b2
	O/S	Version 9.6-20090507.0 by userb on 2009-0
SPMB 0	ROM	Juniper ROM Monitor Version 9.5b1
	O/S	Version 9.6-20090507.0 by userb on 2009-0
SPMB 1	ROM	Juniper ROM Monitor Version 9.5b1
	O/S	Version 9.6-20090507.0 by userb on 2009-0

### show chassis firmware sfc (TX Matrix Plus Router)

```
user@host> show chassis firmware sfc 0
sfc0-re0:
```

Part	Type	Version
Global FPC 4		
Global FPC 6		
Global FPC 7		

```

Global FPC 12
Global FPC 14
Global FPC 15
Global FPC 20
Global FPC 21
Global FPC 22
Global FPC 23
Global FPC 24
Global FPC 25
Global FPC 26
Global FPC 28
Global FPC 29
Global FPC 31
SPMB 0
ROM Juniper ROM Monitor Version 9.5b1
O/S Version 9.6-20090507.0 by userb on 2009-0
SPMB 1
ROM Juniper ROM Monitor Version 9.5b1
O/S Version 9.6-20090507.0 by userb on 2009-0

```

#### show chassis firmware (QFX Series and OCX Series)

```

user@switch> show chassis firmware
Part      Type      Version
FPC 0
Routing Engine 0    U-Boot    U-Boot 1.1.6 (Sep 15 2010 - 02:11:11) 1.0.5
loader      FreeBSD/MIPS U-Boot bootstrap loader 0.1

```

#### show chassis firmware (PTX1000 Packet Transport Routers)

```

user@host> show chassis firmware
Part      Type      Version
FPC 0
U-Boot    ***
loader      FreeBSD/i386 bootstrap loader 1.2
BIOS       V0018.2U
EC FPGA    2.0
MAIN_CPLD  1.f
MEZZ_CPLD  1.f
RE FPGA    2.3

```

#### show chassis firmware (PTX10008 Routers)

```

user@host> show chassis firmware
Part      Type      Version
RE 0
PRI BIOS  QFXS_SFP_00.31_01.01
GDN BIOS  QFXS_SFP_00.31_01.01
FPGA      2.4
RE-FPGA    3.2
RE 1
PRI BIOS  QFXS_SFP_00.31_01.01
GDN BIOS  QFXS_SFP_00.31_01.01
FPGA      2.3
RE-FPGA    3.2
FPC 0
U-Boot    Bank A: U-Boot 2011.12-gfbea47a (Feb 26 2016
- 22:56:52)
CTRL FPGA  4.1
PORT FPGA  2.0
FPC 5
U-Boot    Bank A: U-Boot 2011.12-gfbea47a (Feb 26 2016
- 22:56:52)
CTRL FPGA  3.1
PORT FPGA  2.0
FPC 6
U-Boot    Bank B: U-Boot 2011.12-gfbea47a (Feb 26 2016
- 22:56:52)

```

	CTRL	FPGA	3.1
	PORT	FPGA	2.0
FPM		FPGA	1.9
FTC 0		FPGA	2.0
FTC 1		FPGA	2.0
SIB 0		FPGA	3.0
SIB 1		FPGA	3.0

### show chassis firmware interconnect-device (QFabric System)

```

user@switch> show chassis firmware interconnect-device interconnect1
Part      Type      Version
Routing Engine 0  U-Boot   U-Boot 1.1.6 (May 10 2011 - 04:52:59) 1.1.1
loader    FreeBSD/MIPS U-Boot bootstrap loader 0.1
Routing Engine 1  U-Boot   U-Boot 1.1.6 (May 10 2011 - 04:52:59) 1.1.1
loader    FreeBSD/MIPS U-Boot bootstrap loader 0.1

```

### show chassis firmware (ACX2000 Universal Metro Router)

```

user@switch> show chassis firmware
Part      Type      Version
FPC       O/S       Version 12.2I13 by user2 on 2012-05-29 06:
FEB       O/S       Version 12.2I13 by user2 on 2012-05-29 06:

```

### show chassis firmware detail (EX3300 Switch)

```

user@switch> show chassis firmware detail
FPC 0
  Boot SYSPLD          3
  PoE firmware         4.1.6
  PFE-0                3
  PFE-1                3
  PHY
    microcode          0x514
  Boot Firmware
    uboot               U-Boot 1.1.6 (Aug 21 2011 - 01:45:26) 1.0.0
    loader              FreeBSD/arm U-Boot loader 1.0

```

### show chassis firmware (MX Routers with Media Services Blade [MSB])

```

user@switch> show chassis firmware
Part      Type      Version
FPC 1     ROM      Juniper ROM Monitor Version 12.1b1
          O/S      Version 12.2I21 by user1 on 2012-06-19 17:

```

### show chassis firmware (ACX5048 Router)

```

user@host> show chassis firmware
Part      Type      Version
FPC       Loader    FreeBSD/i386 bootstrap loader 1.2
          BIOS     V0018.7
          TMC FPGA  6.d8
          PICO CPLD0 7.b
          PICO CPLD1 7.b
          PICO CPLD2 7.b
          PICO CPLD3 7.b
          PICO CPLD4 7.b
          PICO CPLD5 7.b
          PICO CPLD6 6.a

```

```

MRE          17.9
Power CPLD   3.a

```

#### show chassis firmware (ACX5096 Router)

```

user@host> show chassis firmware
Part          Type          Version
FPC
loader        FreeBSD/i386 bootstrap loader 1.2
BIOS          V0018.7
TMC FPGA      3000001.5
PICO CPLD0    7.b
PICO CPLD1    7.b
PICO CPLD2    7.b
PICO CPLD3    7.b
PICO CPLD4    7.b
PICO CPLD5    7.b
PICO CPLD6    c6.a
PICO CPLD7    -NA-
PICO CPLD8    7.b
PICO CPLD9    7.b
PICO CPLD10   7.b

PICO CPLD11   7.b

PICO CPLD12   7.b

PICO CPLD13   7.b

PICO CPLD14   c6.a

MRE           7.5
Power CPLD    4.1

```

#### show chassis firmware (ACX500 Router)

```

user@host> show chassis firmware
Part          Type          Version
FPC           O/S           Version 15.2-20150815_dev_rbu_1_16q1.0 by
userb on 2015-08-15 04:18:02 UTC
FEB           O/S           Version 15.2-20150815_dev_rbu_1_16q1.0 by
userb on 2015-08-15 04:18:02 UTC

```

## show chassis fpc

---

<b>List of Syntax</b>	<a href="#">Syntax on page 424</a> <a href="#">Syntax (EX Series Switches) on page 424</a> <a href="#">Syntax (T4000 Routers) on page 424</a> <a href="#">Syntax (TX Matrix and TX Matrix Plus Routers) on page 424</a> <a href="#">Syntax (MX Series Routers and EX Series switches) on page 424</a> <a href="#">Syntax (MX104, MX204, MX2010, MX2020, MX10003, and MX2008 Universal Routing Platforms) on page 424</a> <a href="#">Syntax (MX10008 Universal Routing Platforms) on page 424</a> <a href="#">Syntax (QFX Series) on page 425</a> <a href="#">Syntax (OCX Series) on page 425</a> <a href="#">Syntax (PTX Series Packet Transport Routers) on page 425</a> <a href="#">Syntax (ACX Series Universal Metro Routers) on page 425</a> <a href="#">Syntax (ACX500 Routers) on page 425</a>
<b>Syntax</b>	<code>show chassis fpc</code> <code>&lt;detail &lt;slot&gt;&gt;   &lt;pic-status &lt;slot&gt;&gt;</code>
<b>Syntax (EX Series Switches)</b>	<code>show chassis fpc</code> <code>&lt;detail &lt;fpc-slot&gt;&gt;   &lt;pic-status &lt;fpc-slot&gt;&gt;</code> <code>&lt;fpc-slot&gt;</code>
<b>Syntax (T4000 Routers)</b>	<code>show chassis fpc</code> <code>&lt;detail &lt;fpc-slot&gt;&gt;</code> <code>&lt;pic-status &lt;fpc-slot&gt;&gt;</code>
<b>Syntax (TX Matrix and TX Matrix Plus Routers)</b>	<code>show chassis fpc</code> <code>&lt;detail &lt;fpc-slot&gt;&gt;   &lt;pic-status &lt;fpc-slot&gt;&gt;</code> <code>&lt;slot&gt;</code>
<b>Syntax (MX Series Routers and EX Series switches)</b>	<code>show chassis fpc</code> <code>&lt;detail &lt;slot&gt;&gt;   &lt;pic-status &lt;slot&gt;&gt;</code> <code>&lt;all-members&gt;</code> <code>&lt;local&gt;</code> <code>&lt;member <i>member-id</i>&gt;</code>
<b>Syntax (MX104, MX204, MX2010, MX2020, MX10003, and MX2008 Universal Routing Platforms)</b>	<code>show chassis fpc</code> <code>&lt;slot&gt; detail   &lt;detail &lt;slot&gt;&gt;   &lt;pic-status &lt;slot&gt;&gt;</code> <code>&lt;fpc-slot&gt;</code>
<b>Syntax (MX10008 Universal Routing Platforms)</b>	<code>show chassis fpc</code> <code>&lt;detail&gt;</code> <code>&lt;errors&gt;</code> <code>&lt;fpc-slot&gt;</code> <code>pic-status &lt;fpc-slot&gt;</code>



<b>Syntax (QFX Series)</b>	<pre>show chassis fpc &lt;detail&gt; &lt;interconnect-device <i>name</i> &lt;fpc-slot <i>fpc-slot</i>&gt;&gt; &lt;node-device <i>name</i>&gt;</pre>
<b>Syntax (OCX Series)</b>	<pre>show chassis fpc &lt;detail&gt;</pre>
<b>Syntax (PTX Series Packet Transport Routers)</b>	<pre>show chassis fpc &lt;detail &lt;<i>fpc-slot</i>&gt;&gt;   &lt;pic-status &lt;<i>fpc-slot</i>&gt;&gt; &lt;<i>fpc-slot</i>&gt;</pre>
<b>Syntax (ACX Series Universal Metro Routers)</b>	<pre>show chassis fpc &lt;detail &lt;<i>fpc-slot</i>&gt;&gt;   &lt;pic-status &lt;<i>fpc-slot</i>&gt;&gt; &lt;<i>fpc-slot</i>&gt;</pre>
<b>Syntax (ACX500 Routers)</b>	<pre>show chassis fpc &lt;<i>fpc-slot</i>&gt; detail &lt;<i>fpc-slot</i>&gt; pic-status &lt;<i>fpc-slot</i>&gt;</pre>
<b>Release Information</b>	<p>Command introduced before Junos OS Release 7.4.</p> <p>Command introduced in Junos OS Release 9.0 for EX Series switches.</p> <p>Command introduced in Junos OS Release 11.1 for QFX Series.</p> <p>Command introduced in Junos OS Release 12.1x48 for PTX Series Packet Transport Routers.</p> <p>Command introduced in Junos OS Release 12.2 for ACX Series Universal Metro Routers.</p> <p>Command introduced in Junos OS Release 12.3 for MX2020 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 12.3 for MX2010 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 13.2 for MX104 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.</p> <p>Command introduced in Junos OS Release 17.2 for MX2008 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 17.2 for PTX10008 Routers.</p> <p>Command introduced in Junos OS Release 17.3 for MX10003 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 17.3 for MX150 Router Appliance.</p> <p>Command introduced in Junos OS Release 17.4 for MX204 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 18.1R1 for EX9251 switch.</p> <p>Command introduced in Junos OS Release 18.2 for EX9253 Switches.</p>
<b>Description</b>	Display status information about the installed Flexible PIC Concentrators (FPCs) and PICs.
<b>Options</b>	<p><b>none</b>—Display status information for all FPCs. On a TX Matrix router, display status information for all FPCs on the attached T640 routers in the routing matrix. On a TX Matrix Plus router, display status information for all FPCs on the attached routers in the routing matrix.</p>



**NOTE:** In EX8200 switches, line cards initialize Packet Forwarding Engine during startup. If an error occurs during hardware initialization, the FPCs with bad hardware parts power down after transferring the debug information to the Routing Engine. The Routing Engine marks the FPC offline, logs the error in system log messages (/var/log/messages), and generates an alarm to inform the user.

See the following sample output:

```
user@host> show chassis fpc
```

	Temp	CPU Utilization (%)		Memory	
Utilization (%)					
Slot State	(C)	Total	Interrupt	DRAM (MB)	Heap
Buffer					
0 Empty					
1 Empty					
2 Empty					
3 Empty					
4 Empty					
5 Offline		---Hard FPC error---			
6 Empty					
7 Online	26	4	0	1024	0
32					

The following sample output shows the alarm raised for the failed FPCs:

```
user@host> show chassis alarms
```

4 alarms currently active

Alarm time	Class	Description
2011-03-24 00:52:51 UTC	Major	FPC 5 Hard errors
2011-03-24 00:52:31 UTC	Major	Fan Tray Failure
2011-03-24 00:52:31 UTC	Major	Fan Tray Failure
2011-03-24 00:51:26 UTC	Minor	Loss of communication with Backup RE



**NOTE:** On T4000 routers, when you include the `enhanced-mode` statement at the `[edit chassis network-services]` hierarchy level and reboot the system, only the T4000 Type 5 FPCs present on the router become online while the remaining FPCs are offline, and FPC misconfiguration alarms are generated. The `show chassis alarm` command output displays FPC misconfiguration (`FPC fpc-slot misconfig`) as the reason for the generation the alarms.

The following sample output shows the FPC status after the `enhanced-mode` statement is configured on the T4000 router. The T4000 Type 5 FPC present in slot 5 becomes online while the remaining FPCs are offline.

```
user@host> show chassis fpc
```

	Temp	CPU Utilization (%)	Memory
Utilization (%)			
Slot State	(C)	Total	Interrupt
Buffer			DRAM (MB) Heap
0 offline	---	FPC misconfiguration---	
1 offline	---	FPC misconfiguration---	
2 offline	---	FPC misconfiguration---	
3 Empty			
4 Empty			
5 Online	66	50	0 2816 29
27			

The following sample output shows FPC misconfiguration alarms:

```
user@host> show chassis alarms
```

3 alarms currently active

Alarm time	Class	Description
2011-03-24 00:52:51 PST	Major	FPC 1 misconfig
2011-03-24 00:52:31 PST	Major	FPC 2 misconfig
2011-03-24 00:52:31 PST	Major	FPC 3 misconfig

**detail**—(Optional) Display detailed status information for all FPCs or for the FPC in the specified slot (see `fpc-slot` or `slot`).

**all-members**—(MX Series routers and EX Series switches only) (Optional) Display status information for all FPCs on all members of the Virtual Chassis configuration.

**interconnect-device *name***—(QFabric systems only) (Optional) Display status information for all FPCs on the Interconnect device.

***fpc-slot***—(Optional) FPC slot number:

- (TX Matrix and TX Matrix Plus routers only)—On a TX Matrix router, if you specify the number of the T640 router (line-card chassis) by using the `lcc number` option (the recommended method), replace `fpc-slot` with a value from 0 through 7. Otherwise, replace `fpc-slot` with a value from 0 through 31. Likewise, on a TX Matrix

Plus router, if you specify the number of the specified router (line-card chassis) by using the **lcc number** option (the recommended method), replace **fpc-slot** with a value from 0 through 7. Otherwise, replace **fpc-slot** with a value from 0 through 31. For example, the following commands have the same result:

```
user@host> show chassis fpc detail 1 lcc 1
user@host> show chassis fpc detail 9
```

- M120 router—Replace **fpc-slot** with a value from 0 through 5.
- MX80 router—Replace **fpc-slot** with a value from 0 through 1.
- MX104 and MX104-40G routers—Replace **fpc-slot** with a value from 0 through 2.
- MX240 router—Replace **fpc-slot** with a value from 0 through 2.
- MX480 router—Replace **fpc-slot** with a value from 0 through 5.
- MX-960 router—Replace **fpc-slot** with a value from 0 through 11.
- MX2010 router—Replace **fpc-slot-number** with a value from 0 through 9.
- MX2008 router—Replace **fpc-slot-number** with a value from 0 through 9.
- MX2020 router—Replace **fpc-slot-number** with a value from 0 through 19.
- Other routers—Replace **fpc-slot** with a value from 0 through 7.
- EX Series switches:
  - EX3200 switches and EX4200 standalone switches—Replace **fpc-slot** with 0.
  - EX4200 switches in a Virtual Chassis configuration—Replace **fpc-slot** with a value from 0 through 9.
  - EX6210 switches—Replace **fpc-slot** with a value from 0 through 9.
  - EX8208 switches—Replace **fpc-slot** with a value from 0 through 7.
  - EX8216 switches—Replace **fpc-slot** with a value from 0 through 15.
  - EX9204 switches—Replace **fpc-slot** with a value from 0 through 2.
  - EX9208 switches—Replace **fpc-slot** with a value from 0 through 5.
  - EX9214 switches—Replace **fpc-slot** with a value from 0 through 11.
- QFX Series:
  - QFXSeries and OCX Series switches—Replace **fpc-slot** with 0.
  - QFabric systems—Replace **fpc-slot** with 0 through 31 on the Interconnect device.
- PTX Series Packet Transport Routers:
  - PTX5000 Packet Transport Router—Replace **fpc-slot** with a value from 0 through 7.
- ACX Series Universal Metro Routers:

- ACX1000 and ACX2000 Universal Metro Routers—Replace *fpc-slot* with 0.

**local**—(MX Series routers and EX Series switches only) (Optional) Display status information for all FPCs on the local Virtual Chassis member.

**member *member-id***—(MX Series routers and EX Series switches only) (Optional) Display status information for all FPCs on the specified member of the Virtual Chassis configuration. Replace *member-id* with a value of 0 or 1.

**node-device *name***—(QFabric systems only) (Optional) Display status information for each Node device. Each Node device is equivalent to an FPC.

**pic-status**—(Optional) Display status information for all PICs or for the PIC in the specified slot (see *fpc-slot*).



**NOTE:** On T1600 routers, Type 4 FPCs with ASICs based on the SL2.0 chipset do not support the 10-Gigabit Ethernet LAN/WAN PIC with SFP+ (10x10GE [LAN/WAN] SFPP). If you issue the `show chassis fpc` command with the `pic-status` option, the CLI displays the string “Not Supported” for 10x10GE(LAN/WAN) SFPP PICs installed on such FPCs. The following is a sample output:

```
user@host> show chassis fpc pic-status
Slot 0  Online      E2-FPC Type 1
        PIC 0  Online      1x G/E SFP, 1000 BASE
        PIC 1  Online      Adaptive Services-II
        PIC 2  Online      1x G/E IQ, 1000 BASE
        PIC 3  Online      1x G/E IQ, 1000 BASE
Slot 1  Online      FPC Type 3-ES
        PIC 0  Present     UNUSED- Not Supported
Slot 2  Online      FPC Type 4-ES
        PIC 0  Offline     4x OC-192 SONET XFP
        PIC 1  Present     10x10GE(LAN/WAN) SFPP- Not Supported
<<<<<<
Slot 4  Offline     FPC Type 1-ES
Slot 5  Offline     FPC Type 2-ES
Slot 6  Online      E2-FPC Type 3
        PIC 0  Online      1x OC-192 SONET XFP
        PIC 1  Online      4x OC-48 SONET
        PIC 2  Online      4x OC-48 SONET
        PIC 3  Online      MultiServices 500
Slot 7  Online      FPC Type 4-ES
        PIC 0  Online      4x 10GE (LAN/WAN) XFP
        PIC 1  Online      4x 10GE (LAN/WAN) XFP
```

In addition, an entry is logged in the system log messages (`/var/log/messages`) that the PIC is not supported. The following is a sample message logged in the system log:

```
Apr  5 08:47:36 router1 chassisd[2770]: CHASSISD_UNSUPPORTED_PIC:
PIC 1 in FPC 2 (type 763, version 257) is not supported
```

If you see this issue, contact Juniper Networks Technical Assistance Center (JTAC) for a possible fix. For more information about this issue and a possible solution, see [PSN-2010-03-696](#).



**NOTE:** When there is a double-bit ECC error in a network processor's memory, the Channelized OC3/STM1 (Multi-Rate) Circuit Emulation MIC with SFP or Channelized E1/T1 Circuit Emulation MIC is switched to the offline state.

```
user@host> show chassis fpc pic-status
Slot 1  Online      MPC Type 2 3D Q
PIC 0  Offline      1xCOC12/4xCOC3 CH-CE- ECC error detected
```

**lcc number**—(TX Matrix router and TX Matrix Plus router only) (Optional) Line-card chassis number.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**Required Privilege Level** view

- Related Documentation**
- [request chassis fpc on page 127](#)
  - *show chassis fpc-feb-connectivity*
  - [show chassis fabric fpcs on page 474](#)
  - *Configuring the Junos OS to Resynchronize FPC Sequence Numbers with Active FPCs when an FPC Comes Online*
  - *MX960 Flexible PIC Concentrator Description*
  - *ACX2000 and ACX2100 Routers Hardware and CLI Terminology Mapping*
  - *enhanced-mode*

- List of Sample Output**
- [show chassis fpc \(EX6210 Switch\) on page 436](#)
  - [show chassis fpc \(M10 Router\) on page 436](#)
  - [show chassis fpc \(M20 Router\) on page 436](#)
  - [show chassis fpc detail \(M Series Routers\) on page 437](#)
  - [show chassis fpc detail \(MX150\) on page 437](#)
  - [show chassis fpc detail \(MX80 Router\) on page 437](#)
  - [show chassis fpc \(MX104 Router\) on page 437](#)
  - [show chassis fpc detail \(MX104 Router\) on page 437](#)
  - [show chassis fpc pic-status \(MX104 Router\) on page 438](#)
  - [show chassis fpc \(MX240 Router\) on page 438](#)
  - [show chassis fpc \(MX480 Router\) on page 438](#)
  - [show chassis fpc detail \(EX9200 Switch\) on page 438](#)
  - [show chassis fpc \(MX480 Router\) on page 439](#)
  - [show chassis fpc \(MX480 Router with 100-Gigabit Ethernet CFP\) on page 439](#)
  - [show chassis fpc pic-status \(MX480 Router with 100-Gigabit Ethernet CFP\) on page 439](#)
  - [show chassis fpc pic-status \(EX Series Switch\) on page 440](#)
  - [show chassis fpc \(MX480 Router with MPC4E\) on page 440](#)

[show chassis fpc detail \(MX480 Router with MPC4E\) on page 440](#)  
[show chassis fpc \(MX480 Router with MPC4E\) on page 441](#)  
[show chassis fpc detail \(MX480 Router with MPC4E\) on page 441](#)  
[show chassis fpc \(MX960 Router\) on page 441](#)  
[show chassis fpc \(MX960 Router with MPC5EQ\) on page 442](#)  
[show chassis fpc detail \(MX960 Router with MPC5EQ\) on page 442](#)  
[show chassis fpc pic-status \(MX960 Router with MPC5EQ\) on page 443](#)  
[show chassis fpc \(MX240, MX480, MX960 Routers with Application Services Modular Line Card\) on page 444](#)  
[show chassis fpc \(MX240, MX480, MX960 with Application Services Modular Line Card\) on page 444](#)  
[show chassis fpc \(MX240, MX480, MX960, MX2010, MX2020, and MX2008 Universal Routing Platforms with Dynamic Power Management\) on page 445](#)  
[show chassis fpc \(MX2010 Routers\) on page 445](#)  
[show chassis fpc \(MX2010 Router with Fabric Grant Bypass Enabled\) on page 445](#)  
[show chassis fpc \(MX2010 Router with Fabric Grant Bypass Disabled\) on page 446](#)  
[show chassis fpc pic-status \(MX2010 Router with Fabric Grant Bypass Enabled\) on page 446](#)  
[show chassis fpc pic-status \(MX2010 Router with Fabric Grant Bypass Disabled\) on page 446](#)  
[show chassis fpc \(MX2020 Routers\) on page 446](#)  
[show chassis fpc \(MX2020 Router with MPC4E\) on page 447](#)  
[show chassis fpc \(MX10003 Router\) on page 447](#)  
[show chassis fpc detail \(MX10003 Router\) on page 448](#)  
[show chassis fpc <fpc-slot> \(MX10003 Router\) on page 448](#)  
[show chassis fpc \(MX204 Router\) on page 448](#)  
[show chassis fpc detail \(MX204 Router\) on page 448](#)  
[show chassis fpc <fpc-slot> \(MX204 Router\) on page 449](#)  
[show chassis fpc \(MX10008 Router\) on page 449](#)  
[show chassis fpc detail \(MX10008 Router\) on page 449](#)  
[show chassis fpc <fpc-slot> \(MX10008 Router\) on page 450](#)  
[show chassis fpc detail \(MX2020 Router with MPC4E\) on page 450](#)  
[show chassis fpc \(MX2020 Router with MPC5EQ and MPC6E\) on page 451](#)  
[show chassis fpc detail \(MX2020 Router with MPC5EQ and MPC6E\) on page 451](#)  
[show chassis fpc detail \(MX2008 Router\) on page 453](#)  
[show chassis fpc pic-status \(MX2020 Router with MPC5EQ and MPC6E\) on page 454](#)  
[show chassis fpc detail \(MX Series Routers\) on page 455](#)  
[show chassis fpc detail \(EX Series Switches\) on page 455](#)  
[show chassis fpc detail \(EX9251 Switches\) on page 455](#)  
[show chassis fpc detail \(EX9253 Switches\) on page 455](#)  
[show chassis fpc \(Hardware Not Supported\) on page 456](#)  
[show chassis fpc detail \(Hardware Not Supported\) on page 456](#)  
[show chassis fpc pic-status on page 456](#)  
[show chassis fpc pic-status \(M Series Routers\) on page 456](#)  
[show chassis fpc pic-status \(M120 Router\) on page 457](#)  
[show chassis fpc pic-status \(MX240, MX480, and MX960 Routers with Application Services Modular Line Card\) on page 457](#)  
[show chassis fpc lcc \(TX Matrix Router\) on page 457](#)  
[show chassis fpc pic-status \(TX Matrix Router\) on page 458](#)



[show chassis fpc pic-status lcc \(TX Matrix Router\) on page 458](#)  
[show chassis fpc \(TX Matrix Plus Router\) on page 458](#)  
[show chassis fpc lcc \(TX Matrix Plus Router\) on page 459](#)  
[show chassis fpc detail \(TX Matrix Plus Router\) on page 459](#)  
[show chassis fpc pic-status \(TX Matrix Plus Router\) on page 462](#)  
[show chassis fpc \(T1600 Router\) on page 463](#)  
[show chassis fpc detail \(T1600 Router\) on page 463](#)  
[show chassis fpc <fpc-slot> \(EX Series Switch\) on page 463](#)  
[show chassis fpc slot \(T1600 Router\) on page 464](#)  
[show chassis fpc pic-status \(T1600 Router\) on page 464](#)  
[show chassis fpc \(T4000 Router\) on page 464](#)  
[show chassis fpc detail \(T4000 Router\) on page 464](#)  
[show chassis fpc pic-status \(T4000 Router\) on page 465](#)  
[show chassis fpc \(QFX Series and OCX Series\) on page 465](#)  
[show chassis fpc detail \(QFX3500 Switches\) on page 465](#)  
[show chassis fpc pic-status \(QFX3500 Switches\) on page 465](#)  
[show chassis fpc interconnect-device \(QFabric System\) on page 466](#)  
[show chassis fpc interconnect-device \(QFabric System\) on page 466](#)  
[show chassis fpc interconnect-device detail \(QFabric System\) on page 466](#)  
[show chassis fpc pic-status interconnect-device \(QFabric System\) on page 466](#)  
[show chassis fpc pic-status node-device \(QFabric System\) on page 467](#)  
[show chassis fpc \(PTX5000 Packet Transport Router\) on page 467](#)  
[show chassis fpc detail \(PTX5000 Packet Transport Router\) on page 467](#)  
[show chassis fpc pic-status \(PTX5000 Packet Transport Router\) on page 468](#)  
[show chassis fpc \(PTX10008 Router\) on page 469](#)  
[show chassis fpc detail \(PTX10008 Router\) on page 469](#)  
[show chassis fpc \(PTX10016 Router\) on page 469](#)  
[show chassis fpc detail \(PTX10016 Router\) on page 470](#)  
[show chassis fpc \(ACX2000 Universal Metro Router\) on page 471](#)  
[show chassis fpc 0 \(ACX2000 Universal Metro Router\) on page 471](#)  
[show chassis fpc detail \(ACX2000 Universal Metro Router\) on page 471](#)  
[show chassis fpc pic-status \(ACX2000 Universal Metro Router\) on page 471](#)  
[show chassis FPC 1 \(MX Routers with Media Services Blade \[MSB\]\) on page 471](#)  
[show chassis FPC 1 detail \(MX Routers with Media Services Blade \[MSB\]\) on page 471](#)  
[show chassis fpc \(Node Slicing\) on page 472](#)  
[show chassis fpc pic-status \(Node Slicing\) on page 472](#)

**Output Fields** [Table 18 on page 434](#) lists the output fields for the **show chassis fpc** command. Output fields are listed in the approximate order in which they appear.

Table 18: show chassis fpc Output Fields

Field Name	Field Description	Level of Output
<b>Slot or Slot State</b>	Slot number and state. The state can be one of the following conditions: <ul style="list-style-type: none"> <li>• <b>Dead</b>—Held in reset because of errors.</li> <li>• <b>Diag</b>—Slot is being ignored while the FPC is running diagnostics.</li> <li>• <b>Dormant</b>—Held in reset.</li> <li>• <b>Empty</b>—No FPC is present.</li> <li>• <b>Offline</b>—(PTX Series Packet Transport Routers only) One of the following two states is displayed: <ul style="list-style-type: none"> <li>• <b>FPC offlined due to unreachable destinations</b></li> <li>• <b>FPC Offlined due to degraded FPC action</b></li> </ul> </li> <li>• <b>Online</b>—FPC is online and running.</li> <li>• <b>Present</b>—FPC is detected by the chassis daemon but either is not supported by the current version of Junos OS or is inserted in the wrong slot. The output also states either <b>Hardware Not Supported</b> or <b>Hardware Not In Right Slot</b>. The FPC is coming up but not yet online.</li> <li>• <b>Probed</b>—Probe is complete; awaiting restart of the Packet Forwarding Engine.</li> <li>• <b>Probe-wait</b>—Waiting to be probed.</li> </ul>	all levels
<b>Logical slot</b>	Slot number.	all levels
<b>Temp (C) or Temperature</b>	Temperature of the air passing by the FPC, in degrees Celsius or in both Celsius and Fahrenheit.	all levels all levels
<b>Temperature (PTX Series)</b>	On PTX Series Packet Transport Routers, temperature details are provided in degrees Celsius and Fahrenheit. Output includes: <ul style="list-style-type: none"> <li>• Temperature (PMB)—Temperature of the air passing by the Processor Mezzanine Board (PMB) at the bottom of the FPC.</li> <li>• Temperature (Intake)—Temperature of the air flowing into the chassis.</li> <li>• Temperature (Exhaust)—Exhaust temperatures for multiple zones (Exhaust A and Exhaust B).</li> <li>• Temperature (TLn)—Temperature of the specified Lookup ASIC (TL) of the packet forwarding engine on the FPC.</li> <li>• Temperature (TQn)—Temperature of the specified Queuing and Memory Interface ASIC (TQ) of the packet forwarding engine on the FPC.</li> </ul>	detail
<b>Total CPU Utilization (%)</b>	Total percentage of CPU being used by the FPC's processor.	all levels
<b>Interrupt CPU Utilization (%)</b>	Of the total CPU being used by the FPC's processor, the percentage being used for interrupts.	none specified

Table 18: show chassis fpc Output Fields (continued)

Field Name	Field Description	Level of Output
<b>1 min CPU utilization (%)</b>  <i>NOTE:</i> Supported only on MX240, MX480, MX960, MX2010, MX2020, and MX2008.	Information about the Routing Engine's CPU utilization in the past 1 minute.	none specified
<b>5 min CPU utilization (%)</b>  <i>NOTE:</i> Supported only on MX240, MX480, MX960, MX2010, MX2020, and MX2008.	Information about the Routing Engine's CPU utilization in the past 5 minutes.	none specified
<b>15 min CPU utilization (%)</b>  <i>NOTE:</i> Supported only on MX240, MX480, MX960, MX2010, MX2020, and MX2008.	Information about the Routing Engine's CPU utilization in the past 15 minutes.	none specified
<b>Memory DRAM (MB)</b>	Total DRAM, in megabytes, available to the FPC's processor.	none specified
<b>Heap Utilization (%)</b>	Percentage of heap space (dynamic memory) being used by the FPC's processor. If this number exceeds 80 percent, there may be a software problem (memory leak).  <i>NOTE:</i> On MX Series routers and EX Series switches in a broadband edge environment, heap utilization levels higher than 70 percent can affect unified ISSU, router stability, or scaling capability.	none specified
<b>Buffer Utilization (%)</b>	Percentage of buffer space being used by the FPC's processor for buffering internal messages.	none specified
<b>Total CPU DRAM</b>	Amount of DRAM available to the FPC's CPU.	detail
<b>Total RLDRAM</b>	Amount of reduced latency dynamic random access memory (RLDRAM) available to the FPC CPU.	detail
<b>Total DDR DRAM</b>	Amount of double data rate dynamic random access memory (DDR DRAM) available to the FPC CPU.	detail
<b>Total SRAM</b>	Amount of static RAM (SRAM) used by the FPC's CPU.	detail
<b>Total SDRAM</b>	Total amount of memory used for storing packets and notifications.	detail

Table 18: show chassis fpc Output Fields (continued)

Field Name	Field Description	Level of Output
I/O Manager ASICs information	I/O Manager version number, manufacturer, and part number.	detail
Start time	Time when the Routing Engine detected that the FPC was running.	detail
Uptime	How long the Routing Engine has been connected to the FPC and, therefore, how long the FPC has been up and running.	detail
PIC type	(pic-status output only) Type of PIC.	none specified
GNF (Node slicing)	GNF identifier associated with each line card.  (pic-status output only) GNF identifier associated with each PIC.	all levels

## Sample Output

### show chassis fpc (EX6210 Switch)

```

user@switch> show chassis fpc

```

Slot	State	Temp (C)	CPU Utilization (%) Total Interrupt	Memory DRAM (MB)	Utilization (%) Heap Buffer
0	Empty				
1	Online	7	5 0	1024	0 32
2	Empty				
3	Empty				
4	Online	25	17 2	2048	0 30
5	Online	25	3 0	2048	0 24
6	Online	6	5 0	1024	0 32
7	Empty				
8	Empty				
9	Online	8	7 0	1024	0 32

### show chassis fpc (M10 Router)

```

user@host> show chassis fpc
FPC status:

```

Slot	State	Temp (C)
0	Online	27
1	Online	28

### show chassis fpc (M20 Router)

```

user@host> show chassis fpc
FPC status:

```

Slot	State	Temp (C)	CPU Utilization (%) Total Interrupt	Memory DRAM (MB)	Utilization (%) Heap Buffer
0	Empty	0	0 0	0	0 0
1	Online	38	0 0	8	0 4
2	Online	35	0 0	8	0 3
3	Empty	0	0 0	0	0 0

**show chassis fpc detail (M Series Routers)**

```

user@host> show chassis fpc detail 1
Slot 1 information:
  State                               Online
  Temperature                         48 degrees C
  Total CPU DRAM                      32 MB
  Total SRAM                          4 MB
  Total SDRAM                         256 MB
  I/O Manager ASICs information       Version 2.0, Foundry IBM, Part number 0
  I/O Manager ASICs information       Version 2.0, Foundry IBM, Part number 0
  Start time                         2000-02-08 02:18:49 UTC
  Uptime                             14 hours, 41 minutes, 41 seconds

```

**show chassis fpc detail (MX150)**

```

user@host> show chassis fpc detail
Slot 0 information:
  State                               Online
  Temperature                         42 degrees C / 107 degrees F
  Total CPU DRAM                      2048 MB
  Total RLDRAM                        10 MB
  Total DDR DRAM                      0 MB
  Start time                         2017-04-04 04:44:04 PDT
  Uptime                             7 days, 19 hours, 45 minutes, 50 seconds

```

**show chassis fpc detail (MX80 Router)**

```

user@host> show chassis fpc detail
Slot 0 information:
  State                               Online
  Temperature                         47 degrees C / 116 degrees F
  Total CPU DRAM                      1024 MB
  Total SRAM                          331 MB
  Total SDRAM                         1280 MB
  Start time                         2010-02-08 12:25:33 PST
  Uptime                             2 hours, 13 minutes, 19 seconds
Slot 1 information:
  State                               Online
  Temperature                         47 degrees C / 116 degrees F
  Total CPU DRAM                      1024 MB
  Total SRAM                          331 MB
  Total SDRAM                         1280 MB
  Start time                         2010-02-08 12:25:33 PST
  Uptime                             2 hours, 13 minutes, 19 seconds

```

**show chassis fpc (MX104 Router)**

```

user@host> show chassis fpc
Temp CPU Utilization (%)  Memory      Utilization (%)
Slot State              (C)  Total  Interrupt  DRAM (MB)  Heap    Buffer
0  Online                32    15      5         2048      22     13
1  Online                32    15      5         2048      22     13
2  Online                32    15      5         2048      22     13

```

**show chassis fpc detail (MX104 Router)**

```

user@host> show chassis fpc detail

```

```

Slot 0 information:
  State                Online
  Temperature          32 (C)
  Total CPU DRAM       2048 MB
  Total SRAM           403 MB
  Total SDRAM          1316 MB
  Start time           2013-05-23 14:39:18 IST
  Uptime               1 hour, 20 minutes, 22 seconds
Slot 1 information:
  State                Online
  Temperature          32 (C)
  Total CPU DRAM       2048 MB
  Total SRAM           403 MB
  Total SDRAM          1316 MB
  Start time           2013-05-23 14:39:18 IST
  Uptime               1 hour, 20 minutes, 22 seconds
Slot 2 information:
  State                Online
  Temperature          32 (C)
  Total CPU DRAM       2048 MB
  Total SRAM           403 MB
  Total SDRAM          1316 MB
  Start time           2013-05-23 14:39:18 IST
  Uptime               1 hour, 20 minutes, 22 seconds

```

#### show chassis fpc pic-status (MX104 Router)

```

user@host> show chassis fpc pic-status
Slot 0  Online
Slot 1  Online
  PIC 0  Online      10x 1GE(LAN) -E  SFP
  PIC 1  Online      10x 1GE(LAN) -E  SFP
Slot 2  Online
  PIC 0  Online      4x 10GE(LAN) SFP+

```

#### show chassis fpc (MX240 Router)

```

user@host> show chassis fpc

```

Slot	State	Temp (C)	CPU Total	Utilization (%) Interrupt	Memory DRAM (MB)	Utilization (%) Heap	Utilization (%) Buffer
0	Empty						
1	Online	34	6	0	1024	18	30
2	Online	33	9	0	1024	24	30

#### show chassis fpc (MX480 Router)

```

user@host> show chassis fpc

```

Slot	State	Temp (C)	CPU Total	Utilization (%) Interrupt	Memory DRAM (MB)	Utilization (%) Heap	Utilization (%) Buffer
0	Empty						
1	Online	36	9	0	1024	17	57
2	Empty						
3	Empty						
4	Empty						
5	Empty						

#### show chassis fpc detail (EX9200 Switch)

```

user@switch> show chassis fpc detail

```

```

Slot 2 information:
  State                Online
  Temperature          37
  Total CPU DRAM       2048 MB
  Total RLDRAM         331 MB
  Total DDR DRAM       1536 MB
  Start time:          2014-03-12 15:35:28 UTC
  Uptime:              1 hour, 4 minutes, 29 seconds
  Max Power Consumption 239 Watts

Slot 3 information:
  State                Online
  Temperature          39
  Total CPU DRAM       2048 MB
  Total RLDRAM         1036 MB
  Total DDR DRAM       6656 MB
  Start time:          2014-03-12 15:00:18 UTC
  Uptime:              1 hour, 39 minutes, 39 seconds
  Max Power Consumption 520 Watts

```

#### show chassis fpc (MX480 Router)

```

user@host> show chassis fpc

```

Slot	State	Temp (C)	CPU Utilization (%)	CPU Utilization (%)	Memory
			Total	Interrupt	DRAM (MB)
0	Online		1	0	1024
4		56			
1	Online		1	0	1024
4		56			

#### show chassis fpc (MX480 Router with 100-Gigabit Ethernet CFP)

```

user@host> show chassis fpc

```

Slot	State	Temp (C)	CPU Utilization (%)	Memory	Utilization (%)
			Total	Interrupt	DRAM (MB)
0	Online	33	4	0	2048
1	Online	36	7	0	2048
2	Online	29	6	0	1024
3	Online	33	0	0	0
4	Online	36	7	0	2048
5	Online	34	31	11	2048

#### show chassis fpc pic-status (MX480 Router with 100-Gigabit Ethernet CFP)

```

user@host> show chassis fpc pic-status

```

Slot	State	PIC	Type
1	Online	MPC	Type 3
2	Online	1X100GE	CFP
2	Online	DPCE	40x 1GE R EQ
0	Online	10x	1GE(LAN) EQ
1	Online	10x	1GE(LAN) EQ
2	Online	10x	1GE(LAN) EQ
3	Online	10x	1GE(LAN) EQ
3	Online	MPC	Type 3
0	Online	1X100GE	CFP
2	Online	1X100GE	CFP
4	Online	MPC	Type 3
0	Online	1X100GE	CFP
2	Online	1X100GE	CFP
5	Online	MPC	Type 2 3D EQ

```

PIC 0 Online      2x 10GE XFP
PIC 1 Online      2x 10GE XFP
PIC 2 Online      10x 1GE(LAN) SFP
PIC 3 Online      10x 1GE(LAN) SFP

```

#### show chassis fpc pic-status (EX Series Switch)

```

user@host> show chassis fpc pic-status
Slot 1 Online      EX9200 32x10G SFP
PIC 0 Online      8X10GE SFPP
PIC 1 Online      8X10GE SFPP
PIC 2 Online      8X10GE SFPP
PIC 3 Online      8X10GE SFPP
Slot 2 Online      EX9200 32x10G SFP
PIC 0 Online      8X10GE SFPP
PIC 1 Online      8X10GE SFPP
PIC 2 Online      8X10GE SFPP
PIC 3 Online      8X10GE SFPP

```

#### show chassis fpc (MX480 Router with MPC4E)

```

user@host> show chassis fpc

```

Slot	State	Temp (C)	CPU Utilization (%) Total	Memory Interrupt	Utilization (%) DRAM (MB) Heap	Buffer
0	Empty					
1	Empty					
2	Online	38	7	0	2048 19	14
3	Online	39	8	0	2048 18	14
4	Online	39	7	0	2048 17	14
5	Empty					

#### show chassis fpc detail (MX480 Router with MPC4E)

```

user@host> show chassis fpc detail
Slot 2 information:
State Online
Temperature 38
Total CPU DRAM 2048 MB
Total RDRAM 1036 MB
Total DDR DRAM 11264 MB
Start time: 2013-02-18 05:06:57 PST
Uptime: 17 hours, 41 minutes, 9 seconds
Max Power Consumption 610 Watts
Slot 3 information:
State Online
Temperature 38
Total CPU DRAM 2048 MB
Total RDRAM 1036 MB
Total DDR DRAM 11264 MB
Start time: 2013-02-18 05:07:00 PST
Uptime: 17 hours, 41 minutes, 6 seconds
Max Power Consumption 610 Watts
Slot 4 information:
State Diagnostics
Temperature 37
Total CPU DRAM 0 MB
Total RDRAM 0 MB
Total DDR DRAM 0 MB
Max Power Consumption 520 Watts

```



**show chassis fpc (MX480 Router with MPC4E)**

```

user@host> show chassis fpc

```

Slot	State	Temp (C)	CPU Utilization (%) Total	Interrupt	Memory DRAM (MB)	Utilization (%) Heap	Buffer
0	Empty						
1	Empty						
2	Online	38	7	0	2048	19	14
3	Online	39	8	0	2048	18	14
4	Online	39	7	0	2048	17	14
5	Empty						

**show chassis fpc detail (MX480 Router with MPC4E)**

```

user@host> show chassis fpc detail

```

Slot 2 information:

State	Online
Temperature	38
Total CPU DRAM	2048 MB
Total RLDRAM	1036 MB
Total DDR DRAM	11264 MB
Start time:	2013-02-18 05:06:57 PST
Uptime:	17 hours, 41 minutes, 9 seconds
Max Power Consumption	610 Watts

Slot 3 information:

State	Online
Temperature	38
Total CPU DRAM	2048 MB
Total RLDRAM	1036 MB
Total DDR DRAM	11264 MB
Start time:	2013-02-18 05:07:00 PST
Uptime:	17 hours, 41 minutes, 6 seconds
Max Power Consumption	610 Watts

Slot 4 information:

State	Diagnostics
Temperature	37
Total CPU DRAM	0 MB
Total RLDRAM	0 MB
Total DDR DRAM	0 MB
Max Power Consumption	520 Watts

**show chassis fpc (MX960 Router)**

```

user@host> show chassis fpc

```

Slot	State	Temp (C)	CPU Utilization (%) Total	Interrupt	Memory DRAM (MB)	Utilization (%) Heap	Buffer
0	Empty						
1	Empty						
2	Empty						
3	Online	25	19	0	1024	15	57
4	Empty						
5	Online	26	27	0	1024	15	57
6	Empty						
7	Empty						
8	Empty						
9	Empty						
10	Empty						
11	Empty						

**show chassis fpc (MX960 Router with MPC5EQ)**

```

user@host> show chassis fpc

```

Slot	State	Temp (C)	CPU Utilization (%)	Memory Utilization (%)	DRAM (MB)	Heap	Buffer
0	Online	38	16	0	3584	7	13
1	Online	31	15	0	2048	17	13
2	Empty						
3	Online	31	14	0	2048	20	13
4	Online	34	16	0	3584	7	13
5	Online	34	16	0	3584	7	13
6	Empty						
7	Online	32	9	0	2048	18	14
8	Online	36	19	0	3584	7	13
9	Online	31	9	0	2048	13	13
10	Online	35	14	0	3584	7	13
11	Online	33	11	0	2048	18	14

**show chassis fpc detail (MX960 Router with MPC5EQ)**

```

user@host> show chassis fpc detail

```

Slot 0 information:

State	Online
Temperature	38
Total CPU DRAM	3584 MB
Total XR2	291 MB
Total DDR DRAM	24960 MB
Start time:	2014-04-22 10:01:46 PDT
Uptime:	1 hour, 23 minutes, 40 seconds
Max Power Consumption	607 Watts

Slot 1 information:

State	Online
Temperature	31
Total CPU DRAM	2048 MB
Total RLD RAM	1036 MB
Total DDR DRAM	6656 MB
Start time:	2014-04-22 10:01:50 PDT
Uptime:	1 hour, 23 minutes, 36 seconds
Max Power Consumption	520 Watts

Slot 3 information:

State	Online
Temperature	31
Total CPU DRAM	2048 MB
Total RLD RAM	1324 MB
Total DDR DRAM	5120 MB
Start time:	2014-04-22 10:01:50 PDT
Uptime:	1 hour, 23 minutes, 36 seconds
Max Power Consumption	440 Watts

Slot 4 information:

State	Online
Temperature	34
Total CPU DRAM	3584 MB
Total XR2	291 MB
Total DDR DRAM	24960 MB
Start time:	2014-04-22 10:01:54 PDT
Uptime:	1 hour, 23 minutes, 32 seconds
Max Power Consumption	607 Watts

Slot 5 information:

State	Online
Temperature	34

```

Total CPU DRAM          3584 MB
Total XR2                291 MB
Total DDR DRAM          24960 MB
Start time:              2014-04-22 10:01:56 PDT
Uptime:                  1 hour, 23 minutes, 30 seconds
Max Power Consumption    607 Watts
Slot 7 information:
State                    Online
Temperature              32
Total CPU DRAM          2048 MB
Total RLDRAM             1036 MB
Total DDR DRAM          11264 MB
Start time:              2014-04-22 10:02:02 PDT
Uptime:                  1 hour, 23 minutes, 24 seconds
Max Power Consumption    608 Watts
Slot 8 information:
State                    Online
Temperature              36
Total CPU DRAM          3584 MB
Total XR2                291 MB
Total DDR DRAM          24960 MB
Start time:              2014-04-22 10:02:07 PDT
Uptime:                  1 hour, 23 minutes, 19 seconds
Max Power Consumption    607 Watts
Slot 9 information:
State                    Online
Temperature              31
Total CPU DRAM          2048 MB
Total RLDRAM             734 MB
Total DDR DRAM          3108 MB
Start time:              2014-04-22 10:02:05 PDT
Uptime:                  1 hour, 23 minutes, 21 seconds
Max Power Consumption    368 Watts
Slot 10 information:
State                    Online
Temperature              35
Total CPU DRAM          3584 MB
Total XR2                291 MB
Total DDR DRAM          24960 MB
Start time:              2014-04-22 10:02:11 PDT
Uptime:                  1 hour, 23 minutes, 15 seconds
Max Power Consumption    607 Watts
Slot 11 information:
State                    Online
Temperature              33
Total CPU DRAM          2048 MB
Total RLDRAM             1036 MB
Total DDR DRAM          11264 MB
Start time:              2014-04-22 10:02:16 PDT
Uptime:                  1 hour, 23 minutes, 10 seconds
Max Power Consumption    608 Watts

```

#### show chassis fpc pic-status(MX960 Router with MPC5EQ)

```

user@host> show chassis fpc pic-status
Slot 0  Online      MPC5E 3D Q 2CGE+4XGE
PIC 0   Online      2X10GE SFPP OTN
PIC 1   Online      1X100GE CFP2 OTN
PIC 2   Online      2X10GE SFPP OTN
PIC 3   Online      1X100GE CFP2 OTN

```

```

Slot 1  Online      MPCE Type 3 3D
        PIC 0 Online  10X10GE SFPP
        PIC 2 Online  1X100GE CXP
Slot 3  Online      MPC 3D 16x 10GE
        PIC 0 Online  4x 10GE(LAN) SFP+
        PIC 1 Online  4x 10GE(LAN) SFP+
        PIC 2 Online  4x 10GE(LAN) SFP+
        PIC 3 Online  4x 10GE(LAN) SFP+
Slot 4  Online      MPC5E 3D Q 2CGE+4XGE
        PIC 0 Online  2X10GE SFPP OTN
        PIC 1 Online  1X100GE CFP2 OTN
        PIC 2 Online  2X10GE SFPP OTN
        PIC 3 Online  1X100GE CFP2 OTN
Slot 5  Online      MPC5E 3D Q 2CGE+4XGE
        PIC 0 Online  2X10GE SFPP OTN
        PIC 1 Online  1X100GE CFP2 OTN
        PIC 2 Online  2X10GE SFPP OTN
        PIC 3 Online  1X100GE CFP2 OTN
Slot 7  Online      MPC4E 3D 2CGE+8XGE
        PIC 0 Online  4x10GE SFPP
        PIC 1 Online  1X100GE CFP
        PIC 2 Online  4x10GE SFPP
        PIC 3 Online  1X100GE CFP
Slot 8  Online      MPC5E 3D Q 24XGE+6XLGE
        PIC 0 Offline 12X10GE SFPP OTN
        PIC 1 Offline 12X10GE SFPP OTN
        PIC 2 Online  3X40GE QSFPP
        PIC 3 Online  3X40GE QSFPP
Slot 9  Online      MPCE Type 2 3D P
        PIC 0 Online  2x 10GE XFP
        PIC 1 Online  2x 10GE XFP
Slot 10 Online      MPC5E 3D Q 24XGE+6XLGE
        PIC 0 Online  12X10GE SFPP
        PIC 1 Online  12X10GE SFPP
        PIC 2 Offline 3X40GE QSFPP
        PIC 3 Offline 3X40GE QSFPP
Slot 11 Online      MPC4E 3D 2CGE+8XGE
        PIC 0 Online  4x10GE SFPP
        PIC 1 Online  1X100GE CFP
        PIC 2 Online  4x10GE SFPP
        PIC 3 Online  1X100GE CFP

```

#### show chassis fpc (MX240, MX480, MX960 Routers with Application Services Modular Line Card)

```

user@host> show chassis fpc 1
      Temp CPU Utilization (%)  Memory  Utilization (%)
Slot State      (C) Total Interrupt  DRAM (MB) Heap  Buffer
  1 Online        34    5      0      3072    5    13

```

#### show chassis fpc (MX240, MX480, MX960 with Application Services Modular Line Card)

```

user@host> show chassis fpc 1 detail
Slot 1 information:
  State                               Online
  Temperature                         34
  Total CPU DRAM                      3072 MB
  Total RDRAM                        259 MB
  Total DDR DRAM                     4864 MB
  Start time:                        2012-06-19 10:51:43 PDT

```

```

Uptime:                               16 minutes, 48 seconds
Max Power Consumption                   550 Watts

```

### show chassis fpc (MX240, MX480, MX960, MX2010, MX2020, and MX2008 Universal Routing Platforms with Dynamic Power Management)

```
user@host> show chassis fpc 2 detail
```

```

Slot 2 information:
State                               Online
Temperature                         37
Total CPU DRAM                      3584 MB
Total XR2                           275 MB
Total DDR DRAM                      20352 MB
Start time:                         2014-07-18 02:51:23 PDT
Uptime:                             5 minutes, 19 seconds
Max MPC Base Power Consumption      485 Watts
Max MICO Power Consumption          50 Watts
Max MIC1 Power Consumption          50 Watts
Max MPC Total Power Consumption     585 Watts

```

### show chassis fpc (MX2010 Routers)

```
user@host> show chassis fpc
```

Slot	Temp	CPU Utilization (%)	Memory	Utilization (%)	DRAM (MB)	Heap	Buffer
State	(C)	Total	Interrupt				
0 Online	34	9	0	2048	18	13	
1 Online	32	9	0	2048	15	13	
2 Empty							
3 Empty							
4 Empty							
5 Empty							
6 Empty							
7 Empty							
8 Online	31	13	0	2048	11	13	
9 Online	33	10	0	2048	18	13	

### show chassis fpc (MX2010 Router with Fabric Grant Bypass Enabled)

Following is the output of the **show chassis fpc** command on an MX2010 router with Switch Fabric Board (SFB), where fabric grant bypass is enabled by default. All MPCs power on.

```
user@host> show chassis fpc
```

Slot	Temp	CPU Utilization (%)	Memory	Utilization (%)	DRAM (MB)	Heap	Buffer
State	(C)	Total	Interrupt				
0 Online	34	20	0	2048	9	14	
1 Offline	33	22	0	2048	9	14	
2 Online	33	17	0	2048	9	14	
3 Offline	34	25	0	2048	9	14	
4 Online	32	27	0	2048	9	14	
5 Offline	32	26	0	2048	9	14	
6 Empty							
7 Empty							
8 Empty							
9 Empty							

**show chassis fpc (MX2010 Router with Fabric Grant Bypass Disabled)**

Following is the output of the **show chassis fpc** command on an MX2010 router with Switch Fabric Board (SFB), where fabric grant bypass has been disabled. MPC1 (MX-MPC1-3D), MPC2 (MX-MPC2-3D), and the 16-port 10-Gigabit Ethernet MPC (MPC-3D-16XGE-SFP) do not power on after you disable fabric grant bypass and reboot the router. Also, FPC misconfiguration alarms are generated.

```
user@host> show chassis fpc
Temp  CPU Utilization (%)  Memory  Utilization (%)
Slot State             (C) Total Interrupt    DRAM (MB) Heap      Buffer
0  Online              34    20         0      2048      9       14
1  Offline             ---FPC misconfiguration---
2  Online              33    17         0      2048      9       14
3  Offline             ---FPC misconfiguration---
4  Online              32    27         0      2048      9       14
5  Offline             ---FPC misconfiguration---
6  Empty
7  Empty
8  Empty
9  Empty
```

**show chassis fpc pic-status (MX2010 Router with Fabric Grant Bypass Enabled)**

Following is the output of the **show chassis fpc pic-status** command on an MX2010 router with Switch Fabric Board (SFB), where fabric grant bypass has been enabled by default. All MPCs power on.

```
user@host> show chassis fpc pic-status
Slot 0  Present      MPCE Type 3 3D
Slot 1  Present      MPC Type 2 3D EQ
Slot 2  Present      MPCE Type 3 3D
Slot 3  Present      MPC 3D 16x 10GE
Slot 4  Present      MPCE Type 3 3D
Slot 5  Present      MPCE Type 1 3D Q
```

**show chassis fpc pic-status (MX2010 Router with Fabric Grant Bypass Disabled)**

Following is the output of the **show chassis fpc pic-status** command on an MX2010 router with Switch Fabric Board (SFB), where fabric grant bypass has been disabled. MPC1 (MX-MPC1-3D), MPC2 (MX-MPC2-3D), and the 16-port 10-Gigabit Ethernet MPC (MPC-3D-16XGE-SFP) do not power on after you disable fabric grant bypass mode and reboot the router.

```
user@host> show chassis fpc pic-status
Slot 0  Present      MPCE Type 3 3D
Slot 1  Offline      MPC Type 2 3D EQ
Slot 2  Present      MPCE Type 3 3D
Slot 3  Offline      MPC 3D 16x 10GE
Slot 4  Present      MPCE Type 3 3D
Slot 5  Offline      MPCE Type 1 3D Q
```

**show chassis fpc (MX2020 Routers)**

```
user@host> show chassis fpc
Temp  CPU Utilization (%)  Memory  Utilization (%)
Slot State             (C) Total Interrupt    DRAM (MB) Heap      Buffer
```

0	Online	10	12	0	2048	18	13
1	Online	8	9	0	2048	18	13
2	Online	7	9	0	2048	18	13
3	Online	8	10	0	2048	18	13
4	Online	9	10	0	2048	18	13
5	Online	8	9	0	2048	18	13
6	Online	8	10	0	2048	18	13
7	Online	9	9	0	2048	18	13
8	Online	9	10	0	2048	18	13
9	Online	10	9	0	2048	18	13
10	Online	16	8	0	2048	18	13
11	Online	11	10	0	2048	18	13
12	Online	10	10	0	2048	18	13
13	Online	11	9	0	2048	18	13
14	Online	12	10	0	2048	18	13
15	Online	13	9	0	2048	18	13
16	Online	13	9	0	2048	18	13
17	Online	12	9	0	2048	18	13
18	Online	12	8	0	2048	18	13
19	Online	14	10	0	2048	18	13

#### show chassis fpc (MX2020 Router with MPC4E)

```

user@host> show chassis fpc

```

Slot	Temp	CPU Utilization (%)	Memory	Utilization (%)	Heap	Buffer	
State	(C)	Total	Interrupt	DRAM (MB)			
0	Online	33	12	2	2048	11	13
1	Empty						
2	Empty						
3	Empty						
4	Empty						
5	Empty						
6	Empty						
7	Empty						
8	Empty						
9	Online	31	10	0	2048	11	13
10	Online	32	7	0	2048	14	13
11	Empty						
12	Empty						
13	Empty						
14	Online	28	12	0	2048	15	14
15	Empty						
16	Empty						
17	Empty						
18	Empty						
19	Online	38	8	0	2048	18	13

#### show chassis fpc (MX10003 Router)

```

user@host> show chassis fpc

```

Slot	Temp	CPU Utilization (%)	CPU Utilization (%)	Memory				
State	(C)	Total	Interrupt	DRAM (MB)				
Heap	Buffer							
0	Online	59	25	0	25	24	23	3136
12								
1	Online	62	29	0	26	24	23	3136
12								

**show chassis fpc detail (MX10003 Router)**

```

user@host> show chassis fpc detail

Slot 0 information:
  State                               Online
  Total CPU DRAM                      3136 MB
  Total RLDRAM                        771 MB
  Total DDR DRAM                      18432 MB
  Temperature                         60 degrees C / 140 degrees F
  Start time                         2017-07-19 20:49:58 PDT
  Uptime                             2 hours, 29 minutes, 22 seconds
  Max MPC base power consumption      910 Watts
  Max MIC1 power consumption          95 Watts
  Max MPC total power consumption     1005 Watts
Slot 1 information:
  State                               Online
  Total CPU DRAM                      3136 MB
  Total RLDRAM                        771 MB
  Total DDR DRAM                      18432 MB
  Temperature                         63 degrees C / 145 degrees F
  Start time                         2017-07-19 20:48:01 PDT
  Uptime                             2 hours, 31 minutes, 19 seconds
  Max MPC base power consumption      910 Watts
  Max MIC1 power consumption          155 Watts
  Max MPC total power consumption     1065 Watts

```

**show chassis fpc <fpc-slot> (MX10003 Router)**

```

user@host> show chassis fpc 0

Utilization (%)      Temp CPU Utilization (%)  CPU Utilization (%)  Memory
Slot State           (C)  Total  Interrupt    1min   5min   15min  DRAM (MB)
Heap   Buffer
0  Online            49    26      0        22    22    23    3136
12      11

```

**show chassis fpc (MX204 Router)**

```

user@host> show chassis fpc

Utilization (%)      Temp CPU Utilization (%)  CPU Utilization (%)  Memory
Slot State           (C)  Total  Interrupt    1min   5min   15min  DRAM (MB)
Heap   Buffer
0  Online            Absent  8      0        8      8      8    3136
8      8

```

**show chassis fpc detail (MX204 Router)**

```

user@host> show chassis fpc detail
Slot 0 information:
  State                               Online
  Total CPU DRAM                      3136 MB
  Total RLDRAM                        257 MB
  Total DDR DRAM                      4096 MB
  Temperature                         Absent
  Start time                         2017-11-05 22:14:01 PST
  Uptime                             2 days, 8 hours, 5 minutes, 55 seconds

```



**show chassis fpc <fpc-slot> (MX204 Router)**

```
user@host> show chassis fpc 0
```

Utilization (%)		Temp	CPU Utilization (%)		CPU Utilization (%)			Memory
Slot	State	(C)	Total	Interrupt	1min	5min	15min	DRAM (MB)
Heap	Buffer							
0	Online	Absent	8	0	8	8	8	3136
8	8							

**show chassis fpc (MX10008 Router)**

```
user@host> show chassis fpc
```

Utilization (%)		Temp	CPU Utilization (%)		CPU Utilization (%)			Memory
Slot	State	(C)	Total	Interrupt	1min	5min	15min	DRAM (MB)
Heap	Buffer							
0	Online	42	34	0	35	43	39	3136
19	26							
1	Empty							
2	Online	52	32	0	29	30	30	3136
19	26							
3	Online	48	20	0	19	18	18	3136
18	26							
4	Empty							
5	Empty							
6	Empty							
7	Empty							

**show chassis fpc detail (MX10008 Router)**

```
user@host> show chassis fpc detail
```

```
Slot 0 information:
```

```

State                               Online
Total CPU DRAM                     3136 MB
Total RLDRAM                        1542 MB
Total DDR DRAM                      36864 MB
Temperature                         42 degrees C / 107 degrees F
Start time                         2018-07-18 02:12:50 PDT
Uptime                             10 minutes, 28 seconds
Max power consumption              1535 Watts
Configured Bandwidth                2400 G
Operating Bandwidth                 2400 G

```

```
Slot 2 information:
```

```

State                               Online
Total CPU DRAM                     3136 MB
Total RLDRAM                        1542 MB
Total DDR DRAM                      36864 MB
Temperature                         52 degrees C / 125 degrees F
Start time                         2018-07-17 05:51:15 PDT
Uptime                             20 hours, 32 minutes, 3 seconds
Max power consumption              1535 Watts
Configured Bandwidth                2400 G
Operating Bandwidth                 2400 G

```

```
Slot 3 information:
```

```

State                               Online
Total CPU DRAM                     3136 MB
Total RLDRAM                        1542 MB
Total DDR DRAM                      36864 MB

```

```

Temperature                48 degrees C / 118 degrees F
Start time                 2018-07-17 05:50:40 PDT
Uptime                    20 hours, 32 minutes, 38 seconds
Max power consumption      1475 Watts
Configured Bandwidth       2400 G
Operating Bandwidth        2400 G

```

#### show chassis fpc <fpc-slot> (MX10008 Router)

```

user@host> show chassis fpc 0

```

		Temp	CPU Utilization (%)		CPU Utilization (%)			Memory
Utilization (%)		(C)	Total	Interrupt	1min	5min	15min	DRAM (MB)
Slot	State							
Heap	Buffer							
0	Online	43	33	0	33	40	38	3136
19	26							

#### show chassis fpc detail (MX2020 Router with MPC4E)

```

user@host> show chassis fpc detail
Slot 0 information:
State                Online
Temperature          34
Total CPU DRAM       2048 MB
Total RLD RAM        806 MB
Total DDR DRAM       2632 MB
Start time:         2013-02-17 08:17:35 PST
Uptime:             1 day, 14 hours, 50 minutes, 39 seconds
Max Power Consumption 368 Watts
Slot 9 information:
State                Online
Temperature          32
Total CPU DRAM       2048 MB
Total RLD RAM        806 MB
Total DDR DRAM       2632 MB
Start time:         2013-02-17 08:17:43 PST
Uptime:             1 day, 14 hours, 50 minutes, 31 seconds
Max Power Consumption 368 Watts
Slot 10 information:
State                Online
Temperature          37
Total CPU DRAM       2048 MB
Total RLD RAM        1036 MB
Total DDR DRAM       6656 MB
Start time:         2013-02-17 08:17:54 PST
Uptime:             1 day, 14 hours, 50 minutes, 20 seconds
Max Power Consumption 520 Watts
Slot 14 information:
State                Online
Temperature          32
Total CPU DRAM       2048 MB
Total RLD RAM        1036 MB
Total DDR DRAM       11264 MB
Start time:         2013-02-17 08:18:01 PST
Uptime:             1 day, 14 hours, 50 minutes, 13 seconds
Max Power Consumption 610 Watts
Slot 19 information:
State                Online
Temperature          38
Total CPU DRAM       2048 MB

```

```

Total RLD RAM          1324 MB
Total DDR DRAM         5120 MB
Start time:            2013-02-17 08:18:08 PST
Uptime:                1 day, 14 hours, 50 minutes, 6 seconds
Max Power Consumption  440 Watts

```

#### show chassis fpc (MX2020 Router with MPC5EQ and MPC6E)

```

user@host> show chassis fpc

```

Slot	State	Temp (C)	CPU Utilization (%)	Memory Utilization (%)
			Total Interrupt	DRAM (MB) Heap Buffer
0	Online	31	20 0	3584 7 13
1	Online	28	19 0	2048 17 13
2	Online	27	10 0	2048 18 14
3	Online	26	10 0	2048 13 13
4	Online	29	19 0	3584 7 13
5	Online	28	68 0	2048 20 13
6	Empty			
7	Empty			
8	Empty			
9	Online	36	19 0	3584 10 13
10	Online	37	26 0	3584 10 13
11	Empty			
12	Empty			
13	Empty			
14	Empty			
15	Empty			
16	Empty			
17	Online	28	43 0	3584 10 13
18	Online	29	19 0	3584 7 13
19	Online	31	19 0	3584 7 13

#### show chassis fpc detail (MX2020 Router with MPC5EQ and MPC6E)

```

user@host> show chassis fpc detail
Slot 0 information:
  State: Online
  Temperature: 31
  Total CPU DRAM: 3584 MB
  Total XR2: 291 MB
  Total DDR DRAM: 24960 MB
  Start time: 2014-04-22 23:33:19 PDT
  Uptime: 6 minutes, 24 seconds
  Max Power Consumption: 607 Watts
Slot 1 information:
  State: Online
  Temperature: 28
  Total CPU DRAM: 2048 MB
  Total RLD RAM: 1036 MB
  Total DDR DRAM: 6656 MB
  Start time: 2014-04-22 23:33:24 PDT
  Uptime: 6 minutes, 19 seconds
  Max Power Consumption: 520 Watts
Slot 2 information:
  State: Online
  Temperature: 27
  Total CPU DRAM: 2048 MB
  Total RLD RAM: 1036 MB
  Total DDR DRAM: 11264 MB

```

Start time:	2014-04-22 23:33:34 PDT
Uptime:	6 minutes, 9 seconds
Max Power Consumption	608 Watts
Slot 3 information:	
State	Online
Temperature	26
Total CPU DRAM	2048 MB
Total RLDRAM	734 MB
Total DDR DRAM	3108 MB
Start time:	2014-04-22 23:33:39 PDT
Uptime:	6 minutes, 4 seconds
Max Power Consumption	368 Watts
Slot 4 information:	
State	Online
Temperature	29
Total CPU DRAM	3584 MB
Total XR2	291 MB
Total DDR DRAM	24960 MB
Start time:	2014-04-22 23:33:51 PDT
Uptime:	5 minutes, 52 seconds
Max Power Consumption	607 Watts
Slot 5 information:	
State	Online
Temperature	28
Total CPU DRAM	2048 MB
Total RLDRAM	1324 MB
Total DDR DRAM	5120 MB
Start time:	2014-04-22 23:33:57 PDT
Uptime:	5 minutes, 46 seconds
Max Power Consumption	440 Watts
Slot 9 information:	
State	Online
Temperature	25
Total CPU DRAM	3584 MB
Total XR2	518 MB
Total DDR DRAM	49920 MB
Start time:	2014-04-22 23:31:20 PDT
Uptime:	8 minutes, 23 seconds
Max Power Consumption	1130 Watts
Slot 10 information:	
State	Online
Temperature	32
Total CPU DRAM	3584 MB
Total XR2	518 MB
Total DDR DRAM	49920 MB
Start time:	2014-04-22 23:31:25 PDT
Uptime:	8 minutes, 18 seconds
Max Power Consumption	1130 Watts
Slot 17 information:	
State	Online
Temperature	25
Total CPU DRAM	3584 MB
Total XR2	518 MB
Total DDR DRAM	49920 MB
Start time:	2014-04-22 23:31:29 PDT
Uptime:	8 minutes, 14 seconds
Max Power Consumption	1130 Watts
Slot 18 information:	
State	Online
Temperature	29
Total CPU DRAM	3584 MB

```

Total XR2                291 MB
Total DDR DRAM           24960 MB
Start time:              2014-04-22 23:34:11 PDT
Uptime:                  5 minutes, 32 seconds
Max Power Consumption    607 Watts
Slot 19 information:
State                    Online
Temperature              32
Total CPU DRAM           3584 MB
Total XR2                291 MB
Total DDR DRAM           24960 MB
Start time:              2014-04-22 23:34:20 PDT
Uptime:                  5 minutes, 23 seconds
Max Power Consumption    607 Watts

```

### show chassis fpc detail (MX2008 Router)

```

user@host>show chassis fpc detail
Slot 0 information:
State                    Online
Temperature              33 degrees C / 91 degrees F
Total CPU DRAM           2048 MB
Total RLD RAM            734 MB
Total DDR DRAM           2596 MB
Start time              2017-04-14 07:14:26 PDT
Uptime                  15 hours, 29 minutes, 20 seconds
Max power consumption    347 Watts
Slot 3 information:
State                    Online
Temperature              31 degrees C / 87 degrees F
Total CPU DRAM           3584 MB
Total RLD RAM            259 MB
Total DDR DRAM           20352 MB
Start time              2017-04-14 07:14:38 PDT
Uptime                  15 hours, 29 minutes, 8 seconds
Max MPC base power consumption 376 Watts
Max MICO power consumption  0 Watts
Max MIC1 power consumption  0 Watts
Max MPC total power consumption 376 Watts
Slot 5 information:
State                    Online
Temperature              32 degrees C / 89 degrees F
Total CPU DRAM           3584 MB
Total RLD RAM            275 MB
Total DDR DRAM           20352 MB
Start time              2017-04-14 07:14:46 PDT
Uptime                  15 hours, 29 minutes
Max MPC base power consumption 422 Watts
Max MICO power consumption  18 Watts
Max MIC1 power consumption  0 Watts
Max MPC total power consumption 440 Watts
Slot 7 information:
State                    Online
Temperature              28 degrees C / 82 degrees F
Total CPU DRAM           2048 MB
Total RLD RAM            403 MB
Total DDR DRAM           1572 MB
Start time              2017-04-14 07:14:50 PDT
Uptime                  15 hours, 28 minutes, 56 seconds
Max power consumption    347 Watts
Slot 9 information:

```

```

State                               Online
Temperature                         29
Total CPU DRAM                      3584 MB
Total XR2                           518 MB
Total DDR DRAM                      49920 MB
Start time                          2017-04-14 07:13:16 PDT
Uptime                              15 hours, 30 minutes, 30 seconds
Max MPC base power consumption      834 Watts
Max MICO power consumption          56 Watts
Max MIC1 power consumption          0 Watts
Max MPC total power consumption     890 Watts

```

#### show chassis fpc pic-status (MX2020 Router with MPC5EQ and MPC6E)

```

user@host> show chassis fpc pic-status
Slot 0  Online      MPC5E 3D Q 24XGE+6XLGE
  PIC 0  Online      12X10GE SFPP OTN
  PIC 1  Online      12X10GE SFPP OTN
  PIC 2  Offline     3X40GE QSFPP
  PIC 3  Offline     3X40GE QSFPP
Slot 1  Online      MPCE Type 3 3D
  PIC 0  Online      10X10GE SFPP
  PIC 2  Online      1X100GE CXP
Slot 2  Online      MPC4E 3D 2CGE+8XGE
  PIC 0  Online      4x10GE SFPP
  PIC 1  Online      1X100GE CFP
  PIC 2  Online      4x10GE SFPP
  PIC 3  Online      1X100GE CFP
Slot 3  Online      MPCE Type 2 3D P
  PIC 0  Online      2x 10GE XFP
  PIC 1  Online      2x 10GE XFP
Slot 4  Online      MPC5E 3D Q 2CGE+4XGE
  PIC 0  Online      2X10GE SFPP OTN
  PIC 1  Online      1X100GE CFP2 OTN
  PIC 2  Online      2X10GE SFPP OTN
  PIC 3  Online      1X100GE CFP2 OTN
Slot 5  Online      MPC 3D 16x 10GE
  PIC 0  Online      4x 10GE(LAN) SFP+
  PIC 1  Online      4x 10GE(LAN) SFP+
  PIC 2  Online      4x 10GE(LAN) SFP+
  PIC 3  Online      4x 10GE(LAN) SFP+
Slot 9  Online      MPC6E 3D
  PIC 0  Online      2X100GE CFP2 OTN
  PIC 1  Online      2X100GE CFP2 OTN
Slot 10 Online      MPC6E 3D
  PIC 0  Online      24X10GE SFPP OTN
  PIC 1  Online      4X100GE CXP
Slot 17 Online      MPC6E 3D
  PIC 0  Online      24X10GE SFPP
  PIC 1  Online      4X100GE CXP
Slot 18 Online      MPC5E 3D Q 24XGE+6XLGE
  PIC 0  Offline     12X10GE SFPP OTN
  PIC 1  Offline     12X10GE SFPP OTN
  PIC 2  Online      3X40GE QSFPP
  PIC 3  Online      3X40GE QSFPP
Slot 19 Online      MPC5E 3D Q 24XGE+6XLGE
  PIC 0  Online      12X10GE SFPP OTN
  PIC 1  Offline     12X10GE SFPP OTN
  PIC 2  Offline     3X40GE QSFPP
  PIC 3  Online      3X40GE QSFPP

```

**show chassis fpc detail (MX Series Routers)**

```

user@host> show chassis fpc detail 2
Slot 0 information:
  State                               Online
  Temperature                         36 degrees C / 96 degrees F
  Total CPU DRAM                     1024 MB
  Total RLDRAM                       256 MB
  Total DDR DRAM                     4096 MB
  Start time:                        2009-08-11 21:20:30 PDT
  Uptime:                            2 hours, 8 minutes, 50 seconds
  Max Power Consumption              335 Watts

```

**show chassis fpc detail (EX Series Switches)**

```

user@host> show chassis fpc detail 2
Slot 1 information:
  State                               Online
  Temperature                         41
  Total CPU DRAM                     2048 MB
  Total RLDRAM                       1036 MB
  Total DDR DRAM                     11264 MB
  Start time:                        2013-04-02 00:04:52 PDT
  Uptime:                            7 days, 9 hours, 47 minutes, 46 seconds
  Max Power Consumption              610 Watts
Slot 2 information:
  State                               Online
  Temperature                         41
  Total CPU DRAM                     2048 MB
  Total RLDRAM                       1036 MB
  Total DDR DRAM                     11264 MB
  Start time:                        2013-04-02 00:04:56 PDT
  Uptime:                            7 days, 9 hours, 47 minutes, 42 seconds
  Max Power Consumption              610 Watts

```

**show chassis fpc detail (EX9251 Switches)**

```

user@switch> show chassis fpc detail 2
Slot 0 information:
  State                               Online
  Total CPU DRAM                     3136 MB
  Total RLDRAM                       257 MB
  Total DDR DRAM                     4096 MB
  Temperature                         Absent
  Start time                         2018-03-12 14:59:49 PDT
  Uptime                             1 day, 1 hour, 10 minutes, 48 seconds

```

**show chassis fpc detail (EX9253 Switches)**

```

user@switch> show chassis fpc detail 1
Slot 1 information:
  State                               Online
  Total CPU DRAM                     3136 MB
  Total RLDRAM                       771 MB
  Total DDR DRAM                     18432 MB
  Temperature                         59 degrees C / 138 degrees F
  Start time                         2018-03-04 14:20:42 PST
  Uptime                             3 days, 10 hours, 40 minutes, 57 seconds
  Max MPC base power consumption     910 Watts

```

Max MIC1 power consumption 95 Watts  
 Max MPC total power consumption 1005 Watts

### show chassis fpc (Hardware Not Supported)

```
user@host> show chassis fpc
show chassis fpc
```

Slot	State	Temp (C)	CPU Total	Utilization (%) Interrupt	Memory DRAM (MB)	Utilization (%) Heap	Utilization (%) Buffer
0	Online				CPU less FPC		
1	Present				Hardware Not In Right Slot		
2	Online		0	0	0	0	0
3	Present				Hardware Not Supported		
4	Empty						
5	Empty						
6	Online		0	0	0	0	0

### show chassis fpc detail (Hardware Not Supported)

```
user@host> show chassis fpc detail
Slot 0 information:
  State Online
  Total CPU DRAM ---- CPU less FPC ----
  Start time 2006-07-07 03:21:00 UTC
  Uptime 27 minutes, 51 seconds
Slot 1 information:
  State Present
  Reason --- Hardware Not In Right Slot ---
Slot 2 information:
  State Online
  Total CPU DRAM 32 MB
  Start time 2006-07-07 03:20:59 UTC
  Uptime 27 minutes, 52 seconds
Slot 3 information:
  State Present
  Reason --- Hardware Not Supported ---
  Total CPU DRAM 0 MB
Slot 6 information:
  State Online
  Total CPU DRAM 32 MB
  Start time 2006-07-07 03:21:01 UTC
  Uptime 27 minutes, 50 seconds
```

### show chassis fpc pic-status

```
user@host> show chassis fpc pic-status
Slot 0 Online
  PIC 1 1x OC-12 ATM, MM
  PIC 2 1x OC-12 ATM, MM
  PIC 3 1x OC-12 ATM, MM
Slot 1 Online
  PIC 0 1x OC-48 SONET, SMIR
Slot 2 Online
  PIC 0 1x OC-192 SONET, SMSR
```

### show chassis fpc pic-status (M Series Routers)

```
user@host> show chassis fpc pic-status
```



```

Slot 1  Online      FPC Type 1
        PIC 0 Present 2x OC-3 ATM, MM- Hardware Error
        PIC 1 Online  4x OC-3 SONET, SMIR
Slot 2  Online      E-FPC Type 2
        PIC 0 Online  4x G/E, 1000 BASE-SX
        PIC 1 Online  2x G/E SFP, 1000 BASE
        PIC 3 Online  1x Tunnel
Slot 3  Online      E-FPC Type 1
        PIC 0 Online  1x G/E IQ, 1000 BASE
        PIC 2 Online  1x G/E SFP, 1000 BASE
Slot 4  Online      E-FPC Type 2
        PIC 0 Online  4x G/E SFP, 1000 BASE
        PIC 1 Online  4x G/E SFP, 1000 BASE
        PIC 2 Online  4x G/E SFP, 1000 BASE
        PIC 3 Online  4x G/E SFP, 1000 BASE
Slot 5  Online      FPC Type 2
...

```

#### show chassis fpc pic-status (M120 Router)

```

user@host> show chassis fpc pic-status
Slot 1  Online      M120 CFPC 10GE
        PIC 0 Online  1x 10GE(LAN/WAN) XFP
Slot 3  Online      M120 FPC Type 2 (proto)
        PIC 0 Online  2x G/E IQ, 1000 BASE
        PIC 1 Online  4x OC-3 SONET, SMIR
        PIC 2 Online  2x G/E IQ, 1000 BASE
        PIC 3 Online  8x 1GE(LAN), IQ2
Slot 4  Online      M120 FPC Type 3 (proto)
        PIC 0 Online  10x 1GE(LAN), 1000 BASE
Slot 5  Online      M120 FPC Type 1 (proto)
        PIC 0 Present 1x G/E, 1000 BASE-LX- Not Supported
        PIC 1 Online  1x CHOC3 IQ SONET, SMLR
        PIC 2 Online  4x CHDS3 IQ
        PIC 3 Online  1x G/E SFP, 1000 BASE

```

#### show chassis fpc pic-status (MX240, MX480, and MX960 Routers with Application Services Modular Line Card)

In the following output **Slot 1 and Slot 5** are the Application Services Modular Carrier Cards (AS MCC), **PIC 0** is the Application Services Modular Storage Card (AS MSC), and **PIC 2** is the Application Services Modular Processing Card (AS MXC).

```

user@host> show chassis fpc pic-status
Slot 2  Online      MPC Type 1 3D Q
  Slot 1  Online      AS-MCC
    PIC 0 Online      AS-MSC
    PIC 2 Online      AS-MXC
Slot 4  Offline     MPC 3D 16x 10GE
Slot 5  Offline     AS-MCC

```

#### show chassis fpc lcc (TX Matrix Router)

```

user@host> show chassis fpc lcc 0
lcc0-re0:
-----
Slot State      Temp CPU      Utilization (%) Memory Utilization (%)
          (C) Total Interrupt      DRAM (MB)      Heap      Buffer
0 Empty
1 Online        27    2          0      256          8        44

```

```

2 Online      27      3      0      256      15      44
3 Empty
4 Empty
5 Empty
6 Empty
7 Empty

```

### show chassis fpc pic-status (TX Matrix Router)

```

user@host> show chassis fpc pic-status
lcc0-re0:
-----
Slot 0  Online      FPC Type 3
  PIC 0  Online      1x OC-192 SM SR1
  PIC 1  Online      1x OC-192 SM SR2
  PIC 2  Online      1x OC-192 SM SR1
  PIC 3  Online      1x Tunnel
Slot 1  Online      FPC Type 2
  PIC 0  Online      1x OC-48 SONET, SMSR
  PIC 1  Online      1x OC-48 SONET, SMSR

lcc1-re0:
-----

lcc2-re0:
-----
Slot 1  Online      FPC Type 3
  PIC 0  Online      1x OC-192 SM SR1
Slot 5  Online      FPC Type 2
  PIC 0  Online      1x OC-48 SONET, SMSR
  PIC 1  Online      2x G/E, 1000 BASE-LX
  PIC 2  Online      2x G/E, 1000 BASE-LX
  PIC 3  Online      1x OC-48 SONET, SMSR

lcc3-re0:
-----

```

### show chassis fpc pic-status lcc (TX Matrix Router)

```

user@host> show chassis fpc pic-status lcc 0
lcc0-re0:
-----
Slot 0  Online      FPC Type 3
  PIC 0  Online      1x OC-192 SM SR2
Slot 1  Online      FPC Type 2
  PIC 0  Online      2x OC-12 ATM2 IQ, MM
  PIC 1  Online      1x OC-48 SONET, SMSR
  PIC 2  Online      1x OC-48 SONET, SMSR
  PIC 3  Online      4x G/E, 1000 BASE-SX

```

### show chassis fpc (TX Matrix Plus Router)

```

user@host> show chassis fpc
lcc0-re0:
-----

```

Slot	State	Temp (C)	CPU Utilization (%)		Memory DRAM (MB)	Utilization (%)	
			Total	Interrupt		Heap	Buffer
0	Empty						
1	Online	38	4	0	2048	3	24
2	Online	43	8	0	2048	6	24

```

3 Empty
4 Online      43      6      0      2048      6      24
5 Empty
6 Online      42     13      0      2048      6      24
7 Online      45      7      0      2048      3      24

```

lcc2-re0:

```

-----
Slot State      Temp  CPU Utilization (%)  Memory  Utilization (%)
              (C)  Total  Interrupt      DRAM (MB) Heap      Buffer
0 Online        42     10         0      2048      6      24
1 Empty
2 Online        42     11         0      2048      6      24
3 Online        40      5         0      2048      3      24
4 Online        33     26         0      1024      8      49
5 Empty
6 Online        43      8         0      2048      6      24
7 Online        46      6         0      2048      3      24

```

lcc3-re0:

```

-----
Slot State      Temp  CPU Utilization (%)  Memory  Utilization (%)
              (C)  Total  Interrupt      DRAM (MB) Heap      Buffer
0 Empty
1 Empty
2 Online        39     30         0      2048      7      24
3 Empty
4 Online        41      8         0      2048      6      24
5 Online        41     12         0      2048      6      24
6 Online        40      8         0      2048      6      24
7 Online        42      4         0      2048      3      24

```

#### show chassis fpc lcc (TX Matrix Plus Router)

```
user@host> show chassis fpc lcc 0
```

lcc0-re0:

```

-----
Slot State      Temp  CPU Utilization (%)  Memory  Utilization (%)
              (C)  Total  Interrupt      DRAM (MB) Heap      Buffer
0 Empty
1 Online        38      4         0      2048      3      24
2 Online        43      8         0      2048      6      24
3 Empty
4 Online        43      6         0      2048      6      24
5 Empty
6 Online        42     14         0      2048      6      24
7 Online        45      6         0      2048      3      24

```

#### show chassis fpc detail (TX Matrix Plus Router)

```
user@host> show chassis fpc details
```

lcc0-re0:

Slot 1 information:

```

State                Online
Temperature          38 degrees C / 100 degrees F
Total CPU DRAM       2048 MB
Total SRAM           64 MB
Total SDRAM          1280 MB

```

```

      Start time                2010-10-04 20:06:22 PDT
      Uptime                    1 hour, 32 minutes, 51 seconds
Slot 2 information:
  State                        Online
  Temperature                  43 degrees C / 109 degrees F
  Total CPU DRAM               2048 MB
  Total SRAM                   128 MB
  Total SDRAM                  2560 MB
  Start time                   2010-10-04 20:06:37 PDT
  Uptime                       1 hour, 32 minutes, 36 seconds
Slot 4 information:
  State                        Online
  Temperature                  43 degrees C / 109 degrees F
  Total CPU DRAM               2048 MB
  Total SRAM                   128 MB
  Total SDRAM                  2560 MB
  Start time                   2010-10-04 20:06:40 PDT
  Uptime                       1 hour, 32 minutes, 33 seconds
Slot 6 information:
  State                        Online
  Temperature                  42 degrees C / 107 degrees F
  Total CPU DRAM               2048 MB
  Total SRAM                   128 MB
  Total SDRAM                  2560 MB
  Start time                   2010-10-04 20:06:42 PDT
  Uptime                       1 hour, 32 minutes, 31 seconds
Slot 7 information:
  State                        Online
  Temperature                  45 degrees C / 113 degrees F
  Total CPU DRAM               2048 MB
  Total SRAM                   64 MB
  Total SDRAM                  1280 MB
  Start time                   2010-10-04 20:06:43 PDT
  Uptime                       1 hour, 32 minutes, 30 seconds

```

lcc2-re0:

```

-----
Slot 0 information:
  State                        Online
  Temperature                  42 degrees C / 107 degrees F
  Total CPU DRAM               2048 MB
  Total SRAM                   128 MB
  Total SDRAM                  2560 MB
  Start time                   2010-10-04 20:06:35 PDT
  Uptime                       1 hour, 32 minutes, 38 seconds
Slot 2 information:
  State                        Online
  Temperature                  42 degrees C / 107 degrees F
  Total CPU DRAM               2048 MB
  Total SRAM                   128 MB
  Total SDRAM                  2560 MB
  Start time                   2010-10-04 20:06:37 PDT
  Uptime                       1 hour, 32 minutes, 36 seconds
Slot 3 information:
  State                        Online
  Temperature                  40 degrees C / 104 degrees F
  Total CPU DRAM               2048 MB
  Total SRAM                   64 MB
  Total SDRAM                  1280 MB
  Start time                   2010-10-04 20:06:28 PDT
  Uptime                       1 hour, 32 minutes, 45 seconds

```

```

Slot 4 information:
  State                Online
  Temperature          33 degrees C / 91 degrees F
  Total CPU DRAM       1024 MB
  Total SRAM           64 MB
  Total SDRAM          1280 MB
  Start time           2010-10-04 20:08:03 PDT
  Uptime               1 hour, 31 minutes, 10 seconds
Slot 6 information:
  State                Online
  Temperature          43 degrees C / 109 degrees F
  Total CPU DRAM       2048 MB
  Total SRAM           128 MB
  Total SDRAM          2560 MB
  Start time           2010-10-04 20:06:44 PDT
  Uptime               1 hour, 32 minutes, 29 seconds
Slot 7 information:
  State                Online
  Temperature          46 degrees C / 114 degrees F
  Total CPU DRAM       2048 MB
  Total SRAM           64 MB
  Total SDRAM          1280 MB
  Start time           2010-10-04 20:06:46 PDT
  Uptime               1 hour, 32 minutes, 27 seconds

```

```
lcc3-re0:
```

```

-----
Slot 2 information:
  State                Online
  Temperature          38 degrees C / 100 degrees F
  Total CPU DRAM       2048 MB
  Total SRAM           128 MB
  Total SDRAM          2560 MB
  Start time           2010-10-04 20:17:31 PDT
  Uptime               1 hour, 21 minutes, 42 seconds
Slot 4 information:
  State                Online
  Temperature          41 degrees C / 105 degrees F
  Total CPU DRAM       2048 MB
  Total SRAM           128 MB
  Total SDRAM          2560 MB
  Start time           2010-10-04 20:17:34 PDT
  Uptime               1 hour, 21 minutes, 39 seconds
Slot 5 information:
  State                Online
  Temperature          41 degrees C / 105 degrees F
  Total CPU DRAM       2048 MB
  Total SRAM           128 MB
  Total SDRAM          2560 MB
  Start time           2010-10-04 20:17:36 PDT
  Uptime               1 hour, 21 minutes, 37 seconds
Slot 6 information:
  State                Online
  Temperature          40 degrees C / 104 degrees F
  Total CPU DRAM       2048 MB
  Total SRAM           128 MB
  Total SDRAM          2560 MB
  Start time           2010-10-04 20:17:39 PDT
  Uptime               1 hour, 21 minutes, 34 seconds
Slot 7 information:
  State                Online

```

```

Temperature                42 degrees C / 107 degrees F
Total CPU DRAM              2048 MB
Total SRAM                  64 MB
Total SDRAM                 1280 MB
Start time                  2010-10-04 20:17:41 PDT
Uptime                      1 hour, 21 minutes, 32 seconds

```

### show chassis fpc pic-status (TX Matrix Plus Router)

```
user@host> show chassis fpc pic-status
```

```
1cc0-re0:
```

```

-----
Slot 1  Online      FPC Type 2-ES
PIC 0   Online      8x 1GE(LAN), IQ2
Slot 2  Online      FPC Type 4-ES
PIC 0   Online      4x 10GE (LAN/WAN) XFP
Slot 4  Online      FPC Type 4-ES
PIC 0   Online      4x 10GE (LAN/WAN) XFP
Slot 6  Online      FPC Type 4-ES
PIC 0   Online      4x 10GE (LAN/WAN) XFP
PIC 1   Online      4x 10GE (LAN/WAN) XFP
Slot 7  Online      FPC Type 3-ES
PIC 0   Online      10x 1GE(LAN), 1000 BASE
PIC 2   Online      1x OC-192 SM SR2
PIC 3   Online      10x 1GE(LAN), 1000 BASE

```

```
1cc2-re0:
```

```

-----
Slot 0  Online      FPC Type 4-ES
PIC 0   Online      4x 10GE (LAN/WAN) XFP
Slot 2  Online      FPC Type 4-ES
PIC 0   Online      4x 10GE (LAN/WAN) XFP
PIC 1   Online      4x 10GE (LAN/WAN) XFP
Slot 3  Online      FPC Type 2-ES
PIC 0   Online      8x 1GE(LAN), IQ2
Slot 4  Online      FPC Type 4
PIC 0   Online      10x10GE(LAN/WAN) SFPP
Slot 6  Online      FPC Type 4-ES
PIC 0   Online      4x OC-192 SONET XFP
Slot 7  Online      FPC Type 3-ES
PIC 0   Online      10x 1GE(LAN), 1000 BASE
PIC 1   Offline     1x 10GE(LAN/WAN) IQ2E
PIC 2   Online      1x OC-192 SM SR2
PIC 3   Online      1x Tunnel

```

```
1cc3-re0:
```

```

-----
Slot 2  Online      FPC Type 4-ES
PIC 0   Online      10x10GE(LAN/WAN) SFPP
Slot 4  Online      FPC Type 4-ES
PIC 0   Online      4x OC-192 SONET XFP
Slot 5  Online      FPC Type 4-ES
PIC 0   Online      4x OC-192 SONET XFP
PIC 1   Online      4x 10GE (LAN/WAN) XFP
Slot 6  Online      FPC Type 4-ES
PIC 1   Online      4x 10GE (LAN/WAN) XFP
Slot 7  Online      FPC Type 3-ES
PIC 0   Online      10x 1GE(LAN), 1000 BASE
PIC 1   Online      8x 1GE(TYPE3), IQ2E
PIC 2   Online      4x OC-48 SONET

```

**show chassis fpc (TI600 Router)**

```
user@host> show chassis fpc
```

Slot	State	Temp (C)	CPU Utilization (%) Total Interrupt	Memory DRAM (MB)	Utilization (%) Heap Buffer
0	Empty				
1	Empty				
2	Online	49	3 0	2048	3 24
3	Online	46	6 0	2048	6 24
4	Empty				
5	Online	46	5 0	2048	3 24
6	Empty				
7	Online	44	8 0	1024	7 49

**show chassis fpc detail (TI600 Router)**

```
user@host> show chassis fpc detail
```

```
show chassis fpc detail
```

Slot 2 information:

State	Online
Temperature	49 degrees C / 120 degrees F
Total CPU DRAM	2048 MB
Total SRAM	64 MB
Total SDRAM	1280 MB
Start time	2010-10-04 21:12:52 PDT
Uptime	32 minutes, 9 seconds

Slot 3 information:

State	Online
Temperature	47 degrees C / 116 degrees F
Total CPU DRAM	2048 MB
Total SRAM	128 MB
Total SDRAM	2560 MB
Start time	2010-10-04 21:13:06 PDT
Uptime	31 minutes, 55 seconds

Slot 5 information:

State	Online
Temperature	46 degrees C / 114 degrees F
Total CPU DRAM	2048 MB
Total SRAM	64 MB
Total SDRAM	1280 MB
Start time	2010-10-04 21:12:56 PDT
Uptime	32 minutes, 5 seconds

Slot 7 information:

State	Online
Temperature	44 degrees C / 111 degrees F
Total CPU DRAM	1024 MB
Total SRAM	64 MB
Total SDRAM	1280 MB
Start time	2010-10-04 21:14:34 PDT
Uptime	30 minutes, 27 seconds

**show chassis fpc <fpc-slot> (EX Series Switch)**

```
user@host> show chassis fpc 2
```

Slot	State	Temp (C)	CPU Utilization (%) Total Interrupt	Memory DRAM (MB)	Utilization (%) Heap Buffer
2	Online	40	12 0	2048	19 14

**show chassis fpc slot (T1600 Router)**

```
user@host> show chassis fpc slot 2
```

Slot	State	Temp (C)	CPU Utilization (%)	Memory DRAM (MB)	Utilization (%)
			Total Interrupt	Heap	Buffer
2	Online	49	3 0	2048	3 24

**show chassis fpc pic-status (T1600 Router)**

```
user@host> show chassis fpc pic-status
```

```
Slot 2  Online      FPC Type 1-ES
PIC 0   Online      Load Type 1
PIC 1   Online      4x 1GE(LAN), IQ2E
PIC 3   Online      1x OC-12-3 SFP
Slot 3  Online      FPC Type 4-ES
PIC 0   Online      4x 10GE (LAN/WAN) XFP
PIC 1   Online      4x OC-192 SONET XFP
Slot 5  Online      FPC Type 2-ES
PIC 0   Online      Load Type 2
PIC 1   Online      8x 1GE(LAN), IQ2E
PIC 2   Online      8x 1GE(LAN), IQ2E
PIC 3   Online      1x OC-48-12-3 SFP
Slot 7  Online      FPC Type 4
PIC 0   Online      4x 10GE (LAN/WAN) XFP
```

**show chassis fpc (T4000 Router)**

```
user@host> show chassis fpc
```

Slot	State	Temp (C)	CPU Utilization (%)	Memory DRAM (MB)	Utilization (%)
			Total Interrupt	Heap	Buffer
0	Online	48	15 0	2816	21 27
1	Empty				
2	Empty				
3	Online	51	15 0	2816	21 27
4	Empty				
5	Online	39	8 0	2048	6 23
6	Online	49	15 0	2816	21 27
7	Empty				

**show chassis fpc detail (T4000 Router)**

```
user@host> show chassis fpc detail
```

```
Slot 0 information:
```

```
State Online
Temperature 48 degrees C / 118 degrees F
Total CPU DRAM 2816 MB
Total SRAM 1554 MB
Total SDRAM 10752 MB
Start time 2012-02-09 22:56:25 PST
Uptime 2 hours, 40 minutes, 52 seconds
```

```
Slot 3 information:
```

```
State Online
Temperature 51 degrees C / 123 degrees F
Total CPU DRAM 2816 MB
Total SRAM 1554 MB
Total SDRAM 10752 MB
```



```

Start time                2012-02-09 22:56:22 PST
Uptime                    2 hours, 40 minutes, 55 seconds
Slot 5 information:
State                     Online
Temperature                39 degrees C / 102 degrees F
Total CPU DRAM             2048 MB
Total SRAM                 128 MB
Total SDRAM                2560 MB
Start time                2012-02-09 22:51:27 PST
Uptime                    2 hours, 45 minutes, 50 seconds
Slot 6 information:
State                     Online
Temperature                49 degrees C / 120 degrees F
Total CPU DRAM             2816 MB
Total SRAM                 1554 MB
Total SDRAM                10752 MB
Start time                2012-02-09 22:56:29 PST
Uptime                    2 hours, 40 minutes, 48 seconds

```

#### show chassis fpc pic-status (T4000 Router)

```

user@host> show chassis fpc pic-status
Slot 0  Online      FPC Type 5-3D
PIC 0   Online      12x10GE (LAN/WAN) SFPP
PIC 1   Online      12x10GE (LAN/WAN) SFPP
Slot 3  Online      FPC Type 5-3D
PIC 0   Online      1x100GE
PIC 1   Online      12x10GE (LAN/WAN) SFPP
Slot 5  Online      FPC Type 4-ES
PIC 0   Online      100GE
PIC 1   Online      100GE CFP
Slot 6  Online      FPC Type 5-3D
PIC 0   Online      12x10GE (LAN/WAN) SFPP
PIC 1   Online      12x10GE (LAN/WAN) SFPP

```

#### show chassis fpc (QFX Series and OCX Series)

```

user@switch> show chassis fpc
Temp CPU Utilization (%)  Memory  Utilization (%)
Slot State                (C) Total Interrupt  DRAM (MB) Heap  Buffer
0  Online                  26      2          0      2820    0     49

```

#### show chassis fpc detail (QFX3500 Switches)

```

user@switch> show chassis fpc detail
Slot 0 information:
State                     Online
Temperature                28 degrees C / 82 degrees F
Total CPU DRAM             2820 MB
Total SRAM                 0 MB
Total SDRAM                0 MB
Start time                2010-09-20 01:34:13 PDT
Uptime                    3 days, 3 hours, 31 minutes, 48 seconds

```

#### show chassis fpc pic-status (QFX3500 Switches)

```

user@switch> show chassis fpc pic-status
Slot 0  Online      QFX 48x10G 4x40G Switch
PIC 0   Online      48x 10G-SFP+
PIC 1   Online      15x 10G-SFP+

```

**show chassis fpc interconnect-device (QFabric System)**

```

user@switch> show chassis fpc interconnect-device interconnect1
FPC status:

```

Slot	State	Temp (C)
0	Online	0
1	Online	0
2	Online	0
3	Online	0
4	Online	0
5	Online	0
6	Online	0
7	Online	0
8	Online	0
9	Online	0
10	Online	0
11	Online	0
12	Online	0
13	Online	0
14	Online	0
15	Online	0

**show chassis fpc interconnect-device (QFabric System)**

```

user@switch> show chassis fpc interconnect-device interconnect1 3
FPC status:

```

Slot	State	Temp (C)
3	Online	0

**show chassis fpc interconnect-device detail (QFabric System)**

```

user@switch> show chassis fpc interconnect-device interconnect1 3 detail
Slot 3 information:

```

State	Online
Temperature	0 degrees C / 32 degrees F
Start time	2011-08-18 10:45:04 PDT
Uptime	1 minute, 49 seconds

**show chassis fpc pic-status interconnect-device (QFabric System)**

```

user@switch> show chassis fpc pic-status interconnect-device interconnect1

```

Slot 0	Online	QFX 16-port QSFP+ Front Card
PIC 0	Online	16x 40G-QSFP+
PIC 1	Online	16x 40G-GE
Slot 1	Online	QFX 16-port QSFP+ Front Card
PIC 0	Online	16x 40G-QSFP+
PIC 1	Online	16x 40G-GE
Slot 2	Online	QFX 16-port QSFP+ Front Card
PIC 0	Online	16x 40G-QSFP+
PIC 1	Online	16x 40G-GE
Slot 3	Online	QFX 16-port QSFP+ Front Card
PIC 0	Online	16x 40G-QSFP+
PIC 1	Online	16x 40G-GE
Slot 4	Online	QFX 16-port QSFP+ Front Card
PIC 0	Online	16x 40G-QSFP+
PIC 1	Online	16x 40G-GE
Slot 5	Online	QFX 16-port QSFP+ Front Card

```

PIC 0 Online 16x 40G-QSFP+
PIC 1 Online 16x 40G-GE
Slot 6 Online QFX 16-port QSFP+ Front Card
PIC 0 Online 16x 40G-QSFP+
PIC 1 Online 16x 40G-GE
Slot 7 Online QFX 16-port QSFP+ Front Card
PIC 0 Online 16x 40G-QSFP+
PIC 1 Online 16x 40G-GE
Slot 8 Online QFX Fabric Rear Card
PIC 0 Online 16x 40G-GE
Slot 9 Online QFX Fabric Rear Card
PIC 0 Online 16x 40G-GE
Slot 10 Online QFX Fabric Rear Card
PIC 0 Online 16x 40G-GE
Slot 11 Online QFX Fabric Rear Card
PIC 0 Online 16x 40G-GE
Slot 12 Online QFX Fabric Rear Card
PIC 0 Online 16x 40G-GE
Slot 13 Online QFX Fabric Rear Card
PIC 0 Online 16x 40G-GE
Slot 14 Online QFX Fabric Rear Card
PIC 0 Online 16x 40G-GE
Slot 15 Online QFX Fabric Rear Card
PIC 0 Online 16x 40G-GE

```

#### show chassis fpc pic-status node-device (QFabric System)

```

user@switch> show chassis fpc pic-status node-device node1
Slot node1 Online QFX 48x10G 4x40G Switch
PIC 0 Online 48x 10G-SFP+
PIC 1 Online 4x 40G-QSFP+

```

#### show chassis fpc (PTX5000 Packet Transport Router)

```

user@host> show chassis fpc

```

Slot	State	Temp (C)	CPU Utilization (%)	Memory DRAM (MB)	Utilization (%)
			Total Interrupt	Heap	Buffer
0	Empty				
1	Empty				
2	Online	50	6 0	2816	5 27
3	Empty				
4	Empty				
5	Online	48	9 0	2816	5 27
6	Empty				
7	Online	49	8 0	2816	5 27

#### show chassis fpc detail (PTX5000 Packet Transport Router)

```

user@host> show chassis fpc detail
Slot 2 information:
State Online
Temperature 35 degrees C / 95 degrees F (PMB)
Temperature 35 degrees C / 95 degrees F (Intake)
Temperature 50 degrees C / 122 degrees F (Exhaust A)
Temperature 54 degrees C / 129 degrees F (Exhaust B)
Temperature 54 degrees C / 129 degrees F (TL0)
Temperature 52 degrees C / 125 degrees F (TQ0)
Temperature 61 degrees C / 141 degrees F (TL1)
Temperature 58 degrees C / 136 degrees F (TQ1)

```

```

Temperature          57 degrees C / 134 degrees F (TL2)
Temperature          58 degrees C / 136 degrees F (TQ2)
Temperature          62 degrees C / 143 degrees F (TL3)
Temperature          61 degrees C / 141 degrees F (TQ3)
Total CPU DRAM      2816 MB
Total SRAM           0 MB
Total SDRAM          0 MB
Start time           2012-01-12 12:05:42 PST
Uptime               3 hours, 14 minutes, 7 seconds
Slot 5 information:
State                Online
Temperature          35 degrees C / 95 degrees F (PMB)
Temperature          34 degrees C / 93 degrees F (Intake)
Temperature          48 degrees C / 118 degrees F (Exhaust A)
Temperature          53 degrees C / 127 degrees F (Exhaust B)
Temperature          54 degrees C / 129 degrees F (TL0)
Temperature          52 degrees C / 125 degrees F (TQ0)
Temperature          69 degrees C / 156 degrees F (TL1)
Temperature          56 degrees C / 132 degrees F (TQ1)
Temperature          54 degrees C / 129 degrees F (TL2)
Temperature          56 degrees C / 132 degrees F (TQ2)
Temperature          59 degrees C / 138 degrees F (TL3)
Temperature          60 degrees C / 140 degrees F (TQ3)
Total CPU DRAM      2816 MB
Total SRAM           0 MB
Total SDRAM          0 MB
Start time           2012-01-12 12:05:43 PST
Uptime               3 hours, 14 minutes, 6 seconds
Slot 7 information:
State                Online
Temperature          35 degrees C / 95 degrees F (PMB)
Temperature          33 degrees C / 91 degrees F (Intake)
Temperature          50 degrees C / 122 degrees F (Exhaust A)
Temperature          55 degrees C / 131 degrees F (Exhaust B)
Temperature          56 degrees C / 132 degrees F (TL0)
Temperature          56 degrees C / 132 degrees F (TQ0)
Temperature          61 degrees C / 141 degrees F (TL1)
Temperature          57 degrees C / 134 degrees F (TQ1)
Temperature          55 degrees C / 131 degrees F (TL2)
Temperature          59 degrees C / 138 degrees F (TQ2)
Temperature          62 degrees C / 143 degrees F (TL3)
Temperature          62 degrees C / 143 degrees F (TQ3)
Total CPU DRAM      2816 MB
Total SRAM           0 MB
Total SDRAM          0 MB
Start time           2012-01-12 12:05:44 PST
Uptime               3 hours, 14 minutes, 5 seconds

```

#### show chassis fpc pic-status (PTX5000 Packet Transport Router)

```

user@host> show chassis fpc pic-status
Slot 2  Online      FPC
  PIC 0  Online      24x 10GE(LAN) SFP+
  PIC 1  Online      24x 10GE(LAN) SFP+
Slot 5  Online      FPC
  PIC 0  Online      24x 10GE(LAN) SFP+
  PIC 1  Online      2x 40GE CFP
Slot 7  Online      FPC
  PIC 0  Online      24x 10GE(LAN) SFP+
  PIC 1  Online      2x 40GE CFP

```

## show chassis fpc (PTX10008 Router)

```

user@host> show chassis fpc

```

Utilization (%)	Temp	CPU Utilization (%)		CPU Utilization (%)			Memory
Slot State	(C)	Total	Interrupt	1min	5min	15min	DRAM (MB)
Heap Buffer							
0 Online	38	26	2	26	26	26	1953
20 32							
1 Empty							
2 Empty							
3 Empty							
4 Empty							
5 Online	67	26	2	26	26	26	1953
25 32							
6 Online	52	26	2	26	26	26	1953
25 32							
7 Empty							

## show chassis fpc detail (PTX10008 Router)

```

user@host> show chassis fpc detail

```

Slot 6 information:

State	Online
Total CPU DRAM	8192 MB
Temperature	42 degrees C / 107 degrees F
Start time	2018-09-17 02:42:16 PDT
Uptime	53 minutes, 40 seconds
Max power consumption	675 Watts

Slot 7 information:

State	Online
Total CPU DRAM	8192 MB
Temperature	51 degrees C / 123 degrees F
Start time	2018-09-17 02:42:26 PDT
Uptime	53 minutes, 30 seconds
Max power consumption	1150 Watts

## show chassis fpc (PTX10016 Router)

```

user@host> show chassis fpc

```

Utilization (%)	Temp	CPU Utilization (%)		CPU Utilization (%)			Memory
Slot State	(C)	Total	Interrupt	1min	5min	15min	DRAM (MB)
Heap Buffer							
0 Empty							
1 Online	36	27	2	27	27	27	1953
22 32							
2 Empty							
3 Online	36	27	2	27	27	27	1953
22 32							
4 Empty							
5 Empty							
6 Online	35	27	2	27	27	27	1953
22 32							
7 Empty							
8 Online	34	27	2	27	27	27	1953
22 32							
9 Online	46	24	2	24	24	24	1953

```

26          32
10 Empty
11 Empty
12 Empty
13 Empty
14 Empty
15 Empty

```

### show chassis fpc detail (PTX10016 Router)

```
user@host> show chassis fpc detail
```

```

Slot 0 information:
  State                               Online
  Total CPU DRAM                      8192 MB
  Temperature                         44 degrees C / 111 degrees F
  Start time                          2018-09-10 07:01:09 PDT
  Uptime                              6 days, 23 hours, 17 minutes, 9 seconds
  Max power consumption                1150 Watts
Slot 4 information:
  State                               Online
  Total CPU DRAM                      8192 MB
  Temperature                         40 degrees C / 104 degrees F
  Start time                          2018-09-10 07:01:17 PDT
  Uptime                              6 days, 23 hours, 17 minutes, 1 second
  Max power consumption                1150 Watts
Slot 6 information:
  State                               Online
  Total CPU DRAM                      8192 MB
  Temperature                         42 degrees C / 107 degrees F
  Start time                          2018-09-10 07:01:27 PDT
  Uptime                              6 days, 23 hours, 16 minutes, 51 seconds
  Max power consumption                1150 Watts
Slot 7 information:
  State                               Online
  Total CPU DRAM                      8192 MB
  Temperature                         41 degrees C / 105 degrees F
  Start time                          2018-09-10 07:01:32 PDT
  Uptime                              6 days, 23 hours, 16 minutes, 46 seconds
  Max power consumption                1150 Watts
Slot 9 information:
  State                               Online
  Total CPU DRAM                      16384 MB
  Temperature                         42 degrees C / 107 degrees F
  Start time                          2018-09-10 07:01:45 PDT
  Uptime                              6 days, 23 hours, 16 minutes, 33 seconds
  Max power consumption                1150 Watts
Slot 10 information:
  State                               Online
  Total CPU DRAM                      8192 MB
  Temperature                         41 degrees C / 105 degrees F
  Start time                          2018-09-10 07:01:46 PDT
  Uptime                              6 days, 23 hours, 16 minutes, 32 seconds
  Max power consumption                1150 Watts
Slot 11 information:
  State                               Online
  Total CPU DRAM                      16384 MB
  Temperature                         40 degrees C / 104 degrees F
  Start time                          2018-09-10 07:01:55 PDT
  Uptime                              6 days, 23 hours, 16 minutes, 23 seconds
  Max power consumption                1150 Watts

```

```

Slot 14 information:
  State                               Online
  Total CPU DRAM                      8192 MB
  Temperature                         42 degrees C / 107 degrees F
  Start time                         2018-09-10 07:01:54 PDT
  Uptime                             6 days, 23 hours, 16 minutes, 24 seconds
  Max power consumption               1150 Watts
Slot 15 information:
  State                               Online
  Total CPU DRAM                      16384 MB
  Temperature                         41 degrees C / 105 degrees F
  Start time                         2018-09-10 07:02:03 PDT
  Uptime                             6 days, 23 hours, 16 minutes, 15 seconds
  Max power consumption               1150 Watts

```

#### show chassis fpc (ACX2000 Universal Metro Router)

```

user@host> show chassis fpc

```

Slot	State	Temp (C)	CPU Utilization (%)	Memory DRAM (MB)	Utilization (%)
0	Online	61	17	512	21

#### show chassis fpc 0 (ACX2000 Universal Metro Router)

```

user@host> show chassis fpc 0

```

Slot	State	Temp (C)	CPU Utilization (%)	Memory DRAM (MB)	Utilization (%)
0	Online	61	17	512	21

#### show chassis fpc detail (ACX2000 Universal Metro Router)

```

user@host> show chassis fpc detail
Slot 0 information:
  State                               Online
  Temperature                         61 degrees C / 141 degrees F
  Total CPU DRAM                      512 MB
  Start time                         2012-05-29 02:52:06 PDT
  Uptime                             27 minutes, 17 seconds

```

#### show chassis fpc pic-status (ACX2000 Universal Metro Router)

```

user@host> show chassis fpc pic-status
Slot 0 Online
  PIC 0 Online      16x CHE1T1, RJ48
  PIC 1 Online      8x 1GE(LAN) RJ45
  PIC 2 Online      2x 1GE(LAN) SFP
  PIC 3 Online      2x 10GE(LAN) SFP+

```

#### show chassis FPC 1 (MX Routers with Media Services Blade [MSB])

```

user@switch> show chassis fpc 1

```

Slot	State	Temp (C)	CPU Utilization (%)	Memory DRAM (MB)	Utilization (%)
1	Online	34	5	3072	5

#### show chassis FPC 1 detail (MX Routers with Media Services Blade [MSB])

```

user@switch> show chassis fpc 1 detail

```

```

Slot 1 information:
State                               Online
Temperature                         34
Total CPU DRAM                     3072 MB
Total RLDRAM                       259 MB
Total DDR DRAM                     4864 MB
Start time:                        2012-06-19 10:51:43 PDT
Uptime:                            16 minutes, 48 seconds
Max Power Consumption               550 Watts

```

## Sample Output

### show chassis fpc (Node Slicing)

```

user@router>show chassis fpc

```

Slot	State	Temp (C)	CPU Utilization (%) Total	CPU Utilization (%) Interrupt	CPU Utilization (%) 1min	CPU Utilization (%) 5min	CPU Utilization (%) 15min	Memory DRAM (MB)
0	Online	45	12	0	12	12	12	3584
6		25	3					
1	Online	57	22	0	20	20	20	3136
16		22	2					
2	Online	50	19	0	17	17	16	3584
6		25	3					
3	Online	28	10	0	11	11	11	2048
10		20	6					
4	Online	42	20	0	20	19	19	3584
8		25	6					
5	Online	58	22	0	21	20	20	3136
16		22	4					
6	Online	49	17	0	15	16	16	3136
13		20	1					
7	Online	44	11	0	10	10	10	3584
6		25	5					
8	Online	40	19	0	18	18	18	3584
8		25	5					
9	Online	44	19	0	20	20	20	3584
8		25	5					

## Sample Output

### show chassis fpc pic-status (Node Slicing)

```

user@router> show chassis fpc pic-status

```

Slot	State	Hardware	GNF
0	Online	MPC5E 3D 24XGE+6XLGE	GNF 3
PIC 0	Online	12X10GE SFPP OTN	
PIC 1	Offline	12X10GE SFPP OTN	
PIC 2	Offline	3X40GE QSFPP	
PIC 3	Online	3X40GE QSFPP	
Slot 1	Online	MPC9E 3D	GNF 2
PIC 1	Online	MRATE-12xQSFPP-XGE-XLGE-CGE	
Slot 2	Online	MPC5E 3D Q 2CGE+4XGE	GNF 3
PIC 0	Online	2X10GE SFPP OTN	
PIC 1	Online	1X100GE CFP2 OTN	
PIC 2	Online	2X10GE SFPP OTN	
PIC 3	Online	1X100GE CFP2 OTN	
Slot 3	Online	MPCE Type 2 3D EQ	GNF 6



Slot 4	Online	MPC6E 3D	GNF 6
PIC 0	Online	24X10GE SFPP	
PIC 1	Online	2X100GE CFP2 OTN	
Slot 5	Online	MPC9E 3D	GNF 4
PIC 0	Online	MRATE-12xQSFPP-XGE-XLGE-CGE	
Slot 6	Online	MPC7E 3D MRATE-12xQSFPP-XGE-XLGE-CGE	GNF 1
PIC 0	Online	MRATE-6xQSFPP-XGE-XLGE-CGE	
PIC 1	Online	MRATE-6xQSFPP-XGE-XLGE-CGE	
Slot 7	Online	MPC5E 3D 2CGE+4XGE	GNF 5
PIC 0	Online	2X10GE SFPP OTN	
PIC 1	Online	1X100GE CFP2 OTN	
PIC 2	Online	2X10GE SFPP OTN	
PIC 3	Online	1X100GE CFP2 OTN	
Slot 8	Online	MPC6E 3D	GNF 5
PIC 0	Online	24X10GE SFPP OTN	
Slot 9	Online	MPC6E 3D	GNF 5
PIC 0	Online	24X10GE SFPP	
PIC 1	Online	4X100GE CXP	

## show chassis fabric fpcs

---

<b>List of Syntax</b>	<a href="#">Syntax on page 474</a> <a href="#">Syntax (MX Series Routers) on page 474</a> <a href="#">Syntax (MX2010, MX2020, MX10003, MX10008, and MX2008 3D Universal Edge Routers) on page 474</a> <a href="#">Syntax (T4000 Core Router) on page 474</a> <a href="#">Syntax (PTX Series Packet Transport Routers) on page 474</a> <a href="#">Syntax (TX Matrix Plus Router) on page 474</a> <a href="#">Syntax (QFX Series Switches) on page 474</a> <a href="#">Syntax (EX9253 Switches) on page 474</a> <a href="#">Syntax (EX9253 Switches) on page 474</a>
<b>Syntax</b>	<code>show chassis fabric fpcs</code> <code>&lt;lcc <i>number</i>&gt;</code>
<b>Syntax (MX Series Routers)</b>	<code>show chassis fabric fpcs</code> <code>&lt;extended&gt;</code> <code>&lt;all-members&gt;</code> <code>&lt;local&gt;</code> <code>&lt;member <i>member-id</i>&gt;</code>
<b>Syntax (MX2010, MX2020, MX10003, MX10008, and MX2008 3D Universal Edge Routers)</b>	<code>show chassis fabric fpcs</code>
<b>Syntax (T4000 Core Router)</b>	<code>show chassis fabric fpcs</code>
<b>Syntax (PTX Series Packet Transport Routers)</b>	<code>show chassis fabric fpcs &lt;slot <i>fpc-slot</i>&gt;</code>
<b>Syntax (TX Matrix Plus Router)</b>	<code>show chassis fabric fpcs</code> <code>&lt;lcc <i>number</i>&gt;</code>
<b>Syntax (QFX Series Switches)</b>	<code>show chassis fabric fpcs &lt;slot <i>fpc-slot</i>&gt;</code>
<b>Syntax (EX9253 Switches)</b>	<code>show chassis fabric fpcs</code>
<b>Syntax (EX9253 Switches)</b>	<code>show chassis fabric fpcs</code>
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. Command introduced in Junos OS Release 9.4 for EX Series switches.

Command introduced in Junos OS Release 12.1x48 for PTX Series Packet Transport Routers.

Command introduced in Junos OS Release 12.3 for MX2020 3D Universal Edge Routers.

Command introduced in Junos OS Release 12.3 for MX2010 3D Universal Edge Routers.

Command introduced in Junos OS Release 15.1X53-D30 for QFX Series switches.

**extended** option introduced in JunosOS Release 16.1 for MX2020 and MX2010 Routers.

Command introduced in Junos OS Release 17.2 for MX2008 3D Universal Edge Routers.

Command introduced in Junos OS Release 17.2 for PTX10008 Routers.

Command introduced in Junos OS Release 17.3 for MX10003 3D Universal Edge Routers.

Command introduced in Junos OS Release 18.2 for EX9253 Switches.

**Description** Display the state of the electrical switch fabric links between the Flexible PIC Concentrators (FPCs) and the Switch Interface Boards (SIBs).

**Options** **none**—Display the switch fabric link state. On a TX Matrix router, display the switching fabric link states for the FPCs in all T640 routers connected to the TX Matrix router. On a TX Matrix Plus router, display the switching fabric link states for the FPCs in all routers connected to the TX Matrix Plus router.

**extended**—(MX2020 and MX2010 Routers with SFB2) (Optional) Display the fabric link state for all 24 fabric planes.

**all-members**—(MX Series routers only) (Optional) Display the switching fabric link states for the FPCs in all members of the Virtual Chassis configuration.

**lcc *number***—(TX Matrix router and TX Matrix Plus router only) (Optional) On a TX Matrix router, display the switch fabric link state for the FPCs in the specified T640 router (line-card chassis) that is connected to the TX Matrix router. On a TX Matrix Plus router, display the switch fabric link state for the FPCs in the specified router (line-card chassis) that is connected to the TX Matrix Plus router. Replace ***number*** with a following value depending on the LCC configurations:

- From **0** through **3** on a T640 router on the routing matrix with TX Matrix routers.
- From **0** through **3** on a T1600 router on the routing matrix with TX Matrix Plus routers.
- From **0** through **7** on a T1600 router in a routing matrix with TX Matrix Plus router with 3D SIBs.
- **0, 2, 4, 6** on a T4000 router in a routing matrix with TX Matrix Plus router with 3D SIBs.

**local**—(MX Series routers only) (Optional) Display the switching fabric link states for the FPCs in the local Virtual Chassis member.

**member *member-id***—(MX Series routers only) (Optional) Display the switching fabric link states for the FPCs in the specified member of the Virtual Chassis configuration. Replace ***member-id*** with a value of 0 or 1.

**slot *fpc-slot***—(PTX Series Packet Transport Routers and QFX Series switches only)  
(Optional) Display the fabric state of the specified FPC slot. If no value is provided, display the status of all FPCs.

**Required Privilege Level** view

**Related Documentation**

- [request chassis fabric fpc](#)
- [show chassis fpc on page 424](#)
- [Displaying Information About DPCs or FPCs in an MX Series Router](#)

**List of Sample Output**

- [show chassis fabric fpcs \(M320 Router\) on page 477](#)
- [show chassis fabric fpcs \(MX240 Router\) on page 478](#)
- [show chassis fabric fpcs \(MX10008 Router\) on page 478](#)
- [show chassis fabric fpcs \(MX480 Router\) on page 480](#)
- [show chassis fabric fpcs \(MX960 Router\) on page 481](#)
- [show chassis fabric fpcs \(MX240 with AS MLC Modular Carrier Card\) on page 482](#)
- [show chassis fabric fpcs \(MX480 with AS MLC Modular Carrier Card\) on page 483](#)
- [show chassis fabric fpcs \(MX480 Router with MPC4E\) on page 483](#)
- [show chassis fabric fpcs \(MX960 with AS MLC Modular Carrier Card on page 485](#)
- [show chassis fabric fpcs \(MX2010 Router\) on page 486](#)
- [show chassis fabric fpcs \(MX2020 Router\) on page 490](#)
- [show chassis fabric fpcs \(MX2020 Router with MPC4E\) on page 492](#)
- [show chassis fabric fpcs \(MX2020 Router with SFB2\) on page 494](#)
- [show chassis fabric fpcs \(MX2008 Router\) on page 498](#)
- [show chassis fabric fpcs \(MX10003 Router\) on page 500](#)
- [show chassis fabric fpcs \(T320 Router\) on page 501](#)
- [show chassis fabric fpcs \(T640 Router\) on page 501](#)
- [show chassis fabric fpcs \(TX Matrix Router\) on page 502](#)
- [show chassis fabric fpcs \(TX Matrix Router with 3D SIBs\) on page 503](#)
- [show chassis fabric fpcs lcc \(TX Matrix Router with 3D SIBs\) on page 506](#)
- [show chassis fabric fpcs \(T1600 Router\) on page 507](#)
- [show chassis fabric fpcs \(T4000 Core Router\) on page 508](#)
- [show chassis fabric fpcs \(TX Matrix Plus Router\) on page 510](#)
- [show chassis fabric fpcs lcc \(TX Matrix Plus Router\) on page 517](#)
- [show chassis fabric fpcs \(EX8200 Switch\) on page 518](#)
- [show chassis fabric fpcs \(EX9253 Switch\) on page 519](#)
- [show chassis fabric fpcs \(EX9253 Switch\) on page 521](#)
- [show chassis fabric fpcs \(PTX3000 Router\) on page 523](#)
- [show chassis fabric fpcs \(PTX10008 Router\) on page 524](#)
- [show chassis fabric fpcs \(PTX10016 Router\) on page 526](#)
- [show chassis fabric fpcs \(QFX10008 Switch\) on page 527](#)

**Output Fields** [Table 19 on page 477](#) lists the output fields for the **show chassis fabric fpcs** command. Output fields are listed in the approximate order in which they appear.

Table 19: show chassis fabric fpcs Output Fields

Field Name	Field Description
<b>Fabric management FPC state</b>	<p>Switching fabric link (link from SIB to FPC) state for each FPC:</p> <ul style="list-style-type: none"> <li>• <b>Unused</b>—FPC is not present. (On MX240 and MX480 routers with AS- MLC modular carrier card or MPC4E only) the fabric plane from the pair that share physical links (1 and 5, and 3 and 7) is inactive.</li> <li>• <b>Destination error on PFEs list of PFE numbers</b>—Destination errors to the listed Packet Forwarding Engines. Indicates that the link is not carrying traffic to the listed Packet Forwarding Engines.  <b>NOTE:</b> In Junos OS Release 9.6 and later, the list of Packet Forwarding Engines with destination errors is displayed in the output.  In Junos OS Releases before 9.6, the output only indicates that there are destination errors. However, the list of Packet Forwarding Engines with destination errors is not displayed.</li> <li>• <b>Links ok</b>—Link between the spare SIB and FPC is eligible to carry traffic.</li> <li>• <b>Link error</b>—Link between the SIB and FPC has CRC errors. However, the link is still eligible to carry traffic.</li> <li>• <b>Plane disabled</b>—Fabric plane has been disabled for the following reasons: <ul style="list-style-type: none"> <li>• Destination errors have exceeded the thresholds.</li> <li>• Run-time link errors have exceeded the thresholds.</li> <li>• Initialization time link errors detected, and link training was unsuccessful.</li> <li>• <b>Plane Disabled, Links Error</b> (PTX Series Packet Transport Routers and QFX Series switches only)—The plane is disabled because of link errors detected at the FPC RX.</li> </ul> </li> <li>• <b>Plane Disabled, Links Down</b> (PTX Series Packet Transport Routers and QFX Series switches only)—The plane is disabled because of link errors detected at the SIB RX.</li> <li>• <b>Plane enabled</b>—Link between the active SIB and FPC is eligible to carry traffic.  <b>NOTE:</b> On the Enhanced MX SCB with MPC, a maximum of 4 planes are operational and running. On all the other SCBs with MPC, all the planes are operational and running.</li> <li>• <b>Plane Enabled, Links OK</b> (PTX Series Packet Transport Routers and QFX Series switches only)—The FPC CCL RX link is eligible to carry traffic.</li> <li>• <b>Plane Enabled, Links OK</b> (TX Matrix and TX Matrix Plus routers only)—The FPC HSL RX link is eligible to carry traffic.</li> </ul>

## Sample Output

### show chassis fabric fpcs (M320 Router)

```
user@host> show chassis fabric fpcs
```

```
Fabric management FPC state:
FPC #2
  PFE #1
    SIB #0      Plane enabled
    SIB #1      Plane enabled
    SIB #2      Plane enabled
    SIB #3      Plane enabled
```

#### show chassis fabric fpcs (MX240 Router)

```
user@host> show chassis fabric fpcs
Fabric management FPC state:
FPC 2
  PFE #0
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Links ok
    Plane 5: Links ok
    Plane 6: Links ok
    Plane 7: Links ok
  PFE #1
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Links ok
    Plane 5: Links ok
    Plane 6: Links ok
    Plane 7: Links ok
  PFE #2
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Links ok
    Plane 5: Links ok
    Plane 6: Links ok
    Plane 7: Links ok
  PFE #3
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Links ok
    Plane 5: Links ok
    Plane 6: Links ok
    Plane 7: Links ok
```

#### show chassis fabric fpcs (MX10008 Router)

```
user@host> show chassis fabric fpcs
Fabric management FPC state:
FPC 1
  PFE #0
```

```
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Unused
Plane 5: Unused
PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Unused
Plane 5: Unused
PFE #2
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Unused
Plane 5: Unused
PFE #3
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Unused
Plane 5: Unused
PFE #4
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Unused
Plane 5: Unused
PFE #5
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Unused
Plane 5: Unused
FPC 5
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Unused
Plane 5: Unused
PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Unused
Plane 5: Unused
PFE #2
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
```

```
Plane 4: Unused
Plane 5: Unused
PFE #3
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Unused
Plane 5: Unused
PFE #4
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Unused
Plane 5: Unused
PFE #5
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Unused
Plane 5: Unused
```

#### show chassis fabric fpcs (MX480 Router)

```
user@host> show chassis fabric fpcs
```

```
FPC 0
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Links ok
Plane 5: Links ok
Plane 6: Links ok
Plane 7: Links ok
PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Links ok
Plane 5: Links ok
Plane 6: Links ok
Plane 7: Links ok
PFE #2
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Links ok
Plane 5: Links ok
Plane 6: Links ok
Plane 7: Links ok
PFE #3
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
```



```

Plane 4: Links ok
Plane 5: Links ok
Plane 6: Links ok
Plane 7: Links ok
FPC 1
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled

```

#### show chassis fabric fpcs (MX960 Router)

```

user@host> show chassis fabric fpcs
FPC 0
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Links ok
Plane 5: Links ok
PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Links ok
Plane 5: Links ok
PFE #2
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Links ok
Plane 5: Links ok
PFE #3
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Links ok
Plane 5: Links ok
FPC 1
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled

```

```
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
FPC 2
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Links ok
Plane 5: Links ok
PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Links ok
Plane 5: Links ok
PFE #2
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Links ok
...
```

#### show chassis fabric fpcs (MX240 with AS MLC Modular Carrier Card)

In the following output, FPC 1 is the AS MLC modular carrier card (AS MCC).

```
user@host>show chassis fabric fpcs
FPC 1
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Unused
Plane 6: Plane enabled
Plane 7: Unused
FPC 2
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
```

**show chassis fabric fpcs (MX480 with AS MLC Modular Carrier Card)**

In the following output, FPC 5 is the AS MLC modular carrier card (AS MCC).

```

user@host>show chassis fabric fpcs
FPC 2
  PFE #0
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane enabled
    Plane 5: Plane enabled
    Plane 6: Plane enabled
    Plane 7: Plane enabled
FPC 4
  PFE #0
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Links ok
    Plane 5: Links ok
    Plane 6: Links ok
    Plane 7: Links ok
  PFE #2
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Links ok
    Plane 5: Links ok
    Plane 6: Links ok
    Plane 7: Links ok
FPC 5
  PFE #0
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane enabled
    Plane 5: Unused
    Plane 6: Plane enabled
    Plane 7: Unused

```

**show chassis fabric fpcs (MX480 Router with MPC4E)**

In the following output, **FPC4** is the MPC4E (MPC4E-3D-32XGE-SFPP) card.

```

user@host > show chassis fabric fpcs
Fabric management FPC state:
FPC 0
  PFE #0
    Plane 0: Links ok
    Plane 1: Links ok
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane enabled
    Plane 5: Links ok
    Plane 6: Plane enabled

```

```
Plane 7: Links ok
PFE #1
Plane 0: Links ok
Plane 1: Links ok
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Links ok
Plane 6: Plane enabled
Plane 7: Links ok
FPC 1
PFE #0
Plane 0: Links ok
Plane 1: Links ok
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Links ok
Plane 6: Plane enabled
Plane 7: Links ok
PFE #1
Plane 0: Links ok
Plane 1: Links ok
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Links ok
Plane 6: Plane enabled
Plane 7: Links ok
PFE #2
Plane 0: Links ok
Plane 1: Links ok
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Links ok
Plane 6: Plane enabled
Plane 7: Links ok
PFE #3
Plane 0: Links ok
Plane 1: Links ok
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Links ok
Plane 6: Plane enabled
FPC 3
PFE #0
Plane 0: Links ok
Plane 1: Links ok
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Links ok
Plane 6: Plane enabled
Plane 7: Links ok
FPC 4
PFE #0
Plane 0: Links ok
Plane 1: Links ok
```

```

Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Unused
Plane 6: Plane enabled
Plane 7: Unused
PFE #1
Plane 0: Links ok
Plane 1: Links ok
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Unused
Plane 6: Plane enabled
Plane 7: Unused

```

### show chassis fabric fpcs (MX960 with AS MLC Modular Carrier Card)

In the following output, FPC 5 is the AS MLC modular carrier card (AS MCC).

```

user@host>show chassis fabric fpcs
Fabric management FPC state:
FPC 0
  PFE #0
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Links ok
    Plane 5: Links ok
  PFE #1
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Links ok
    Plane 5: Links ok
FPC 1
  PFE #0
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Links ok
    Plane 5: Links ok
FPC 4
  PFE #0
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Links ok
    Plane 5: Links ok
  PFE #1
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Links ok
    Plane 5: Links ok
PFE #2

```

```
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Links ok
Plane 5: Links ok
PFE #3
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Links ok
Plane 5: Links ok
FPC 5
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Links ok
Plane 5: Links ok
FPC 8
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Links ok
Plane 5: Links ok
PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Links ok
Plane 5: Links ok
PFE #2
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Links ok
Plane 5: Links ok
PFE #3
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Links ok
Plane 5: Links ok
```

#### show chassis fabric fpcs (MX2010 Router)

```
user@host> show chassis fabric fpcs
Fabric management FPC state:
FPC 0
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane disabled
```

```
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane disabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
FPC 1
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane disabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
FPC 2
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane disabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane disabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
FPC 3
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane disabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane disabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
```

```
PFE #2
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane disabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled

PFE #3
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane disabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled

FPC 4
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane disabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled

FPC 5
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane disabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled

PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane disabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled

FPC 6
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane disabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled

PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
```



```
Plane 3: Plane disabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
PFE #2
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane disabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
PFE #3
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane disabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
FPC 7
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane disabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane disabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
FPC 8
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane disabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
FPC 9
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane disabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
```

```
Plane 7: Plane enabled
PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane disabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
```

### show chassis fabric fpcs (MX2020 Router)

```
user@host> show chassis fabric fpcs
Fabric management FPC state:
FPC 0
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
PFE #2
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
PFE #3
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
FPC 1
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
```

```
Plane 7: Plane enabled
PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
PFE #2
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
PFE #3
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
FPC 2
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
PFE #2
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
PFE #3
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
```

```
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
FPC 3
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
PFE #2
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
PFE #3
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
FPC 4
...
```

#### show chassis fabric fpcs (MX2020 Router with MPC4E)

```
user@host > show chassis fabric fpcs
Fabric management FPC state:
FPC 0
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
```

```
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
FPC 9
  PFE #0
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane enabled
    Plane 5: Plane enabled
    Plane 6: Plane enabled
    Plane 7: Plane enabled
  PFE #1
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane enabled
    Plane 5: Plane enabled
    Plane 6: Plane enabled
    Plane 7: Plane enabled
FPC 10
  PFE #0
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane enabled
    Plane 5: Plane enabled
    Plane 6: Plane enabled
    Plane 7: Plane enabled
FPC 14
  PFE #0
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane enabled
    Plane 5: Plane enabled
    Plane 6: Plane enabled
    Plane 7: Plane enabled
  PFE #1
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane enabled
    Plane 5: Plane enabled
    Plane 6: Plane enabled
    Plane 7: Plane enabled
FPC 19
  PFE #0
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane enabled
```

```
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
PFE #2
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
PFE #3
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
```

#### show chassis fabric fpcs (MX2020 Router with SFB2)

```
user@host> show chassis fabric fpcs extended
Fabric management FPC state:
FPC 0
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Destination error
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
Plane 8: Destination error
Plane 9: Destination error
Plane 10: Destination error
Plane 11: Destination error
Plane 12: Plane enabled
Plane 13: Plane enabled
Plane 14: Plane enabled
Plane 15: Plane enabled
Plane 16: Plane enabled
Plane 17: Plane enabled
Plane 18: Plane disabled
Plane 19: Plane disabled
Plane 20: Plane disabled
Plane 21: Destination error
Plane 22: Plane enabled
Plane 23: Plane enabled
```

```
FPC 1
  PFE #0
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane enabled
    Plane 5: Plane enabled
    Plane 6: Plane enabled
    Plane 7: Plane enabled
    Plane 8: Plane enabled
    Plane 9: Plane enabled
    Plane 10: Plane enabled
    Plane 11: Plane enabled
    Plane 12: Plane enabled
    Plane 13: Plane enabled
    Plane 14: Plane enabled
    Plane 15: Plane enabled
    Plane 16: Plane enabled
    Plane 17: Plane enabled
    Plane 18: Plane disabled
    Plane 19: Plane disabled
    Plane 20: Plane disabled
    Plane 21: Plane enabled
    Plane 22: Plane enabled
    Plane 23: Plane enabled
  PFE #1
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane enabled
    Plane 5: Plane enabled
    Plane 6: Plane enabled
    Plane 7: Plane enabled
    Plane 8: Plane enabled
    Plane 9: Plane enabled
    Plane 10: Plane enabled
    Plane 11: Plane enabled
    Plane 12: Plane enabled
    Plane 13: Plane enabled
    Plane 14: Plane enabled
    Plane 15: Plane enabled
    Plane 16: Plane enabled
    Plane 17: Plane enabled
    Plane 18: Plane disabled
    Plane 19: Plane disabled
    Plane 20: Plane disabled
    Plane 21: Plane enabled
    Plane 22: Plane enabled
    Plane 23: Plane enabled
  PFE #2
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane enabled
    Plane 5: Plane enabled
    Plane 6: Plane enabled
    Plane 7: Plane enabled
    Plane 8: Plane enabled
```

Plane 9: Plane enabled  
Plane 10: Plane enabled  
Plane 11: Plane enabled  
Plane 12: Plane enabled  
Plane 13: Plane enabled  
Plane 14: Plane enabled  
Plane 15: Plane enabled  
Plane 16: Plane enabled  
Plane 17: Plane enabled  
Plane 18: Plane disabled  
Plane 19: Plane disabled  
Plane 20: Plane disabled  
Plane 21: Plane enabled  
Plane 22: Plane enabled  
Plane 23: Plane enabled

## PFE #3

Plane 0: Plane enabled  
Plane 1: Plane enabled  
Plane 2: Plane enabled  
Plane 3: Plane enabled  
Plane 4: Plane enabled  
Plane 5: Plane enabled  
Plane 6: Plane enabled  
Plane 7: Plane enabled  
Plane 8: Plane enabled  
Plane 9: Plane enabled  
Plane 10: Plane enabled  
Plane 11: Plane enabled  
Plane 12: Plane enabled  
Plane 13: Plane enabled  
Plane 14: Plane enabled  
Plane 15: Plane enabled  
Plane 16: Plane enabled  
Plane 17: Plane enabled  
Plane 18: Plane disabled  
Plane 19: Plane disabled  
Plane 20: Plane disabled  
Plane 21: Plane enabled  
Plane 22: Plane enabled  
Plane 23: Plane enabled

...

## FPC 19

## PFE #0

Plane 0: Plane enabled  
Plane 1: Plane enabled  
Plane 2: Plane enabled  
Plane 3: Plane enabled  
Plane 4: Plane enabled  
Plane 5: Plane enabled  
Plane 6: Plane enabled  
Plane 7: Plane enabled  
Plane 8: Plane enabled  
Plane 9: Plane enabled  
Plane 10: Plane enabled  
Plane 11: Plane enabled  
Plane 12: Plane enabled  
Plane 13: Plane enabled  
Plane 14: Plane enabled  
Plane 15: Plane enabled  
Plane 16: Plane enabled



```
Plane 17: Plane enabled
Plane 18: Unused
Plane 19: Unused
Plane 20: Unused
Plane 21: Plane enabled
Plane 22: Plane enabled
Plane 23: Plane enabled
PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
Plane 8: Plane enabled
Plane 9: Plane enabled
Plane 10: Plane enabled
Plane 11: Plane enabled
Plane 12: Plane enabled
Plane 13: Plane enabled
Plane 14: Plane enabled
Plane 15: Plane enabled
Plane 16: Plane enabled
Plane 17: Plane enabled
Plane 18: Unused
Plane 19: Unused
Plane 20: Unused
Plane 21: Plane enabled
Plane 22: Plane enabled
Plane 23: Plane enabled
PFE #2
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
Plane 8: Plane enabled
Plane 9: Plane enabled
Plane 10: Plane enabled
Plane 11: Plane enabled
Plane 12: Plane enabled
Plane 13: Plane enabled
Plane 14: Plane enabled
Plane 15: Plane enabled
Plane 16: Plane enabled
Plane 17: Plane enabled
Plane 18: Unused
Plane 19: Unused
Plane 20: Unused
Plane 21: Plane enabled
Plane 22: Plane enabled
Plane 23: Plane enabled
PFE #3
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
```

```
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
Plane 8: Plane enabled
Plane 9: Plane enabled
Plane 10: Plane enabled
Plane 11: Plane enabled
Plane 12: Plane enabled
Plane 13: Plane enabled
Plane 14: Plane enabled
Plane 15: Plane enabled
Plane 16: Plane enabled
Plane 17: Plane enabled
Plane 18: Unused
Plane 19: Unused
Plane 20: Unused
Plane 21: Plane enabled
Plane 22: Plane enabled
Plane 23: Plane enabled
```

#### show chassis fabric fpcs (MX2008 Router)

```
user@host> show chassis fabric fpcs
Fabric management FPC state:
FPC 0
  PFE #0
    Plane 0: Plane disabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane disabled
    Plane 5: Plane enabled
    Plane 6: Plane enabled
    Plane 7: Plane disabled
  PFE #1
    Plane 0: Plane disabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane disabled
    Plane 5: Plane enabled
    Plane 6: Plane enabled
    Plane 7: Plane disabled
  PFE #2
    Plane 0: Plane disabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane disabled
    Plane 5: Plane enabled
    Plane 6: Plane enabled
    Plane 7: Plane disabled
  PFE #3
    Plane 0: Plane disabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane disabled
    Plane 5: Plane enabled
```

```
Plane 6: Plane enabled
Plane 7: Plane disabled
FPC 1
  PFE #0
    Plane 0: Plane disabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane disabled
    Plane 5: Plane enabled
    Plane 6: Plane enabled
    Plane 7: Plane disabled
  PFE #1
    Plane 0: Plane disabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane disabled
    Plane 5: Plane enabled
    Plane 6: Plane enabled
    Plane 7: Plane disabled
  PFE #2
    Plane 0: Plane disabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane disabled
    Plane 5: Plane enabled
    Plane 6: Plane enabled
    Plane 7: Plane disabled
  PFE #3
    Plane 0: Plane disabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane disabled
    Plane 5: Plane enabled
    Plane 6: Plane enabled
    Plane 7: Plane disabled
FPC 3
  PFE #0
    Plane 0: Plane disabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane disabled
    Plane 5: Plane enabled
    Plane 6: Plane enabled
    Plane 7: Plane disabled
FPC 5
  PFE #0
    Plane 0: Plane disabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane disabled
    Plane 5: Plane enabled
    Plane 6: Plane enabled
    Plane 7: Plane disabled
```

**show chassis fabric fpcs (MX10003 Router)**

```
user@host> show chassis fabric fpcs
```

```
Fabric management FPC state:
```

```
FPC 1
```

```
  PFE #0
```

```
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane enabled
    Plane 5: Plane enabled
    Plane 6: Plane enabled
    Plane 7: Plane enabled
    Plane 8: Plane enabled
    Plane 9: Plane enabled
    Plane 10: Plane enabled
    Plane 11: Plane enabled
    Plane 12: Plane enabled
    Plane 13: Plane enabled
    Plane 14: Plane enabled
    Plane 15: Plane enabled
    Plane 16: Plane enabled
    Plane 17: Plane enabled
    Plane 18: Plane enabled
    Plane 19: Plane enabled
    Plane 20: Plane enabled
    Plane 21: Plane enabled
```

```
  PFE #1
```

```
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane enabled
    Plane 5: Plane enabled
    Plane 6: Plane enabled
    Plane 7: Plane enabled
    Plane 8: Plane enabled
    Plane 9: Plane enabled
    Plane 10: Plane enabled
    Plane 11: Plane enabled
    Plane 12: Plane enabled
    Plane 13: Plane enabled
    Plane 14: Plane enabled
    Plane 15: Plane enabled
    Plane 16: Plane enabled
    Plane 17: Plane enabled
    Plane 18: Plane enabled
    Plane 19: Plane enabled
    Plane 20: Plane enabled
    Plane 21: Plane enabled
```

```
  PFE #2
```

```
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane enabled
    Plane 5: Plane enabled
    Plane 6: Plane enabled
    Plane 7: Plane enabled
```

```

Plane 8: Plane enabled
Plane 9: Plane enabled
Plane 10: Plane enabled
Plane 11: Plane enabled
Plane 12: Plane enabled
Plane 13: Plane enabled
Plane 14: Plane enabled
Plane 15: Plane enabled
Plane 16: Plane enabled
Plane 17: Plane enabled
Plane 18: Plane enabled
Plane 19: Plane enabled
Plane 20: Plane enabled
Plane 21: Plane enabled

```

### show chassis fabric fpcs (T320 Router)

```

user@host> show chassis fabric fpcs
FPC #3
  PFE #1
    SIB #0
      Links ok
    SIB #1
      Plane enabled
    SIB #2
      Plane enabled
FPC #5
  PFE #1
    SIB #0
      Links ok
    SIB #1
      Plane enabled
    SIB #2
      Plane enabled
FPC #7
  PFE #1
    SIB #0
      Links ok
    SIB #1
      Plane enabled
    SIB #2
      Plane enabled

```

### show chassis fabric fpcs (T640 Router)

```

user@host> show chassis fabric fpcs
Fabric management FPC state:
FPC #2
  PFE #1
    SIB #0
      Links ok
    SIB #1
      Plane enabled
    SIB #2
      Plane enabled
    SIB #3
      Plane enabled
    SIB #4
      Plane enabled

```

```

FPC #3
  PFE #1
    SIB #2
      Plane enabled
    SIB #3
      Link error
      Destination error on PFes
      8   9   10  11  12  13  14  15  16  17  18  19  20  21
    SIB #4
      Destination error on PFes
      8   9   10  11  12  13  14  15  16  17  18  19  20  21
...

```

### show chassis fabric fpcs (TX Matrix Router)

```

user@host> show chassis fabric fpcs
lcc0-re0:
-----
Fabric management FPC state:
FPC #0
  PFE #1
    SIB #0
      Links ok
    SIB #2
      Links ok
    SIB #3
      Links ok
    SIB #4
      Links ok
FPC #2
  PFE #1
    SIB #0
      Links ok
    SIB #2
      Links ok
    SIB #3
      Links ok
    SIB #4
      Links ok
FPC #3
  PFE #1
    SIB #2
      Plane enabled
    SIB #3
      Link error
      Destination error on PFes
      8   9   10  11  12  13  14  15  16  17  18  19  20  21
    SIB #4
      Destination error on PFes
      8   9   10  11  12  13  14  15  16  17  18  19  20  21
...
FPC #4
  PFE #0
    SIB #4 Links ok
  PFE #1
    SIB #4 Links ok
FPC #5
  PFE #1
    SIB #4 Links ok
FPC #6
  PFE #1
    SIB #4 Links ok

```

```

lcc2-re0:
-----
Fabric management FPC state:
FPC #0
  PFE #1
    SIB #4 Links ok
FPC #1
  PFE #1
    SIB #4 Links ok
FPC #2
  PFE #0
    SIB #4 Links ok
  PFE #1
    SIB #4 Links ok
FPC #4
  PFE #0
    SIB #4 Links ok
  PFE #1
    SIB #4 Links ok
FPC #5
  PFE #1
    SIB #4 Links ok

```

#### show chassis fabric fpcs (TX Matrix Router with 3D SIBs)

```

user@host> show chassis fabric fpcs
lcc0-re0:
-----
Fabric management FPC state:
FPC #0
  PFE #0
    SIB #0
      Links ok
    SIB #1
      Links ok
    SIB #2
      Links ok
    SIB #3
      Links ok
    SIB #4
      Links ok
  PFE #1
    SIB #0
      Links ok
    SIB #1
      Links ok
    SIB #2
      Links ok
    SIB #3
      Links ok
    SIB #4
      Links ok
FPC #3
  PFE #0
    SIB #0
      Links ok
    SIB #1
      Links ok
    SIB #2
      Links ok

```

```
SIB #3
    Links ok
SIB #4
    Links ok
PFE #1
    SIB #0
        Links ok
    SIB #1
        Links ok
    SIB #2
        Links ok
    SIB #3
        Links ok
    SIB #4
        Links ok
FPC #4
    PFE #0
        SIB #0
            Links ok
        SIB #1
            Links ok
        SIB #2
            Links ok
        SIB #3
            Links ok
        SIB #4
            Links ok
    PFE #1
        SIB #0
            Links ok
        SIB #1
            Links ok
        SIB #2
            Links ok
        SIB #3
            Links ok
        SIB #4
            Links ok
FPC #5
    PFE #0
        SIB #0
            Links ok
        SIB #1
            Links ok
        SIB #2
            Links ok
        SIB #3
            Links ok
        SIB #4
            Links ok
    PFE #1
        SIB #0
            Links ok
        SIB #1
            Links ok
        SIB #2
            Links ok
        SIB #3
            Links ok
        SIB #4
            Links ok
```



```
FPC #6
  PFE #0
    SIB #0      Links ok
    SIB #1      Links ok
    SIB #2      Links ok
    SIB #3      Links ok
    SIB #4      Links ok
  PFE #1
    SIB #0      Links ok
    SIB #1      Links ok
    SIB #2      Links ok
    SIB #3      Links ok
    SIB #4      Links ok
```

```
lcc2-re0:
```

```
lcc4-re0:
```

```
Fabric management FPC state:
```

```
FPC #2
  PFE #0
    SIB #0      Links ok
    SIB #1      Links ok
    SIB #2      Links ok
    SIB #3      Links ok
    SIB #4      Links ok
  PFE #1
    SIB #0      Links ok
    SIB #1      Links ok
    SIB #2      Links ok
    SIB #3      Links ok
    SIB #4      Links ok
FPC #3
  PFE #0
    SIB #0      Links ok
    SIB #1      Links ok
    SIB #2      Links ok
```

```
SIB #3
    Links ok
SIB #4
    Links ok
PFE #1
SIB #0
    Links ok
SIB #1
    Links ok
SIB #2
    Links ok
SIB #3
    Links ok
SIB #4
    Links ok
```

```
lcc6-re0:
```

#### show chassis fabric fpcs lcc (TX Matrix Router with 3D SIBs)

```
user@host> show chassis fabric fpcs lcc 4
lcc4-re0:
```

```
-----
Fabric management FPC state:
```

```
FPC #2
PFE #0
SIB #0
    Links ok
SIB #1
    Links ok
SIB #2
    Links ok
SIB #3
    Links ok
SIB #4
    Links ok
PFE #1
SIB #0
    Links ok
SIB #1
    Links ok
SIB #2
    Links ok
SIB #3
    Links ok
SIB #4
    Links ok
FPC #3
PFE #0
SIB #0
    Links ok
SIB #1
    Links ok
SIB #2
    Links ok
SIB #3
    Links ok
SIB #4
    Links ok
PFE #1
```

```

SIB #0
    Links ok
SIB #1
    Links ok
SIB #2
    Links ok
SIB #3
    Links ok
SIB #4
    Links ok

```

### show chassis fabric fpcs (T1600 Router)

```

user@host> show chassis fabric fpcs
Fabric management FPC state:
FPC #0

```

```

    PFE #0
        SIB #0
            Links ok
        SIB #1
            Plane enabled
        SIB #2
            Plane enabled
        SIB #3
            Plane enabled
        SIB #4
            Plane enabled

```

```

    PFE #1
        SIB #0
            Links ok
        SIB #1
            Plane enabled
        SIB #2
            Plane enabled
        SIB #3
            Plane enabled
        SIB #4
            Plane enabled

```

```

FPC #1
    PFE #0
        SIB #0
            Links ok
        SIB #1
            Plane enabled
        SIB #2
            Plane enabled
        SIB #3
            Plane enabled
        SIB #4
            Plane enabled

```

```

    PFE #1
        SIB #0
            Links ok
        SIB #1
            Plane enabled
        SIB #2
            Plane enabled
        SIB #3
            Plane enabled
        SIB #4
            Plane enabled

```

```

FPC #2
PFE #0
  SIB #0
    Links ok
  SIB #1
    Plane enabled
  SIB #2
    Plane enabled
  SIB #3
    Plane enabled
  SIB #4
    Plane enabled
FPC #4
PFE #0
  SIB #0
    Links ok
  SIB #1
    Plane enabled
  SIB #2
    Plane enabled
  SIB #3
    Plane enabled
  SIB #4
    Plane enabled
PFE #1
  SIB #0
    Links ok
  SIB #1
    Plane enabled
  SIB #2
    Plane enabled
  SIB #3
    Plane enabled
  SIB #4
    Plane enabled
FPC #3
PFE #1
  SIB #2
    Plane enabled
  SIB #3
    Link error
    Destination error on PFES      0  1  2  3  4  5  6  7
    8  9 10 11 12 13 14 15 16 17 18 19 20 21
  SIB #4
    Destination error on PFES      0  1  2  3  4  5  6  7
    8  9 10 11 12 13 14 15 16 17 18 19 20 21

```

#### show chassis fabric fpcs (T4000 Core Router)

Fabric management FPC state:

```

FPC #2
PFE #0
  SIB #0
    Links ok
  SIB #1
    Plane enabled
  SIB #2
    Plane enabled
  SIB #3
    Plane enabled
  SIB #4

```

```
Plane enabled
FPC #3
  PFE #0
    SIB #0
      Links ok
    SIB #1
      Plane enabled
    SIB #2
      Plane enabled
    SIB #3
      Plane enabled
    SIB #4
      Plane enabled
FPC #5
  PFE #0
    SIB #0
      Links ok
    SIB #1
      Plane enabled
    SIB #2
      Plane enabled
    SIB #3
      Plane enabled
    SIB #4
      Plane enabled
  PFE #1
    SIB #0
      Links ok
    SIB #1
      Plane enabled
    SIB #2
      Plane enabled
    SIB #3
      Plane enabled
    SIB #4
      Plane enabled
FPC #6
  PFE #0
    SIB #0
      Links ok
    SIB #1
      Plane enabled
    SIB #2
      Plane enabled
    SIB #3
      Plane enabled
    SIB #4
      Plane enabled
  PFE #1
    SIB #0
      Links ok
    SIB #1
      Plane enabled
    SIB #2
      Plane enabled
    SIB #3
      Plane enabled
    SIB #4
      Plane enabled
```

**show chassis fabric fpcs (TX Matrix Plus Router)**

```
user@host> show chassis fabric fpcs
1cc0-re0:
```

```
-----
Fabric management FPC state:
```

```
FPC #0
```

```
  PFE #1
```

```
    SIB #0
```

```
      Unused
```

```
    SIB #1
```

```
      Links ok
```

```
    SIB #2
```

```
      Links ok
```

```
    SIB #3
```

```
      Links ok
```

```
    SIB #4
```

```
      Links ok
```

```
FPC #2
```

```
  PFE #0
```

```
    SIB #0
```

```
      Unused
```

```
    SIB #1
```

```
      Links ok
```

```
    SIB #2
```

```
      Links ok
```

```
    SIB #3
```

```
      Links ok
```

```
    SIB #4
```

```
      Links ok
```

```
  PFE #1
```

```
    SIB #0
```

```
      Unused
```

```
    SIB #1
```

```
      Links ok
```

```
    SIB #2
```

```
      Links ok
```

```
    SIB #3
```

```
      Links ok
```

```
    SIB #4
```

```
      Links ok
```

```
FPC #3
```

```
  PFE #1
```

```
    SIB #2
```

```
      Plane enabled
```

```
    SIB #3
```

```
      Link error
```

```
      Destination error on PFES      0  1  2  3  4  5  6  7
      8  9 10 11 12 13 14 15 16 17 18 19 20 21
```

```
    SIB #4
```

```
      Destination error on PFES      0  1  2  3  4  5  6  7
      8  9 10 11 12 13 14 15 16 17 18 19 20 21
```

```
FPC #4
```

```
  PFE #0
```

```
    SIB #0
```

```
      Unused
```

```
    SIB #1
```

```
      Links ok
```

```
    SIB #2
```

```
      Links ok
```

```
    SIB #3
```

```

        Links ok
    SIB #4
        Links ok
PFE #1
    SIB #0
        Unused
    SIB #1
        Links ok
    SIB #2
        Links ok
    SIB #3
        Links ok
    SIB #4
        Links ok
FPC #6
PFE #0
    SIB #0
        Unused
    SIB #1
        Links ok
    SIB #2
        Links ok
    SIB #3
        Links ok
    SIB #4
        Links ok
PFE #1
    SIB #0
        Unused
    SIB #1
        Links ok
    SIB #2
        Links ok
    SIB #3
        Links ok
    SIB #4
        Links ok
FPC #7
PFE #0
    SIB #0
        Unused
    SIB #1
        Links ok
    SIB #2
        Links ok
    SIB #3
        Links ok
    SIB #4
        Links ok

```

```
lcc1-re0:
```

```
-----
Fabric management FPC state:
```

```

FPC #2
PFE #0
    SIB #0
        Links ok
    SIB #1
        Links ok
    SIB #2
        Links ok

```

```

SIB #3
    Links ok
SIB #4
    Links ok
PFE #1
    SIB #0
        Links ok
    SIB #1
        Links ok
    SIB #2
        Links ok
    SIB #3
        Links ok
    SIB #4
        Links ok
FPC #4
    PFE #0
        SIB #0
            Links ok
        SIB #1
            Links ok
        SIB #2
            Links ok
        SIB #3
            Links ok
        SIB #4
            Links ok
    PFE #1
        SIB #0
            Links ok
        SIB #1
            Links ok
        SIB #2
            Links ok
        SIB #3
            Destination error on PFES      1      8      9      29      40      65      72      73
            93 104
        SIB #4
            Links ok
FPC #6
    PFE #0
        SIB #0
            Links ok
        SIB #1
            Links ok
        SIB #2
            Links ok
        SIB #3
            Links ok
        SIB #4
            Links ok
    PFE #1
        SIB #0
            Links ok
        SIB #1
            Links ok
        SIB #2
            Links ok
        SIB #3
            Links ok

```



```
SIB #4
Links ok
FPC #7
PFE #0
SIB #0
Links ok
SIB #1
Links ok
SIB #2
Links ok
SIB #3
Links ok
SIB #4
Links ok
```

```
lcc2-re0:
```

```
-----
Fabric management FPC state:
```

```
FPC #0
PFE #0
SIB #0
Links ok
SIB #1
Links ok
SIB #2
Links ok
SIB #3
Links ok
SIB #4
Links ok
PFE #1
SIB #0
Links ok
SIB #1
Links ok
SIB #2
Links ok
SIB #3
Links ok
SIB #4
Links ok
FPC #2
PFE #0
SIB #0
Links ok
SIB #1
Links ok
SIB #2
Links ok
SIB #3
Links ok
SIB #4
Links ok
PFE #1
SIB #0
Links ok
SIB #1
Links ok
SIB #2
Links ok
SIB #3
```

```

        SIB #4      Links ok
        SIB #4      Links ok
FPC #4
  PFE #0
    SIB #0
      Links ok
    SIB #1
      Links ok
    SIB #2
      Links ok
    SIB #3
      Links ok
    SIB #4
      Links ok
FPC #5
  PFE #0
    SIB #0
      Links ok
    SIB #1
      Links ok
    SIB #2
      Links ok
    SIB #3
      Links ok
    SIB #4
      Links ok
  PFE #1
    SIB #0
      Links ok
    SIB #1
      Links ok
    SIB #2
      Links ok
    SIB #3
      Links ok
    SIB #4
      Links ok
FPC #6
  PFE #0
    SIB #0
      Links ok
    SIB #1
      Links ok
    SIB #2
      Links ok
    SIB #3
      Links ok
    SIB #4
      Links ok
  PFE #1
    SIB #0
      Links ok
    SIB #1
      Links ok
    SIB #2
      Links ok
    SIB #3
      Links ok
    SIB #4
      Links ok
```

```
FPC #7
  PFE #0
    SIB #0      Links ok
    SIB #1      Links ok
    SIB #2      Links ok
    SIB #3      Links ok
    SIB #4      Links ok
```

```
lcc3-re0:
```

```
-----
Fabric management FPC state:
```

```
FPC #0
  PFE #0
    SIB #0      Links ok
    SIB #1      Links ok
    SIB #2      Links ok
    SIB #3      Links ok
    SIB #4      Links ok
  PFE #1
    SIB #0      Links ok
    SIB #1      Links ok
    SIB #2      Links ok
    SIB #3      Links ok
    SIB #4      Links ok
FPC #2
  PFE #0
    SIB #0      Links ok
    SIB #1      Links ok
    SIB #2      Links ok
    SIB #3      Links ok
    SIB #4      Links ok
  PFE #1
    SIB #0      Links ok
    SIB #1      Links ok
    SIB #2      Links ok
    SIB #3      Links ok
    SIB #4
```

```

Links ok
FPC #4
  PFE #0
    SIB #0
      Links ok
    SIB #1
      Links ok
    SIB #2
      Links ok
    SIB #3
      Links ok
    SIB #4
      Links ok
  PFE #1
    SIB #0
      Links ok
    SIB #1
      Links ok
    SIB #2
      Links ok
    SIB #3
      Links ok
    SIB #4
      Links ok
FPC #5
  PFE #0
    SIB #0
      Links ok
    SIB #1
      Links ok
    SIB #2
      Links ok
    SIB #3
      Links ok
    SIB #4
      Links ok
  PFE #1
    SIB #0
      Links ok
    SIB #1
      Links ok
    SIB #2
      Links ok
    SIB #3
      Links ok
    SIB #4
      Links ok
FPC #6
  PFE #0
    SIB #0
      Links ok
    SIB #1
      Links ok
    SIB #2
      Links ok
    SIB #3
      Links ok
    SIB #4
      Links ok
  PFE #1
    SIB #0
```

```

SIB #1 Links ok
SIB #2 Links ok
SIB #3 Links ok
SIB #4 Links ok
FPC #7
PFE #0
SIB #0 Links ok
SIB #1 Links ok
SIB #2 Links ok
SIB #3 Links ok
SIB #4 Links ok

```

#### show chassis fabric fpcs lcc (TX Matrix Plus Router)

```

user@host> show chassis fabric fpcs lcc 0
lcc0-re1:
-----
Fabric management FPC state:
FPC #3
PFE #1
SIB #2 Plane enabled
SIB #3 Link error
Destination error on PFes      0  1  2  3  4  5  6  7
8  9 10 11 12 13 14 15 16 17 18 19 20 21
SIB #4
Destination error on PFes      0  1  2  3  4  5  6  7
8  9 10 11 12 13 14 15 16 17 18 19 20 21
FPC #4
PFE #0
SIB #0 Links ok
SIB #1 Links ok
SIB #2 Links ok
SIB #3 Links ok
SIB #4 Links ok
PFE #1
SIB #0 Links ok
SIB #1 Links ok
SIB #2 Links ok
SIB #3 Links ok
SIB #4 Links ok
FPC #6
PFE #0
SIB #0 Links ok
SIB #1 Links ok
SIB #2 Links ok
SIB #3 Links ok
SIB #4 Links ok
PFE #1
SIB #0 Links ok

```

```
SIB #1 Links ok
SIB #2 Links ok
SIB #3 Links ok
SIB #4 Links ok
FPC #7
PFE #0
SIB #0 Links ok
SIB #1 Links ok
SIB #2 Links ok
SIB #3 Links ok
SIB #4 Links ok
```

### show chassis fabric fpcs (EX8200 Switch)

```
user@host> show chassis fabric fpcs
Fabric management FPC state
FPC 6
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Links ok
Plane 5: Links ok
Plane 6: Links ok
Plane 7: Links ok
Plane 8: Plane enabled
Plane 9: Plane enabled
Plane 10: Plane enabled
Plane 11: Plane enabled
PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Links ok
Plane 5: Links ok
Plane 6: Links ok
Plane 7: Links ok
Plane 8: Plane enabled
Plane 9: Plane enabled
Plane 10: Plane enabled
Plane 11: Plane enabled
FPC 7
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Links ok
Plane 5: Links ok
Plane 6: Links ok
Plane 7: Links ok
Plane 8: Plane enabled
Plane 9: Plane enabled
Plane 10: Plane enabled
Plane 11: Plane enabled
PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
```

```
Plane 3: Plane enabled
Plane 4: Links ok
Plane 5: Links ok
Plane 6: Links ok
Plane 7: Links ok
Plane 8: Plane enabled
Plane 9: Plane enabled
Plane 10: Plane enabled
Plane 11: Plane enabled
```

### show chassis fabric fpcs (EX9253 Switch)

```
user@switch> show chassis fabric fpcs
```

```
Fabric management FPC state:
```

```
FPC 0
```

```
PFE #0
```

```
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
Plane 8: Plane enabled
Plane 9: Plane enabled
Plane 10: Plane enabled
Plane 11: Plane enabled
Plane 12: Plane enabled
Plane 13: Plane enabled
Plane 14: Plane enabled
Plane 15: Plane enabled
Plane 16: Plane enabled
Plane 17: Plane enabled
Plane 18: Plane enabled
Plane 19: Plane enabled
Plane 20: Plane enabled
Plane 21: Plane enabled
```

```
PFE #1
```

```
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
Plane 8: Plane enabled
Plane 9: Plane enabled
Plane 10: Plane enabled
Plane 11: Plane enabled
Plane 12: Plane enabled
Plane 13: Plane enabled
Plane 14: Plane enabled
Plane 15: Plane enabled
Plane 16: Plane enabled
Plane 17: Plane enabled
Plane 18: Plane enabled
Plane 19: Plane enabled
Plane 20: Plane enabled
Plane 21: Plane enabled
```

## PFE #2

Plane 0: Plane enabled  
Plane 1: Plane enabled  
Plane 2: Plane enabled  
Plane 3: Plane enabled  
Plane 4: Plane enabled  
Plane 5: Plane enabled  
Plane 6: Plane enabled  
Plane 7: Plane enabled  
Plane 8: Plane enabled  
Plane 9: Plane enabled  
Plane 10: Plane enabled  
Plane 11: Plane enabled  
Plane 12: Plane enabled  
Plane 13: Plane enabled  
Plane 14: Plane enabled  
Plane 15: Plane enabled  
Plane 16: Plane enabled  
Plane 17: Plane enabled  
Plane 18: Plane enabled  
Plane 19: Plane enabled  
Plane 20: Plane enabled  
Plane 21: Plane enabled

## FPC 1

## PFE #0

Plane 0: Plane enabled  
Plane 1: Plane enabled  
Plane 2: Plane enabled  
Plane 3: Plane enabled  
Plane 4: Plane enabled  
Plane 5: Plane enabled  
Plane 6: Plane enabled  
Plane 7: Plane enabled  
Plane 8: Plane enabled  
Plane 9: Plane enabled  
Plane 10: Plane enabled  
Plane 11: Plane enabled  
Plane 12: Plane enabled  
Plane 13: Plane enabled  
Plane 14: Plane enabled  
Plane 15: Plane enabled  
Plane 16: Plane enabled  
Plane 17: Plane enabled  
Plane 18: Plane enabled  
Plane 19: Plane enabled  
Plane 20: Plane enabled  
Plane 21: Plane enabled

## PFE #1

Plane 0: Plane enabled  
Plane 1: Plane enabled  
Plane 2: Plane enabled  
Plane 3: Plane enabled  
Plane 4: Plane enabled  
Plane 5: Plane enabled  
Plane 6: Plane enabled  
Plane 7: Plane enabled  
Plane 8: Plane enabled  
Plane 9: Plane enabled  
Plane 10: Plane enabled  
Plane 11: Plane enabled  
Plane 12: Plane enabled



```

Plane 13: Plane enabled
Plane 14: Plane enabled
Plane 15: Plane enabled
Plane 16: Plane enabled
Plane 17: Plane enabled
Plane 18: Plane enabled
Plane 19: Plane enabled
Plane 20: Plane enabled
Plane 21: Plane enabled
PFE #2
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
Plane 8: Plane enabled
Plane 9: Plane enabled
Plane 10: Plane enabled
Plane 11: Plane enabled
Plane 12: Plane enabled
Plane 13: Plane enabled
Plane 14: Plane enabled
Plane 15: Plane enabled
Plane 16: Plane enabled
Plane 17: Plane enabled
Plane 18: Plane enabled
Plane 19: Plane enabled
Plane 20: Plane enabled
Plane 21: Plane enabled

```

### show chassis fabric fpcs (EX9253 Switch)

```

user@switch> show chassis fabric fpcs
Fabric management FPC state:
FPC 0
PFE #0
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
Plane 8: Plane enabled
Plane 9: Plane enabled
Plane 10: Plane enabled
Plane 11: Plane enabled
Plane 12: Plane enabled
Plane 13: Plane enabled
Plane 14: Plane enabled
Plane 15: Plane enabled
Plane 16: Plane enabled
Plane 17: Plane enabled
Plane 18: Plane enabled
Plane 19: Plane enabled
Plane 20: Plane enabled
Plane 21: Plane enabled

```

## PFE #1

Plane 0: Plane enabled  
Plane 1: Plane enabled  
Plane 2: Plane enabled  
Plane 3: Plane enabled  
Plane 4: Plane enabled  
Plane 5: Plane enabled  
Plane 6: Plane enabled  
Plane 7: Plane enabled  
Plane 8: Plane enabled  
Plane 9: Plane enabled  
Plane 10: Plane enabled  
Plane 11: Plane enabled  
Plane 12: Plane enabled  
Plane 13: Plane enabled  
Plane 14: Plane enabled  
Plane 15: Plane enabled  
Plane 16: Plane enabled  
Plane 17: Plane enabled  
Plane 18: Plane enabled  
Plane 19: Plane enabled  
Plane 20: Plane enabled  
Plane 21: Plane enabled

## PFE #2

Plane 0: Plane enabled  
Plane 1: Plane enabled  
Plane 2: Plane enabled  
Plane 3: Plane enabled  
Plane 4: Plane enabled  
Plane 5: Plane enabled  
Plane 6: Plane enabled  
Plane 7: Plane enabled  
Plane 8: Plane enabled  
Plane 9: Plane enabled  
Plane 10: Plane enabled  
Plane 11: Plane enabled  
Plane 12: Plane enabled  
Plane 13: Plane enabled  
Plane 14: Plane enabled  
Plane 15: Plane enabled  
Plane 16: Plane enabled  
Plane 17: Plane enabled  
Plane 18: Plane enabled  
Plane 19: Plane enabled  
Plane 20: Plane enabled  
Plane 21: Plane enabled

## FPC 1

## PFE #0

Plane 0: Plane enabled  
Plane 1: Plane enabled  
Plane 2: Plane enabled  
Plane 3: Plane enabled  
Plane 4: Plane enabled  
Plane 5: Plane enabled  
Plane 6: Plane enabled  
Plane 7: Plane enabled  
Plane 8: Plane enabled  
Plane 9: Plane enabled  
Plane 10: Plane enabled  
Plane 11: Plane enabled  
Plane 12: Plane enabled

```
Plane 13: Plane enabled
Plane 14: Plane enabled
Plane 15: Plane enabled
Plane 16: Plane enabled
Plane 17: Plane enabled
Plane 18: Plane enabled
Plane 19: Plane enabled
Plane 20: Plane enabled
Plane 21: Plane enabled
PFE #1
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
Plane 8: Plane enabled
Plane 9: Plane enabled
Plane 10: Plane enabled
Plane 11: Plane enabled
Plane 12: Plane enabled
Plane 13: Plane enabled
Plane 14: Plane enabled
Plane 15: Plane enabled
Plane 16: Plane enabled
Plane 17: Plane enabled
Plane 18: Plane enabled
Plane 19: Plane enabled
Plane 20: Plane enabled
Plane 21: Plane enabled
PFE #2
Plane 0: Plane enabled
Plane 1: Plane enabled
Plane 2: Plane enabled
Plane 3: Plane enabled
Plane 4: Plane enabled
Plane 5: Plane enabled
Plane 6: Plane enabled
Plane 7: Plane enabled
Plane 8: Plane enabled
Plane 9: Plane enabled
Plane 10: Plane enabled
Plane 11: Plane enabled
Plane 12: Plane enabled
Plane 13: Plane enabled
Plane 14: Plane enabled
Plane 15: Plane enabled
Plane 16: Plane enabled
Plane 17: Plane enabled
Plane 18: Plane enabled
Plane 19: Plane enabled
Plane 20: Plane enabled
Plane 21: Plane enabled
```

#### show chassis fabric fpcs (PTX3000 Router)

```
user@host> show chassis fabric fpcs slot 8
Fabric management FPC state:
FPC #8
```

```

PFE #0
  SIB0_Fcore0 (plane 0) Plane Enabled, Links OK
  SIB0_Fcore1 (plane 1) Plane Enabled, Links OK
  SIB1_Fcore0 (plane 2) Plane Enabled, Links OK
  SIB1_Fcore1 (plane 3) Plane Enabled, Links OK
  SIB2_Fcore0 (plane 4) Plane Enabled, Links OK
  SIB2_Fcore1 (plane 5) Plane Enabled, Links OK
  SIB3_Fcore0 (plane 6) Plane Enabled, Links OK
  SIB3_Fcore1 (plane 7) Plane Enabled, Links OK
  SIB4_Fcore0 (plane 8) Plane Enabled, Links OK
  SIB4_Fcore1 (plane 9) Plane Enabled, Links OK
  SIB5_Fcore0 (plane 10) Plane Enabled, Links OK
  SIB5_Fcore1 (plane 11) Plane Enabled, Links OK
  SIB6_Fcore0 (plane 12) Plane Enabled, Links OK
  SIB6_Fcore1 (plane 13) Plane Enabled, Links OK
  SIB7_Fcore0 (plane 14) Plane Enabled, Links OK
  SIB7_Fcore1 (plane 15) Plane Enabled, Links OK
  SIB8_Fcore0 (plane 16) Plane Enabled, Links OK
  SIB8_Fcore1 (plane 17) Plane Enabled, Links OK
PFE #1
  SIB0_Fcore0 (plane 0) Plane Enabled, Links OK
  SIB0_Fcore1 (plane 1) Plane Enabled, Links OK
  SIB1_Fcore0 (plane 2) Plane Enabled, Links OK
  SIB1_Fcore1 (plane 3) Plane Enabled, Links OK
  SIB2_Fcore0 (plane 4) Plane Enabled, Links OK
  SIB2_Fcore1 (plane 5) Plane Enabled, Links OK
  SIB3_Fcore0 (plane 6) Plane Enabled, Links OK
  SIB3_Fcore1 (plane 7) Plane Enabled, Links OK
  SIB4_Fcore0 (plane 8) Plane Enabled, Links OK
  SIB4_Fcore1 (plane 9) Plane Enabled, Links OK
  SIB5_Fcore0 (plane 10) Plane Enabled, Links OK
  SIB5_Fcore1 (plane 11) Plane Enabled, Links OK
  SIB6_Fcore0 (plane 12) Plane Enabled, Links OK
  SIB6_Fcore1 (plane 13) Plane Enabled, Links OK
  SIB7_Fcore0 (plane 14) Plane Enabled, Links OK
  SIB7_Fcore1 (plane 15) Plane Enabled, Links OK
  SIB8_Fcore0 (plane 16) Plane Enabled, Links OK
  SIB8_Fcore1 (plane 17) Plane Enabled, Links OK

```

### show chassis fabric fpcs (PTX10008 Router)

```

user@host> show chassis fabric fpcs slot 8
Fabric management FPC state:
FPC #0
  PFE #0
    SIB0_FASIC0 (plane 0) Plane Enabled, Links OK
    SIB0_FASIC1 (plane 1) Plane Enabled, Links OK
    SIB1_FASIC0 (plane 2) Plane Enabled, Links OK
    SIB1_FASIC1 (plane 3) Plane Enabled, Links OK
  PFE #1
    SIB0_FASIC0 (plane 0) Plane Enabled, Links OK
    SIB0_FASIC1 (plane 1) Plane Enabled, Links OK
    SIB1_FASIC0 (plane 2) Plane Enabled, Links OK
    SIB1_FASIC1 (plane 3) Plane Enabled, Links OK
  PFE #2
    SIB0_FASIC0 (plane 0) Plane Enabled, Links OK
    SIB0_FASIC1 (plane 1) Plane Enabled, Links OK
    SIB1_FASIC0 (plane 2) Plane Enabled, Links OK
    SIB1_FASIC1 (plane 3) Plane Enabled, Links OK
FPC #5
  PFE #0

```

525

**show chassis fabric fpcs (PTX10016 Router)**

```
user@host> show chassis fabric fpcs slot 8
```

```
Fabric management FPC state:
```

```
FPC #8
```

```
PFE #0
```

SIB0_FASIC0	(plane 0)	Plane Enabled, Links OK
SIB0_FASIC1	(plane 1)	Plane Enabled, Links OK
SIB0_FASIC2	(plane 2)	Plane Enabled, Links OK
SIB0_FASIC3	(plane 3)	Plane Enabled, Links OK
SIB0_FASIC4	(plane 4)	Plane Enabled, Links OK
SIB0_FASIC5	(plane 5)	Plane Enabled, Links OK
SIB1_FASIC0	(plane 6)	Plane Enabled, Links OK
SIB1_FASIC1	(plane 7)	Plane Enabled, Links OK
SIB1_FASIC2	(plane 8)	Plane Enabled, Links OK
SIB1_FASIC3	(plane 9)	Plane Enabled, Links OK
SIB1_FASIC4	(plane 10)	Plane Enabled, Links OK
SIB1_FASIC5	(plane 11)	Plane Enabled, Links OK
SIB2_FASIC0	(plane 12)	Plane Enabled, Links OK
SIB2_FASIC1	(plane 13)	Plane Enabled, Links OK
SIB2_FASIC2	(plane 14)	Plane Enabled, Links OK
SIB2_FASIC3	(plane 15)	Plane Enabled, Links OK
SIB2_FASIC4	(plane 16)	Plane Enabled, Links OK
SIB2_FASIC5	(plane 17)	Plane Enabled, Links OK
SIB3_FASIC0	(plane 18)	Plane Enabled, Links OK
SIB3_FASIC1	(plane 19)	Plane Enabled, Links OK
SIB3_FASIC2	(plane 20)	Plane Enabled, Links OK
SIB3_FASIC3	(plane 21)	Plane Enabled, Links OK
SIB3_FASIC4	(plane 22)	Plane Enabled, Links OK
SIB3_FASIC5	(plane 23)	Plane Enabled, Links OK
SIB4_FASIC0	(plane 24)	Plane Enabled, Links OK
SIB4_FASIC1	(plane 25)	Plane Enabled, Links OK
SIB4_FASIC2	(plane 26)	Plane Enabled, Links OK
SIB4_FASIC3	(plane 27)	Plane Enabled, Links OK
SIB4_FASIC4	(plane 28)	Plane Enabled, Links OK
SIB4_FASIC5	(plane 29)	Plane Enabled, Links OK
SIB5_FASIC0	(plane 30)	Plane Enabled, Links OK
SIB5_FASIC1	(plane 31)	Plane Enabled, Links OK
SIB5_FASIC2	(plane 32)	Plane Enabled, Links OK
SIB5_FASIC3	(plane 33)	Plane Enabled, Links OK
SIB5_FASIC4	(plane 34)	Plane Enabled, Links OK
SIB5_FASIC5	(plane 35)	Plane Enabled, Links OK

```
PFE #1
```

SIB0_FASIC0	(plane 0)	Plane Enabled, Links OK
SIB0_FASIC1	(plane 1)	Plane Enabled, Links OK
SIB0_FASIC2	(plane 2)	Plane Enabled, Links OK
SIB0_FASIC3	(plane 3)	Plane Enabled, Links OK
SIB0_FASIC4	(plane 4)	Plane Enabled, Links OK
SIB0_FASIC5	(plane 5)	Plane Enabled, Links OK
SIB1_FASIC0	(plane 6)	Plane Enabled, Links OK
SIB1_FASIC1	(plane 7)	Plane Enabled, Links OK
SIB1_FASIC2	(plane 8)	Plane Enabled, Links OK
SIB1_FASIC3	(plane 9)	Plane Enabled, Links OK
SIB1_FASIC4	(plane 10)	Plane Enabled, Links OK
SIB1_FASIC5	(plane 11)	Plane Enabled, Links OK
SIB2_FASIC0	(plane 12)	Plane Enabled, Links OK
SIB2_FASIC1	(plane 13)	Plane Enabled, Links OK
SIB2_FASIC2	(plane 14)	Plane Enabled, Links OK
SIB2_FASIC3	(plane 15)	Plane Enabled, Links OK
SIB2_FASIC4	(plane 16)	Plane Enabled, Links OK

```

SIB2_FASIC5 (plane 17) Plane Enabled, Links OK
SIB3_FASIC0 (plane 18) Plane Enabled, Links OK
SIB3_FASIC1 (plane 19) Plane Enabled, Links OK
SIB3_FASIC2 (plane 20) Plane Enabled, Links OK
SIB3_FASIC3 (plane 21) Plane Enabled, Links OK
SIB3_FASIC4 (plane 22) Plane Enabled, Links OK
SIB3_FASIC5 (plane 23) Plane Enabled, Links OK
SIB4_FASIC0 (plane 24) Plane Enabled, Links OK
SIB4_FASIC1 (plane 25) Plane Enabled, Links OK
SIB4_FASIC2 (plane 26) Plane Enabled, Links OK
SIB4_FASIC3 (plane 27) Plane Enabled, Links OK
SIB4_FASIC4 (plane 28) Plane Enabled, Links OK
SIB4_FASIC5 (plane 29) Plane Enabled, Links OK
SIB5_FASIC0 (plane 30) Plane Enabled, Links OK
SIB5_FASIC1 (plane 31) Plane Enabled, Links OK
SIB5_FASIC2 (plane 32) Plane Enabled, Links OK
SIB5_FASIC3 (plane 33) Plane Enabled, Links OK
SIB5_FASIC4 (plane 34) Plane Enabled, Links OK
SIB5_FASIC5 (plane 35) Plane Enabled, Links OK
PFE #2
SIB0_FASIC0 (plane 0) Plane Enabled, Links OK
SIB0_FASIC1 (plane 1) Plane Enabled, Links OK
SIB0_FASIC2 (plane 2) Plane Enabled, Links OK
SIB0_FASIC3 (plane 3) Plane Enabled, Links OK
SIB0_FASIC4 (plane 4) Plane Enabled, Links OK
SIB0_FASIC5 (plane 5) Plane Enabled, Links OK
SIB1_FASIC0 (plane 6) Plane Enabled, Links OK
SIB1_FASIC1 (plane 7) Plane Enabled, Links OK
SIB1_FASIC2 (plane 8) Plane Enabled, Links OK
SIB1_FASIC3 (plane 9) Plane Enabled, Links OK
SIB1_FASIC4 (plane 10) Plane Enabled, Links OK
SIB1_FASIC5 (plane 11) Plane Enabled, Links OK
SIB2_FASIC0 (plane 12) Plane Enabled, Links OK
SIB2_FASIC1 (plane 13) Plane Enabled, Links OK
SIB2_FASIC2 (plane 14) Plane Enabled, Links OK
SIB2_FASIC3 (plane 15) Plane Enabled, Links OK
SIB2_FASIC4 (plane 16) Plane Enabled, Links OK
SIB2_FASIC5 (plane 17) Plane Enabled, Links OK
SIB3_FASIC0 (plane 18) Plane Enabled, Links OK
SIB3_FASIC1 (plane 19) Plane Enabled, Links OK
SIB3_FASIC2 (plane 20) Plane Enabled, Links OK
SIB3_FASIC3 (plane 21) Plane Enabled, Links OK
SIB3_FASIC4 (plane 22) Plane Enabled, Links OK
SIB3_FASIC5 (plane 23) Plane Enabled, Links OK
SIB4_FASIC0 (plane 24) Plane Enabled, Links OK
SIB4_FASIC1 (plane 25) Plane Enabled, Links OK
SIB4_FASIC2 (plane 26) Plane Enabled, Links OK
SIB4_FASIC3 (plane 27) Plane Enabled, Links OK
SIB4_FASIC4 (plane 28) Plane Enabled, Links OK
SIB4_FASIC5 (plane 29) Plane Enabled, Links OK
SIB5_FASIC0 (plane 30) Plane Enabled, Links OK
SIB5_FASIC1 (plane 31) Plane Enabled, Links OK
SIB5_FASIC2 (plane 32) Plane Enabled, Links OK
SIB5_FASIC3 (plane 33) Plane Enabled, Links OK
SIB5_FASIC4 (plane 34) Plane Enabled, Links OK
SIB5_FASIC5 (plane 35) Plane Enabled, Links OK

```

### show chassis fabric fpcs (QFX10008 Switch)

```
user@host> show chassis fabric fpcs slot 0
```

## Fabric management FPC state:

## FPC #0

## PFE #0

SIB0_PFO	(plane 0)	Plane Enabled, Links OK
SIB0_PFI	(plane 1)	Plane Enabled, Links OK
SIB1_PFO	(plane 2)	Plane Enabled, Links OK
SIB1_PFI	(plane 3)	Plane Enabled, Links OK
SIB2_PFO	(plane 4)	Plane Enabled, Links OK
SIB2_PFI	(plane 5)	Plane Enabled, Links OK
SIB3_PFO	(plane 6)	Plane Enabled, Links OK
SIB3_PFI	(plane 7)	Plane Enabled, Links OK
SIB4_PFO	(plane 8)	Plane Enabled, Links OK
SIB4_PFI	(plane 9)	Plane Enabled, Links OK
SIB5_PFO	(plane 10)	Plane Enabled, Links OK
SIB5_PFI	(plane 11)	Plane Enabled, Links OK

## PFE #1

SIB0_PFO	(plane 0)	Plane Enabled, Links OK
SIB0_PFI	(plane 1)	Plane Enabled, Links OK
SIB1_PFO	(plane 2)	Plane Enabled, Links OK
SIB1_PFI	(plane 3)	Plane Enabled, Links OK
SIB2_PFO	(plane 4)	Plane Enabled, Links OK
SIB2_PFI	(plane 5)	Plane Enabled, Links OK
SIB3_PFO	(plane 6)	Plane Enabled, Links OK
SIB3_PFI	(plane 7)	Plane Enabled, Links OK
SIB4_PFO	(plane 8)	Plane Enabled, Links OK
SIB4_PFI	(plane 9)	Plane Enabled, Links OK
SIB5_PFO	(plane 10)	Plane Enabled, Links OK
SIB5_PFI	(plane 11)	Plane Enabled, Links OK

## PFE #2

SIB0_PFO	(plane 0)	Plane Enabled, Links OK
SIB0_PFI	(plane 1)	Plane Enabled, Links OK
SIB1_PFO	(plane 2)	Plane Enabled, Links OK
SIB1_PFI	(plane 3)	Plane Enabled, Links OK
SIB2_PFO	(plane 4)	Plane Enabled, Links OK
SIB2_PFI	(plane 5)	Plane Enabled, Links OK
SIB3_PFO	(plane 6)	Plane Enabled, Links OK
SIB3_PFI	(plane 7)	Plane Enabled, Links OK
SIB4_PFO	(plane 8)	Plane Enabled, Links OK
SIB4_PFI	(plane 9)	Plane Enabled, Links OK
SIB5_PFO	(plane 10)	Plane Enabled, Links OK
SIB5_PFI	(plane 11)	Plane Enabled, Links OK

## PFE #3

SIB0_PFO	(plane 0)	Plane Enabled, Links OK
SIB0_PFI	(plane 1)	Plane Enabled, Links OK
SIB1_PFO	(plane 2)	Plane Enabled, Links OK
SIB1_PFI	(plane 3)	Plane Enabled, Links OK
SIB2_PFO	(plane 4)	Plane Enabled, Links OK
SIB2_PFI	(plane 5)	Plane Enabled, Links OK
SIB3_PFO	(plane 6)	Plane Enabled, Links OK
SIB3_PFI	(plane 7)	Plane Enabled, Links OK
SIB4_PFO	(plane 8)	Plane Enabled, Links OK
SIB4_PFI	(plane 9)	Plane Enabled, Links OK
SIB5_PFO	(plane 10)	Plane Enabled, Links OK
SIB5_PFI	(plane 11)	Plane Enabled, Links OK



## show chassis fabric map

<b>List of Syntax</b>	<a href="#">Syntax on page 529</a> <a href="#">Syntax (MX Series Router) on page 529</a>
<b>Syntax</b>	<pre>show chassis fabric map plane &lt;plane-number&gt;</pre>
<b>Syntax (MX Series Router)</b>	<pre>show chassis fabric map &lt;all-members&gt; &lt;local&gt; &lt;member member-id&gt; &lt;plane plane-number&gt;</pre>
<b>Release Information</b>	<p>Command introduced in Junos OS Release 8.0.</p> <p>Command introduced in Junos OS Release 9.4 for EX Series switches.</p>
<b>Description</b>	<p>(M120 and MX Series routers and EX8200 switches only) On the M120 router, display the state of the switching fabric map for connections from the Forwarding Engine Boards (FEBs) to the ports on the fabric planes, as interpreted by the fabric plane. On the MX Series router and the EX8200 switch, display the state of the switching fabric map for connections from each Packet Forwarding Engine on the Dense Port Concentrators (DPCs) to the ports on the fabric planes, as interpreted by the fabric plane. For information about the meaning of “fabric plane”, “DPCs”, and “SIBs” on the switches, see the hardware documentation for your switch.</p>
<b>Options</b>	<p><b>none</b>—Display the switching fabric map state for the M120 or MX Series router or EX8200 switch.</p> <p><b>all-members</b>—(MX Series routers only) (Optional) Display the switching fabric map state for all the members of the Virtual Chassis configuration.</p> <p><b>local</b>—(MX Series routers only) (Optional) Display the switching fabric map state for the local Virtual Chassis member.</p> <p><b>member <i>member-id</i></b>—(MX Series routers only) (Optional) Display the switching fabric map state for the specified member of the Virtual Chassis configuration. Replace the <i>member-id</i> with a value of 0 or 1.</p> <p><b>plane <i>plane-number</i></b>—(Optional) Display the state of the fabric link for the specified plane number.</p> <ul style="list-style-type: none"> <li>For the M120 router, replace <i>plane-number</i> with a value from 0 through 3.</li> <li>For the MX480 and MX240 routers, replace <i>plane-number</i> with a value from 0 through 7.</li> <li>For the MX960 router, replace <i>plane-number</i> with a value from 0 through 5.</li> </ul>

- For the EX8208 switch, replace *plane-number* with a value from 0 through 11.
- For the EX8216 switch, replace *plane-number* with a value from 0 through 7.

**Required Privilege Level** view

**List of Sample Output** [show chassis fabric map \(M120 Router\) on page 530](#)  
[show chassis fabric map \(MX Series Routers\) on page 531](#)  
[show chassis fabric map plane 1 \(EX8200 Switch\) on page 534](#)

**Output Fields** [Table 20 on page 530](#) lists the output fields for the **show chassis fabric map** command. Output fields are listed in the approximate order in which they appear.

*Table 20: show chassis fabric map Output Fields*

Field Name	Field Description
in-links	Fabric map for receive side links.
out-links	Fabric map for transmit side links.
state	State of the fabric link: <ul style="list-style-type: none"> <li>• <b>RESET</b>—Link between SIB and FPC/DPC is powered down on purpose. This is done in all non-dual PFE based boards.</li> <li>• <b>UP</b>—Link between SIB and FPC/DPC is up and running.</li> <li>• <b>DOWN</b>—Link between SIB and FPC/DPC is powered down.</li> <li>• <b>FAULT</b>—SIB is in alarmed state where the SIB's plane is not operational for the following reasons:               <ul style="list-style-type: none"> <li>• On-board F-chip is not operational.</li> <li>• Fiber optic connector faults.</li> <li>• FPC connector faults.</li> <li>• SIB midplane connector faults.</li> </ul> </li> </ul>

## Sample Output

### show chassis fabric map (M120 Router)

```
user@host> show chassis fabric map
FEB0->CB0F0_00 up CB0F0_08->FEB7 Down

FEB1->CB0F0_01 Down CB0F0_09->FEB6 Down

FEB6->CB0F0_02 Down CB0F0_10->FEB1 Down

FEB2->CB0F0_03 Down CB0F0_11->FEB0 up

FEB3->CB0F0_04 Down CB0F0_12->FEB3 Down

FEB4->CB0F0_05 up CB0F0_13->FEB2 Down
```

FEB7->CB0F0\_06 Down CB0F0\_14->FEB5 Down

FEB5->CB0F0\_07 Down CB0F0\_15->FEB4 up:

### show chassis fabric map (MX Series Routers)

user@host> show chassis fabric map

DPC4PFE0->CB0F0_00_0	up	CB0F0_00_0->DPC4PFE0	up
DPC4PFE1->CB0F0_00_1	up	CB0F0_00_1->DPC4PFE1	up
DPC4PFE2->CB0F0_00_2	up	CB0F0_00_2->DPC4PFE2	up
DPC4PFE3->CB0F0_00_3	up	CB0F0_00_3->DPC4PFE3	up
DPC7PFE0->CB0F0_01_0	Down	CB0F0_01_0->DPC7PFE0	Down
DPC7PFE1->CB0F0_01_1	Down	CB0F0_01_1->DPC7PFE1	Down
DPC7PFE2->CB0F0_01_2	Down	CB0F0_01_2->DPC7PFE2	Down
DPC7PFE3->CB0F0_01_3	Down	CB0F0_01_3->DPC7PFE3	Down
DPC3PFE0->CB0F0_03_0	Down	CB0F0_03_0->DPC3PFE0	Down
DPC3PFE1->CB0F0_03_1	Down	CB0F0_03_1->DPC3PFE1	Down
DPC3PFE2->CB0F0_03_2	Down	CB0F0_03_2->DPC3PFE2	Down
DPC3PFE3->CB0F0_03_3	Down	CB0F0_03_3->DPC3PFE3	Down
DPC8PFE0->CB0F0_05_0	Down	CB0F0_05_0->DPC8PFE0	Down
DPC8PFE1->CB0F0_05_1	Down	CB0F0_05_1->DPC8PFE1	Down
DPC8PFE2->CB0F0_05_2	Down	CB0F0_05_2->DPC8PFE2	Down
DPC8PFE3->CB0F0_05_3	Down	CB0F0_05_3->DPC8PFE3	Down
DPC1PFE0->CB0F0_06_0	Down	CB0F0_06_0->DPC1PFE0	Down
DPC1PFE1->CB0F0_06_1	Down	CB0F0_06_1->DPC1PFE1	Down
DPC1PFE2->CB0F0_06_2	Down	CB0F0_06_2->DPC1PFE2	Down
DPC1PFE3->CB0F0_06_3	Down	CB0F0_06_3->DPC1PFE3	Down
DPC10PFE0->CB0F0_07_0	Down	CB0F0_07_0->DPC10PFE0	Down
DPC10PFE1->CB0F0_07_1	Down	CB0F0_07_1->DPC10PFE1	Down
DPC10PFE2->CB0F0_07_2	Down	CB0F0_07_2->DPC10PFE2	Down
DPC10PFE3->CB0F0_07_3	Down	CB0F0_07_3->DPC10PFE3	Down
DPC11PFE0->CB0F0_08_0	Down	CB0F0_08_0->DPC11PFE0	Down
DPC11PFE1->CB0F0_08_1	Down	CB0F0_08_1->DPC11PFE1	Down
DPC11PFE2->CB0F0_08_2	Down	CB0F0_08_2->DPC11PFE2	Down
DPC11PFE3->CB0F0_08_3	Down	CB0F0_08_3->DPC11PFE3	Down
DPC0PFE0->CB0F0_09_0	Down	CB0F0_09_0->DPC0PFE0	Down
DPC0PFE1->CB0F0_09_1	Down	CB0F0_09_1->DPC0PFE1	Down
DPC0PFE2->CB0F0_09_2	Down	CB0F0_09_2->DPC0PFE2	Down
DPC0PFE3->CB0F0_09_3	Down	CB0F0_09_3->DPC0PFE3	Down
DPC9PFE0->CB0F0_11_0	Down	CB0F0_11_0->DPC9PFE0	Down
DPC9PFE1->CB0F0_11_1	Down	CB0F0_11_1->DPC9PFE1	Down
DPC9PFE2->CB0F0_11_2	Down	CB0F0_11_2->DPC9PFE2	Down
DPC9PFE3->CB0F0_11_3	Down	CB0F0_11_3->DPC9PFE3	Down
DPC2PFE0->CB0F0_13_0	up	CB0F0_13_0->DPC2PFE0	up
DPC2PFE1->CB0F0_13_1	up	CB0F0_13_1->DPC2PFE1	up
DPC2PFE2->CB0F0_13_2	up	CB0F0_13_2->DPC2PFE2	up
DPC2PFE3->CB0F0_13_3	up	CB0F0_13_3->DPC2PFE3	up
DPC6PFE0->CB0F0_14_0	Down	CB0F0_14_0->DPC6PFE0	Down
DPC6PFE1->CB0F0_14_1	Down	CB0F0_14_1->DPC6PFE1	Down
DPC6PFE2->CB0F0_14_2	Down	CB0F0_14_2->DPC6PFE2	Down
DPC6PFE3->CB0F0_14_3	Down	CB0F0_14_3->DPC6PFE3	Down
DPC5PFE0->CB0F0_15_0	Down	CB0F0_15_0->DPC5PFE0	Down
DPC5PFE1->CB0F0_15_1	Down	CB0F0_15_1->DPC5PFE1	Down
DPC5PFE2->CB0F0_15_2	Down	CB0F0_15_2->DPC5PFE2	Down
DPC5PFE3->CB0F0_15_3	Down	CB0F0_15_3->DPC5PFE3	Down
DPC4PFE0->CB0F1_00_0	up	CB0F1_00_0->DPC4PFE0	up
DPC4PFE1->CB0F1_00_1	up	CB0F1_00_1->DPC4PFE1	up
DPC4PFE2->CB0F1_00_2	up	CB0F1_00_2->DPC4PFE2	up
DPC4PFE3->CB0F1_00_3	up	CB0F1_00_3->DPC4PFE3	up
DPC7PFE0->CB0F1_01_0	Down	CB0F1_01_0->DPC7PFE0	Down

DPC7PFE1->CB0F1_01_1	Down	CB0F1_01_1->DPC7PFE1	Down
DPC7PFE2->CB0F1_01_2	Down	CB0F1_01_2->DPC7PFE2	Down
DPC7PFE3->CB0F1_01_3	Down	CB0F1_01_3->DPC7PFE3	Down
DPC3PFE0->CB0F1_03_0	Down	CB0F1_03_0->DPC3PFE0	Down
DPC3PFE1->CB0F1_03_1	Down	CB0F1_03_1->DPC3PFE1	Down
DPC3PFE2->CB0F1_03_2	Down	CB0F1_03_2->DPC3PFE2	Down
DPC3PFE3->CB0F1_03_3	Down	CB0F1_03_3->DPC3PFE3	Down
DPC8PFE0->CB0F1_05_0	Down	CB0F1_05_0->DPC8PFE0	Down
DPC8PFE1->CB0F1_05_1	Down	CB0F1_05_1->DPC8PFE1	Down
DPC8PFE2->CB0F1_05_2	Down	CB0F1_05_2->DPC8PFE2	Down
DPC8PFE3->CB0F1_05_3	Down	CB0F1_05_3->DPC8PFE3	Down
DPC1PFE0->CB0F1_06_0	Down	CB0F1_06_0->DPC1PFE0	Down
DPC1PFE1->CB0F1_06_1	Down	CB0F1_06_1->DPC1PFE1	Down
DPC1PFE2->CB0F1_06_2	Down	CB0F1_06_2->DPC1PFE2	Down
DPC1PFE3->CB0F1_06_3	Down	CB0F1_06_3->DPC1PFE3	Down
DPC10PFE0->CB0F1_07_0	Down	CB0F1_07_0->DPC10PFE0	Down
DPC10PFE1->CB0F1_07_1	Down	CB0F1_07_1->DPC10PFE1	Down
DPC10PFE2->CB0F1_07_2	Down	CB0F1_07_2->DPC10PFE2	Down
DPC10PFE3->CB0F1_07_3	Down	CB0F1_07_3->DPC10PFE3	Down
DPC11PFE0->CB0F1_08_0	Down	CB0F1_08_0->DPC11PFE0	Down
DPC11PFE1->CB0F1_08_1	Down	CB0F1_08_1->DPC11PFE1	Down
DPC11PFE2->CB0F1_08_2	Down	CB0F1_08_2->DPC11PFE2	Down
DPC11PFE3->CB0F1_08_3	Down	CB0F1_08_3->DPC11PFE3	Down
DPC0PFE0->CB0F1_09_0	Down	CB0F1_09_0->DPC0PFE0	Down
DPC0PFE1->CB0F1_09_1	Down	CB0F1_09_1->DPC0PFE1	Down
DPC0PFE2->CB0F1_09_2	Down	CB0F1_09_2->DPC0PFE2	Down
DPC0PFE3->CB0F1_09_3	Down	CB0F1_09_3->DPC0PFE3	Down
DPC9PFE0->CB0F1_11_0	Down	CB0F1_11_0->DPC9PFE0	Down
DPC9PFE1->CB0F1_11_1	Down	CB0F1_11_1->DPC9PFE1	Down
DPC9PFE2->CB0F1_11_2	Down	CB0F1_11_2->DPC9PFE2	Down
DPC9PFE3->CB0F1_11_3	Down	CB0F1_11_3->DPC9PFE3	Down
DPC2PFE0->CB0F1_13_0	up	CB0F1_13_0->DPC2PFE0	up
DPC2PFE1->CB0F1_13_1	up	CB0F1_13_1->DPC2PFE1	up
DPC2PFE2->CB0F1_13_2	up	CB0F1_13_2->DPC2PFE2	up
DPC2PFE3->CB0F1_13_3	up	CB0F1_13_3->DPC2PFE3	up
DPC6PFE0->CB0F1_14_0	Down	CB0F1_14_0->DPC6PFE0	Down
DPC6PFE1->CB0F1_14_1	Down	CB0F1_14_1->DPC6PFE1	Down
DPC6PFE2->CB0F1_14_2	Down	CB0F1_14_2->DPC6PFE2	Down
DPC6PFE3->CB0F1_14_3	Down	CB0F1_14_3->DPC6PFE3	Down
DPC5PFE0->CB0F1_15_0	Down	CB0F1_15_0->DPC5PFE0	Down
DPC5PFE1->CB0F1_15_1	Down	CB0F1_15_1->DPC5PFE1	Down
DPC5PFE2->CB0F1_15_2	Down	CB0F1_15_2->DPC5PFE2	Down
DPC5PFE3->CB0F1_15_3	Down	CB0F1_15_3->DPC5PFE3	Down
DPC4PFE0->CB1F0_00_0	up	CB1F0_00_0->DPC4PFE0	up
DPC4PFE1->CB1F0_00_1	up	CB1F0_00_1->DPC4PFE1	up
DPC4PFE2->CB1F0_00_2	up	CB1F0_00_2->DPC4PFE2	up
DPC4PFE3->CB1F0_00_3	up	CB1F0_00_3->DPC4PFE3	up
DPC7PFE0->CB1F0_01_0	Down	CB1F0_01_0->DPC7PFE0	Down
DPC7PFE1->CB1F0_01_1	Down	CB1F0_01_1->DPC7PFE1	Down
DPC7PFE2->CB1F0_01_2	Down	CB1F0_01_2->DPC7PFE2	Down
DPC7PFE3->CB1F0_01_3	Down	CB1F0_01_3->DPC7PFE3	Down
DPC3PFE0->CB1F0_03_0	Down	CB1F0_03_0->DPC3PFE0	Down
DPC3PFE1->CB1F0_03_1	Down	CB1F0_03_1->DPC3PFE1	Down
DPC3PFE2->CB1F0_03_2	Down	CB1F0_03_2->DPC3PFE2	Down
DPC3PFE3->CB1F0_03_3	Down	CB1F0_03_3->DPC3PFE3	Down
DPC8PFE0->CB1F0_05_0	Down	CB1F0_05_0->DPC8PFE0	Down
DPC8PFE1->CB1F0_05_1	Down	CB1F0_05_1->DPC8PFE1	Down
DPC8PFE2->CB1F0_05_2	Down	CB1F0_05_2->DPC8PFE2	Down
DPC8PFE3->CB1F0_05_3	Down	CB1F0_05_3->DPC8PFE3	Down
DPC1PFE0->CB1F0_06_0	Down	CB1F0_06_0->DPC1PFE0	Down
DPC1PFE1->CB1F0_06_1	Down	CB1F0_06_1->DPC1PFE1	Down

DPC1PFE2->CB1F0_06_2	Down	CB1F0_06_2->DPC1PFE2	Down
DPC1PFE3->CB1F0_06_3	Down	CB1F0_06_3->DPC1PFE3	Down
DPC10PFE0->CB1F0_07_0	Down	CB1F0_07_0->DPC10PFE0	Down
DPC10PFE1->CB1F0_07_1	Down	CB1F0_07_1->DPC10PFE1	Down
DPC10PFE2->CB1F0_07_2	Down	CB1F0_07_2->DPC10PFE2	Down
DPC10PFE3->CB1F0_07_3	Down	CB1F0_07_3->DPC10PFE3	Down
DPC11PFE0->CB1F0_08_0	Down	CB1F0_08_0->DPC11PFE0	Down
DPC11PFE1->CB1F0_08_1	Down	CB1F0_08_1->DPC11PFE1	Down
DPC11PFE2->CB1F0_08_2	Down	CB1F0_08_2->DPC11PFE2	Down
DPC11PFE3->CB1F0_08_3	Down	CB1F0_08_3->DPC11PFE3	Down
DPC0PFE0->CB1F0_09_0	Down	CB1F0_09_0->DPC0PFE0	Down
DPC0PFE1->CB1F0_09_1	Down	CB1F0_09_1->DPC0PFE1	Down
DPC0PFE2->CB1F0_09_2	Down	CB1F0_09_2->DPC0PFE2	Down
DPC0PFE3->CB1F0_09_3	Down	CB1F0_09_3->DPC0PFE3	Down
DPC9PFE0->CB1F0_11_0	Down	CB1F0_11_0->DPC9PFE0	Down
DPC9PFE1->CB1F0_11_1	Down	CB1F0_11_1->DPC9PFE1	Down
DPC9PFE2->CB1F0_11_2	Down	CB1F0_11_2->DPC9PFE2	Down
DPC9PFE3->CB1F0_11_3	Down	CB1F0_11_3->DPC9PFE3	Down
DPC2PFE0->CB1F0_13_0	up	CB1F0_13_0->DPC2PFE0	up
DPC2PFE1->CB1F0_13_1	up	CB1F0_13_1->DPC2PFE1	up
DPC2PFE2->CB1F0_13_2	up	CB1F0_13_2->DPC2PFE2	up
DPC2PFE3->CB1F0_13_3	up	CB1F0_13_3->DPC2PFE3	up
DPC6PFE0->CB1F0_14_0	Down	CB1F0_14_0->DPC6PFE0	Down
DPC6PFE1->CB1F0_14_1	Down	CB1F0_14_1->DPC6PFE1	Down
DPC6PFE2->CB1F0_14_2	Down	CB1F0_14_2->DPC6PFE2	Down
DPC6PFE3->CB1F0_14_3	Down	CB1F0_14_3->DPC6PFE3	Down
DPC5PFE0->CB1F0_15_0	Down	CB1F0_15_0->DPC5PFE0	Down
DPC5PFE1->CB1F0_15_1	Down	CB1F0_15_1->DPC5PFE1	Down
DPC5PFE2->CB1F0_15_2	Down	CB1F0_15_2->DPC5PFE2	Down
DPC5PFE3->CB1F0_15_3	Down	CB1F0_15_3->DPC5PFE3	Down
DPC4PFE0->CB1F1_00_0	up	CB1F1_00_0->DPC4PFE0	up
DPC4PFE1->CB1F1_00_1	up	CB1F1_00_1->DPC4PFE1	up
DPC4PFE2->CB1F1_00_2	up	CB1F1_00_2->DPC4PFE2	up
DPC4PFE3->CB1F1_00_3	up	CB1F1_00_3->DPC4PFE3	up
DPC7PFE0->CB1F1_01_0	Down	CB1F1_01_0->DPC7PFE0	Down
DPC7PFE1->CB1F1_01_1	Down	CB1F1_01_1->DPC7PFE1	Down
DPC7PFE2->CB1F1_01_2	Down	CB1F1_01_2->DPC7PFE2	Down
DPC7PFE3->CB1F1_01_3	Down	CB1F1_01_3->DPC7PFE3	Down
DPC3PFE0->CB1F1_03_0	Down	CB1F1_03_0->DPC3PFE0	Down
DPC3PFE1->CB1F1_03_1	Down	CB1F1_03_1->DPC3PFE1	Down
DPC3PFE2->CB1F1_03_2	Down	CB1F1_03_2->DPC3PFE2	Down
DPC3PFE3->CB1F1_03_3	Down	CB1F1_03_3->DPC3PFE3	Down
DPC8PFE0->CB1F1_05_0	Down	CB1F1_05_0->DPC8PFE0	Down
DPC8PFE1->CB1F1_05_1	Down	CB1F1_05_1->DPC8PFE1	Down
DPC8PFE2->CB1F1_05_2	Down	CB1F1_05_2->DPC8PFE2	Down
DPC8PFE3->CB1F1_05_3	Down	CB1F1_05_3->DPC8PFE3	Down
DPC1PFE0->CB1F1_06_0	Down	CB1F1_06_0->DPC1PFE0	Down
DPC1PFE1->CB1F1_06_1	Down	CB1F1_06_1->DPC1PFE1	Down
DPC1PFE2->CB1F1_06_2	Down	CB1F1_06_2->DPC1PFE2	Down
DPC1PFE3->CB1F1_06_3	Down	CB1F1_06_3->DPC1PFE3	Down
DPC10PFE0->CB1F1_07_0	Down	CB1F1_07_0->DPC10PFE0	Down
DPC10PFE1->CB1F1_07_1	Down	CB1F1_07_1->DPC10PFE1	Down
DPC10PFE2->CB1F1_07_2	Down	CB1F1_07_2->DPC10PFE2	Down
DPC10PFE3->CB1F1_07_3	Down	CB1F1_07_3->DPC10PFE3	Down
DPC11PFE0->CB1F1_08_0	Down	CB1F1_08_0->DPC11PFE0	Down
DPC11PFE1->CB1F1_08_1	Down	CB1F1_08_1->DPC11PFE1	Down
DPC11PFE2->CB1F1_08_2	Down	CB1F1_08_2->DPC11PFE2	Down
DPC11PFE3->CB1F1_08_3	Down	CB1F1_08_3->DPC11PFE3	Down
DPC0PFE0->CB1F1_09_0	Down	CB1F1_09_0->DPC0PFE0	Down
DPC0PFE1->CB1F1_09_1	Down	CB1F1_09_1->DPC0PFE1	Down
DPC0PFE2->CB1F1_09_2	Down	CB1F1_09_2->DPC0PFE2	Down

DPC0PFE3->CB1F1_09_3	Down	CB1F1_09_3->DPC0PFE3	Down
DPC9PFE0->CB1F1_11_0	Down	CB1F1_11_0->DPC9PFE0	Down
DPC9PFE1->CB1F1_11_1	Down	CB1F1_11_1->DPC9PFE1	Down
DPC9PFE2->CB1F1_11_2	Down	CB1F1_11_2->DPC9PFE2	Down
DPC9PFE3->CB1F1_11_3	Down	CB1F1_11_3->DPC9PFE3	Down
DPC2PFE0->CB1F1_13_0	up	CB1F1_13_0->DPC2PFE0	up
DPC2PFE1->CB1F1_13_1	up	CB1F1_13_1->DPC2PFE1	up
DPC2PFE2->CB1F1_13_2	up	CB1F1_13_2->DPC2PFE2	up
DPC2PFE3->CB1F1_13_3	up	CB1F1_13_3->DPC2PFE3	up
DPC6PFE0->CB1F1_14_0	Down	CB1F1_14_0->DPC6PFE0	Down
DPC6PFE1->CB1F1_14_1	Down	CB1F1_14_1->DPC6PFE1	Down
DPC6PFE2->CB1F1_14_2	Down	CB1F1_14_2->DPC6PFE2	Down
DPC6PFE3->CB1F1_14_3	Down	CB1F1_14_3->DPC6PFE3	Down
DPC5PFE0->CB1F1_15_0	Down	CB1F1_15_0->DPC5PFE0	Down
DPC5PFE1->CB1F1_15_1	Down	CB1F1_15_1->DPC5PFE1	Down
DPC5PFE2->CB1F1_15_2	Down	CB1F1_15_2->DPC5PFE2	Down
DPC5PFE3->CB1F1_15_3	Down	CB1F1_15_3->DPC5PFE3	Down
plane 4 is not up			
plane 5 is not up			

#### show chassis fabric map plane 1 (EX8200 Switch)

```

user@host> show chassis fabric map plane 1
user@host> show chassis fabric map plane 1
DPC6PFE0->CB0F0_00_0    Down    CB0F0_00_0->DPC6PFE0    Down
DPC6PFE1->CB0F0_00_1    Down    CB0F0_00_1->DPC6PFE1    Down
DPC6PFE2->CB0F0_00_2    Down    CB0F0_00_2->DPC6PFE2    Down
DPC6PFE3->CB0F0_00_3    Down    CB0F0_00_3->DPC6PFE3    Down
DPC0PFE0->CB0F0_01_0    Down    CB0F0_01_0->DPC0PFE0    Down
DPC0PFE1->CB0F0_01_1    Down    CB0F0_01_1->DPC0PFE1    Down
DPC0PFE2->CB0F0_01_2    Down    CB0F0_01_2->DPC0PFE2    Down
DPC0PFE3->CB0F0_01_3    Down    CB0F0_01_3->DPC0PFE3    Down
DPC5PFE0->CB0F0_02_0    Down    CB0F0_02_0->DPC5PFE0    Down
DPC5PFE1->CB0F0_02_1    Down    CB0F0_02_1->DPC5PFE1    Down
DPC5PFE2->CB0F0_02_2    Down    CB0F0_02_2->DPC5PFE2    Down
DPC5PFE3->CB0F0_02_3    Down    CB0F0_02_3->DPC5PFE3    Down
DPC3PFE0->CB0F0_03_0    Down    CB0F0_03_0->DPC3PFE0    Down
DPC3PFE1->CB0F0_03_1    Down    CB0F0_03_1->DPC3PFE1    Down
DPC3PFE2->CB0F0_03_2    Down    CB0F0_03_2->DPC3PFE2    Down
DPC3PFE3->CB0F0_03_3    Down    CB0F0_03_3->DPC3PFE3    Down
DPC4PFE0->CB0F0_04_0    Down    CB0F0_04_0->DPC4PFE0    Down
DPC4PFE1->CB0F0_04_1    Down    CB0F0_04_1->DPC4PFE1    Down
DPC4PFE2->CB0F0_04_2    Down    CB0F0_04_2->DPC4PFE2    Down
DPC4PFE3->CB0F0_04_3    Down    CB0F0_04_3->DPC4PFE3    Down
DPC2PFE0->CB0F0_05_0    Down    CB0F0_05_0->DPC2PFE0    Down
DPC2PFE1->CB0F0_05_1    Down    CB0F0_05_1->DPC2PFE1    Down
DPC2PFE2->CB0F0_05_2    Down    CB0F0_05_2->DPC2PFE2    Down
DPC2PFE3->CB0F0_05_3    Down    CB0F0_05_3->DPC2PFE3    Down
DPC7PFE0->CB0F0_06_0    Down    CB0F0_06_0->DPC7PFE0    Down
DPC7PFE1->CB0F0_06_1    Down    CB0F0_06_1->DPC7PFE1    Down
DPC7PFE2->CB0F0_06_2    Down    CB0F0_06_2->DPC7PFE2    Down
DPC7PFE3->CB0F0_06_3    Down    CB0F0_06_3->DPC7PFE3    Down
DPC1PFE0->CB0F0_07_0    Down    CB0F0_07_0->DPC1PFE0    Down
DPC1PFE1->CB0F0_07_1    Down    CB0F0_07_1->DPC1PFE1    Down
DPC1PFE2->CB0F0_07_2    Down    CB0F0_07_2->DPC1PFE2    Down
DPC1PFE3->CB0F0_07_3    Down    CB0F0_07_3->DPC1PFE3    Down
DPC0PFE0->CB0F0_08_0    Down    CB0F0_08_0->DPC0PFE0    Down
DPC0PFE1->CB0F0_08_1    Down    CB0F0_08_1->DPC0PFE1    Down
DPC0PFE2->CB0F0_08_2    Down    CB0F0_08_2->DPC0PFE2    Down
DPC0PFE3->CB0F0_08_3    Down    CB0F0_08_3->DPC0PFE3    Down
DPC7PFE0->CB0F0_09_0    Down    CB0F0_09_0->DPC7PFE0    Down

```

DPC7PFE1->CB0F0_09_1	Down	CB0F0_09_1->DPC7PFE1	Down
DPC7PFE2->CB0F0_09_2	Down	CB0F0_09_2->DPC7PFE2	Down
DPC7PFE3->CB0F0_09_3	Down	CB0F0_09_3->DPC7PFE3	Down
DPC1PFE0->CB0F0_10_0	Down	CB0F0_10_0->DPC1PFE0	Down
DPC1PFE1->CB0F0_10_1	Down	CB0F0_10_1->DPC1PFE1	Down
DPC1PFE2->CB0F0_10_2	Down	CB0F0_10_2->DPC1PFE2	Down
DPC1PFE3->CB0F0_10_3	Down	CB0F0_10_3->DPC1PFE3	Down
DPC4PFE0->CB0F0_11_0	Down	CB0F0_11_0->DPC4PFE0	Down
DPC4PFE1->CB0F0_11_1	Down	CB0F0_11_1->DPC4PFE1	Down
DPC4PFE2->CB0F0_11_2	Down	CB0F0_11_2->DPC4PFE2	Down
DPC4PFE3->CB0F0_11_3	Down	CB0F0_11_3->DPC4PFE3	Down
DPC2PFE0->CB0F0_12_0	Down	CB0F0_12_0->DPC2PFE0	Down
DPC2PFE1->CB0F0_12_1	Down	CB0F0_12_1->DPC2PFE1	Down
DPC2PFE2->CB0F0_12_2	Down	CB0F0_12_2->DPC2PFE2	Down
DPC2PFE3->CB0F0_12_3	Down	CB0F0_12_3->DPC2PFE3	Down
DPC5PFE0->CB0F0_13_0	Down	CB0F0_13_0->DPC5PFE0	Down
DPC5PFE1->CB0F0_13_1	Down	CB0F0_13_1->DPC5PFE1	Down
DPC5PFE2->CB0F0_13_2	Down	CB0F0_13_2->DPC5PFE2	Down
DPC5PFE3->CB0F0_13_3	Down	CB0F0_13_3->DPC5PFE3	Down
DPC3PFE0->CB0F0_14_0	Down	CB0F0_14_0->DPC3PFE0	Down
DPC3PFE1->CB0F0_14_1	Down	CB0F0_14_1->DPC3PFE1	Down
DPC3PFE2->CB0F0_14_2	Down	CB0F0_14_2->DPC3PFE2	Down
DPC3PFE3->CB0F0_14_3	Down	CB0F0_14_3->DPC3PFE3	Down
DPC6PFE0->CB0F0_15_0	Down	CB0F0_15_0->DPC6PFE0	Down
DPC6PFE1->CB0F0_15_1	Down	CB0F0_15_1->DPC6PFE1	Down
DPC6PFE2->CB0F0_15_2	Down	CB0F0_15_2->DPC6PFE2	Down
DPC6PFE3->CB0F0_15_3	Down	CB0F0_15_3->DPC6PFE3	Down

## show chassis fabric plane

---

<b>List of Syntax</b>	<a href="#">Syntax on page 536</a> <a href="#">Syntax (TX Matrix Plus Router) on page 536</a> <a href="#">Syntax (MX Series Routers) on page 536</a> <a href="#">Syntax (MX2010, MX2020, MX10008, and MX2008 Universal Routing Platforms) on page 536</a> <a href="#">Syntax (EX9253 Switches) on page 536</a>
<b>Syntax</b>	show chassis fabric plane
<b>Syntax (TX Matrix Plus Router)</b>	show chassis fabric plane <detail   extensive   terse> <lcc <i>number</i>   sfc <i>number</i> >
<b>Syntax (MX Series Routers)</b>	show chassis fabric plane <extended> <detail   extensive   terse> <all-members> <local> <member <i>member-id</i> >
<b>Syntax (MX2010, MX2020, MX10008, and MX2008 Universal Routing Platforms)</b>	show chassis fabric plane
<b>Syntax (EX9253 Switches)</b>	show chassis fabric plane
<b>Release Information</b>	Command introduced in Junos OS Release 8.0. Command introduced in Junos OS Release 9.4 for EX Series switches. detail, extensive, lcc, sfc, and terse options introduced for the TX Matrix Plus router in Junos OS Release 9.6. Command introduced in Junos OS Release 12.3 for MX2020 Universal Routing Platforms. Command introduced in Junos OS Release 12.3 for MX2010 Universal Routing Platforms. <b>extended</b> option introduced in Junos OS Release 16.1 for MX2020 and MX2010 Routers. Command introduced in Junos OS Release 17.2 for MX2008 Universal Routing Platforms. Command introduced in Junos OS Release 17.3 for MX10003 Universal Routing Platforms. Command introduced in Junos OS Release 18.2 for MX10008 Universal Routing Platforms. Command introduced in Junos OS Release 18.2 for EX9253 Switches.
<b>Description</b>	(TX Matrix Plus router, T4000, T1600, M120, and MX Series routers and EX8200 switches only) On the M120 router, display the state of all fabric plane connections to the Forwarding Engine Boards (FEBs). On MX Series routers, display the state of all fabric plane connections to the Dense Port Concentrators (DPCs) and Packet Forwarding Engines (PFEs) on the Flexible PIC Concentrators (FPCs). On the TX Matrix Plus router, and on T1600 or T4000 routers in a routing matrix, display the state of the fabric



management plane and the logical planes on the switch-fabric chassis (SFC) and line-card chassis (LCC). On EX8200 switches, display the state of all fabric planes. This command can be used on the master Routing Engine only.

- Options**
- none**—(MX2010, MX2020, and MX2008 Routers only) (Optional) Display the state of the fabric management plane.
  - extended**—(MX2020, MX2010, and MX2008 Routers only) (Optional) Display the state of the fabric management planes (all 24 fabric planes).
  - detail**—(TX Matrix Plus routers, T1600 or T4000 routers in a routing matrix, and MX Series routers only) (Optional) Display detailed output for the fabric management plane. Show Switch Interface Board (SIB) states for the TXP-F13 SIB and the TXP-F2S SIB.
  - extensive**—(TX Matrix Plus routers, T1600 or T4000 routers in a routing matrix, and MX Series routers only) (Optional) Display extensive output for the fabric management plane.
  - terse**—(TX Matrix Plus routers and MX Series routers only) (Optional) Display terse output for the fabric management plane.
  - all-members**—(MX Series routers only) (Optional) Display the state of all fabric plane connections on all members of the Virtual Chassis configuration.
  - lcc *number***—(TX Matrix routers and TX Matrix Plus routers only) (Optional) Line-card chassis number.  
  
Replace *number* with the following values depending on the LCC configuration:
    - 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
    - 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
    - 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
    - 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
  - local**—(MX Series routers only) (Optional) Display the state of all fabric plane connections on the local Virtual Chassis member.
  - member *member-id***—(MX Series routers only) (Optional) Display the state of all fabric plane connections on the specified member of the Virtual Chassis configuration. Replace *member-id* with a value of 0 or 1.
  - sfc *number***—(TX Matrix Plus router only) (Optional) Show information about the TX Matrix Plus router (SFC). Replace *number* with 0.

**Required Privilege Level** view

**Related Documentation**

- [request chassis fabric plane on page 124](#)
- [show chassis fabric plane-location on page 590](#)
- [Routing Matrix with a TX Matrix Plus Router Solutions Page](#)

**List of Sample Output**

- [show chassis fabric plane \(M120 Router\) on page 545](#)
- [show chassis fabric plane \(MX240 Router\) on page 546](#)
- [show chassis fabric plane \(MX10008 Router\) on page 547](#)
- [show chassis fabric plane \(MX480 Router\) on page 548](#)
- [show chassis fabric plane \(MX960 Router\) on page 549](#)
- [show chassis fabric plane \(MX240 with AS MLC Modular Carrier Card\) on page 550](#)
- [show chassis fabric plane \(MX480 with AS MLC Modular Carrier Card\) on page 551](#)
- [show chassis fabric plane \(MX480 Router with MPC4E\) on page 552](#)
- [show chassis fabric plane \(MX960 with AS-MLC Modular Carrier Card\) on page 554](#)
- [show chassis fabric plane \(MX2010 Router\) on page 556](#)
- [show chassis fabric plane \(MX2020 Router\) on page 560](#)
- [show chassis fabric plane \(MX2020 Router with MPC4E\) on page 565](#)
- [show chassis fabric plane \(MX2020 Routers with SFB2\) on page 568](#)
- [show chassis fabric plane \(MX2008\) on page 571](#)
- [show chassis fabric plane \(TX Matrix Plus Router\) on page 573](#)
- [show chassis fabric plane \(TX Matrix Plus Router with 3D SIBs\) on page 573](#)
- [show chassis fabric plane detail \(TX Matrix Plus Router\) on page 574](#)
- [show chassis fabric plane extensive \(TX Matrix Plus Router \) on page 575](#)
- [show chassis fabric plane extensive \(TX Matrix Plus Router with 3D SIBs\) on page 577](#)
- [show chassis fabric plane terse \(TX Matrix Plus Router\) on page 579](#)
- [show chassis fabric plane terse \(TX Matrix Plus Router with 3D SIBs\) on page 580](#)
- [show chassis fabric plane lcc \(TX Matrix Plus Router\) on page 581](#)
- [show chassis fabric plane lcc \(TX Matrix Plus Router with 3D SIBs\) on page 581](#)
- [show chassis fabric plane sfc \(TX Matrix Plus Router\) on page 581](#)
- [show chassis fabric plane sfc \(TX Matrix Plus Router with 3D SIBs\) on page 581](#)
- [show chassis fabric plane \(T1600 Router\) on page 581](#)
- [show chassis fabric plane extensive \(T1600 Router\) on page 582](#)
- [show chassis fabric plane detail \(T1600 Router\) on page 584](#)
- [show chassis fabric plane \(EX8200 Switch\) on page 584](#)
- [show chassis fabric plane \(EX9253 Switch\) on page 585](#)

**Output Fields** [Table 21 on page 538](#) lists the output fields for the **show chassis fabric plane** command. Output fields are listed in the approximate order in which they appear.

*Table 21: show chassis fabric plane Output Fields*

Field Name	Field Description	Level of output
Plane	(TX Matrix Plus, MX Series routers, M120 routers, and EX8200 switches only) Number of the plane.	none

Table 21: show chassis fabric plane Output Fields (continued)

Field Name	Field Description	Level of output
Plane state	<p>(MX Series and M120 routers and EX8200 switches only) State of each plane:</p> <ul style="list-style-type: none"> <li>ACTIVE—SIB is operational and running.</li> </ul> <p><b>NOTE:</b> On the Enhanced MX SCB with MPCs, a maximum of 4 planes are operational and running. On all the other SCBs with MPCs, all the planes are operational and running.</p> <ul style="list-style-type: none"> <li>FAULTY— SIB is in alarmed state where the SIB's plane is not operational for the following reasons: <ul style="list-style-type: none"> <li>On-board fabric ASIC is not operational.</li> <li>Fiber optic connector faults.</li> <li>FPC connector faults.</li> <li>SIB midplane connector faults.</li> </ul> </li> </ul> <p>(MX2010, MX2020, MX10003, and MX2008 Routers only) State of each plane:</p> <ul style="list-style-type: none"> <li>ACTIVE—SFB is operational and running.</li> <li>OFFLINE— SFB is in offline.</li> </ul>	none
FEB	<p>(M120 routers only) FEB number and state of links to each FEB:</p> <ul style="list-style-type: none"> <li>Link error—Link between SIB and FPC is not operational.</li> <li>Links ok—Link between SIB and FPC is active.</li> <li>Unused—No FPC is present.</li> </ul>	none
FPC	<p>(MX Series routers only) Slot number of each Dense Port Concentrator (DPC) or Flexible PIC Concentrator (FPC). An FPC occupies two DPC slots on an MX Series router. The interface corresponds to the lowest numbered DPC slot for which the FPC is installed.</p>	none

Table 21: show chassis fabric plane Output Fields (continued)

Field Name	Field Description	Level of output
PFE	<p>(MX Series and M120 routers only) Slot number of each Packet Forwarding Engine and the state of the links to the DCP: <b>Links ok</b>, <b>Link error</b>, or <b>Unused</b>. Each DPC includes four Packet Forwarding Engines.</p> <ul style="list-style-type: none"> <li>• <b>Links ok</b>: Link between SIB and FPC is active.</li> <li>• <b>Link error</b>: Link between SIB and FPC is not operational.</li> <li>• <b>Unused</b>: No FPC is present.</li> </ul> <p>(On MX240 and MX480 routers with AS MLC modular carrier card and MPC4E only) Indicates that the link between the fabric plane and the hardware link on the modular carrier card or MPC4E is not operational.</p> <p>(MX2010, MX2020, and MX2008 routers only) Slot number of each Packet Forwarding Engine and the state of the links to the DPC: <b>Links ok</b>, <b>Link error</b>, or <b>Unused</b>. Each DPC includes four Packet Forwarding Engines.</p> <ul style="list-style-type: none"> <li>• <b>Links ok</b>: Link between SFB and FPC is active.</li> <li>• <b>Link error</b>: Link between SFB and FPC is not operational.</li> <li>• <b>Unused</b>: No FPC is present.</li> </ul>	none
State	<p>(TX Matrix Plus, and T1600 or T4000 routers in a routing matrix only)—State of the fabric plane:</p> <ul style="list-style-type: none"> <li>• <b>Online</b>: Fabric plane is operational and running and links on the SIB are operational.</li> <li>• <b>Offline</b>: Fabric plane state is <b>Offline</b> because the plane does not have four or more F2S and one F13 online.</li> <li>• <b>Empty</b>: Fabric plane state is <b>Empty</b> if all SIBs in the plane are absent.</li> <li>• <b>Spare</b>: Fabric plane is redundant and can be operational if the operational fabric plane encounters an error.</li> <li>• <b>Check</b>: Fabric plane is in alarmed state due to the following reason and the cause of the error must be resolved: <ul style="list-style-type: none"> <li>• One or more SIBs (belonging to the fabric plane) in the <b>Online</b> or <b>Spare</b> states has transitioned to the <b>Check</b> state. <b>Check</b> state of the SIB can be caused by link errors or destination errors.</li> </ul> </li> <li>• <b>Fault</b>: Fabric plane is in alarmed state if one or more SIBs belonging to the plane are in the <b>Fault</b> state. A SIB can be in the <b>Fault</b> state because of the following reasons: <ul style="list-style-type: none"> <li>• On-board fabric ASIC is not operational.</li> <li>• Fiber optic connector faults.</li> <li>• FPC connector faults.</li> <li>• SIB midplane connector faults.</li> <li>• Link errors have exceeded the threshold.</li> </ul> </li> </ul>	none
Link Errors	<p>(TX Matrix Plus routers with 3D SIBs only) indicate the number of links which are marked faulty because the errors on them have crossed threshold.</p>	none

Table 21: show chassis fabric plane Output Fields (continued)

Field Name	Field Description	Level of output
<b>Cable Errors</b>	(TX Matrix Plus routers with 3D SIBs only) Indicate the number of mandatory cables that are not connected, or in up state for that plane	none
<b>Destination Errors</b>	(TX Matrix Plus routers with 3D SIBs only) Indicates the number of destinations that are not reachable on this plane.	none
<b>Uptime</b>	(TX Matrix Plus, and T1600 or T4000 routers in a routing matrix only)—Time the fabric plane has been up and running.	none

#### Fabric Management Plane State Output Fields for the show chassis fabric plane extensive Command on a TX Matrix Plus Router

PLANE <i>number</i>	State of the fabric plane:	extensive
	<ul style="list-style-type: none"> <li>• <b>Online:</b> Fabric plane is operational and running and links on the SIB are operational.</li> <li>• <b>Offline:</b> Fabric plane state is <b>Offline</b> because the plane does not have 4 or more F2S and 1 F13 online.</li> <li>• <b>Empty:</b> Fabric plane state is <b>Empty</b> if all SIBs in the plane are absent.</li> <li>• <b>Spare:</b> Fabric plane is redundant and can be operational if the operational fabric plane encounters an error.</li> <li>• <b>Check:</b> Fabric plane is in alarmed state due to the following reasons and the cause of the error must be resolved: <ul style="list-style-type: none"> <li>• One or more SIBs (belonging to the fabric plane) in the <b>Online</b> or <b>Spare</b> states has transitioned to the <b>Check</b> state. <b>Check</b> state of the SIB can be caused because of link errors or destination errors.</li> </ul> </li> <li>• <b>Fault:</b> Fabric plane is in alarmed state if one or more SIBs belonging to the plane are in the <b>Fault</b> state. A SIB can be in the <b>Fault</b> state because of the following reasons: <ul style="list-style-type: none"> <li>• On-board fabric ASIC is not operational.</li> <li>• Fiber optic connector faults.</li> <li>• FPC connector faults.</li> <li>• SIB midplane connector faults.</li> <li>• Link errors have exceeded the threshold.</li> </ul> </li> </ul>	

Table 21: show chassis fabric plane Output Fields (continued)

Field Name	Field Description	Level of output
SIB F13/F2S slot-number	<p>State of the TXP-F13 SIB or TXP-F2S SIB:</p> <ul style="list-style-type: none"> <li>• <b>Activating</b>—Transitional state when the SIB is transitioning to the <b>Online</b> or <b>Spare</b> state.</li> <li>• <b>Deactivating</b>—Transitional state when the SIB is going offline.</li> <li>• <b>Online</b>—SIB is operational and running.</li> <li>• <b>Offline</b>—SIB is powered down.</li> <li>• <b>Spare</b>—SIB is redundant and will move to active state if one of the working SIBs fails to pass traffic.</li> <li>• <b>Empty</b>—No SIB is present.</li> <li>• <b>Fault</b>—SIB is in alarmed state because of the following reasons and the cause of the error must be resolved: <ul style="list-style-type: none"> <li>• On-board fabric ASIC is not operational.</li> <li>• Fiber optic connector faults.</li> <li>• FPC connector faults.</li> <li>• SIB midplane connector faults.</li> <li>• Link errors have exceeded the threshold</li> </ul> </li> <li>• <b>Check</b>—SIB is in alarmed state where the SIB is partially operational because of link or destination errors. Only a SIB that is <b>Online</b> or <b>Spare</b> can transition to the <b>Check</b> state.</li> </ul> <p><b>NOTE:</b> If a SIB is not inserted properly, the SIB cannot transition to the <b>Online</b> or <b>Spare</b> state, and therefore cannot transition to the <b>Check</b> state.</p>	extensive
SIB F13 slot-number Odd/Even	<p>State of the TXP-F13 SIB even and odd port connection optical links from the TX Matrix Plus router (SFC) to the router (LCC) in the routing matrix. The left four ports on the SFC are labeled <b>Even</b> and provide connections to one even-numbered LCC—LCC0 or LCC2. The right four ports on the SFC are labeled <b>Odd</b> and provide connections to one odd-numbered LCC—LCC1 or LCC3.</p>	extensive
LCC number, SIB slot-number	<p>State of the SIB on the LCC that is connected to the <b>Even</b> or <b>Odd</b> port on the TXP-F13 SIB faceplate:</p> <ul style="list-style-type: none"> <li>• <b>Links ok</b>—Links between the TXP-F13 SIB on the SFC and the LCC are active.</li> <li>• <b>Links error</b>—One or more links between the TXP-F13 SIB on the SFC and the LCC, have experienced an error, but the affected links remain operational.</li> <li>• <b>Unused</b>—No SIB is present.</li> </ul>	extensive

Table 21: show chassis fabric plane Output Fields (continued)

Field Name	Field Description	Level of output
<b>SG number Port number</b>	<p>State of the SG chip ports on the LCC:</p> <ul style="list-style-type: none"> <li>• <b>Links ok</b>—Link is active.</li> <li>• <b>Link error</b>—Link is operational with errors.</li> <li>• <b>Link error crc saturated</b>—CRC has exceeded the rate threshold and reached saturation without optical issues—that is, a cable has not been cut, removed, or otherwise experienced an error.</li> <li>• <b>Link error crc saturated with optical errors</b>—CRC has exceeded the rate threshold and reached saturation with optical issues—that is, a cable has been cut, removed, or otherwise experienced an error.</li> <li>• <b>Unused</b>—Port is not in use.</li> </ul>	<b>extensive</b>
<b>SIB F2S slot-number</b>	State of the intra-chassis links between the TXP-F2S and TXP-F13 SIBs.	<b>extensive</b>

Fabric Management SIB State Output Fields for the show chassis fabric plane extensive Command on a TX Matrix Plus Router

Table 21: show chassis fabric plane Output Fields (continued)

Field Name	Field Description	Level of output
<b>SIB slot-number</b>	<p>State of the SIBs on the T1600/T4000 router (LCC) in the routing matrix:</p> <ul style="list-style-type: none"> <li>• <b>Activating</b>—Transitional state when the SIB is coming online.</li> <li>• <b>Deactivating</b>—Transitional state when the SIB is going offline.</li> <li>• <b>Connected</b>—SIBs on an LCC are connected and trained, but are either not online or are spare, because the plane on the the TX Matrix Plus router (SFC) is still offline. The LCC SIB transitions to the <b>Connected</b> state when the F13 SIB to which it connects is online but the SFC plane (to which the LCC SIB connects) is offline for some reason; for instance, when there are insufficient number of F2 SIBs in the plane.</li> <li>• <b>Disconnected</b>—If an F13 SIB on the TX Matrix Plus router (SFC) goes offline, then the SIBs on the LCCs connected to the F13 SIB get disconnected. On the TX Matrix Plus router with 3D SIBs, the LCC SIB is also disconnected if the F13 SIB is online, but none of the cables are connected or trained. The <b>Disconnected</b> state is valid only for SIBs on an LCC. An LCC SIB transitions to the <b>Disconnected</b> state when the F13 SIB to which it connects goes <b>Offline</b>, irrespective of the state of the SFC plane. <b>SFC Error</b>—If an F13 SIB on the TX Matrix Plus router (SFC) transitions to the <b>Fault</b> state (because of link errors, for instance), and if an LCC SIB connected to the F13 SIB comes online, the LCC SIB transitions to the <b>SFC Error</b> state. This state indicates that the F13 SIB to which the LCC SIB is connected has errors. <b>NOTE:</b> The <b>Connected</b>, <b>Disconnected</b>, and <b>SFC Error</b> states are applicable only to the SIBs on an LCC.</li> <li>• <b>Online</b>—SIB is operational and running.</li> <li>• <b>Offline</b>—SIB is powered down.</li> <li>• <b>Spare</b>—SIB is redundant and will move to active state if one of the working SIBs fails to pass traffic.</li> <li>• <b>Empty</b>—No SIB is present.</li> <li>• <b>Fault</b>—SIB is in alarmed state where the SIB's plane is not operational for the following reasons: <ul style="list-style-type: none"> <li>• On-board fabric ASIC is not operational.</li> <li>• Fiber optic connector faults.</li> <li>• FPC connector faults.</li> <li>• SIB midplane connector faults.</li> <li>• Link errors have exceeded the threshold</li> </ul> </li> <li>• <b>Check</b>—SIB is in alarmed state where the SIB is partially operational because of link or destination errors. Only a SIB that is <b>Online</b> or <b>Spare</b> can transition to the <b>Check</b> state. <b>NOTE:</b> If a SIB is not inserted properly, the SIB cannot transition to the <b>Online</b> or <b>Spare</b> state, and therefore cannot transition to the <b>Check</b> state.</li> </ul>	<b>extensive</b>



Table 21: show chassis fabric plane Output Fields (continued)

Field Name	Field Description	Level of output
LCC SIB Link State	State of the LCC SIB link: <ul style="list-style-type: none"> <li>• <b>Links ok</b>—Link is active.</li> <li>• <b>Links error</b>—A link error has occurred, but the link remains operational.</li> <li>• <b>Unused</b>—SIB is not in use.</li> </ul>	extensive
SG number Port number	State of the SG chip ports on the LCC: <ul style="list-style-type: none"> <li>• <b>Links ok</b>—Link is active.</li> <li>• <b>Link error</b>—Link is operational with errors.</li> <li>• <b>Link error crc saturated</b>—CRC has exceeded the rate threshold and reached saturation without optical issues—that is, a cable has not been cut, removed, or otherwise experienced an error.</li> <li>• <b>Link error crc saturated with optical errors</b>—CRC has exceeded the rate threshold and reached saturation with optical issues—that is, a cable has been cut, removed, or otherwise experienced an error.</li> <li>• <b>Unused</b>—Port is not in use.</li> </ul>	extensive

## Sample Output

### show chassis fabric plane (M120 Router)

```

user@host> show chassis fabric plane
Fabric management PLANE state
Plane 0
Plane state: ACTIVE
FEB 0: Links ok
FEB 1: Links ok
FEB 2: Links ok
FEB 3: Links ok
FEB 4: Links ok
FEB 5: Links ok
Plane 1
Plane state: ACTIVE
FEB 0: Links ok
FEB 1: Links ok
FEB 2: Links ok
FEB 3: Links ok
FEB 4: Links ok
FEB 5: Links ok
Plane 2
Plane state: ACTIVE
FEB 0: Links ok
FEB 1: Links ok
FEB 2: Links ok
FEB 3: Links ok
FEB 4: Links ok
FEB 5: Links ok
Plane 3
Plane state: ACTIVE
FEB 0: Links ok

```

```
FEB 1: Links ok
FEB 2: Links ok
FEB 3: Links ok
FEB 4: Links ok
FEB 5: Links ok
```

### show chassis fabric plane (MX240 Router)

```
user@host> show chassis fabric plane
Plane 0
  Plane state: ACTIVE
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 2
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
Plane 1
  Plane state: ACTIVE
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 2
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
Plane 2
  Plane state: ACTIVE
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 2
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
Plane 3
  Plane state: ACTIVE
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 2
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
Plane 4
  Plane state: SPARE
    FPC 1
      PFE 0 :Links ok
```

```

        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
    FPC 2
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
Plane 5
  Plane state: SPARE
    FPC 1
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
    FPC 2
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
Plane 6
  Plane state: SPARE
    FPC 1
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
    FPC 2
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
Plane 7
  Plane state: SPARE
    FPC 1
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
    FPC 2
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok

```

### show chassis fabric plane (MX10008 Router)

```
user@host> show chassis fabric plane
```

```
Fabric management PLANE state
```

```
Plane 0
```

```
  Plane state: ACTIVE
```

```
    FPC 1
```

```
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
        PFE 4 :Links ok
        PFE 5 :Links ok
```

```
    FPC 5
```

```
        PFE 0 :Links ok
```

```

PFE 1 :Links ok
PFE 2 :Links ok
PFE 3 :Links ok
PFE 4 :Links ok
PFE 5 :Links ok
Plane 1
  Plane state: ACTIVE
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
      PFE 4 :Links ok
      PFE 5 :Links ok
    FPC 5
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
      PFE 4 :Links ok
      PFE 5 :Links ok
Plane 2
  Plane state: ACTIVE
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
      PFE 4 :Links ok
      PFE 5 :Links ok
    FPC 5
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
      PFE 4 :Links ok
      PFE 5 :Links ok
Plane 3
  Plane state: ACTIVE
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
      PFE 4 :Links ok
      PFE 5 :Links ok
    FPC 5
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
      PFE 4 :Links ok
      PFE 5 :Links ok
```

#### show chassis fabric plane (MX480 Router)

```
user@host> show chassis fabric plane
Fabric management PLANE state
Plane 0
  Plane state: ACTIVE
    FPC 1
```

```

        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
Plane 1
  Plane state: ACTIVE
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
Plane 2
  Plane state: ACTIVE
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
Plane 3
  Plane state: ACTIVE
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
Plane 4
  Plane state: SPARE
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
Plane 5
  Plane state: SPARE
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
Plane 6
  Plane state: SPARE
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
Plane 7
  Plane state: SPARE
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok

```

### show chassis fabric plane (MX960 Router)

```

user@host> show chassis fabric plane
Plane 0
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok

```

```
        FPC 2
          PFE 0 :Links ok
          PFE 1 :Links ok
Plane 1
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
    FPC 2
      PFE 0 :Links ok
      PFE 1 :Links ok
Plane 2
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
    FPC 2
      PFE 0 :Links ok
      PFE 1 :Links ok
Plane 3
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
    FPC 2
      PFE 0 :Links ok
      PFE 1 :Links ok
```

#### show chassis fabric plane (MX240 with AS MLC Modular Carrier Card)

In the following output, FPC 1 is the AS MLC modular carrier card (AS MCC).

```
user@host>show chassis fabric plane
Fabric management PLANE state
Plane 0
  Plane state: ACTIVE
    FPC 1
      PFE 0 :Links ok
    FPC 2
      PFE 0 :Links ok
Plane 1
  Plane state: ACTIVE
    Plane state: ACTIVE
    FPC 1
      PFE 0 :Links ok
    FPC 2
      PFE 0 :Links ok
Plane 2
  Plane state: ACTIVE
    FPC 2
      PFE 0 :Links ok
    FPC 4
      PFE 0 :Links ok
      PFE 2 :Links ok
    FPC 5
      PFE 0 :Links ok
Plane 3
  Plane state: ACTIVE
    Plane state: ACTIVE
    FPC 1
      PFE 0 :Links ok
    FPC 2
      PFE 0 :Links ok
Plane 4
```

```

Plane state: ACTIVE
  Plane state: ACTIVE
    FPC 1
      PFE 0 :Links ok
    FPC 2
      PFE 0 :Links ok
Plane 5
  Plane state: ACTIVE
    FPC 1
      PFE 0 :Unused
    FPC 2
      PFE 0 :Links ok
Plane 6
  Plane state: ACTIVE
    FPC 1
      PFE 0 :Links ok
    FPC 2
      PFE 0 :Links ok
Plane 7
  Plane state: ACTIVE
    FPC 1
      PFE 0 :Unused
    FPC 2
      PFE 0 :Links ok

```

#### show chassis fabric plane (MX480 with AS MLC Modular Carrier Card)

In the following output, FPC 5 is the AS MLC modular carrier card (AS MCC).

```

user@host>show chassis fabric plane
Fabric management PLANE state
Plane 0
  Plane state: ACTIVE
    FPC 2
      PFE 0 :Links ok
    FPC 4
      PFE 0 :Links ok
      PFE 2 :Links ok
    FPC 5
      PFE 0 :Links ok
Plane 1
  Plane state: ACTIVE
    FPC 2
      PFE 0 :Links ok
    FPC 4
      PFE 0 :Links ok
      PFE 2 :Links ok
    FPC 5
      PFE 0 :Links ok
Plane 2
  Plane state: ACTIVE
    FPC 2
      PFE 0 :Links ok
    FPC 4
      PFE 0 :Links ok
      PFE 2 :Links ok
    FPC 5
      PFE 0 :Links ok
Plane 3
  Plane state: ACTIVE

```

```
FPC 2
  PFE 0 :Links ok
FPC 4
  PFE 0 :Links ok
  PFE 2 :Links ok
FPC 5
  PFE 0 :Links ok
Plane 4
  Plane state: ACTIVE
    FPC 2
      PFE 0 :Links ok
    FPC 4
      PFE 0 :Links ok
      PFE 2 :Links ok
    FPC 5
      PFE 0 :Links ok
Plane 5
  Plane state: ACTIVE
    FPC 2
      PFE 0 :Links ok
    FPC 4
      PFE 0 :Links ok
      PFE 2 :Links ok
    FPC 5
      PFE 0 :Unused
Plane 6
  Plane state: ACTIVE
    FPC 2
      PFE 0 :Links ok
    FPC 4
      PFE 0 :Links ok
      PFE 2 :Links ok
    FPC 5
      PFE 0 :Links ok
Plane 7
  Plane state: ACTIVE
    FPC 2
      PFE 0 :Links ok
    FPC 4
      PFE 0 :Links ok
      PFE 2 :Links ok
    FPC 5
      PFE 0 :Unused
```

#### show chassis fabric plane (MX480 Router with MPC4E)

```
user@host > show chassis fabric plane
Fabric management PLANE state
Plane 0
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 3
      PFE 0 :Links ok
    FPC 4
```



```
        PFE 0 :Links ok
        PFE 1 :Links ok
Plane 1
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 3
      PFE 0 :Links ok
    FPC 4
      PFE 0 :Links ok
      PFE 1 :Links ok
Plane 2
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 3
      PFE 0 :Links ok
    FPC 4
      PFE 0 :Links ok
      PFE 1 :Links ok
Plane 3
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 3
      PFE 0 :Links ok
    FPC 4
      PFE 0 :Links ok
      PFE 1 :Links ok
Plane 4
  Plane state: SPARE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 3
      PFE 0 :Links ok
    FPC 4
      PFE 0 :Links ok
```

```

        PFE 1 :Links ok
Plane 5
  Plane state: SPARE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 3
      PFE 0 :Links ok
    FPC 4
      PFE 0 :Links ok
      PFE 1 :Links ok
Plane 6
  Plane state: SPARE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 3
      PFE 0 :Links ok
    FPC 4
      PFE 0 :Links ok
      PFE 1 :Links ok
Plane 7
  Plane state: SPARE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 3
      PFE 0 :Links ok
    FPC 4
      PFE 0 :Links ok
      PFE 1 :Links ok
```

### show chassis fabric plane (MX960 with AS-MLC Modular Carrier Card)

In the following output, FPC 1 is a modular carrier card.

```
user@host>show chassis fabric plane
Fabric management PLANE state
Plane 0
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 1
      PFE 0 :Links ok
    FPC 4
```

```

        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
    FPC 5
        PFE 0 :Links ok
    FPC 8
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
Plane 1
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 1
      PFE 0 :Links ok
    FPC 4
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 5
      PFE 0 :Links ok
    FPC 8
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
Plane 2
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 1
      PFE 0 :Links ok
    FPC 4
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 5
      PFE 0 :Links ok
    FPC 8
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
Plane 3
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 1
      PFE 0 :Links ok
    FPC 4
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
```

```
FPC 5
  PFE 0 :Links ok
FPC 8
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
Plane 4
Plane state: SPARE
FPC 0
  PFE 0 :Links ok
  PFE 1 :Links ok
FPC 1
  PFE 0 :Links ok
FPC 4
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 5
  PFE 0 :Links ok
FPC 8
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
Plane 5
Plane state: SPARE
FPC 0
  PFE 0 :Links ok
  PFE 1 :Links ok
FPC 1
  PFE 0 :Links ok
FPC 4
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 5
  PFE 0 :Links ok
FPC 8
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
```

#### show chassis fabric plane (MX2010 Router)

```
user@host>show chassis fabric plane
Fabric management PLANE state
Plane 0
Plane state: ACTIVE
FPC 0
  PFE 0 :Links ok
  PFE 1 :Links ok
FPC 1
  PFE 0 :Links ok
FPC 2
  PFE 0 :Links ok
  PFE 1 :Links ok
FPC 3
```

```

        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
    FPC 4
        PFE 0 :Links ok
    FPC 5
        PFE 0 :Links ok
        PFE 1 :Links ok
    FPC 6
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
    FPC 7
        PFE 0 :Links ok
        PFE 1 :Links ok
    FPC 8
        PFE 0 :Links ok
    FPC 9
        PFE 0 :Links ok
        PFE 1 :Links ok
Plane 1
  Plane state: ACTIVE
    FPC 0
        PFE 0 :Links ok
        PFE 1 :Links ok
    FPC 1
        PFE 0 :Links ok
    FPC 2
        PFE 0 :Links ok
        PFE 1 :Links ok
    FPC 3
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
    FPC 4
        PFE 0 :Links ok
    FPC 5
        PFE 0 :Links ok
        PFE 1 :Links ok
    FPC 6
    PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
    FPC 7
        PFE 0 :Links ok
        PFE 1 :Links ok
    FPC 8
        PFE 0 :Links ok
    FPC 9
        PFE 0 :Links ok
        PFE 1 :Links ok
Plane 2
  Plane state: ACTIVE
    FPC 0
        PFE 0 :Links ok
        PFE 1 :Links ok
    FPC 1
```

```
    PFE 0 :Links ok
FPC 2
    PFE 0 :Links ok
    PFE 1 :Links ok
FPC 3
    PFE 0 :Links ok
    PFE 1 :Links ok
    PFE 2 :Links ok
    PFE 3 :Links ok
FPC 4
    PFE 0 :Links ok
FPC 5
    PFE 0 :Links ok
    PFE 1 :Links ok
FPC 6
    PFE 0 :Links ok
    PFE 1 :Links ok
    PFE 2 :Links ok
    PFE 3 :Links ok
FPC 7
    PFE 0 :Links ok
    PFE 1 :Links ok
FPC 8
    PFE 0 :Links ok
FPC 9
    PFE 0 :Links ok
    PFE 1 :Links ok
Plane 3
  Plane state: OFFLINE
Plane 4
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 1
      PFE 0 :Links ok
    FPC 2
      PFE 0 :Links ok
PFE 1 :Links ok
    FPC 3
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 4
      PFE 0 :Links ok
    FPC 5
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 6
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 7
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 8
      PFE 0 :Links ok
    FPC 9
      PFE 0 :Links ok
```

```

    PFE 1 :Links ok
Plane 5
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 1
      PFE 0 :Links ok
    FPC 2
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 3
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 4
      PFE 0 :Links ok
    FPC 5
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 6
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 7
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 8
      PFE 0 :Links ok
    FPC 9
      PFE 0 :Links ok
    PFE 1 :Links ok
Plane 6
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 1
      PFE 0 :Links ok
    FPC 2
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 3
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 4
      PFE 0 :Links ok
    FPC 5
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 6
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 7
      PFE 0 :Links ok
```

```
        PFE 1 :Links ok
    FPC 8
        PFE 0 :Links ok
    FPC 9
        PFE 0 :Links ok
        PFE 1 :Links ok
Plane 7
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 1
      PFE 0 :Links ok
    FPC 2
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 3
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 4
      PFE 0 :Links ok
    FPC 5
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 6
      PFE 0 :Links ok
    PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 7
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 8
      PFE 0 :Links ok
    FPC 9
      PFE 0 :Links ok
      PFE 1 :Links ok
```

#### show chassis fabric plane (MX2020 Router)

```
user@host>show chassis fabric plane
Fabric management PLANE state
Plane 0
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 2
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
```



```
FPC 3
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 4
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 5
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 6
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 7
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 8
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 9
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 10
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 11
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 12
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 13
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 14
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 15
```

```
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
    FPC 16
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
    FPC 17
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
    FPC 18
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
    FPC 19
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
Plane 1
Plane state: ACTIVE
    FPC 0
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
    FPC 1
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
    FPC 2
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
    FPC 3
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
    FPC 4
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
    FPC 5
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
    FPC 6
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
```

```
FPC 7
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 8
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 9
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 10
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 11
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 12
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 13
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 14
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 15
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 16
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 17
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 18
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 19
```

```
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
Plane 2
Plane state: ACTIVE
  FPC 0
    PFE 0 :Links ok
    PFE 1 :Links ok
    PFE 2 :Links ok
    PFE 3 :Links ok
  FPC 1
    PFE 0 :Links ok
    PFE 1 :Links ok
    PFE 2 :Links ok
    PFE 3 :Links ok
  FPC 2
    PFE 0 :Links ok
    PFE 1 :Links ok
    PFE 2 :Links ok
    PFE 3 :Links ok
  FPC 3
    PFE 0 :Links ok
    PFE 1 :Links ok
    PFE 2 :Links ok
    PFE 3 :Links ok
  FPC 4
    PFE 0 :Links ok
    PFE 1 :Links ok
    PFE 2 :Links ok
    PFE 3 :Links ok
  FPC 5
    PFE 0 :Links ok
    PFE 1 :Links ok
    PFE 2 :Links ok
    PFE 3 :Links ok
  FPC 6
    PFE 0 :Links ok
    PFE 1 :Links ok
    PFE 2 :Links ok
    PFE 3 :Links ok
  FPC 7
    PFE 0 :Links ok
    PFE 1 :Links ok
    PFE 2 :Links ok
    PFE 3 :Links ok
  FPC 8
    PFE 0 :Links ok
    PFE 1 :Links ok
    PFE 2 :Links ok
    PFE 3 :Links ok
  FPC 9
    PFE 0 :Links ok
    PFE 1 :Links ok
    PFE 2 :Links ok
    PFE 3 :Links ok
  FPC 10
    PFE 0 :Links ok
    PFE 1 :Links ok
    PFE 2 :Links ok
    PFE 3 :Links ok
```

```

FPC 11
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 12
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 13
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 14
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 15
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 16
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 17
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 18
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 19
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
Plane 3
...
```

#### show chassis fabric plane (MX2020 Router with MPC4E)

```

user@host > show chassis fabric plane
Fabric management PLANE state
Plane 0
  Plane state: ACTIVE
  FPC 0
    PFE 0 :Links ok
    PFE 1 :Links ok
  FPC 9
    PFE 0 :Links ok
    PFE 1 :Links ok
  FPC 10
```

```
        PFE 0 :Links ok
    FPC 14
        PFE 0 :Links ok
        PFE 1 :Links ok
    FPC 19
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
Plane 1
  Plane state: ACTIVE
    FPC 0
        PFE 0 :Links ok
        PFE 1 :Links ok
    FPC 9
        PFE 0 :Links ok
        PFE 1 :Links ok
    FPC 10
        PFE 0 :Links ok
    FPC 14
        PFE 0 :Links ok
        PFE 1 :Links ok
    FPC 19
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
Plane 2
  Plane state: ACTIVE
    FPC 0
        PFE 0 :Links ok
        PFE 1 :Links ok
    FPC 9
        PFE 0 :Links ok
        PFE 1 :Links ok
    FPC 10
        PFE 0 :Links ok
    FPC 14
        PFE 0 :Links ok
        PFE 1 :Links ok
    FPC 19
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
Plane 3
  Plane state: ACTIVE
    FPC 0
        PFE 0 :Links ok
        PFE 1 :Links ok
    FPC 9
        PFE 0 :Links ok
        PFE 1 :Links ok
    FPC 10
        PFE 0 :Links ok
    FPC 14
        PFE 0 :Links ok
        PFE 1 :Links ok
    FPC 19
        PFE 0 :Links ok
        PFE 1 :Links ok
```

```
        PFE 2 :Links ok
        PFE 3 :Links ok
Plane 4
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 9
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 10
      PFE 0 :Links ok
    FPC 14
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 19
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
Plane 5
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 9
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 10
      PFE 0 :Links ok
    FPC 14
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 19
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
Plane 6
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 9
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 10
      PFE 0 :Links ok
    FPC 14
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 19
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
Plane 7
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
```

```
FPC 9
  PFE 0 :Links ok
  PFE 1 :Links ok
FPC 10
  PFE 0 :Links ok
FPC 14
  PFE 0 :Links ok
  PFE 1 :Links ok
FPC 19
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
```

### show chassis fabric plane (MX2020 Routers with SFB2)

```
user@host> show chassis fabric plane
```

```
Fabric management PLANE state
```

```
Plane 0
```

```
Plane state: ACTIVE
```

```
FPC 0
  PFE 0 :Links ok
FPC 1
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 2
  PFE 0 :Links ok
  PFE 1 :Links ok
FPC 3
  PFE 0 :Links ok
  PFE 1 :Links ok
FPC 6
  PFE 0 :Links ok
FPC 7
  PFE 0 :Links ok
FPC 11
  PFE 0 :Links ok
  PFE 1 :Links ok
FPC 12
  PFE 0 :Links ok
  PFE 1 :Links ok
FPC 13
  PFE 0 :Links ok
  PFE 1 :Links ok
FPC 18
  PFE 0 :Links ok
FPC 19
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
```

```
Plane 1
```

```
Plane state: ACTIVE
```

```
FPC 0
  PFE 0 :Links ok
FPC 1
  PFE 0 :Links ok
  PFE 1 :Links ok
PFE 2 :Links ok
```



```
    PFE 3 :Links ok
FPC 2
    PFE 0 :Links ok
    PFE 1 :Links ok
FPC 3
    PFE 0 :Links ok
    PFE 1 :Links ok
FPC 6
    PFE 0 :Links ok
FPC 7
    PFE 0 :Links ok
FPC 11
    PFE 0 :Links ok
    PFE 1 :Links ok
FPC 12
    PFE 0 :Links ok
    PFE 1 :Links ok
FPC 13
    PFE 0 :Links ok
    PFE 1 :Links ok
FPC 18
    PFE 0 :Links ok
FPC 19
    PFE 0 :Links ok
    PFE 1 :Links ok
    PFE 2 :Links ok
    PFE 3 :Links ok
Plane 2
Plane state: ACTIVE
FPC 0
    PFE 0 :Links ok
FPC 1
    PFE 0 :Links ok
    PFE 1 :Links ok
    PFE 2 :Links ok
    PFE 3 :Links ok
FPC 2
    PFE 0 :Links ok
    PFE 1 :Links ok
FPC 3
    PFE 0 :Links ok
    PFE 1 :Links ok
FPC 6
    PFE 0 :Links ok
FPC 7
    PFE 0 :Links ok
FPC 11
    PFE 0 :Links ok
    PFE 1 :Links ok
FPC 12
    PFE 0 :Links ok
    PFE 1 :Links ok
FPC 13
    PFE 0 :Links ok
    PFE 1 :Links ok
FPC 18
    PFE 0 :Links ok
FPC 19
    PFE 0 :Links ok
    PFE 1 :Links ok
    PFE 2 :Links ok
```

```
        PFE 3 :Links ok
...
Plane 18
  Plane state: OFFLINE
Plane 19
  Plane state: OFFLINE
Plane 20
  Plane state: OFFLINE
Plane 21
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 2
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 3
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 6
      PFE 0 :Links ok
    FPC 7
      PFE 0 :Links ok
    FPC 11
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 12
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 13
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 18
      PFE 0 :Links ok
    FPC 19
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
Plane 22
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 2
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 3
      PFE 0 :Links ok
      PFE 1 :Links ok
    FPC 6
      PFE 0 :Links ok
    FPC 7
```

```

        PFE 0 :Links ok
    FPC 11
        PFE 0 :Links ok
        PFE 1 :Links ok
    FPC 12
        PFE 0 :Links ok
        PFE 1 :Links ok
    FPC 13
        PFE 0 :Links ok
        PFE 1 :Links ok
    FPC 18
        PFE 0 :Links ok
    FPC 19
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
Plane 23
    Plane state: ACTIVE
    FPC 0
        PFE 0 :Links ok
    FPC 1
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
    FPC 2
        PFE 0 :Links ok
        PFE 1 :Links ok
    FPC 3
        PFE 0 :Links ok
PFE 1 :Links ok
    FPC 6
        PFE 0 :Links ok
    FPC 7
        PFE 0 :Links ok
    FPC 11
        PFE 0 :Links ok
        PFE 1 :Links ok
    FPC 12
        PFE 0 :Links ok
        PFE 1 :Links ok
    FPC 13
        PFE 0 :Links ok
        PFE 1 :Links ok
    FPC 18
        PFE 0 :Links ok
    FPC 19
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok

```

### show chassis fabric plane (MX2008)

```

user@host> show chassis fabric plane
Fabric management PLANE state
Plane 0
    Plane state: OFFLINE
Plane 1
    Plane state: ACTIVE

```

```
FPC 0
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 1
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
  PFE 3 :Links ok
FPC 3
  PFE 0 :Links ok
FPC 5
  PFE 0 :Links ok
Plane 2
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 3
      PFE 0 :Links ok
    FPC 5
      PFE 0 :Links ok
Plane 3
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 3
      PFE 0 :Links ok
    FPC 5
      PFE 0 :Links ok
Plane 4
  Plane state: OFFLINE
Plane 5
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
      PFE 3 :Links ok
    FPC 3
```

```

        PFE 0 :Links ok
    FPC 5
        PFE 0 :Links ok
Plane 6
    Plane state: ACTIVE
    FPC 0
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
    FPC 1
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
        PFE 3 :Links ok
    FPC 3
        PFE 0 :Links ok
    FPC 5
        PFE 0 :Links ok
Plane 7
    Plane state: OFFLINE

```

#### show chassis fabric plane (TX Matrix Plus Router)

```
user@host> show chassis fabric plane
```

```
sfc0-re0:
```

```

-----
Plane  State          Link errors  Destination errors  Uptime
0      Spare           NONE         NONE                10 hours, 16 seconds
1      Online          NONE         NONE                10 hours, 13 seconds
2      Online          NONE         NONE                10 hours, 9 seconds
3      Online          NONE         NONE                10 hours, 7 seconds
4      Online          NONE         NONE

```

```
lcc0-re0:
```

```

-----
SIB   State          Link errors  Destination errors  Uptime
0      Spare           NONE         NONE                10 hours, 16 seconds
1      Online          NONE         NONE                10 hours, 13 seconds
2      Online          NONE         NONE                10 hours, 9 seconds
3      Online          NONE         NONE                10 hours, 7 seconds
4      Online          NONE         NONE

```

```
lcc2-re0:
```

```

-----
SIB   State          Link errors  Destination errors  Uptime
0      Spare           NONE         NONE                10 hours, 16 seconds
1      Online          NONE         NONE                10 hours, 12 seconds
2      Online          NONE         NONE                10 hours, 9 seconds
3      Online          NONE         NONE                10 hours, 7 seconds
4      Online          NONE         NONE

```

#### show chassis fabric plane (TX Matrix Plus Router with 3D SIBs)

```
user@host> show chassis fabric plane
```

```
sfc0-re0:
```

```

-----
Plane  State          Cable errors  Link errors  Destination errors  Uptime
0      Spare           NONE         NONE         NONE                5 hours, 11
1      Online          NONE         NONE         NONE                minutes, 3 seconds

```

```

2      Online      NONE      NONE      NONE      8 hours, 4
minutes, 24 seconds
3      Online      NONE      NONE      NONE      8 hours, 3
minutes, 16 seconds
4      Online      NONE      NONE      NONE      8 hours, 2
minutes, 12 seconds

```

```
lcc2-re0:
```

```

-----
SIB   State      Cable errors  Link errors  Destination errors  Uptime
0     Spare      NONE         NONE         NONE                5 hours, 11
1     Online      NONE         NONE         NONE                minutes, 3 seconds
2     Online      NONE         NONE         NONE                8 hours, 4
minutes, 57 seconds
3     Online      NONE         NONE         NONE                8 hours, 3
minutes, 53 seconds
4     Online      NONE         NONE         NONE                8 hours, 2
minutes, 45 seconds

```

```
lcc4-re0:
```

```

-----
SIB   State      Cable errors  Link errors  Destination errors  Uptime
0     Spare      NONE         NONE         NONE                5 hours, 11
1     Online      NONE         NONE         NONE                minutes, 12 seconds
2     Online      NONE         NONE         NONE                8 hours, 4
minutes, 24 seconds
3     Online      NONE         NONE         NONE                8 hours, 3
minutes, 16 seconds
4     Online      NONE         NONE         NONE                8 hours, 2
minutes, 12 seconds

```

```
lcc5-re0:
```

```

-----
SIB   State      Cable errors  Link errors  Destination errors  Uptime
0     Spare      NONE         NONE         NONE                5 hours, 11
1     Online      NONE         NONE         NONE                minutes, 12 seconds
2     Online      NONE         NONE         NONE                8 hours, 4
minutes, 24 seconds
3     Online      NONE         NONE         NONE                8 hours, 3
minutes, 15 seconds
4     Online      NONE         NONE         NONE                8 hours, 2
minutes, 11 seconds

```

### show chassis fabric plane detail (TX Matrix Plus Router)

```

user@host> show chassis fabric plane detail
sfc0-re0:

```

```
-----
Fabric Management PLANE State:
```

```

PLANE 0:  Spare
  SIB F13 0 :  Spare
  SIB F13 1 :  Empty
  SIB F2S 0/0 : Spare
  SIB F2S 0/2 : Spare
  SIB F2S 0/4 : Spare
  SIB F2S 0/6 : Spare
PLANE 1:  Online
  SIB F13 3 :  Online

```

```

SIB F13 4 : Empty
SIB F2S 1/0 : Online
SIB F2S 1/2 : Online
SIB F2S 1/4 : Online
SIB F2S 1/6 : Online
PLANE 2: Online
SIB F13 6 : Online
SIB F13 7 : Empty
SIB F2S 2/0 : Online
SIB F2S 2/2 : Online
SIB F2S 2/4 : Online
SIB F2S 2/6 : Online
PLANE 3: Online
SIB F13 8 : Online
SIB F13 9 : Online
SIB F2S 3/0 : Online
SIB F2S 3/2 : Online
SIB F2S 3/4 : Online
SIB F2S 3/6 : Online
PLANE 4: Online
SIB F13 11 : Online
SIB F13 12 : Online
SIB F2S 4/0 : Online
SIB F2S 4/2 : Online
SIB F2S 4/4 : Online
SIB F2S 4/6 : Online

```

```
lcc0-re0:
```

```
-----
Fabric Management SIB State:
```

```

SIB 0 : Spare
SIB 1 : Online
SIB 2 : Online
SIB 3 : Online
SIB 4 : Online

```

```
lcc1-re0:
```

```
-----
Fabric Management SIB State:
```

```

SIB 0 : Spare
SIB 1 : Online
SIB 2 : Online
SIB 3 : Online
SIB 4 : Online

```

```
...
```

### show chassis fabric plane extensive (TX Matrix Plus Router )

```
user@host> show chassis fabric plane extensive
sfc0-re0:
```

```
-----
Fabric Management PLANE State:
```

```

PLANE 0: Spare
SIB F13 0 : Spare
SIB F13 1 : Empty
SIB F2S 0/0 : Spare
SIB F2S 0/2 : Spare
SIB F2S 0/4 : Spare
SIB F2S 0/6 : Spare
SIB F13 0 Even:
LCC 0, SIB 0 : Links ok

```

```
SG 0
  Port 0 : Links ok
  Port 1 : Links ok
  Port 2 : Links ok
  Port 3 : Links ok
SG 1
  Port 0 : Links ok
  Port 1 : Links ok
  Port 2 : Links ok
  Port 3 : Links ok
SG 2
  Port 0 : Links ok
  Port 1 : Links ok
  Port 2 : Links ok
  Port 3 : Links ok
SG 3
  Port 0 : Links ok
  Port 1 : Links ok
  Port 2 : Links ok
  Port 3 : Links ok
SIB F13 0 Odd:
  LCC 1, SIB 0 : Links ok
  SG 0
    Port 0 : Links ok
    Port 1 : Links ok
    Port 2 : Links ok
    Port 3 : Links ok
  SG 1
    Port 0 : Links ok
    Port 1 : Links ok
    Port 2 : Links ok
    Port 3 : Links ok
  SG 2
    Port 0 : Links ok
    Port 1 : Links ok
    Port 2 : Links ok
    Port 3 : Links ok
  SG 3
    Port 0 : Links ok
    Port 1 : Links ok
    Port 2 : Links ok
    Port 3 : Links ok
SIB F2S 0/0: Links ok
SIB F2S 0/2: Links ok
SIB F2S 0/4: Links ok
SIB F2S 0/6: Links ok
SIB F13 1 Even:
  LCC 2, SIB 0 : Unused
  SG 0
    Port 0 : Unused
    Port 1 : Unused
    Port 2 : Unused
    Port 3 : Unused
  SG 1
    Port 0 : Unused
    Port 1 : Unused
    Port 2 : Unused
    Port 3 : Unused
  SG 2
    Port 0 : Unused
    Port 1 : Unused
```



```

        Port 2 : Unused
        Port 3 : Unused
    SG 3
        Port 0 : Unused
        Port 1 : Unused
        Port 2 : Unused
        Port 3 : Unused
SIB F13 1 Odd:
    LCC 3, SIB 0 : Unused
    SG 0
        Port 0 : Unused
        Port 1 : Unused
        Port 2 : Unused
        Port 3 : Unused
    SG 1
        Port 0 : Unused
        Port 1 : Unused
        Port 2 : Unused
        Port 3 : Unused
    SG 2
        Port 0 : Unused
        Port 1 : Unused
        Port 2 : Unused
        Port 3 : Unused
    SG 3
        Port 0 : Unused
        Port 1 : Unused
        Port 2 : Unused
        Port 3 : Unused
SIB F2S 0/0: Unused
SIB F2S 0/2: Unused
SIB F2S 0/4: Unused
SIB F2S 0/6: Unused
PLANE 1: Online
    SIB F13 3 : Online
    SIB F13 4 : Empty
    SIB F2S 1/0 : Online
    SIB F2S 1/2 : Online
    SIB F2S 1/4 : Online
    SIB F2S 1/6 : Online
    SIB F13 3 Even:
...

```

#### show chassis fabric plane extensive (TX Matrix Plus Router with 3D SIBs)

```

user@host> show chassis fabric plane extensive
sfc0-re0:

```

```

-----
Fabric Management PLANE State:

```

```

PLANE 0: Online
    SIB F13 0 : Empty
    SIB F13 1 : Online
    SIB F2S 0/0 : Online
    SIB F2S 0/2 : Online
    SIB F2S 0/4 : Online
    SIB F2S 0/6 : Online
    SIB F13 0
        LCC 0, SIB 0 : Unused
        PFE 0 : Unused
        PFE 1 : Unused
        PFE 2 : Unused

```

```
PFE 3 : Unused
PFE 4 : Unused
PFE 5 : Unused
PFE 6 : Unused
PFE 7 : Unused
PFE 8 : Unused
PFE 9 : Unused
PFE 10 : Unused
PFE 11 : Unused
PFE 12 : Unused
PFE 13 : Unused
PFE 14 : Unused
PFE 15 : Unused
LCC 1, SIB 0 : Unused
PFE 0 : Unused
PFE 1 : Unused
PFE 2 : Unused
PFE 3 : Unused
PFE 4 : Unused
PFE 5 : Unused
PFE 6 : Unused
PFE 7 : Unused
PFE 8 : Unused
PFE 9 : Unused
PFE 10 : Unused
PFE 11 : Unused
PFE 12 : Unused
PFE 13 : Unused
PFE 14 : Unused
PFE 15 : Unused
LCC 2, SIB 0 : Unused
PFE 0 : Unused
PFE 1 : Unused
PFE 2 : Unused
PFE 3 : Unused
PFE 4 : Unused
PFE 5 : Unused
PFE 6 : Unused
PFE 7 : Unused
PFE 8 : Unused
PFE 9 : Unused
PFE 10 : Unused
...
lcc5-re0:
-----
Fabric Management SIB State:
SIB 0 : Online
LCC SIB Link State : Links ok
PFE 0 : Links ok
PFE 1 : Links ok
PFE 2 : Links ok
PFE 3 : Links ok
PFE 4 : Links ok
PFE 5 : Links ok
PFE 6 : Links ok
PFE 7 : Links ok
PFE 8 : Links ok
PFE 9 : Links ok
PFE 10 : Links ok
PFE 11 : Links ok
PFE 12 : Links ok
```

```

PFE 13 : Links ok
PFE 14 : Links ok
PFE 15 : Links ok
FPC 1
  PFE 0 : Links ok
FPC 2
  PFE 0 : Links ok
FPC 3
  PFE 0 : Links ok
  PFE 1 : Links ok
FPC 4
  PFE 0 : Links ok
SIB 1 : Online
LCC SIB Link State : Links ok
PFE 0 : Links ok
PFE 1 : Links ok
PFE 2 : Links ok
PFE 3 : Links ok
PFE 4 : Links ok
PFE 5 : Links ok
PFE 6 : Links ok
PFE 7 : Links ok
PFE 8 : Links ok
PFE 9 : Links ok
PFE 10 : Links ok
PFE 11 : Links ok
PFE 12 : Links ok
PFE 13 : Links ok
PFE 14 : Links ok
PFE 15 : Links ok
FPC 1
  PFE 0 : Links ok
FPC 2
  PFE 0 : Links ok
FPC 3
  PFE 0 : Links ok
  PFE 1 : Links ok
FPC 4
  PFE 0 : Links ok

```

#### show chassis fabric plane terse (TX Matrix Plus Router)

```

user@host> show chassis fabric plane terse
sfc0-re0:

```

Plane	State	Link errors	Destination errors	Uptime
0	Spare	NONE	NONE	
1	Online	NONE	NONE	18 minutes, 37 seconds
2	Online	NONE	NONE	18 minutes, 36 seconds
3	Online	NONE	NONE	18 minutes, 33 seconds
4	Online	NONE	NONE	18 minutes, 31 seconds

```
lcc1-re0:
```

SIB	State	Link errors	Destination errors	Uptime
0	Spare	NONE	NONE	
1	Online	NONE	NONE	18 minutes, 37 seconds

2	Online	NONE	NONE
3	Online	NONE	NONE
4	Empty	NONE	NONE

lcc2-re0:

SIB	State	Link errors	Destination errors	Uptime
0	Spare	NONE	NONE	
1	Online	NONE	NONE	18 minutes, 37 seconds
2	Online	NONE	NONE	18 minutes, 36 seconds
3	Online	NONE	NONE	18 minutes, 32 seconds
4	Online	NONE	NONE	18 minutes, 31 seconds

### show chassis fabric plane terse (TX Matrix Plus Router with 3D SIBs)

user@host&gt; show chassis fabric plane terse

sfc0-re0:

Plane	State	Cable errors	Link errors	Destination errors	Uptime
0	Offline	NONE	NONE	NONE	
1	Online	NONE	NONE	NONE	1 day, 18 hours, 14 minutes, 26 seconds
2	Offline	NONE	NONE	NONE	
3	Offline	NONE	NONE	NONE	
4	Offline	NONE	NONE	NONE	

lcc2-re0:

SIB	State	Cable errors	Link errors	Destination errors	Uptime
0	Offline	NONE	NONE	NONE	
1	Online	NONE	NONE	NONE	1 day, 18 hours, 17 minutes
2	Offline	NONE	NONE	NONE	
3	Offline	NONE	NONE	NONE	
4	Offline	NONE	NONE	NONE	

lcc4-re0:

SIB	State	Cable errors	Link errors	Destination errors	Uptime
0	Offline	NONE	NONE	NONE	
1	Online	NONE	NONE	NONE	1 day, 18 hours, 14 minutes, 38 seconds
2	Offline	NONE	NONE	NONE	
3	Offline	NONE	NONE	NONE	
4	Offline	NONE	NONE	NONE	

lcc5-re0:

SIB	State	Cable errors	Link errors	Destination errors	Uptime
0	Offline	NONE	NONE	NONE	
1	Online	NONE	NONE	NONE	1 day, 18 hours, 14 minutes, 34 seconds
2	Offline	NONE	NONE	NONE	
3	Offline	NONE	NONE	NONE	
4	Offline	NONE	NONE	NONE	

**show chassis fabric plane lcc (TX Matrix Plus Router)**

```
user@host> show chassis fabric plane lcc 1
lcc1-re0:
```

SIB	State	Link errors	Destination errors	Uptime
0	Spare	NONE	NONE	
1	Online	NONE	NONE	25 minutes, 17 seconds
2	Disconnected	NONE	NONE	
3	Disconnected	NONE	NONE	
4	Empty	NONE	NONE	

**show chassis fabric plane lcc (TX Matrix Plus Router with 3D SIBs)**

```
user@host> show chassis fabric plane lcc 2
lcc2-re0:
```

SIB	State	Cable errors	Link errors	Destination errors	Uptime
0	Offline	NONE	NONE	NONE	
1	Online	NONE	NONE	NONE	1 day, 18 hours, 16 minutes, 44 seconds
2	Offline	NONE	NONE	NONE	
3	Offline	NONE	NONE	NONE	
4	Offline	NONE	NONE	NONE	

**show chassis fabric plane sfc (TX Matrix Plus Router)**

```
user@host> show chassis fabric plane sfc 0
sfc0-re0:
```

Plane	State	Link errors	Destination errors	Uptime
0	Spare	NONE	NONE	
1	Online	NONE	NONE	27 minutes, 7 seconds
2	Online	NONE	NONE	27 minutes, 6 seconds
3	Online	NONE	NONE	27 minutes, 3 seconds
4	Online	NONE	NONE	27 minutes, 1 second

**show chassis fabric plane sfc (TX Matrix Plus Router with 3D SIBs)**

```
user@host> show chassis fabric plane sfc 0
sfc0-re0:
```

Plane	State	Cable errors	Link errors	Destination errors	Uptime
0	Offline	NONE	NONE	NONE	
1	Online	NONE	NONE	NONE	1 day, 18 hours, 14 minutes, 20 seconds
2	Offline	NONE	NONE	NONE	
3	Offline	NONE	NONE	NONE	
4	Offline	NONE	NONE	NONE	

**show chassis fabric plane (TI600 Router)**

```
user@host> show chassis fabric plane
Plane State Uptime
0 Online 15 hours, 42 minutes, 9 seconds
```

1	Online	15 hours, 42 minutes, 9 seconds
2	Fault	
3	Online	15 hours, 42 minutes, 9 seconds
4	Online	15 hours, 42 minutes, 9 seconds

### show chassis fabric plane extensive (T1600 Router)

```
user@host> show chassis fabric plane extensive
```

```
Fabric Management PLANE State:
```

```
PLANE 0:    Online
  ST-SIB-L 0: Links ok
    SG 0
      Port 0    : Links ok
      Port 1    : Links ok
      Port 2    : Links ok
      Port 3    : Links ok
    SG 1
      Port 0    : Links ok
      Port 1    : Links ok
      Port 2    : Links ok
      Port 3    : Links ok
    SG 2
      Port 0    : Links ok
      Port 1    : Links ok
      Port 2    : Links ok
      Port 3    : Links ok
    SG 3
      Port 0    : Links ok
      Port 1    : Links ok
      Port 2    : Links ok
      Port 3    : Links ok
  ST-SIB-L 0
    FPC 4
      PFE 0: Links ok
      PFE 1: Links ok
    FPC 6
      PFE 0: Links ok
      PFE 1: Links ok
    FPC 7
      PFE 0: Links ok
  PLANE 1:    Online
    ST-SIB-L 1: Links ok
      SG 0
        Port 0    : Links ok
        Port 1    : Links ok
        Port 2    : Links ok
        Port 3    : Links ok
      SG 1
        Port 0    : Links ok
        Port 1    : Links ok
        Port 2    : Links ok
        Port 3    : Links ok
      SG 2
        Port 0    : Links ok
        Port 1    : Links ok
        Port 2    : Links ok
        Port 3    : Links ok
      SG 3
        Port 0    : Links ok
        Port 1    : Links ok
        Port 2    : Links ok
```

```

        Port 3      : Links ok
ST-SIB-L 1
  FPC 4
    PFE 0: Links ok
    PFE 1: Links ok
  FPC 6
    PFE 0: Links ok
    PFE 1: Links ok
  FPC 7
    PFE 0: Links ok
PLANE 2:   Online
ST-SIB-L 2: Links ok
  SG 0
    Port 0      : Links ok
    Port 1      : Links ok
    Port 2      : Links ok
    Port 3      : Links ok
  SG 1
    Port 0      : Links ok
    Port 1      : Links ok
    Port 2      : Links ok
    Port 3      : Links ok
  SG 2
    Port 0      : Links ok
    Port 1      : Links ok
    Port 2      : Links ok
    Port 3      : Links ok
  SG 3
    Port 0      : Links ok
    Port 1      : Links ok
    Port 2      : Links ok
    Port 3      : Links ok
ST-SIB-L 2
  FPC 4
    PFE 0: Links ok
    PFE 1: Links ok
  FPC 6
    PFE 0: Links ok
    PFE 1: Links ok
  FPC 7
    PFE 0: Links ok
PLANE 3:   Spare
ST-SIB-L 3: Links ok
  SG 0
    Port 0      : Links ok
    Port 1      : Links ok
    Port 2      : Links ok
    Port 3      : Links ok
  SG 1
    Port 0      : Links ok
    Port 1      : Links ok
    Port 2      : Links ok
    Port 3      : Links ok
  SG 2
    Port 0      : Links ok
    Port 1      : Links ok
    Port 2      : Links ok
    Port 3      : Links ok
  SG 3
    Port 0      : Links ok
    Port 1      : Links ok

```

```

        Port 2      : Links ok
        Port 3      : Links ok
    ST-SIB-L 3
        FPC 4
            PFE 0: Links ok
            PFE 1: Links ok
        FPC 6
            PFE 0: Links ok
            PFE 1: Links ok
        FPC 7
            PFE 0: Links ok
    PLANE 4:   Online
    ST-SIB-L 4: Links ok
    SG 0
        Port 0      : Links ok
        Port 1      : Links ok
        Port 2      : Links ok
        Port 3      : Links ok
    SG 1
        Port 0      : Links ok
        Port 1      : Links ok
        Port 2      : Links ok
        Port 3      : Links ok
    SG 2
        Port 0      : Links ok
        Port 1      : Links ok
        Port 2      : Links ok
        Port 3      : Links ok
    SG 3
        Port 0      : Links ok
        Port 1      : Links ok
        Port 2      : Links ok
        Port 3      : Links ok
    ST-SIB-L 4
        FPC 4
            PFE 0: Links ok
            PFE 1: Links ok
        FPC 6
            PFE 0: Links ok
            PFE 1: Links ok
        FPC 7
            PFE 0: Links ok
```

#### show chassis fabric plane detail (T1600 Router)

```
user@host> show chassis fabric plane detail
Fabric Management PLANE State:
PLANE 0:   Online
PLANE 1:   Online
PLANE 2:   Online
PLANE 3:   Spare
PLANE 4:   Online
```

#### show chassis fabric plane (EX8200 Switch)

```
user@host> show chassis fabric plane
Fabric management PLANE state
Plane 0
    Plane state: ACTIVE
Plane 1
```



```

    Plane state: ACTIVE
Plane 2
    Plane state: ACTIVE
Plane 3
    Plane state: ACTIVE
Plane 4
    Plane state: SPARE
Plane 5
    Plane state: SPARE
Plane 6
    Plane state: SPARE
Plane 7
    Plane state: SPARE
Plane 8
    Plane state: ACTIVE
Plane 9
    Plane state: ACTIVE
Plane 10
    Plane state: ACTIVE
Plane 11
    Plane state: ACTIVE

```

#### show chassis fabric plane (EX9253 Switch)

```

user@switch> show chassis fabric plane
Fabric management PLANE state
Plane 0
    Plane state: ACTIVE
        FPC 0
            PFE 0 :Links ok
            PFE 1 :Links ok
            PFE 2 :Links ok
        FPC 1
            PFE 0 :Links ok
            PFE 1 :Links ok
            PFE 2 :Links ok
Plane 1
    Plane state: ACTIVE
        FPC 0
            PFE 0 :Links ok
            PFE 1 :Links ok
            PFE 2 :Links ok
        FPC 1
            PFE 0 :Links ok
            PFE 1 :Links ok
            PFE 2 :Links ok
Plane 2
    Plane state: ACTIVE
        FPC 0
            PFE 0 :Links ok
            PFE 1 :Links ok
            PFE 2 :Links ok
        FPC 1
            PFE 0 :Links ok
            PFE 1 :Links ok
            PFE 2 :Links ok
Plane 3
    Plane state: ACTIVE
        FPC 0
            PFE 0 :Links ok
            PFE 1 :Links ok

```

```
        PFE 2 :Links ok
    FPC 1
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
Plane 4
    Plane state: ACTIVE
    FPC 0
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
    FPC 1
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
Plane 5
    Plane state: ACTIVE
    FPC 0
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
    FPC 1
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
Plane 6
    Plane state: ACTIVE
    FPC 0
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
    FPC 1
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
Plane 7
    Plane state: ACTIVE
    FPC 0
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
    FPC 1
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
Plane 8
    Plane state: ACTIVE
    FPC 0
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
    FPC 1
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
Plane 9
    Plane state: ACTIVE
    FPC 0
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
```

```
FPC 1
  PFE 0 :Links ok
  PFE 1 :Links ok
  PFE 2 :Links ok
Plane 10
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
Plane 11
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
Plane 12
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
Plane 13
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
Plane 14
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
Plane 15
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
    FPC 1
```

```
        PFE 0 :Links ok
        PFE 1 :Links ok
        PFE 2 :Links ok
Plane 16
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
Plane 17
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
Plane 18
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
Plane 19
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
Plane 20
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
    FPC 1
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
Plane 21
  Plane state: ACTIVE
    FPC 0
      PFE 0 :Links ok
      PFE 1 :Links ok
      PFE 2 :Links ok
    FPC 1
      PFE 0 :Links ok
```

```
PFE 1 :Links ok  
PFE 2 :Links ok
```

## show chassis fabric plane-location

---

<b>List of Syntax</b>	<a href="#">Syntax on page 590</a> <a href="#">Syntax (MX Series Routers) on page 590</a> <a href="#">Syntax (MX2010, MX2020, MX10003, and MX2008 3D Universal Edge Routers) on page 590</a> <a href="#">Syntax (TX Matrix Plus Router) on page 590</a> <a href="#">Syntax (QFX Switches) on page 590</a> <a href="#">Syntax (EX9253 Switches) on page 590</a> <a href="#">Syntax (EX9253 Switches) on page 590</a>
<b>Syntax</b>	show chassis fabric plane-location
<b>Syntax (MX Series Routers)</b>	show chassis fabric plane-location <all-members> <local> <member <i>member-id</i> >
<b>Syntax (MX2010, MX2020, MX10003, and MX2008 3D Universal Edge Routers)</b>	show chassis fabric plane-location <extended>
<b>Syntax (TX Matrix Plus Router)</b>	show chassis fabric plane-location
<b>Syntax (QFX Switches)</b>	show chassis fabric plane-location
<b>Syntax (EX9253 Switches)</b>	show chassis fabric plane-location
<b>Syntax (EX9253 Switches)</b>	show chassis fabric plane-location
<b>Release Information</b>	Command introduced in Junos OS Release 8.0. Command introduced in Junos OS Release 9.4 for EX Series switches. Command introduced in Junos OS Release 12.1x48 for PTX Series Packet Transport Routers. Command introduced in Junos OS Release 12.3 for MX2020 3D Universal Edge Routers. Command introduced in Junos OS Release 12.3 for MX2010 3D Universal Edge Routers. Command introduced in Junos OS Release 15.1X53-D30 for QFX Series switches. <b>extended</b> option introduced in Junos OS Release 16.1R1 for MX2020 and MX2010 3D Universal Edge Routers. Command introduced in Junos OS Release 17.2 for MX2008 3D Universal Edge Routers. Command introduced in Junos OS Release 17.2 for PTX10008 Routers. Command introduced in Junos OS Release 17.3 for MX10003 3D Universal Edge Routers. Command introduced in Junos OS Release 18.2 for MX10008 3D Universal Edge Routers.

Command introduced in Junos OS Release 18.2 for EX9253 Switches.

**Description** (M120, MX Series routers, and EX8200 switches only) Display the Control Board (CB) location of each plane. This command can be used on the master Routing Engine or the backup Routing Engine. For information about the meaning of “CBs” and “fabric plane” on the switches, see the hardware documentation for your switch.

(TX Matrix Plus routers only) Display the SIB location of each fabric plane.

(PTX Series Packet Transport Routers and QFX Series switches only) Display the fabric plane location of each SIB.

(MX2010, MX2020, and MX2008 Routers only) Display the fabric plane location of each Switch Fabric Board (SFB).

**Options** **all-members**—(MX Series routers only) (Optional) Display the CB location of each fabric plane on the Routing Engines in all member routers in the Virtual Chassis configuration.

**local**—(MX Series routers only) (Optional) Display the CB location of each fabric plane on the Routing Engines in the local Virtual Chassis member.

**member *member-id***—(MX Series routers only) (Optional) Display the CB location of each fabric plane on the Routing Engines in the specified member in the Virtual Chassis configuration. Replace *member-id* with a value of 0 or 1.

**extended**—(MX2020, MX2010, and MX2008 routers only) (Optional) Display the fabric plane location of all 3 planes of each Switch Fabric Board (SFB) or enhanced Switch Fabric Board (SFB2).

**Required Privilege Level** view

**List of Sample Output**

- [show chassis fabric plane-location \(M120 Router\) on page 592](#)
- [show chassis fabric plane-location \(MX240 and MX480 Routers\) on page 592](#)
- [show chassis fabric plane-location \(MX960 Router\) on page 593](#)
- [show chassis fabric plane-location \(MX10008 Router\) on page 593](#)
- [show chassis fabric plane-location \(MX2010 Router\) on page 593](#)
- [show chassis fabric plane-location \(MX2020 Router\) on page 594](#)
- [show chassis fabric plane-location \(MX2020 Router with SFB2\) on page 594](#)
- [show chassis fabric plane-location \(MX2008 Router\) on page 594](#)
- [show chassis fabric plane-location \(MX10003 Router\) on page 595](#)
- [show chassis fabric plane-location \(TX Matrix Plus Router\) on page 596](#)
- [show chassis fabric plane-location \(TX Matrix Plus Router with 3D SIBs\) on page 596](#)
- [show chassis fabric plane-location \(EX8200 Switch\) on page 596](#)
- [show chassis fabric plane-location \(EX9253 Switch\) on page 596](#)
- [show chassis fabric plane-location \(EX9253 Switch\) on page 598](#)
- [show chassis fabric plane-location \(PTX Series Packet Transport Routers\) on page 599](#)
- [show chassis fabric plane-location \(PTX10008 Routers\) on page 599](#)
- [show chassis fabric plane-location \(QFX 10008 Switch\) on page 599](#)

**Output Fields** Table 22 on page 592 lists the output fields for the **show chassis fabric plane-location** command. Output fields are listed in the approximate order in which they appear.

*Table 22: show chassis fabric plane-location Output Fields*

Field Name	Field Description
Plane <i>n</i>	Plane number.  (PTX Series Packet Transport Routers and QFX Series switches) Plane numbers associated with the SIB.  (MX2010, MX2020, and MX2008 Routers only) Plane numbers associated with the SFB.
Control Board <i>n</i>	Control board number.
SFC ABS-SIB-F13	(TX Matrix Plus routers only) Switch Interface Board (SIB) slot number on the F13 SIB.
SFC ABS-SIB-F2S	(TX Matrix Plus routers only) SIB slot number on the F2S SIB.
LCC ST-SIB-L	(TX Matrix Plus routers only) Line-card chassis (LCC) SIB slot number.
SFC SIB F13	(TX Matrix Plus routers with 3D SIBs only) Switch Interface Board (SIB) slot number on the F13 SIB.
SFC SIB F2S	(TX Matrix Plus routers with 3D SIBs only) SIB slot number on the F2S SIB.
LCC SIB	(TX Matrix Plus routers with 3D SIBs only) Line-card chassis (LCC) SIB slot number.
SIB	(PTX Series Packet Transport Routers and QFX Series switches) SIB number.
Switch Fabric Board <i>n</i>	(MX2010, MX2020, and MX2008 Routers only) SFB number.

## Sample Output

### show chassis fabric plane-location (M120 Router)

```
user@host> show chassis fabric plane-location
-----Fabric Plane Locations-----
Plane 0                Control Board 0
Plane 1                Control Board 0
Plane 2                Control Board 1
Plane 3                Control Board 1
```

### show chassis fabric plane-location (MX240 and MX480 Routers)

```
user@host> show chassis fabric plane-location
-----Fabric Plane Locations-----
Plane 0                Control Board 0
```



Plane 1	Control Board 0
Plane 2	Control Board 0
Plane 3	Control Board 0
Plane 4	Control Board 1
Plane 5	Control Board 1
Plane 6	Control Board 1
Plane 7	Control Board 1

#### show chassis fabric plane-location (MX960 Router)

```
user@host> show chassis fabric plane-location
-----Fabric Plane Locations-----
Plane 0          Control Board 0
Plane 1          Control Board 0
Plane 2          Control Board 1
Plane 3          Control Board 1
Plane 4          Control Board 2
Plane 5          Control Board 2
```

#### show chassis fabric plane-location (MX10008 Router)

```
user@host> show chassis fabric plane-location
-----Fabric Plane Locations-----
Plane 0          Switch Fabric Board 0
Plane 1          Switch Fabric Board 0
Plane 2          Switch Fabric Board 0
Plane 3          Switch Fabric Board 0
Plane 4          Switch Fabric Board 1
Plane 5          Switch Fabric Board 1
Plane 6          Switch Fabric Board 1
Plane 7          Switch Fabric Board 1
Plane 8          Switch Fabric Board 2
Plane 9          Switch Fabric Board 2
Plane 10         Switch Fabric Board 2
Plane 11         Switch Fabric Board 2
Plane 12         Switch Fabric Board 3
Plane 13         Switch Fabric Board 3
Plane 14         Switch Fabric Board 3
Plane 15         Switch Fabric Board 3
Plane 16         Switch Fabric Board 4
Plane 17         Switch Fabric Board 4
Plane 18         Switch Fabric Board 4
Plane 19         Switch Fabric Board 4
Plane 20         Switch Fabric Board 5
Plane 21         Switch Fabric Board 5
Plane 22         Switch Fabric Board 5
Plane 23         Switch Fabric Board 5
```

#### show chassis fabric plane-location (MX2010 Router)

```
user@host> show chassis fabric plane-location
-----Fabric Plane Locations-----
Plane 0          Switch Fabric Board 0
Plane 1          Switch Fabric Board 1
Plane 2          Switch Fabric Board 2
Plane 3          Switch Fabric Board 3
Plane 4          Switch Fabric Board 4
Plane 5          Switch Fabric Board 5
```

Plane 6	Switch Fabric Board 6
Plane 7	Switch Fabric Board 7

#### show chassis fabric plane-location (MX2020 Router)

```
user@host> show chassis fabric plane-location
-----Fabric Plane Locations-----
Plane 0      Switch Fabric Board 0
Plane 1      Switch Fabric Board 1
Plane 2      Switch Fabric Board 2
Plane 3      Switch Fabric Board 3
Plane 4      Switch Fabric Board 4
Plane 5      Switch Fabric Board 5
Plane 6      Switch Fabric Board 6
Plane 7      Switch Fabric Board 7
```

#### show chassis fabric plane-location (MX2020 Router with SFB2)

```
user@host> show chassis fabric plane-location extended
-----Fabric Plane Locations-----
Plane 0      Switch Fabric Board 0
Plane 1      Switch Fabric Board 0
Plane 2      Switch Fabric Board 0
Plane 3      Switch Fabric Board 1
Plane 4      Switch Fabric Board 1
Plane 5      Switch Fabric Board 1
Plane 6      Switch Fabric Board 2
Plane 7      Switch Fabric Board 2
Plane 8      Switch Fabric Board 2
Plane 9      Switch Fabric Board 3
Plane 10     Switch Fabric Board 3
Plane 11     Switch Fabric Board 3
Plane 12     Switch Fabric Board 4
Plane 13     Switch Fabric Board 4
Plane 14     Switch Fabric Board 4
Plane 15     Switch Fabric Board 5
Plane 16     Switch Fabric Board 5
Plane 17     Switch Fabric Board 5
Plane 18     Switch Fabric Board 6
Plane 19     Switch Fabric Board 6
Plane 20     Switch Fabric Board 6
Plane 21     Switch Fabric Board 7
Plane 22     Switch Fabric Board 7
Plane 23     Switch Fabric Board 7
```

#### show chassis fabric plane-location (MX2008 Router)

```
user@host> show chassis fabric plane-location
-----Fabric Plane Locations-----
Plane 0      Switch Fabric Board 0
Plane 1      Switch Fabric Board 1
Plane 2      Switch Fabric Board 2
Plane 3      Switch Fabric Board 3
Plane 4      Switch Fabric Board 4
Plane 5      Switch Fabric Board 5
Plane 6      Switch Fabric Board 6
Plane 7      Switch Fabric Board 7
```

**show chassis fabric plane-location (MX10003 Router)**

```
user@host> show chassis fabric plane-location

-----Fabric Plane Locations-----
Plane 0
    FPC 0
    FPC 1
Plane 1
    FPC 0
    FPC 1
Plane 2
    FPC 0
    FPC 1
Plane 3
    FPC 0
    FPC 1
Plane 4
    FPC 0
    FPC 1
Plane 5
    FPC 0
    FPC 1
Plane 6
    FPC 0
    FPC 1
Plane 7
    FPC 0
    FPC 1
Plane 8
    FPC 0
    FPC 1
Plane 9
    FPC 0
    FPC 1
Plane 10
    FPC 0
    FPC 1
Plane 11
    FPC 0
    FPC 1
Plane 12
    FPC 0
    FPC 1
Plane 13
    FPC 0
    FPC 1
Plane 14
    FPC 0
    FPC 1
Plane 15
    FPC 0
    FPC 1
Plane 16
    FPC 0
    FPC 1
Plane 17
    FPC 0
    FPC 1
Plane 18
    FPC 0
```

```

        FPC 1
Plane 19
        FPC 0
        FPC 1
Plane 20
        FPC 0
        FPC 1
Plane 21
        FPC 0
        FPC 1

```

### show chassis fabric plane-location (TX Matrix Plus Router)

```

user@host> show chassis fabric plane-location
Fabric Plane Locations :
Plane      SFC ABS-SIB-F13      SFC ABS-SIB-F2      LCC ST-SIB-L
0          0, 1                0/0, 0/2, 0/4, 0/6      0
1          3, 4                1/0, 1/2, 1/4, 1/6      1
2          6, 7                2/0, 2/2, 2/4, 2/6      2
3          8, 9                3/0, 3/2, 3/4, 3/6      3
4          11, 12             4/0, 4/2, 4/4, 4/6      4

```

### show chassis fabric plane-location (TX Matrix Plus Router with 3D SIBs)

```

user@host> show chassis fabric plane-location
sfc0-re0
-----
-----Fabric Plane Locations-----
Plane      SFC SIB F13      SFC SIB F2      LCC SIB
0          0, 1                0/0, 0/2, 0/4, 0/6      0
1          3, 4                1/0, 1/2, 1/4, 1/6      1
2          6, 7                2/0, 2/2, 2/4, 2/6      2
3          8, 9                3/0, 3/2, 3/4, 3/6      3
4          11, 12             4/0, 4/2, 4/4, 4/6      4

```

### show chassis fabric plane-location (EX8200 Switch)

```

user@host> show chassis fabric plane-location
-----Fabric Plane Locations-----
Plane 0      Control Board 0
Plane 1      Control Board 0
Plane 2      Control Board 0
Plane 3      Control Board 0
Plane 4      Control Board 1
Plane 5      Control Board 1
Plane 6      Control Board 1
Plane 7      Control Board 1
Plane 8      Control Board 2
Plane 9      Control Board 2
Plane 10     Control Board 2
Plane 11     Control Board 2

```

### show chassis fabric plane-location (EX9253 Switch)

```

user@switch> show chassis fabric plane-location
-----Fabric Plane Locations-----
Plane 0
        FPC 0
        FPC 1
Plane 1

```

```

                FPC 0
                FPC 1
Plane 2
                FPC 0
                FPC 1
Plane 3
                FPC 0
                FPC 1
Plane 4
                FPC 0
                FPC 1
Plane 5
                FPC 0
                FPC 1
Plane 6
                FPC 0
                FPC 1
Plane 7
                FPC 0
                FPC 1
Plane 8
                FPC 0
                FPC 1
Plane 9
                FPC 0
                FPC 1
Plane 10
                FPC 0
                FPC 1
Plane 11
                FPC 0
                FPC 1
Plane 12
                FPC 0
                FPC 1
Plane 13
                FPC 0
                FPC 1
Plane 14
                FPC 0
                FPC 1
Plane 15
                FPC 0
                FPC 1
Plane 16
                FPC 0
                FPC 1
Plane 17
                FPC 0
                FPC 1
Plane 18
                FPC 0
                FPC 1
Plane 19
                FPC 0
                FPC 1
Plane 20
                FPC 0
                FPC 1
Plane 21
```

FPC 0  
FPC 1

### show chassis fabric plane-location (EX9253 Switch)

```
user@switch> show chassis fabric plane-location
-----Fabric Plane Locations-----
Plane 0
    FPC 0
    FPC 1
Plane 1
    FPC 0
    FPC 1
Plane 2
    FPC 0
    FPC 1
Plane 3
    FPC 0
    FPC 1
Plane 4
    FPC 0
    FPC 1
Plane 5
    FPC 0
    FPC 1
Plane 6
    FPC 0
    FPC 1
Plane 7
    FPC 0
    FPC 1
Plane 8
    FPC 0
    FPC 1
Plane 9
    FPC 0
    FPC 1
Plane 10
    FPC 0
    FPC 1
Plane 11
    FPC 0
    FPC 1
Plane 12
    FPC 0
    FPC 1
Plane 13
    FPC 0
    FPC 1
Plane 14
    FPC 0
    FPC 1
Plane 15
    FPC 0
    FPC 1
Plane 16
    FPC 0
    FPC 1
Plane 17
    FPC 0
    FPC 1
```

```

Plane 18
    FPC 0
    FPC 1
Plane 19
    FPC 0
    FPC 1
Plane 20
    FPC 0
    FPC 1
Plane 21
    FPC 0
    FPC 1

```

#### show chassis fabric plane-location (PTX Series Packet Transport Routers)

```

user@host> show chassis fabric plane-location
-----Fabric Plane Locations-----
SIB          Planes
0             0    1
1             2    3
2             4    5
3             6    7
4             8    9
5            10   11
6            12   13
7            14   15
8            16   17

```

#### show chassis fabric plane-location (PTX10008 Routers)

```

user@host> show chassis fabric plane-location
-----Fabric Plane Locations-----
SIB          Planes
0             0    1
1             2    3
2             4    5
3             6    7
4             8    9
5            10   11

```

#### show chassis fabric plane-location (QFX 10008 Switch)

```

user@host> show chassis fabric plane-location
-----Fabric Plane Locations-----
SIB          Planes
0             0    1
1             2    3
2             4    5
3             6    7
4             8    9
5            10   11

```

## show chassis fabric sibs

---

<b>Syntax</b>	<code>show chassis fabric sibs</code> <code>&lt;lcc <i>number</i>   scc&gt;</code> <code>&lt;slot <i>slot-number</i>&gt;</code>
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. Command introduced on QFX Series switches in Junos OS Release 15.1X53-D30 Command introduced in Junos OS Release 17.2 for PTX10008 Routers.
<b>Description</b>	(TX Matrix routers only) Display the state of the electrical and optical switch fabric link between the SIBs in the TX Matrix router (TX-SIBs) and the SIBs in the T640 routers (T640 LCC SIBs).  (M320, T640, T1600, T4000 and PTX Series routers and QFX Series switches) Display the state of the electrical switch fabric link between the SIBs and the FPCs.
<b>Options</b>	<b>none</b> —(TX Matrix routers only) Display the state of the electrical and optical switch fabric link between the SIBs in the TX Matrix router (TX-SIBs) and the SIBs in the T640 routers (T640 LCC SIBs).  (M320, T640, T1600, T4000 and PTX Series routers and QFX Series switches) Display the state of the electrical switch fabric link between the SIBs and the FPCs.  <b>lcc <i>number</i></b> —(Optional) Display the switching fabric link state for the T640 SIBs on a specified T640 router (line-card chassis) connected to a TX Matrix router.  <b>scc</b> —(Optional) Display the switching fabric link state for the TX-SIBs on the TX Matrix router (switch-card chassis).  <b>slot <i>slot-number</i></b> —(Optional) Display the state of the electrical switch fabric link between the specified SIB slot and the FPCs.
<b>Required Privilege Level</b>	view
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <a href="#">request chassis sib</a></li><li>• <a href="#">show chassis sibs</a></li><li>• <a href="#">Monitoring the SIBs</a></li><li>• <a href="#">Redundant SIBs Overview</a></li></ul>
<b>List of Sample Output</b>	<a href="#">show chassis fabric sibs (M320 Router) on page 603</a> <a href="#">show chassis fabric sibs (T640 Router) on page 603</a> <a href="#">show chassis fabric sibs (T1600 Router) on page 604</a> <a href="#">show chassis fabric sibs (T4000 Core Router) on page 606</a> <a href="#">show chassis fabric sibs (TX Matrix Router) on page 607</a>



[show chassis fabric sibs lcc \(TX Matrix Router\) on page 609](#)  
[show chassis fabric sibs scc \(TX Matrix Router\) on page 610](#)  
[show chassis fabric sibs slot \(PTX3000 Router\) on page 610](#)  
[show chassis fabric sibs \(PTX10008 Router\) on page 611](#)  
[show chassis fabric sibs \(QFX10008 Switch\) on page 612](#)

**Output Fields** [Table 23 on page 601](#) lists the output fields for the **show chassis fabric sibs** command. Output fields are listed in the approximate order in which they appear.

*Table 23: show chassis fabric sibs Output Fields*

Field Name	Field Description
<b>Fabric management SIB state</b>	Switching fabric link (link from FPC to SIB) state for each SIB: <ul style="list-style-type: none"><li>• <b>Unused</b>—SIB is not present.</li><li>• <b>Links ok</b>—Link between the SIB and the FPC is active.</li><li>• <b>Link error</b>—Link between the SIB and the FPC is not operational.</li></ul>

Table 23: show chassis fabric sibs Output Fields (continued)

Field Name	Field Description
Plane state	<p>Possible plane state of the M320 SIB, TX-SIB or T640 SIB:</p> <ul style="list-style-type: none"> <li>• <b>S_ACTIVE</b>—Links on the SIB are operational, and the fabric plane (SIB) is operational and running.</li> <li>• <b>S_SPARE</b>—Links on the SIB are operational and the fabric plane (SIB) is redundant and can be operational if any of the fabric planes in the <b>S_ACTIVE</b> state encounters an error.</li> </ul> <p><b>NOTE:</b> If the plane is unusable by any of the Packet Forwarding Engines, the command output displays an additional string, <b>plane has link errors on # pfes</b>, where, # indicates the total number of links (both from SIB to FPC, and from FPC to SIB) having link errors (detected either during initialization time or runtime) in this particular plane. This does not count links having destination errors.</p> <ul style="list-style-type: none"> <li>• <b>S_EMPTY</b>—No links are present on the SIB, and the fabric plane (SIB) is powered down.</li> <li>• <b>S_ACTIVATING</b>—Links on the SIB are coming online; this is a transitional state.</li> <li>• <b>S_DEACTIVATING</b>—Links on the SIB are going offline; this is a transitional state.</li> <li>• <b>S_FAULTING</b>—Links on the SIB are being marked faulty, and the fabric plane (SIB) is not operational.</li> <li>• <b>S_FAULT</b>—Links on the SIB are in an alarmed state, and the fabric plane (SIB) is not operational for the following reasons: <ul style="list-style-type: none"> <li>• On-board F-chip is not operational.</li> <li>• Fiber optic connector faults.</li> <li>• FPC connector faults.</li> </ul> </li> </ul> <p>Possible plane state of the QFX Series SIB:</p> <ul style="list-style-type: none"> <li>• <b>Active</b>—Links on the SIB are operational, and the fabric plane (SIB) is operational and running.</li> <li>• <b>Spare</b>—Links on the SIB are operational and the fabric plane (SIB) is redundant and can be operational if any of the fabric planes in the <b>S_ACTIVE</b> state encounters an error.</li> <li>• <b>Empty</b>—No links are present on the SIB, and the fabric plane (SIB) is powered down.</li> <li>• <b>Activating</b>—Links on the SIB are coming online; this is a transitional state.</li> <li>• <b>Deactivating</b>—Links on the SIB are going offline; this is a transitional state.</li> <li>• <b>Faulting</b>—Links on the SIB are being marked faulty, and the fabric plane (SIB) is not operational.</li> <li>• <b>Fault</b>—Links on the SIB are in an alarmed state, and the fabric plane (SIB) is not operational for the following reasons: <ul style="list-style-type: none"> <li>• On-board F-chip is not operational.</li> <li>• Fiber optic connector faults.</li> <li>• FPC connector faults.</li> </ul> </li> </ul>

## Sample Output

### show chassis fabric sibs (M320 Router)

```

user@host> show chassis fabric sibs
Fabric management SIB state:
SIB #0
  plane state: S_ACTIVE
  FPC #0
    PFE #1 : Links ok
  FPC #1
    PFE #1 : Links ok
  FPC #2
    PFE #1 : Links ok
  FPC #3
    PFE #1 : Links ok
SIB #1
  plane state: S_ACTIVE
  FPC #0
    PFE #1 : Links ok
  FPC #1
    PFE #1 : Links ok
  FPC #2
    PFE #1 : Links ok
  FPC #3
    PFE #1 : Links ok
SIB #2
  plane state: S_ACTIVE
  FPC #0
    PFE #1 : Links ok
  FPC #1
    PFE #1 : Links ok
  FPC #2
    PFE #1 : Links ok
  FPC #3
    PFE #1 : Links ok
SIB #3
  plane state: S_ACTIVE
  FPC #0
    PFE #1 : Links ok
  FPC #1
    PFE #1 : Links ok
  FPC #2
    PFE #1 : Links ok
  FPC #3
    PFE #1 : Links ok

```

### show chassis fabric sibs (T640 Router)

```

user@host> show chassis fabric sibs
Fabric management SIB state:
SIB #0
  plane state: S_SPARE
  FPC #0
    PFE #1 : Links ok
  FPC #2
    PFE #1 : Links ok
  FPC #3
    PFE #0 : Links ok
    PFE #1 : Links ok

```

```
SIB #1
  plane state: S_ACTIVE
  FPC #0
    PFE #1 : Links ok
  FPC #2
    PFE #1 : Links ok
  FPC #3
    PFE #0 : Links ok
    PFE #1 : Links ok
SIB #2
  plane state: S_ACTIVE
  FPC #0
    PFE #1 : Links ok
  FPC #2
    PFE #1 : Links ok
  FPC #3
    PFE #0 : Links ok
    PFE #1 : Links ok
SIB #3
  plane state: S_ACTIVE
  FPC #0
    PFE #1 : Links ok
  FPC #2
    PFE #1 : Links ok
  FPC #3
    PFE #0 : Links ok
    PFE #1 : Links ok
SIB #4
  plane state: S_ACTIVE
  FPC #0
    PFE #1 : Links ok
  FPC #2
    PFE #1 : Links ok
  FPC #3
    PFE #0 : Links ok
    PFE #1 : Links ok
```

#### show chassis fabric sibs (T1600 Router)

```
user@host> show chassis fabric sibs
SIB #0
  plane state: S_SPARE
  FPC #0
    PFE #0 : Links ok
    PFE #1 : Links ok
  FPC #1
    PFE #0 : Links ok
    PFE #1 : Links ok
  FPC #2
    PFE #0 : Links ok
  FPC #4
    PFE #0 : Links ok
    PFE #1 : Links ok
  FPC #5
    PFE #0 : Links ok
  FPC #6
    PFE #0 : Links ok
    PFE #1 : Links ok
  FPC #7
    PFE #0 : Links ok
    PFE #1 : Links ok
```

```

SIB #1
plane state: S_ACTIVE , plane has link errors on 2 pfes
FPC #0
  PFE #0 : Links ok
  PFE #1 : Links ok
FPC #1
  PFE #0 : Links ok
  PFE #1 : Links ok
FPC #3
  PFE #0 : Links ok
  PFE #1 : Links ok
FPC #4
  PFE #0 : Links ok
  PFE #1 : Links ok
FPC #5
  PFE #0 : Links ok
  PFE #1 : Links ok
FPC #7
  PFE #0 : Links ok
  PFE #1 : Links ok
SIB #2
plane state: S_ACTIVE
SIB #2
plane state: S_ACTIVE
FPC #0
  PFE #0 : Links ok
  PFE #1 : Links ok
FPC #1
  PFE #0 : Links ok
  PFE #1 : Links ok
FPC #2
  PFE #0 : Links ok
FPC #4
  PFE #0 : Links ok
  PFE #1 : Links ok
FPC #5
  PFE #0 : Links ok
FPC #6
  PFE #0 : Links ok
  PFE #1 : Links ok
FPC #7
  PFE #0 : Links ok
  PFE #1 : Links ok
SIB #3
plane state: S_ACTIVE
FPC #0
  PFE #0 : Links ok
  PFE #1 : Links ok
FPC #1
  PFE #0 : Links ok
  PFE #1 : Links ok
FPC #2
  PFE #0 : Links ok
FPC #4
  PFE #0 : Links ok
  PFE #1 : Links ok
FPC #5
  PFE #0 : Links ok
FPC #6
  PFE #0 : Links ok
  PFE #1 : Links ok
FPC #7

```

```
        PFE #0 : Links ok
        PFE #1 : Links ok
SIB #4
  plane state: S_ACTIVE
  FPC #0
    PFE #0 : Links ok
    PFE #1 : Links ok
  FPC #1
    PFE #0 : Links ok
    PFE #1 : Links ok
  FPC #2
    PFE #0 : Links ok
  FPC #4
    PFE #0 : Links ok
    PFE #1 : Links ok
  FPC #5
    PFE #0 : Links ok
  FPC #6
    PFE #0 : Links ok
    PFE #1 : Links ok
  FPC #7
    PFE #0 : Links ok
    PFE #1 : Links ok
```

#### show chassis fabric sibs (T4000 Core Router)

```
user@host> show chassis fabric sibs
Fabric management SIB state:
SIB #0
  plane state: S_SPARE
  FPC #2
    PFE #0 : Links ok
  FPC #3
    PFE #0 : Links ok
  FPC #5
    PFE #0 : Links ok
    PFE #1 : Links ok
  FPC #6
    PFE #0 : Links ok
    PFE #1 : Links ok
SIB #1
  plane state: S_ACTIVE
  FPC #2
    PFE #0 : Links ok
  FPC #3
    PFE #0 : Links ok
  FPC #5
    PFE #0 : Links ok
    PFE #1 : Links ok
  FPC #6
    PFE #0 : Links ok
    PFE #1 : Links ok
SIB #2
  plane state: S_ACTIVE
  FPC #2
    PFE #0 : Links ok
  FPC #3
    PFE #0 : Links ok
  FPC #5
    PFE #0 : Links ok
    PFE #1 : Links ok
```

```

FPC #6
  PFE #0 : Links ok
  PFE #1 : Links ok
SIB #3
  plane state: S_ACTIVE
  FPC #2
    PFE #0 : Links ok
  FPC #3
    PFE #0 : Links ok
  FPC #5
    PFE #0 : Links ok
    PFE #1 : Links ok
  FPC #6
    PFE #0 : Links ok
    PFE #1 : Links ok
SIB #4
  plane state: S_ACTIVE
  FPC #2
    PFE #0 : Links ok
  FPC #3
    PFE #0 : Links ok
  FPC #5
    PFE #0 : Links ok
    PFE #1 : Links ok
  FPC #6
    PFE #0 : Links ok
    PFE #1 : Links ok

```

#### show chassis fabric sibs (TX Matrix Router)

```

user@host> show chassis fabric sibs
scc-re0:
-----
Fabric management SIB state:
SIB #1
  plane state: S_ACTIVE , plane has link errors on 2 pfes
  FPC #0
    PFE #0 : Links ok
    PFE #1 : Links ok
  FPC #1
    PFE #0 : Links ok
    PFE #1 : Links ok
  FPC #3
    PFE #0 : Links ok
    PFE #1 : Links ok
  FPC #4
    PFE #0 : Links ok
    PFE #1 : Links ok
  FPC #5
    PFE #0 : Links ok
    PFE #1 : Links ok
  FPC #7
    PFE #0 : Links ok
    PFE #1 : Links ok
SIB #2
  plane state: S_ACTIVE
  LCC #0 : Links ok
  LCC #1 : Links ok
SIB #3
  plane state: S_ACTIVE
  LCC #0 : Links ok

```

```
LCC #1      : Links ok
SIB #4
plane state: S_ACTIVE
LCC #0      : Links ok
LCC #1      : Links ok
```

```
lcc0-re0:
```

```
-----
Fabric management SIB state:
```

```
SIB #1
plane state: S_ACTIVE
FPC #0
  PFE #0  : Links ok
  PFE #1  : Links ok
FPC #1
  PFE #1  : Links ok
FPC #2
  PFE #0  : Links ok
  PFE #1  : Links ok
FPC #3
  PFE #1  : Links ok
FPC #4
  PFE #1  : Links ok
FPC #5
  PFE #0  : Links ok
FPC #6
  PFE #1  : Links ok
FPC #7
  PFE #1  : Links ok
SCC      : Links ok
```

```
SIB #2
plane state: S_ACTIVE
FPC #0
  PFE #0  : Links ok
  PFE #1  : Links ok
FPC #1
  PFE #1  : Links ok
FPC #2
  PFE #0  : Links ok
  PFE #1  : Links ok
FPC #3
  PFE #1  : Links ok
FPC #4
  PFE #1  : Links ok
FPC #5
  PFE #0  : Links ok
FPC #6
  PFE #1  : Links ok
FPC #7
  PFE #1  : Links ok
SCC      : Links ok
```

```
SIB #3
plane state: S_ACTIVE
FPC #0
  PFE #0  : Links ok
  PFE #1  : Links ok
FPC #1
  PFE #1  : Links ok
FPC #2
  PFE #0  : Links ok
  PFE #1  : Links ok
```



```

FPC #3
  PFE #1 : Links ok
FPC #4
  PFE #1 : Links ok
FPC #5
  PFE #0 : Links ok
FPC #6
  PFE #1 : Links ok
FPC #7
  PFE #1 : Links ok
SCC      : Links ok
SIB #4
plane state: S_ACTIVE
FPC #0
  PFE #0 : Links ok
  PFE #1 : Links ok
FPC #1
  PFE #1 : Links ok
FPC #2
  PFE #0 : Links ok
  PFE #1 : Links ok
FPC #3
  PFE #1 : Links ok
FPC #4
  PFE #1 : Links ok
FPC #5
  PFE #0 : Links ok
FPC #6
  PFE #1 : Links ok
FPC #7
  PFE #1 : Links ok
SCC      : Links o

```

#### show chassis fabric sibs lcc (TX Matrix Router)

```

user@host> show chassis fabric sibs lcc 0
lcc1-re0:

```

```

-----
Fabric management SIB state:

```

```

SIB #1
plane state: S_ACTIVE
FPC #0
  PFE #0 : Links ok
FPC #2
  PFE #1 : Links ok
FPC #4
  PFE #0 : Links ok
FPC #5
  PFE #1 : Links ok
FPC #7
  PFE #0 : Links ok
SCC      : Links ok
SIB #2
plane state: S_ACTIVE
FPC #0
  PFE #0 : Links ok
FPC #2
  PFE #1 : Links ok
FPC #4
  PFE #0 : Links ok
FPC #5

```

```
        PFE #1 : Links ok
FPC #7
        PFE #0 : Links ok
SCC      : Links ok
SIB #3
plane state: S_ACTIVE
FPC #0
        PFE #0 : Links ok
FPC #2
        PFE #1 : Links ok
FPC #4
        PFE #0 : Links ok
FPC #5
        PFE #1 : Links ok
FPC #7
        PFE #0 : Links ok
SCC      : Links ok
SIB #4
plane state: S_ACTIVE
FPC #0
        PFE #0 : Links ok
FPC #2
        PFE #1 : Links ok
FPC #4
        PFE #0 : Links ok
FPC #5
        PFE #1 : Links ok
FPC #7
        PFE #0 : Links ok
SCC      : Links ok
```

#### show chassis fabric sibs scc (TX Matrix Router)

```
user@host> show chassis fabric sibs scc
scc-re0:
```

```
-----
Fabric management SIB state:
```

```
SIB #1
plane state: S_ACTIVE
LCC #0      : Links ok
LCC #1      : Links ok
SIB #2
plane state: S_ACTIVE
LCC #0      : Links ok
LCC #1      : Links ok
SIB #3
plane state: S_ACTIVE
LCC #0      : Links ok
LCC #1      : Links ok
SIB #4
plane state: S_ACTIVE
LCC #0      : Links ok
LCC #1      : Links ok
```

#### show chassis fabric sibs slot (PTX3000 Router)

```
user@host> show chassis fabric sibs slot 0
Fabric management SIB state:
SIB #0 Online
Fcore #0 (plane 0) Active
```

```

FPC #8
  PFE #0 : OK
  PFE #1 : OK
FPC #12
  PFE #0 : OK
  PFE #1 : OK
Fcore #1 (plane 1) Active
  FPC #8
    PFE #0 : OK
    PFE #1 : OK
  FPC #12
    PFE #0 : OK
    PFE #1 : OK

```

#### show chassis fabric sibs (PTX10008 Router)

```

user@host> show chassis fabric sibs
Fabric management SIB state:
SIB #0 Online
  FASIC #0 (plane 0) Active
    FPC #0
      PFE #0 : OK
      PFE #1 : OK
      PFE #2 : OK
    FPC #5
      PFE #0 : OK
      PFE #1 : OK
      PFE #2 : OK
      PFE #3 : OK
      PFE #4 : OK
      PFE #5 : OK
    FPC #6
      PFE #0 : OK
      PFE #1 : OK
      PFE #2 : OK
      PFE #3 : OK
      PFE #4 : OK
      PFE #5 : OK
  FASIC #1 (plane 1) Active
    FPC #0
      PFE #0 : OK
      PFE #1 : OK
      PFE #2 : OK
    FPC #5
      PFE #0 : OK
      PFE #1 : OK
      PFE #2 : OK
      PFE #3 : OK
      PFE #4 : OK
      PFE #5 : OK
    FPC #6
      PFE #0 : OK
      PFE #1 : OK
      PFE #2 : OK
      PFE #3 : OK
      PFE #4 : OK
      PFE #5 : OK
SIB #1 Online
  FASIC #0 (plane 2) Active
    FPC #0
      PFE #0 : OK

```

```

        PFE #1 : OK
        PFE #2 : OK
    FPC #5
        PFE #0 : OK
        PFE #1 : OK
        PFE #2 : OK
        PFE #3 : OK
        PFE #4 : OK
        PFE #5 : OK
    FPC #6
        PFE #0 : OK
        PFE #1 : OK
        PFE #2 : OK
        PFE #3 : OK
        PFE #4 : OK
        PFE #5 : OK
    FASIC #1 (plane 3) Active
    FPC #0
        PFE #0 : OK
        PFE #1 : OK
        PFE #2 : OK
    FPC #5
        PFE #0 : OK
        PFE #1 : OK
        PFE #2 : OK
        PFE #3 : OK
        PFE #4 : OK
        PFE #5 : OK
    FPC #6
        PFE #0 : OK
        PFE #1 : OK
        PFE #2 : OK
        PFE #3 : OK
        PFE #4 : OK
        PFE #5 : OK
    SIB #2 Empty
    SIB #3 Empty
    SIB #4 Empty
    SIB #5 Empty
```

#### show chassis fabric sibs (QFX10008 Switch)

```

user@host> show chassis fabric sibs
Fabric management SIB state:
SIB #0 Online
    FASIC #0 (plane 0) Active
    FPC #0
        PFE #0 : OK
        PFE #1 : OK
        PFE #2 : OK
        PFE #3 : OK
    FPC #1
        PFE #0 : OK
        PFE #1 : OK
    FASIC #1 (plane 1) Active
    FPC #0
        PFE #0 : OK
        PFE #1 : OK
    FPC #12
        PFE #0 : OK
        PFE #1 : OK
```

SIB #1 Empty  
SIB #2 Empty  
SIB #3 Empty  
SIB #4 Empty  
SIB #5 Empty

## show chassis fabric summary

---

<b>List of Syntax</b>	<a href="#">Syntax on page 614</a> <a href="#">Syntax (EX9253 Switches) on page 614</a>
<b>Syntax</b>	show chassis fabric summary <extended>
<b>Syntax (EX9253 Switches)</b>	show chassis fabric summary
<b>Release Information</b>	<p>Command introduced in Junos OS Release 8.4.</p> <p>Command introduced in Junos OS Release 9.4 for EX Series switches.</p> <p>Command introduced in Junos OS Release 12.1X48 for PTX Series Packet Transport Routers.</p> <p>Command introduced in Junos OS Release 12.3 for MX2020 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 12.3 for MX2010 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 15.1X53-D30 for QFX Series switches.</p> <p><b>extended</b> option added in Junos OS Release 14.1R2.</p> <p>Command introduced in Junos OS Release 17.2 for MX2008 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 17.3 for MX10003 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 18.2 for MX10008 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 17.2 for PTX10008 Routers.</p> <p>Command introduced in Junos OS Release 18.2 for EX9253 Switches.</p>
<b>Description</b>	<p>(MX Series routers and EX8200 switches only) Display the state of all fabric planes and the elapsed uptime.</p> <p>(QFX Series switches) Display the state of all fabric planes.</p>
<b>Options</b>	<b>extended</b> —(Optional) Display the extended summary of fabric planes.
<b>Required Privilege Level</b>	view
<b>List of Sample Output</b>	<a href="#">show chassis fabric summary (MX240 Router) on page 617</a> <a href="#">show chassis fabric summary (MX480 Router) on page 617</a> <a href="#">show chassis fabric summary (MX480 Router with MPC4E) on page 617</a> <a href="#">show chassis fabric summary (MX960 Router) on page 618</a> <a href="#">show chassis fabric summary (MX10008 Router) on page 618</a> <a href="#">show chassis fabric summary (MX2010 Router) on page 618</a> <a href="#">show chassis fabric summary (MX2020 Router) on page 618</a> <a href="#">show chassis fabric summary (MX2020 Router with MPC4E) on page 619</a> <a href="#">show chassis fabric summary (MX2008) on page 619</a> <a href="#">show chassis fabric summary (EX8200 Switch) on page 619</a> <a href="#">show chassis fabric summary (EX9253 Switch) on page 619</a> <a href="#">show chassis fabric summary (PTX Series Packet Transport Router) on page 620</a> <a href="#">show chassis fabric summary (PTX10008 Router) on page 620</a>

[show chassis fabric summary \(QFX 10008 Switch\) on page 621](#)  
[show chassis fabric summary extended \(MX960 Router\) on page 621](#)  
[show chassis fabric summary \(MX10003 Router\) on page 621](#)  
[show chassis fabric summary extended \(MX10003 Router\) on page 622](#)

**Output Fields** [Table 24 on page 615](#) lists the output fields for the **show chassis fabric summary** command. Output fields are listed in the approximate order in which they appear.

*Table 24: show chassis fabric summary Output Fields*

Field Name	Field Description
Plane	(MX Series, MX2020, MX2010, and MX2008 Routers only) Plane number.

Table 24: show chassis fabric summary Output Fields (continued)

Field Name	Field Description
<b>State</b>	<p>(MX Series and QFX Series) State of the SIB or FPC:</p> <ul style="list-style-type: none"> <li>• <b>Online</b>—Switch Interface Board (SIB) is operational and running.</li> </ul> <p><b>NOTE:</b> On the Enhanced MX SCB with Trio MPC, a maximum of 4 planes are operational and running. On all the other SCBs with Trio MPC, all the planes are operational and running.</p> <ul style="list-style-type: none"> <li>• <b>Empty</b>—SIB is powered down.</li> <li>• <b>Check</b>—SIB is in the <b>Check</b> state because of the following reasons: <ul style="list-style-type: none"> <li>• SIB is not inserted properly.</li> <li>• Some destination errors are detected on the SIB. In this case, the Packet Forwarding Engine stops using the SIB to send traffic to the affected destination Packet Forwarding Engine.</li> <li>• Some link errors are detected on the channel between the SIB and a Packet Forwarding Engine. Link errors can be detected at initialization time or runtime: <ul style="list-style-type: none"> <li>• Link errors caused by a link training failure at initialization time—The Packet Forwarding Engine does not use the SIB to send traffic. The <b>show chassis fabric fpcs</b> command shows <b>Plane disabled</b> as status for this link.</li> <li>• Link errors caused by CRC errors detected at runtime—The Packet Forwarding Engine continues to use the SIB to send traffic. The <b>show chassis fabric fpcs</b> command shows <b>Link error</b> as the status for this link.</li> </ul> </li> </ul> </li> </ul> <p><b>NOTE:</b> The <b>Check</b> state does not apply to PTX Series Packet Transport Routers because there are no SIBs in the Check state.</p> <p>For information about link and destination errors, issue the <b>show chassis fabric fpcs</b> commands.</p> <ul style="list-style-type: none"> <li>• <b>Spare</b>—SIB is redundant and will move to active state if one of the working SIBs fails.</li> </ul> <p><b>NOTE:</b> <b>Spare</b> does not apply to PTX Series Packet Transport Routers because there are no spare SIBs in the device.</p> <p>(MX2010, MX2020, and MX2008 Routers) State of the SFB.</p> <ul style="list-style-type: none"> <li>• <b>Online</b>—Switch Fabric Board (SFB) is operational and running.</li> <li>• <b>Offline</b>—Switch Fabric Board (SFB) is powered down.</li> <li>• <b>Check</b>—Switch Fabric Board (SFB) is in the check state.</li> </ul>
<b>Errors</b>	<p>(PTX Series and QFX Series) Indicates whether there is any error on the SIB.</p> <ul style="list-style-type: none"> <li>• <b>None</b>—No errors</li> <li>• <b>Link Errors</b>—Fabric link errors were found on the SIB RX link.</li> <li>• <b>Cell drops</b>—Fabric cell drops were found on the SIB ASIC.</li> <li>• <b>Link, Cell drops</b>—Both Link errors and cell drops were detected on at least one of the FPC's fabric links.</li> </ul>



Table 24: show chassis fabric summary Output Fields (continued)

Field Name	Field Description
	<ul style="list-style-type: none"> <li>• <b>Asic Errors</b>—A fault affecting one of the ASICs on the SIB is detected. It can be an IO error or an internal error signaled by the ASIC.</li> </ul> <p><b>NOTE:</b> The <b>Errors</b> column is empty only when the FPC or SIB is offline.</p>
<b>Uptime</b>	(MX Series, MX2010, MX2020, and MX2008 Routers) Elapsed time the plane has been online.
<b>Link Error</b>	Fabric link errors were found on the SIB RX link.
<b>Link TF</b>	Fabric link training failure has occurred.
<b>Destination errors</b>	<ul style="list-style-type: none"> <li>• <b>Local</b>—Destination error detected on the FPC or PFE's own self-stream.</li> <li>• <b>Remote</b>—Destination error detected on the FPC or PFE's non-self-streams.</li> </ul>

## Sample Output

### show chassis fabric summary (MX240 Router)

```
user@host> show chassis fabric summary
Plane  State  Uptime
0      Online 23 hours, 26 minutes, 54 seconds
1      Online 23 hours, 26 minutes, 54 seconds
2      Check 18 hours, 33 minutes, 42 seconds
3      Online 23 hours, 26 minutes, 54 seconds
4      Spare 23 hours, 26 minutes, 54 seconds
5      Spare 23 hours, 26 minutes, 54 seconds
6      Spare 23 hours, 26 minutes, 54 seconds
7      Spare 23 hours, 26 minutes, 54 seconds
```

### show chassis fabric summary (MX480 Router)

```
user@host> show chassis fabric summary
Plane  State  Uptime
0      Online 8 hours, 45 minutes, 29 seconds
1      Online 8 hours, 45 minutes, 28 seconds
2      Online 8 hours, 45 minutes, 28 seconds
3      Online 8 hours, 45 minutes, 28 seconds
4      Spare 8 hours, 45 minutes, 28 seconds
5      Spare 8 hours, 45 minutes, 28 seconds
6      Spare 8 hours, 45 minutes, 28 seconds
7      Check 6 hours, 10 minutes, 12 seconds
```

### show chassis fabric summary (MX480 Router with MPC4E)

```
user@host > show chassis fabric summary
```

Plane	State	Uptime
0	Online	6 hours, 57 minutes, 44 seconds
1	Online	6 hours, 57 minutes, 40 seconds
2	Online	6 hours, 57 minutes, 39 seconds
3	Online	6 hours, 57 minutes, 34 seconds
4	Spare	6 hours, 57 minutes, 34 seconds
5	Spare	6 hours, 57 minutes, 29 seconds
6	Spare	6 hours, 57 minutes, 29 seconds
7	Spare	6 hours, 57 minutes, 24 seconds

Note:

For FPC slots with MPC Type 4 or MCC:

Fabric planes 1 and 5, 3 and 7 use shared physical links.

Those slots may run in a reduced bandwidth in case both plane 1 and 5, or both 3 and 7 are active.

#### show chassis fabric summary (MX960 Router)

```
user@host> show chassis fabric summary
```

Plane	State	Uptime
0	Online	3 hours, 7 minutes, 9 seconds
1	Online	3 hours, 7 minutes, 4 seconds
2	Online	3 hours, 6 minutes, 59 seconds
3	Online	3 hours, 6 minutes, 54 seconds
4	Empty	
5	Empty	

#### show chassis fabric summary (MX10008 Router)

```
user@host> show chassis fabric summary
```

Plane	State	Uptime
0	Online	19 hours, 27 minutes, 33 seconds
1	Online	19 hours, 27 minutes, 7 seconds
2	Online	19 hours, 26 minutes, 39 seconds
3	Online	19 hours, 26 minutes, 11 seconds
4	Online	19 hours, 26 minutes, 13 seconds
5	Online	19 hours, 26 minutes, 22 seconds

#### show chassis fabric summary (MX2010 Router)

```
user@host> show chassis fabric summary
```

Plane	State	Uptime
0	Online	1 day, 13 hours, 20 minutes, 10 seconds
1	Online	1 day, 13 hours, 19 minutes, 59 seconds
2	Online	1 day, 13 hours, 19 minutes, 49 seconds
3	Offline	
4	Online	1 day, 13 hours, 19 minutes, 28 seconds
5	Check	1 day, 13 hours, 19 minutes, 17 seconds
6	Online	1 day, 13 hours, 19 minutes, 6 seconds
7	Online	1 hour, 43 minutes, 5 seconds

#### show chassis fabric summary (MX2020 Router)

```
user@host> show chassis fabric summary
```

Plane	State	Uptime
0	Online	8 hours, 24 minutes, 1 second
1	Online	8 hours, 47 minutes, 54 seconds
2	Online	8 hours, 47 minutes, 44 seconds
3	Online	8 hours, 47 minutes, 33 seconds
4	Online	8 hours, 47 minutes, 22 seconds
5	Online	8 hours, 47 minutes, 12 seconds

```

6      Online  8 hours, 47 minutes, 1 second
7      Online  8 hours, 46 minutes, 50 seconds

```

#### show chassis fabric summary (MX2020 Router with MPC4E)

```

user@host > show chassis fabric summary
Plane  State  Uptime
0      Online  3 days, 6 hours, 58 minutes, 29 seconds
1      Online  3 days, 6 hours, 58 minutes, 18 seconds
2      Online  3 days, 6 hours, 58 minutes, 8 seconds
3      Online  3 days, 6 hours, 57 minutes, 57 seconds
4      Online  3 days, 6 hours, 57 minutes, 46 seconds
5      Online  3 days, 6 hours, 57 minutes, 36 seconds
6      Online  3 days, 6 hours, 57 minutes, 25 seconds
7      Online  3 days, 6 hours, 57 minutes, 14 seconds

```

#### show chassis fabric summary (MX2008)

```

user@host > show chassis fabric summary
Plane  State  Uptime
0      Offline
1      Online  16 hours, 38 minutes, 34 seconds
2      Online  16 hours, 38 minutes, 29 seconds
3      Online  16 hours, 38 minutes, 24 seconds
4      Offline
5      Online  16 hours, 38 minutes, 13 seconds
6      Online  16 hours, 38 minutes, 8 seconds
7      Offline

```

#### show chassis fabric summary (EX8200 Switch)

```

user@host> show chassis fabric summary
Plane  State  Uptime
0      Online  12 days, 50 minutes, 54 seconds
1      Online  12 days, 50 minutes, 53 seconds
2      Online  12 days, 50 minutes, 53 seconds
3      Online  12 days, 50 minutes, 52 seconds
4      Spare   12 days, 50 minutes, 49 seconds
5      Spare   12 days, 50 minutes, 47 seconds
6      Spare   12 days, 50 minutes, 47 seconds
7      Spare   12 days, 50 minutes, 46 seconds
8      Online  12 days, 50 minutes, 52 seconds
9      Online  12 days, 50 minutes, 50 seconds
10     Online  12 days, 50 minutes, 50 seconds
11     Online  12 days, 50 minutes, 49 seconds

```

#### show chassis fabric summary (EX9253 Switch)

```

user@switch> show chassis fabric summary
Plane  State  Uptime
0      Online  21 days, 8 minutes, 41 seconds
1      Online  21 days, 8 minutes, 41 seconds
2      Online  21 days, 8 minutes, 41 seconds
3      Online  21 days, 8 minutes, 41 seconds
4      Online  21 days, 8 minutes, 41 seconds
5      Online  21 days, 8 minutes, 41 seconds
6      Online  21 days, 8 minutes, 41 seconds
7      Online  21 days, 8 minutes, 41 seconds
8      Online  21 days, 8 minutes, 41 seconds
9      Online  21 days, 8 minutes, 41 seconds

```

10	Online	21 days, 8 minutes, 41 seconds
11	Online	21 days, 8 minutes, 41 seconds
12	Online	21 days, 8 minutes, 41 seconds
13	Online	21 days, 8 minutes, 41 seconds
14	Online	21 days, 8 minutes, 41 seconds
15	Online	21 days, 8 minutes, 41 seconds
16	Online	21 days, 8 minutes, 41 seconds
17	Online	21 days, 8 minutes, 41 seconds
18	Online	21 days, 8 minutes, 41 seconds
19	Online	21 days, 8 minutes, 41 seconds
20	Online	21 days, 8 minutes, 41 seconds
21	Online	21 days, 8 minutes, 41 seconds

#### show chassis fabric summary (PTX Series Packet Transport Router)

```
user@host> show chassis fabric summary
```

FRU	State	Errors
SIB0	Online	None
SIB1	Online	Link Errors
SIB2	Online	None
SIB3	Online	Cell drops
SIB4	Offline	
SIB5	Online	None
SIB6	Online	Link, Cell drops
SIB7	Online	None
SIB8	Online	Link, Cell drops
FPC0	Online	None
FPC1	Online	Link Errors
FPC2	Online	None
FPC3	Offline	
FPC4	Online	None
FPC5	Online	None
FPC6	Empty	
FPC7	Empty	

#### show chassis fabric summary (PTX10008 Router)

```
user@host> show chassis fabric summary
```

FRU	State	Errors
SIB0	Online	None
SIB1	Online	None
SIB2	Empty	
SIB3	Empty	
SIB4	Empty	
SIB5	Empty	
FPC0	Online	None
FPC1	Empty	
FPC2	Empty	
FPC3	Empty	
FPC4	Empty	
FPC5	Online	None
FPC6	Online	None
FPC7	Empty	

**show chassis fabric summary (QFX 10008 Switch)**

```

user@host> show chassis fabric summary
FRU           State      Errors

FPC0          Online     None
FPC1          Online     Link Errors
FPC2          Online     None
FPC3          Offline
FPC4          Online     None
FPC5          Online     None
FPC6          Empty
FPC7          Empty

SIB0          Online     None
SIB1          Online     Link Errors
SIB2          Online     None
SIB3          Online     Cell drops
SIB4          Offline
SIB5          Online     None

```

**Sample Output****show chassis fabric summary extended (MX960 Router)**

```

user@host> show chassis fabric summary extended
Plane  State   Link Error  Link TF  Destination errors  Uptime
                                Local / Remote
0      Online NO      NO      NO/ NO      7 days, 5 hours, 25 minutes,
20 seconds
1      Online NO      NO      NO/ NO      7 days, 5 hours, 25 minutes,
11 seconds
2      Online NO      NO      NO/ NO      7 days, 5 hours, 25 minutes,
5 seconds
3      Online NO      NO      NO/ NO      7 days, 5 hours, 24 minutes,
59 seconds
4      Spare NO      NO      NO/ NO      7 days, 5 hours, 24 minutes,
52 seconds
5      Spare NO      NO      NO/ NO      7 days, 5 hours, 24 minutes,
45 seconds

```

**show chassis fabric summary (MX10003 Router)**

```

user@host> show chassis fabric summary

Plane  State   Uptime
0      Online 1 day, 10 hours, 12 minutes, 52 seconds
1      Online 1 day, 10 hours, 12 minutes, 52 seconds
2      Online 1 day, 10 hours, 12 minutes, 52 seconds
3      Online 1 day, 10 hours, 12 minutes, 52 seconds
4      Online 1 day, 10 hours, 12 minutes, 52 seconds
5      Online 1 day, 10 hours, 12 minutes, 52 seconds
6      Online 1 day, 10 hours, 12 minutes, 52 seconds
7      Online 1 day, 10 hours, 12 minutes, 52 seconds
8      Online 1 day, 10 hours, 12 minutes, 52 seconds
9      Online 1 day, 10 hours, 12 minutes, 52 seconds
10     Online 1 day, 10 hours, 12 minutes, 52 seconds
11     Online 1 day, 10 hours, 12 minutes, 52 seconds
12     Online 1 day, 10 hours, 12 minutes, 52 seconds

```

```

13   Online  1 day, 10 hours, 12 minutes, 52 seconds
14   Online  1 day, 10 hours, 12 minutes, 52 seconds
15   Online  1 day, 10 hours, 12 minutes, 52 seconds
16   Online  1 day, 10 hours, 12 minutes, 52 seconds
17   Online  1 day, 10 hours, 12 minutes, 52 seconds
18   Online  1 day, 10 hours, 12 minutes, 52 seconds
19   Online  1 day, 10 hours, 12 minutes, 52 seconds
20   Online  1 day, 10 hours, 12 minutes, 52 seconds
21   Online  1 day, 10 hours, 12 minutes, 52 seconds

```

### show chassis fabric summary extended (MX10003 Router)

```
user@host> show chassis fabric summary extended
```

Plane	State	Link Error	Link TF	Destination errors Local / Remote	Uptime
0	Online	NO	NO	NO/ NO	1 day, 10 hours, 14 minutes, 26 seconds
1	Online	NO	NO	NO/ NO	1 day, 10 hours, 14 minutes, 26 seconds
2	Online	NO	NO	NO/ NO	1 day, 10 hours, 14 minutes, 26 seconds
3	Online	NO	NO	NO/ NO	1 day, 10 hours, 14 minutes, 26 seconds
4	Online	NO	NO	NO/ NO	1 day, 10 hours, 14 minutes, 26 seconds
5	Online	NO	NO	NO/ NO	1 day, 10 hours, 14 minutes, 26 seconds
6	Online	NO	NO	NO/ NO	1 day, 10 hours, 14 minutes, 26 seconds
7	Online	NO	NO	NO/ NO	1 day, 10 hours, 14 minutes, 26 seconds
8	Online	NO	NO	NO/ NO	1 day, 10 hours, 14 minutes, 26 seconds
9	Online	NO	NO	NO/ NO	1 day, 10 hours, 14 minutes, 26 seconds
10	Online	NO	NO	NO/ NO	1 day, 10 hours, 14 minutes, 26 seconds
11	Online	NO	NO	NO/ NO	1 day, 10 hours, 14 minutes, 26 seconds
12	Online	NO	NO	NO/ NO	1 day, 10 hours, 14 minutes, 26 seconds
13	Online	NO	NO	NO/ NO	1 day, 10 hours, 14 minutes, 26 seconds
14	Online	NO	NO	NO/ NO	1 day, 10 hours, 14 minutes, 26 seconds
15	Online	NO	NO	NO/ NO	1 day, 10 hours, 14 minutes, 26 seconds
16	Online	NO	NO	NO/ NO	1 day, 10 hours, 14 minutes, 26 seconds
17	Online	NO	NO	NO/ NO	1 day, 10 hours, 14 minutes, 26 seconds
18	Online	NO	NO	NO/ NO	1 day, 10 hours, 14 minutes, 26 seconds
19	Online	NO	NO	NO/ NO	1 day, 10 hours, 14 minutes, 26 seconds
20	Online	NO	NO	NO/ NO	1 day, 10 hours, 14 minutes, 26 seconds
21	Online	NO	NO	NO/ NO	1 day, 10 hours, 14 minutes, 26 seconds



## show chassis hardware

---

<b>List of Syntax</b>	<a href="#">Syntax on page 624</a> <a href="#">Syntax (EX Series) on page 624</a> <a href="#">Syntax (T4000 Router) on page 624</a> <a href="#">Syntax (TX Matrix Router) on page 624</a> <a href="#">Syntax (TX Matrix Plus Router) on page 624</a> <a href="#">Syntax (MX Series Routers) on page 624</a> <a href="#">Syntax (MX104, MX204, MX2010, MX2020, MX10003, MX10008, and MX2008 Universal Routing Platforms) on page 625</a> <a href="#">Syntax (QFX Series) on page 625</a> <a href="#">Syntax (OCX Series) on page 625</a> <a href="#">Syntax (PTX Series Packet Transport Routers) on page 625</a> <a href="#">Syntax (ACX Series Universal Metro Routers) on page 625</a> <a href="#">Syntax (ACX5048 and ACX5096 Routers) on page 625</a> <a href="#">Syntax (ACX500 Routers) on page 625</a>
<b>Syntax</b>	<code>show chassis hardware</code> <code>&lt;detail   extensive&gt;</code> <code>&lt;clei-models&gt;</code> <code>&lt;models&gt;</code>
<b>Syntax (EX Series)</b>	<code>show chassis hardware</code> <code>&lt;clei-models&gt;</code> <code>&lt;detail   extensive&gt;</code> <code>&lt;models&gt;</code> <code>&lt;satellite [slot-id <i>slot-id</i>   device-alias <i>alias-name</i>]&gt;</code>
<b>Syntax (T4000 Router)</b>	<code>show chassis hardware</code> <code>&lt;clei-models&gt;</code> <code>&lt;detail   extensive&gt;</code> <code>&lt;models&gt;</code>
<b>Syntax (TX Matrix Router)</b>	<code>show chassis hardware</code> <code>&lt;clei-models&gt;</code> <code>&lt;detail   extensive&gt;</code> <code>&lt;models&gt;</code> <code>&lt;lcc <i>number</i>   scc&gt;</code>
<b>Syntax (TX Matrix Plus Router)</b>	<code>show chassis hardware</code> <code>&lt;clei-models&gt;</code> <code>&lt;detail   extensive&gt;</code> <code>&lt;models&gt;</code> <code>&lt;lcc <i>number</i>   sfc <i>number</i>&gt;</code>
<b>Syntax (MX Series Routers)</b>	<code>show chassis hardware</code> <code>&lt;detail   extensive&gt;</code> <code>&lt;clei-models&gt;</code> <code>&lt;models&gt;</code>



	<all-members> <local> <member <i>member-id</i> >
<b>Syntax (MX104, MX204, MX2010, MX2020, MX10003, MX10008, and MX2008 Universal Routing Platforms)</b>	show chassis hardware <clei-models> <detail   extensive> <models> <satellite [slot-id <i>slot-id</i>   device-alias <i>alias-name</i> ]>
<b>Syntax (QFX Series)</b>	show chassis hardware <detail   extensive> <clei-models> <interconnect-device <i>name</i> > <node-device <i>name</i> > <models>
<b>Syntax (OCX Series)</b>	show chassis hardware <detail   extensive> <clei-models> <models>
<b>Syntax (PTX Series Packet Transport Routers)</b>	show chassis hardware <detail   extensive> <clei-models> <models>
<b>Syntax (ACX Series Universal Metro Routers)</b>	show chassis hardware <detail   extensive> <clei-models> <models>
<b>Syntax (ACX5048 and ACX5096 Routers)</b>	show chassis hardware <detail   extensive> <clei-models> <models>
<b>Syntax (ACX500 Routers)</b>	show chassis hardware <detail   extensive> <clei-models> <models>
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. <b>models</b> option introduced in Junos OS Release 8.2. Command introduced in Junos OS Release 9.0 for EX Series switches. <b>sfc</b> option introduced in Junos OS Release 9.6 for the TX Matrix Plus router. Command introduced in Junos OS Release 11.1 for QFX Series.

Command introduced in Junos OS Release 12.1X48 for PTX Series Packet Transport Routers.

Command introduced in Junos OS Release 12.2 for ACX Series Universal Metro Routers.

Command introduced in Junos OS Release 12.3 for MX2010 and MX2020 Universal Routing Platforms.

Information for **disk** and **usb** introduced in Junos OS Release 15.1X53-D60 for QFX10002, QFX10008, and QFX10016 switches.

Command introduced in Junos OS Release 15.1X54-D20 for ACX5048 and ACX5096 Routers.

Command introduced in Junos OS Release 17.2 for MX2008 Universal Routing Platforms.

Command introduced in Junos OS Release 17.2 for PTX10008 Routers.

Command introduced in Junos OS Release 17.3 for MX10003 Universal Routing Platforms.

Command introduced in Junos OS Release 17.3 for MX150 Router Appliance.

Command introduced in Junos OS Release 17.4 for MX204 Routers.

Command introduced in Junos OS Release 18.1R1 for EX9251 Switches.

Command introduced in Junos OS Release 18.2 for EX9253 Switches.

Command introduced in Junos OS Release 18.2R1 for MX10008 Routers

**Description** Display a list of all Flexible PIC Concentrators (FPCs) and PICs installed in the router or switch chassis, including the hardware version level and serial number.

In the EX Series switch command output, FPC refers to the following:

- On EX2200 switches, EX3200 switches, EX4200 standalone switches, and EX4500 switches—Refers to the switch; FPC *number* is always 0.
- On EX4200 switches in a Virtual Chassis configuration—Refers to the member of a Virtual Chassis; FPC *number* equals the member ID, from 0 through 9.
- On EX8208 and EX8216 switches—Refers to a line card; FPC *number* equals the slot number for the line card.

On QFX3500, QFX5100, and OCX Series standalone switches, and PTX1000 routers both the FPC and FPC *number* are always 0.

On T4000 Type 5 FPCs, there are no **top temperature sensor** or **bottom temperature sensor** parameters. Instead, **fan intake temperature sensor** and **fan exhaust temperature sensors** parameters are displayed.

Starting from Junos OS Release 11.4, the output of the **show chassis hardware models** operational mode command displays the enhanced midplanes FRU model numbers (CHAS-BP3-MX240-S, CHAS-BP3-MX480-S or CHAS-BP3-MX960-S) based on the router. Prior to release 11.4, the FRU model numbers are left blank when the router has enhanced midplanes. Note that the enhanced midplanes are introduced through the Junos OS Release 13.3, but can be supported on all Junos OS releases.

Starting with Junos OS Release 14.1, the output of the **show chassis hardware detail | extensive | clei-models | models** operational mode command displays the new DC power supply module (PSM) and power distribution unit (PDU) that are added to provide power to the high-density FPC (FPC2-PTX-P1A) and other components in a PTX5000 Packet Transport Router.

- Options** **none**—Display information about hardware. For a TX Matrix router, display information about the TX Matrix router and its attached T640 routers. For a TX Matrix Plus router, display information about the TX Matrix Plus router and its attached routers.
- clei-models**—(Optional) Display Common Language Equipment Identifier (CLEI) barcode and model number for orderable field-replaceable units (FRUs).
- detail**—(Optional) Include RAM and disk information in output.
- extensive**—(Optional) Display ID EEPROM information.
- all-members**—(MX Series routers only) (Optional) Display hardware-specific information for all the members of the Virtual Chassis configuration.
- interconnect-device *name***—(QFabric systems only) (Optional) Display hardware-specific information for the Interconnect device.
- lcc *number***—(TX Matrix routers and TX Matrix Plus router only) (Optional) On a TX Matrix router, display hardware information for a specified T640 router (line-card chassis) that is connected to the TX Matrix router. On a TX Matrix Plus router, display hardware information for a specified router (line-card chassis) that is connected to the TX Matrix Plus router.
- Replace *number* with the following values depending on the LCC configuration:
- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
  - 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
  - 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
  - 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- local**—(MX Series routers only) (Optional) Display hardware-specific information for the local Virtual Chassis members.
- member *member-id***—(MX Series routers and EX Series switches) (Optional) Display hardware-specific information for the specified member of the Virtual Chassis configuration. Replace *member-id* variable with a value 0 or 1.
- models**—(Optional) Display model numbers and part numbers for orderable FRUs and, for components that use ID EEPROM format v2, the CLEI code.
- node-device *name***—(QFabric systems only) (Optional) Display hardware-specific information for the Node device.
- satellite [*slot-id slot-id* | *device-alias alias-name*]**—(Junos Fusion only) (Optional) Display hardware information for the specified satellite device in a Junos Fusion, or for all satellite devices in the Junos Fusion if no satellite devices are specified.

**scc**—(TX Matrix router only) (Optional) Display hardware information for the TX Matrix router (switch-card chassis).

**sfc number**—(TX Matrix Plus router only) (Optional) Display hardware information for the TX Matrix Plus router (switch-fabric chassis). Replace *number* variable with 0.

**Additional Information** The **show chassis hardware detail** command now displays DIMM information for the following Routing Engines, as shown in [Table 25 on page 628](#).

**Table 25: Routing Engines Displaying DIMM Information**

Routing Engines	Routers
RE-S-1800x2 and RE-S-1800x4	MX240, MX480, and MX960 routers
RE-A-1800x2	M120 and M320 routers

In Junos OS Release 11.4 and later, the output for the **show chassis hardware models** operational mode command for MX Series routers display the enhanced midplanes FRU model numbers—CHAS-BP3-MX240-S, CHAS-BP3-MX480-S, or CHAS-BP3-MX960-S—based on the router. In releases before Junos OS Release 11.4, the FRU model numbers are left blank when the router has enhanced midplanes. Note that the enhanced midplanes are introduced through Junos OS Release 13.3, but can be supported on all Junos OS releases.

Starting with Junos OS Release 17.3R1, the output of the **show chassis hardware** command displays the mode in which vMX is running (performance mode or lite mode) in the part number field for the FPC. **RIOT-PERF** indicates performance mode and **RIOT-LITE** indicates lite mode.

**Required Privilege Level** view

**Related Documentation**

- *show chassis power*

**List of Sample Output**

- [show chassis hardware \(EX8216 Switch\) on page 635](#)
- [show chassis hardware clei-models \(EX8216 Switch\) on page 637](#)
- [show chassis hardware clei-models \(T1600 Router\) on page 637](#)
- [show chassis hardware clei-models \(PTX10008 Routers\) on page 638](#)
- [show chassis hardware clei-models \(PTX10016 Routers\) on page 638](#)
- [show chassis hardware \(EX2300-C Switch\) on page 639](#)
- [show chassis hardware \(EX2300 Switch\) on page 639](#)
- [show chassis hardware detail \(EX4200 Switch\) on page 640](#)
- [show chassis hardware \(EX4300 Switch\) on page 640](#)
- [show chassis hardware models \(EX4500 Switch\) on page 640](#)
- [show chassis hardware detail \(EX9200 Switch\) on page 641](#)
- [show chassis hardware detail \(EX9251 Switch\) on page 641](#)
- [show chassis hardware detail \(EX9253 Switch\) on page 642](#)

[show chassis hardware detail \(PTX10008 Routers\) on page 642](#)  
[show chassis hardware detail \(PTX10016 Routers\) on page 644](#)  
[show chassis hardware \(M7i Router\) on page 646](#)  
[show chassis hardware \(M10 Router\) on page 647](#)  
[show chassis hardware models \(M10 Router\) on page 647](#)  
[show chassis hardware \(M20 Router\) on page 647](#)  
[show chassis hardware models \(M20 Router\) on page 648](#)  
[show chassis hardware \(M40 Router\) on page 648](#)  
[show chassis hardware \(M40e Router\) on page 649](#)  
[show chassis hardware \(M120 Router\) on page 650](#)  
[show chassis hardware detail \(M120 Router\) on page 651](#)  
[show chassis hardware models \(M120 Router\) on page 651](#)  
[show chassis hardware \(M160 Router\) on page 652](#)  
[show chassis hardware models \(M160 Router\) on page 653](#)  
[show chassis hardware detail \(M160 Router\) on page 653](#)  
[show chassis hardware \(M320 Router\) on page 654](#)  
[show chassis hardware models \(M320 Router\) on page 655](#)  
[show chassis hardware \(MX5 Router\) on page 656](#)  
[show chassis hardware \(MX10 Router\) on page 657](#)  
[show chassis hardware \(MX40 Router\) on page 657](#)  
[show chassis hardware \(Fixed MX80 Router\) on page 658](#)  
[show chassis hardware \(Modular MX80 Router\) on page 658](#)  
[show chassis hardware \(MX150\) on page 659](#)  
[show chassis hardware models \(MX150\) on page 659](#)  
[show chassis hardware \(MX104 Router\) on page 659](#)  
[show chassis hardware detail \(MX104 Router\) on page 660](#)  
[show chassis hardware detail \(MX480 Packet Transport Router with details of virtual disk size\) on page 660](#)  
[show chassis hardware extensive \(MX104 Router\) on page 661](#)  
[show chassis hardware extensive \(PTX10008 Router\) on page 664](#)  
[show chassis hardware extensive \(PTX10016 Router\) on page 676](#)  
[show chassis hardware models \(MX104 Router\) on page 689](#)  
[show chassis hardware models \(PTX10008 Router\) on page 689](#)  
[show chassis hardware models \(PTX10016 Router\) on page 690](#)  
[show chassis hardware clei-models \(MX104 Router\) on page 690](#)  
[show chassis hardware \(MX240 Router\) on page 691](#)  
[show chassis hardware detail \(MX 240 Router with Routing Engine Displaying DIMM Information\) on page 691](#)  
[show chassis hardware \(MX240 Router with Enhanced MX SCB\) on page 692](#)  
[show chassis hardware \(MX480 Router\) on page 693](#)  
[show chassis hardware \(MX480 Router with Enhanced MX SCB\) on page 693](#)  
[show chassis hardware \(MX480 Routers with MPC5E and Built-In OTN PIC\) on page 694](#)  
[show chassis hardware detail \(MX480 Routers with MPC5E and Built-In OTN PIC\) on page 695](#)  
[show chassis hardware extensive \(MX480 Routers with MPC5E and Built-In OTN PIC\) on page 697](#)  
[show chassis hardware \(MX960 Router\) on page 699](#)  
[show chassis hardware \(MX960 Router with Bidirectional Optics\) on page 700](#)  
[show chassis hardware \(MX960 Router with Enhanced MX SCB\) on page 701](#)

[show chassis hardware models \(MX960 Router with Enhanced MX SCB\) on page 702](#)  
[show chassis hardware \(MX960 Router with MPC5EQ\) on page 703](#)  
[show chassis hardware detail \(MX960 Router\) on page 706](#)  
[show chassis hardware detail \(MX960 Router with MPC5EQ\) on page 706](#)  
[show chassis hardware extensive \(MX960 Router with MPC5EQ\) on page 709](#)  
[show chassis hardware models \(MX960 Router with MPC5EQ\) on page 718](#)  
[show chassis hardware clei-models \(MX960 Router with MPC5EQ\) on page 718](#)  
[show chassis hardware \(MX960 Router with MPC3E and 100-Gigabit DWDM OTN MIC\) on page 719](#)  
[show chassis hardware clei-models \(MX960 Router with MPC3E and 100-Gigabit DWDM OTN MIC\) on page 720](#)  
[show chassis hardware \(MX10008 Router\) on page 720](#)  
[show chassis hardware clei-models \(MX10008 Router\) on page 721](#)  
[show chassis hardware detail \(MX10008 Router\) on page 722](#)  
[show chassis hardware extensive \(MX10008 Router\) on page 723](#)  
[show chassis hardware models \(MX10008 Router\) on page 737](#)  
[show chassis hardware \(PTX3000 Router with 5-port 100-Gigabit DWDM OTN PIC\) on page 738](#)  
[show chassis hardware clei-models \(PTX3000 Router with 5-port 100-Gigabit DWDM OTN PIC\) on page 739](#)  
[show chassis hardware \(MX2010 Router\) on page 739](#)  
[show chassis hardware detail \(MX2010 Router\) on page 741](#)  
[show chassis hardware extensive \(MX2010 Router\) on page 746](#)  
[show chassis hardware models \(MX2010 Router\) on page 751](#)  
[show chassis hardware clei-models \(MX2010 Routers\) on page 752](#)  
[show chassis hardware \(MX2010 Routers with MPC6E and OTN MIC\) on page 753](#)  
[show chassis hardware detail \(MX2010 Routers with MPC6E and OTN MIC\) on page 755](#)  
[show chassis hardware extensive \(MX2010 Routers with MPC6E and OTN MIC\) on page 757](#)  
[show chassis hardware \(MX2020 Router\) on page 761](#)  
[show chassis hardware detail \(MX2020 Router\) on page 770](#)  
[show chassis hardware \(MX2020 Router with 240-V high-voltage DC PSMs and PDMs\) on page 779](#)  
[show chassis hardware models \(MX2020 Router\) on page 780](#)  
[show chassis hardware clei-models \(MX2020 Router\) on page 781](#)  
[show chassis hardware \(MX2020 Router with MPC5EQ and MPC6E\) on page 783](#)  
[show chassis hardware detail \(MX2020 Router with MPC5EQ and MPC6E\) on page 787](#)  
[show chassis hardware extensive \(MX2020 Router with MPC5EQ and MPC6E\) on page 789](#)  
[show chassis hardware models \(MX2020 Routers with MPC5EQ and MPC6E\) on page 795](#)  
[show chassis hardware clei-models \(MX2020 Router with MPC5EQ and MPC6E\) on page 796](#)  
[show chassis hardware \(MX Series routers with ATM MIC\) on page 797](#)  
[show chassis hardware \(MX240, MX480, MX960 routers with Application Services Modular Line Card\) on page 797](#)  
[show chassis hardware extensive \(MX240, MX480, MX960 Routers with Application Services Modular Line Card\) on page 798](#)  
[show chassis hardware \(MX480 Router with MPC4E\) on page 799](#)

[show chassis hardware \(MX2020 Router with MPC4E\) on page 799](#)  
[show chassis hardware \(MX5, MX10, MX40, MX80, MX240, MX480, and MX960 Routers with Enhanced 20-Port Gigabit Ethernet MIC\) on page 801](#)  
[show chassis hardware models \(MX5, MX10, MX40, MX80, MX240, MX480, and MX960 Routers with Enhanced 20-Port Gigabit Ethernet MIC\) on page 802](#)  
[show chassis hardware \(MX2008 Router\) on page 802](#)  
[show chassis hardware detail \(MX2008 Router\) on page 803](#)  
[show chassis hardware extensive \(MX2008 Router\) on page 804](#)  
[show chassis hardware models \(MX2008 Router\) on page 817](#)  
[show chassis hardware clei-models \(MX2008 Router\) on page 817](#)  
[show chassis hardware \(MX10003 Router\) on page 818](#)  
[show chassis hardware \(MX204 Router\) on page 819](#)  
[show chassis hardware \(vMX running in lite mode\) on page 819](#)  
[show chassis hardware \(vMX running in performance mode\) on page 819](#)  
[show chassis hardware \(T320 Router\) on page 820](#)  
[show chassis hardware \(T640 Router\) on page 821](#)  
[show chassis hardware models \(T640 Router\) on page 821](#)  
[show chassis hardware extensive \(T640 Router\) on page 822](#)  
[show chassis hardware \(T4000 Router\) on page 823](#)  
[show chassis hardware \(T4000 Router with 16-GB Line Card Chassis \(LCC\) Routing Engine\) on page 825](#)  
[show chassis hardware \(T4000 Router with LSR FPC\) on page 825](#)  
[show chassis hardware clei-models \(T4000 Router\) on page 825](#)  
[show chassis hardware detail \(T4000 Router\) on page 826](#)  
[show chassis hardware models \(T4000 Router\) on page 828](#)  
[show chassis hardware lcc \(TX Matrix Router\) on page 828](#)  
[show chassis hardware scc \(TX Matrix Router\) on page 829](#)  
[show chassis hardware \(T1600 Router\) on page 829](#)  
[show chassis hardware \(TX Matrix Plus Router\) on page 832](#)  
[show chassis hardware sfc \(TX Matrix Plus Router\) on page 837](#)  
[show chassis hardware extensive \(TX Matrix Plus Router\) on page 838](#)  
[show chassis hardware clei-models \(TX Matrix Plus Router\) on page 839](#)  
[show chassis hardware detail \(TX Matrix Plus Router\) on page 841](#)  
[show chassis hardware models \(TX Matrix Plus Router\) on page 843](#)  
[show chassis hardware \(TX Matrix Plus Router with 3D SIBs\) on page 846](#)  
[show chassis hardware clei-models \(TX Matrix Plus Router with 3D SIBs\) on page 849](#)  
[show chassis hardware detail \(TX Matrix Plus Router with 3D SIBs\) on page 853](#)  
[show chassis hardware lcc \(TX Matrix Plus Router with 3D SIBs\) on page 857](#)  
[show chassis hardware sfc \(TX Matrix Plus Router with 3D SIBs\) on page 858](#)  
[show chassis hardware \(16-Port 10-Gigabit Ethernet MPC with SFP+ Optics \[MX Series Routers\]\) on page 859](#)  
[show chassis hardware \(MPC3E \[MX Series Routers\]\) on page 860](#)  
[show chassis hardware \(QFX3500 Switches\) on page 861](#)  
[show chassis hardware detail \(QFX3500 Switches\) on page 861](#)  
[show chassis hardware models \(QFX3500 Switches\) on page 862](#)  
[show chassis hardware clei-models \(QFX3500 Switches\) on page 862](#)  
[show chassis hardware clei-models \(QFX5100 Switches\) on page 863](#)  
[show chassis hardware \(QFX10002 Switches\) on page 863](#)  
[show chassis hardware detail \(QFX10002 Switches\) on page 864](#)

[show chassis hardware \(QFX10008 and QFX10016 Switches\) on page 864](#)  
[show chassis hardware detail \(QFX10008 and QFX10016 Switches\) on page 865](#)  
[show chassis hardware interconnect-device \(QFabric Systems\) on page 865](#)  
[show chassis hardware node-device \(QFabric Systems\) on page 865](#)  
[show chassis hardware \(PTX5000 Packet Transport Router\) on page 866](#)  
[show chassis hardware \(PTX5000 Packet Transport Router with AC PSM and PDU\) on page 867](#)  
[show chassis hardware \(PTX5000 Packet Transport Router with FPC2-PTX-P1A\) on page 868](#)  
[show chassis hardware clei-models \(PTX5000 Packet Transport Router\) on page 868](#)  
[show chassis hardware clei-models \(PTX5000 Packet Transport Router with AC PSM and PDU\) on page 869](#)  
[show chassis hardware clei-models \(PTX5000 Packet Transport Router with FPC2-PTX-P1A\) on page 869](#)  
[show chassis hardware detail \(PTX5000 Packet Transport Router\) on page 869](#)  
[show chassis hardware detail \(PTX5000 Packet Transport Router with AC PSM and PDU\) on page 871](#)  
[show chassis hardware detail \(PTX5000 Packet Transport Router with FPC2-PTX-P1A\) on page 871](#)  
[show chassis hardware models \(PTX5000 Packet Transport Router\) on page 872](#)  
[show chassis hardware models \(PTX5000 Packet Transport Router with AC PSM and PDU\) on page 872](#)  
[show chassis hardware models \(PTX5000 Packet Transport Router with FPC2-PTX-P1A\) on page 873](#)  
[show chassis hardware extensive \(PTX5000 Packet Transport Router\) on page 873](#)  
[show chassis hardware extensive \(PTX1000 Packet Transport Router\) on page 874](#)  
[show chassis hardware extensive \(PTX5000 with Control Board 2\) on page 874](#)  
[show chassis hardware \(MX Routers with Media Services Blade \[MSB\]\) on page 875](#)  
[show chassis hardware extensive \(MX Routers with Media Services Blade \[MSB\]\) on page 875](#)  
[show chassis hardware \(ACX5048 Router\) on page 876](#)  
[show chassis hardware detail \(ACX5048 Router\) on page 877](#)  
[show chassis hardware clei-models \(ACX5048 Router\) on page 877](#)  
[show chassis hardware models \(ACX5048 Router\) on page 877](#)  
[show chassis hardware \(ACX5096 Router\) on page 878](#)  
[show chassis hardware detail \(ACX5096 Router\) on page 878](#)  
[show chassis hardware clei-models \(ACX5096 Router\) on page 879](#)  
[show chassis hardware models \(ACX5096 Router\) on page 879](#)  
[show chassis hardware \(ACX500 Router\) on page 879](#)  
[show chassis hardware detail \(ACX500 Router\) on page 880](#)  
[show chassis hardware extensive \(ACX500 Router\) on page 880](#)  
[show chassis hardware clei-models \(ACX500 Router\) on page 882](#)  
[show chassis hardware models \(ACX500 Router\) on page 882](#)

**Output Fields** [Table 26 on page 633](#) lists the output fields for the **show chassis hardware** command. Output fields are listed in the approximate order in which they appear.



Table 26: show chassis hardware Output Fields

Field Name	Field Description	Level of Output
Item	<p>Chassis component:</p> <ul style="list-style-type: none"> <li>(EX Series switches)—Information about the chassis, Routing Engine (SRE and Routing Engine modules in EX8200 switches), power supplies, fan trays, and LCD panel. Also displays information about Flexible PIC Concentrators (FPCs) and associated Physical Interface Cards (PICs). Information about the backplane, midplane, and SIBs (SF modules) is displayed for EX8200 switches.</li> <li>(MX Series routers and EX Series switches)—Information about the backplane, Routing Engine, Power Entry Modules (PEMs), and fan trays. Also displays information about Flexible PIC Concentrators (FPCs) and associated Physical Interface Cards (PICs), Modular Port Concentrators (MPCs) and associated Modular Interface Cards (MICs), or Dense Port Concentrators (DPCs). MX80 routers have a single Routing Engine and a built-in Packet Forwarding Engine that attaches directly to MICs. The Packet Forwarding Engine has two “pseudo” FPCs (FPC 0 and FPC1). MX80 routers also have a Forwarding Engine Board (FEB). MX104 routers have a built-in Packet forwarding Engine and a Forwarding Engine Board (FEB). The Packet Forwarding Engine of the MX104 router has three “pseudo” FPCs (FPC0, FPC1, and FPC2).</li> <li>(M Series routers, except for the M320 router)—Information about the backplane; power supplies; fan trays; Routing Engine; maxicab (the connection between the Routing Engine and the backplane, for the M40 router only); SCB, SSB, SFM, or FEB; MCS and PCG (for the M160 router only); each FPC and PIC; and each fan, blower, and impeller.</li> <li>(M120, M320, and T Series routers)—Information about the backplane, power supplies, fan trays, midplane, FPM (craft interface), CIP, PEM, SCG, CB, FPC, PIC, SFP, SPMB, and SIB.</li> <li>(QFX Series)—Information about the chassis, Pseudo CB, Routing Engine, power supplies, fan trays, Interconnect devices, and Node devices. Also displays information about Flexible PIC Concentrators (FPCs) and associated Physical Interface Cards (PICs).</li> <li>(PTX Series)—Information about the chassis, midplane, craft interface (FPM), power distribution units (PDUs) and Power Supply Modules (PSMs), Centralized Clock Generators (CCGs), Routing Engines, Control Boards (CBs) and Switch Processor Mezzanine Boards (SPMBs), Flexible PIC Concentrators (FPCs), PICs, Switch Interface Boards (SIBs), and fan trays (vertical and horizontal).</li> <li>(MX2010, MX2020, and MX2008 routers)—Information about the chassis, midplane, craft interface (FPM), power midplane (PMP), Power Supply Modules (PSMs), Power Distribution Modules (PDMs), Routing Engines, Control Boards (CBs) and Switch Processor Mezzanine Boards (SPMBs), Switch Fabric Boards (SFBs), Flexible PIC Concentrators (FPCs), PICs, adapter cards (ADCs) and fan trays.</li> <li>(vMX routers)—Information about the chassis, midplane, Routing Engines, and Control Boards (CBs). Also displays information about Flexible PIC Concentrators (FPCs) and associated Modular Interface Cards (MICs) and Physical Interface Cards (PICs).</li> </ul>	All levels
Version	Revision level of the chassis component.	All levels
Part number	Part number of the chassis component.	All levels

Table 26: show chassis hardware Output Fields (continued)

Field Name	Field Description	Level of Output
<b>Serial number</b>	Serial number of the chassis component. The serial number of the backplane is also the serial number of the router chassis. Use this serial number when you need to contact Juniper Networks Customer Support about the router or switch chassis.	All levels
<b>Assb ID or Assembly ID</b>	( <b>extensive</b> keyword only) Identification number that describes the FRU hardware.	<b>extensive</b>
<b>Assembly Version</b>	( <b>extensive</b> keyword only) Version number of the FRU hardware.	<b>extensive</b>
<b>Assembly Flags</b>	( <b>extensive</b> keyword only) Flags.	<b>extensive</b>
<b>FRU model number</b>	( <b>clei-models</b> , <b>extensive</b> , and <b>models</b> keyword only) Model number of the FRU hardware component.	none specified
<b>CLEI code</b>	( <b>clei-models</b> and <b>extensive</b> keyword only) Common Language Equipment Identifier code. This value is displayed only for hardware components that use ID EEPROM format v2. This value is not displayed for components that use ID EEPROM format v1.	none specified
<b>EEPROM Version</b>	ID EEPROM version used by the hardware component: <b>0x00</b> (version 0), <b>0x01</b> (version 1), or <b>0x02</b> (version 2).	<b>extensive</b>
<b>Description</b>	<p>Brief description of the hardware item:</p> <ul style="list-style-type: none"> <li>• Type of power supply.</li> <li>• Type of PIC. If the PIC type is not supported on the current software release, the output states <b>Hardware Not Supported</b>.</li> <li>• Type of FPC: <b>FPC Type 1</b>, <b>FPC Type 2</b>, <b>FPC Type 3</b>, <b>FPC Type 4</b>, or <b>FPC TypeOC192</b>.</li> </ul> <p>On EX Series switches, a brief description of the FPC.</p> <p>The following list shows the PIM abbreviation in the output and the corresponding PIM name.</p> <ul style="list-style-type: none"> <li>• <b>2x FE</b>—Either two built-in Fast Ethernet interfaces (fixed PIM) or dual-port Fast Ethernet PIM</li> <li>• <b>4x FE</b>—4-port Fast Ethernet ePIM</li> <li>• <b>1x GE Copper</b>—Copper Gigabit Ethernet ePIM (one 10-Mbps, 100-Mbps, or 1000-Mbps port)</li> <li>• <b>1x GE SFP</b>—SFP Gigabit Ethernet ePIM (one fiber port)</li> <li>• <b>2x Serial</b>—Dual-port serial PIM</li> <li>• <b>2x T1</b>—Dual-port T1 PIM</li> <li>• <b>2x E1</b>—Dual-port E1 PIM</li> <li>• <b>2x CT1E1</b>—Dual-port channelized T1/E1 PIM</li> <li>• <b>1x T3</b>—T3 PIM (one port)</li> <li>• <b>1x E3</b>—E3 PIM (one port)</li> <li>• <b>4x BRI S/T</b>—4-port ISDN BRI S/T PIM</li> <li>• <b>4x BRI U</b>—4-port ISDN BRI U PIM</li> <li>• <b>1x ADSL Annex A</b>—ADSL 2/2+ Annex A PIM (one port, for POTS)</li> </ul>	All levels

Table 26: show chassis hardware Output Fields (continued)

Field Name	Field Description	Level of Output
	<ul style="list-style-type: none"> <li>• <b>1x ADSL Annex B</b>—ADSL 2/2+ Annex B PIM (one port, for ISDN)</li> <li>• <b>2x SHDSL (ATM)</b>—G SHDSL PIM (2-port two-wire module or 1-port four-wire module)</li> <li>• <b>1x TGM550</b>—TGM550 Telephony Gateway Module (Avaya VoIP gateway module with one console port, two analog <b>LINE</b> ports, and two analog <b>TRUNK</b> ports)</li> <li>• <b>1x DS1 TIM510</b>—TIM510 E1/T1 Telephony Interface Module (Avaya VoIP media module with one E1 or T1 trunk termination port and ISDN PRI backup)</li> <li>• <b>4x FXS, 4x FXO, TIM514</b>—TIM514 Analog Telephony Interface Module (Avaya VoIP media module with four analog <b>LINE</b> ports and four analog <b>TRUNK</b> ports)</li> <li>• <b>4x BRI TIM521</b>—TIM521 BRI Telephony Interface Module (Avaya VoIP media module with four ISDN BRI ports)</li> <li>• <b>Crypto Accelerator Module</b>—For enhanced performance of cryptographic algorithms used in IP Security (IPsec) services</li> <li>• <b>MPC M16x10GE</b>—16-port 10-Gigabit Module Port Concentrator that supports SFP+ optical transceivers. (Not on EX Series switches.)</li> <li>• For hosts, the Routing Engine type.</li> <li>• For small form-factor pluggable transceiver (SFP) modules, the type of fiber: <b>LX, SX, LH, or T</b>.</li> <li>• LCD description for EX Series switches (except EX2200 switches).</li> <li>• <b>MPC2</b>—1-port MPC2 that supports two separate slots for MICs.</li> <li>• <b>MPC3E</b>—1-port MPC3E that supports two separate slots for MICs (MIC-3D-1X100GE-CFP and MIC-3D-20GE-SFP) on MX960, MX480, and MX240 routers. The MPC3E maps one MIC to one PIC (1 MIC, 1 PIC), which differs from the mapping of legacy MPCs.</li> <li>• 100GBASE-LR4, pluggable CFP optics</li> <li>• Supports the Enhanced MX Switch Control Board with fabric redundancy and existing SCBs without fabric redundancy.</li> <li>• Interoperates with existing MX Series line cards, including Flexible Port Concentrators (FPC), Dense Port Concentrators (DPCs), and Modular Port Concentrators (MPCs).</li> <li>• <b>MPC4E</b>—Fixed configuration MPC4E that is available in two flavors: MPC4E-3D-32XGE-SFP and MPC4E-3D-2CGE-8XGE on MX2020, MX960, MX480, and MX240 routers.</li> <li>• LCD description for MX Series routers</li> </ul>	

## Sample Output

### show chassis hardware (EX8216 Switch)

```

user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis       REV 06   710-016845   BA0909120112   EX8216
Midplane      REV 06   710-020771   AX0109197723   EX8216-MP
CB 0          REV 22   710-020771   AX0109197723   EX8216-RE320
CB 1          REV 22   710-020771   AX0109197726   EX8216-RE320
Routing Engine 1  BUILTIN BUILTIN      RE-EX8216

```

FPC 3	REV 19	710-020683	BC0109083125	EX8200-48F
CPU	REV 13	710-020598	BF0109144549	EX8200-CPU
FPC 4	REV 17	710-020683	BC0108500127	EX8200-48F
CPU	REV 10	710-020598	BF0108460510	EX8200-CPU
PIC 0		BUILTIN	BUILTIN	48x 100 Base-QFX/1000
Base-X				
Xcvr 1	REV 01	740-011613	PE70V89	SFP-SX
Xcvr 11	REV 01	740-011613	PE70YCE	SFP-SX
Xcvr 12	REV 01	740-011613	PE70VSH	SFP-SX
Xcvr 13	REV 01	740-011613	E08C02063	SFP-SX
Xcvr 14	REV 01	740-011613	PE70VKU	SFP-SX
Xcvr 15	REV 01	740-011613	E08E03372	SFP-SX
Xcvr 21	REV 01	740-011613	PE70VAD	SFP-SX
Xcvr 22	REV 01	740-011613	E08E01228	SFP-SX
Xcvr 23	REV 01	740-011613	PE70VSL	SFP-SX
Xcvr 24	REV 01	740-011613	E08E03409	SFP-SX
Xcvr 25	REV 01	740-011613	PE70VL4	SFP-SX
Xcvr 26	REV 01	740-011613	PDQ4L2Z	SFP-SX
Xcvr 27	REV 01	740-011613	PE70WFK	SFP-SX
Xcvr 28	REV 01	740-011782	PBD2B5U	SFP-SX
Xcvr 29	REV 01	740-011613	PE70UQX	SFP-SX
Xcvr 30	REV 01	740-011613	PE70VL5	SFP-SX
Xcvr 31	REV 01	740-011613	PE70V0F	SFP-SX
Xcvr 32	REV 01	740-011613	E08C02052	SFP-SX
Xcvr 33	REV 01	740-011613	E08C02197	SFP-SX
Xcvr 34	REV 01	740-011613	PE70V0L	SFP-SX
Xcvr 35	REV 01	740-011613	E08E03390	SFP-SX
Xcvr 36	REV 01	740-011613	PDQ4VL9	SFP-SX
Xcvr 37	REV 01	740-011613	E08E03370	SFP-SX
Xcvr 38	REV 01	740-011613	E08E03362	SFP-SX
Xcvr 39	REV 01	740-011613	E08C02065	SFP-SX
Xcvr 40	REV 01	740-011613	E08E03405	SFP-SX
Xcvr 41	REV 01	740-011613	E08E03411	SFP-SX
Xcvr 43	REV 01	740-011613	E08C02171	SFP-SX
Xcvr 45	REV 01	740-011613	E08E03410	SFP-SX
FPC 13	REV 16	710-016837	BB0109051344	EX8200-8XS
CPU				
SIB 0	REV 10	710-021613	AY0109166244	EX8216-SF320
SIB 1	REV 10	710-021613	AY0109166357	EX8216-SF320
SIB 2	REV 10	710-021613	AY0109166362	EX8216-SF320
SIB 3	REV 10	710-021613	AY0109166338	EX8216-SF320
SIB 4	REV 10	710-021613	AY0109166350	EX8216-SF320
SIB 5	REV 10	710-021613	AY0109166365	EX8216-SF320
SIB 6	REV 10	710-021613	AY0109166361	EX8216-SF320
SIB 7	REV 10	710-021613	AY0109166399	EX8216-SF320
PSU 0	REV 17	740-021466	BG0709170003	EX8200-AC2K
PSU 1	REV 17	740-021466	BG0709170004	EX8200-AC2K
PSU 2	REV 17	740-021466	BG0709170020	EX8200-AC2K
PSU 3	REV 17	740-021466	BG0709170017	EX8200-AC2K
PSU 4	REV 17	740-021466	BG0709170008	EX8200-AC2K
PSU 5	REV 17	740-021466	BG0709170018	EX8200-AC2K
Top Fan Tray				
FTC 0	REV 4	760-022620	CX1209140212	EX8216-FT
FTC 1	REV 4	760-022620	CX1209140212	EX8216-FT
Bottom Fan Tray				
FTC 0	REV 4	760-022620	CX1209140211	EX8216-FT
FTC 1	REV 4	760-022620	CX1209140211	EX8216-FT
LCD 0	REV 04	710-025742	CE0109186919	EX8200 LCD

**show chassis hardware clei-models (EX8216 Switch)**

```

user@host> show chassis hardware clei-models
Hardware inventory:
Item          Version  Part number  CLEI code  FRU model number
Midplane      REV 08   710-016845
PSU 0         REV 05   740-023002  COUPAEAEAA EX8200-PWR-AC3KR
PSU 1         REV 05   740-023002  COUPAEAEAA EX8200-PWR-AC3KR
PSU 2         REV 05   740-023002  COUPAEAEAA EX8200-PWR-AC3KR
PSU 3         REV 05   740-023002  COUPAEAEAA EX8200-PWR-AC3KR
PSU 4         REV 05   740-023002  COUPAEAEAA EX8200-PWR-AC3KR
PSU 5         REV 05   740-023002  COUPAEAEAA EX8200-PWR-AC3KR
Top Fan Tray
Bottom Fan Tray

```

**show chassis hardware clei-models (T1600 Router)**

```

user@host> show chassis hardware clei-models
Hardware inventory:
Item          Version  Part number  CLEI code  FRU model number
Midplane      REV 03   710-005608
FPM Display   REV 05   710-002897
CIP           REV 06   710-002895
PEM 0         Rev 07   740-017906  IPUPAC7KTA PWR-T1600-3-80-DC-S
PEM 1         Rev 18   740-002595  PWR-T-DC-S
SCG 0         REV 15   710-003423  SCG-T-S
Routing Engine 0 REV 08   740-014082  RE-A-2000-4096-S
Routing Engine 1 REV 07   740-014082  RE-A-2000-4096-S
CB 0          REV 05   710-007655  CB-T-S
CB 1          REV 03   710-017707  CB-T-S
FPC 0         REV 07   710-013558  T640-FPC2-E2
  PIC 0       REV 01   750-010618  PB-4GE-SFP
  PIC 1       REV 06   750-001900  PB-10C48-SON-SMSR
  PIC 2       REV 14   750-001901  PB-40C12-SON-SMIR
  PIC 3       REV 07   750-001900  PB-10C48-SON-SMSR
FPC 1         REV 06   710-013553  T640-FPC1-E2
  PIC 0       REV 08   750-001072  P-1GE-SX
  PIC 1       REV 10   750-012266  PB-4GE-TYPE1-SFP-IQ2
  PIC 2       REV 22   750-005634  PB-1CHOC12SMIR-QPP
FPC 2
  PIC 0       REV 16   750-007141  PC-10GE-SFP
  PIC 1       REV 06   750-015217  PC-8GE-TYPE3-SFP-IQ2
  PIC 2       REV 05   750-004695  PC-TUNNEL
  PIC 3       REV 17   750-009553  PC-40C48-SON-SFP
FPC 3         REV 01   710-010154  T640-FPC3-E
  PIC 0       REV 07   750-012793  PC-1XGE-TYPE3-XFP-IQ2
  PIC 1       REV 25   750-007141  PC-10GE-SFP
  PIC 2       REV 17   750-009553  PC-40C48-SON-SFP
  PIC 3       REV 32   750-003700  PC-10C192-SON-VSR
FPC 4         REV 16   710-013037  T1600-FPC4-ES
  PIC 1       REV 06   750-034781  PD-1CE-CFP
FPC 5         REV 02   710-013037  T1600-FPC4-ES
  PIC 0       REV 16   750-012518  PD-40C192-SON-XFP
  PIC 1       REV 01   750-010850  PD-10C768-SON-SR
FPC 6         REV 14   710-013037  T1600-FPC4-ES
  PIC 0       REV 11   750-017405  PD-4XGE-XFP
  PIC 1       REV 13   750-017405  PD-4XGE-XFP
FPC 7         REV 09   710-007529  T640-FPC3
  PIC 0       REV 10   750-012793  PC-1XGE-TYPE3-XFP-IQ2
  PIC 1       REV 01   750-015217  PC-8GE-TYPE3-SFP-IQ2

```

PIC 2	REV 01	750-015217	PC-8GE-TYPE3-SFP-IQ2
PIC 3	REV 15	750-009450	PC-10C192-SON-SR2
SIB 0	REV 07	710-013074	SIB-I-T1600-S
SIB 1	REV 07	710-013074	SIB-I-T1600-S
SIB 2	REV 07	710-013074	SIB-I-T1600-S
SIB 3	REV 07	710-013074	SIB-I-T1600-S
SIB 4	REV 07	710-013074	SIB-I-T1600-S
Fan Tray 0			FANTRAY-T-S
Fan Tray 1			FANTRAY-T-S
Fan Tray 2			FAN-REAR-TX-T640-S

### show chassis hardware clei-models (PTX10008 Routers)

```

user@host> show chassis hardware clei-models
Hardware inventory:

```

Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 27	750-054097	CMMUM00ARA	QFX10008-CHAS
CB 0	REV 02	750-068820	CMUCAH3CTB	QFX10000-RE
CB 1	REV 02	750-068820	CMUCAH3CTB	QFX10000-RE
FPC 0	REV 36	750-051354	CMUIAM9BAA	QFX10000-36Q
PIC 0		BUILTIN		
FPC 1	REV 33	750-051354	CMUIAM9BAA	QFX10000-36Q
PIC 0		BUILTIN		
FPC 2	REV 32	750-051357	CMUIANABAA	QFX10000-30C
PIC 0		BUILTIN		
FPC 3	REV 35	750-051357	CMUIANABAA	QFX10000-30C
PIC 0		BUILTIN		
FPC 5	REV 08	750-068822	CMUIAM9BAB	QFX10000-36Q
PIC 0		BUILTIN		
FPC 6	REV 08	750-068822	CMUIAM9BAB	QFX10000-36Q
PIC 0		BUILTIN		
FPD Board	REV 07	711-054687		
Power Supply 0	REV 02	740-049388	CMUPADNBAA	QFX10000-PWR-AC
Power Supply 1	REV 02	740-049388	CMUPADNBAA	QFX10000-PWR-AC
Power Supply 2	REV 02	740-049388	CMUPADNBAA	QFX10000-PWR-AC
Power Supply 3	REV 02	740-049388	CMUPADNBAA	QFX10000-PWR-AC
Power Supply 4	REV 02	740-049388	CMUPADNBAA	QFX10000-PWR-AC
Power Supply 5	REV 02	740-049388	CMUPADNBAA	QFX10000-PWR-AC
FTC 0	REV 14	750-050108	CMUCAHZCAA	QFX10008-FAN-CTRL
FTC 1	REV 14	750-050108	CMUCAHZCAA	QFX10008-FAN-CTRL
Fan Tray 0	REV 09	760-054372	CMUCAHYCAA	QFX10008-FAN
Fan Tray 1	REV 09	760-054372	CMUCAHYCAA	QFX10008-FAN
SIB 0	REV 24	750-050058	CMUCAH0CAA	QFX10008-SF
SIB 1	REV 24	750-050058	CMUCAH0CAA	QFX10008-SF
SIB 2	REV 24	750-050058	CMUCAH0CAA	QFX10008-SF
SIB 3	REV 24	750-050058	CMUCAH0CAA	QFX10008-SF
SIB 4	REV 24	750-050058	CMUCAH0CAA	QFX10008-SF
SIB 5	REV 23	750-050058	CMUCAH0CAA	QFX10008-SF

### show chassis hardware clei-models (PTX10016 Routers)

```

user@host> show chassis hardware clei-models
Hardware inventory:

```

Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 24	750-077138	CMMUN00ARA	JNP10016
CB 0	REV 04	711-065897	PROTOXCLEI	PROTO-ASSEMBLY
CB 1	REV 05	711-065897	PROTOXCLEI	PROTO-ASSEMBLY
FPC 2		BUILTIN		
PIC 0		BUILTIN		
FPC 4	REV 35	750-071976	CMUIANABAA	JNP10K-LC1101

PIC 0		BUILTIN		
FPC 5	REV 13	750-068822	CMUIAM9BAC	QFX10000-36Q
PIC 0		BUILTIN		
FPC 6	REV 41	750-071976	CMUIANABAB	JNP10K-LC1101
PIC 0		BUILTIN		
FPC 7	REV 35	750-071976	CMUIANABAA	JNP10K-LC1101
PIC 0		BUILTIN		
FPC 8	REV 35	750-071976	CMUIANABAA	JNP10K-LC1101
PIC 0		BUILTIN		
FPC 9	REV 41	750-071976	CMUIANABAB	JNP10K-LC1101
PIC 0		BUILTIN		
FPC 10	REV 35	750-071976	CMUIANABAA	JNP10K-LC1101
PIC 0		BUILTIN		
FPC 11	REV 35	750-071976	CMUIANABAA	JNP10K-LC1101
PIC 0		BUILTIN		
FPC 13	REV 41	750-071976	CMUIANABAB	JNP10K-LC1101
PIC 0		BUILTIN		
FPC 15	REV 37	750-071976	CMUIANABAA	JNP10K-LC1101
PIC 0		BUILTIN		
Power Supply 0	REV 01	740-073147	CMUPADPBAA	JNP10K-PWR-DC
Power Supply 1	REV 01	740-073147	CMUPADPBAA	JNP10K-PWR-DC
Power Supply 2	REV 01	740-073147	CMUPADPBAA	JNP10K-PWR-DC
Power Supply 3	REV 01	740-073147	CMUPADPBAA	JNP10K-PWR-DC
Power Supply 4	REV 01	740-073147	CMUPADPBAA	JNP10K-PWR-DC
Power Supply 5	REV 01	740-073147	CMUPADPBAA	JNP10K-PWR-DC
Power Supply 6	REV 01	740-073147	CMUPADPBAA	JNP10K-PWR-DC
Power Supply 7	REV 01	740-073147	CMUPADPBAA	JNP10K-PWR-DC
Power Supply 8	REV 01	740-073147	CMUPADPBAA	JNP10K-PWR-DC
Power Supply 9	REV 01	740-073147	CMUPADPBAA	JNP10K-PWR-DC
Fan Tray 0				QFX5100-FAN-AFO
Fan Tray 1				QFX5100-FAN-AFO
SIB 0	REV 15	750-077140	CMUCAH6CAA	JNP10016-SF
SIB 1	REV 15	750-077140	CMUCAH6CAA	JNP10016-SF
SIB 2	REV 15	750-077140	CMUCAH6CAA	JNP10016-SF
SIB 3	REV 15	750-077140	CMUCAH6CAA	JNP10016-SF
SIB 4	REV 15	750-077140	CMUCAH6CAA	JNP10016-SF
SIB 5	REV 15	750-077140	CMUCAH6CAA	JNP10016-SF
FPD Board	REV 07	711-054687		

### show chassis hardware (EX2300-C Switch)

```

user@switch> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis
Pseudo CB 0
Routing Engine 0
FPC 0          REV 04    650-059984  HV0215410003  EX2300-C-12P
  CPU          BUILTIN   BUILTIN     12x10/100/1000 Base-T
  PIC 0        REV 04    650-059984  HV0215410003  2x10G SFP/SFP+
    Xcvr 0     REV 01    740-021309  T09K00695     SFP+-10G-LR
    Xcvr 1     REV 01    740-030658  AD1146A05JT   SFP+-10G-USR
Power Supply 0 JPSU-170W-AC

```

### show chassis hardware (EX2300 Switch)

```

user@switch> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description

```

Chassis			JY0215410033	EX2300-24P
Pseudo CB 0				
Routing Engine 0		BUILTIN	BUILTIN	RE-EX2300-24P
FPC 0	REV 05	650-059968	JY0215410033	EX2300-24P
CPU		BUILTIN	BUILTIN	FPC CPU
PIC 0	REV 05	BUILTIN	BUILTIN	24x10/100/1000 Base-T
PIC 1	REV 05	650-059968	JY0215410033	4x10G SFP/SFP+
Xcvr 0	REV 01	740-030658	AD1125A03ES	SFP+-10G-USR
Xcvr 1	REV 01	740-021308	AJP0TDZ	SFP+-10G-SR
Xcvr 3	REV 01	740-021309	A9401FL	SFP+-10G-LR
Power Supply 0				JPSU-450W-AC-AFO
Fan Tray 0 (AFO)				Fan Module, Airflow Out
Fan Tray 1 (AFO)				Fan Module, Airflow Out

#### show chassis hardware detail (EX4200 Switch)

```
user@host> show chassis hardware detail
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			BM0208327733	EX4200-24T
Routing Engine 0	REV 11	750-021256	BM0208327733	EX4200-24T, 8 POE
Routing Engine 0			BM0208327733	EX4200-24T, 8 POE
FPC 0	REV 11	750-021256	BM0208327733	EX4200-24T, 8 POE
CPU		BUILTIN	BUILTIN	FPC CPU
PIC 0		BUILTIN	BUILTIN	24x 10/100/1000 Base-T
PIC 1	REV 03B	711-021270	AR0208162285	4x GE SFP
BRD	REV 08	711-021264	AK0208328289	EX4200-24T, 8 POE
Power Supply 0	REV 03	740-020957	AT0508346354	PS 320W AC
Fan Tray				Fan Tray

#### show chassis hardware (EX4300 Switch)

```
user@host> show chassis hardware
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			PD3713160055	EX4300-48P
Routing Engine 0	REV 04	650-044930	PD3713160055	EX4300-48P
FPC 0	REV 04	650-044930	PD3713160055	EX4300-48P
CPU		BUILTIN	BUILTIN	FPC CPU
PIC 0	REV 04	BUILTIN	BUILTIN	48x 10/100/1000 Base-T
PIC 1	REV 04	BUILTIN	BUILTIN	4x 40GE
Power Supply 0	REV 01	740-046871	1EDA3090026	JPSU-1100-AC-AFO-A
Fan Tray 0 (AFO)				Fan Module, Airflow Out
Fan Tray 1 (AFO)				Fan Module, Airflow Out

#### show chassis hardware models (EX4500 Switch)

```
user@host> show chassis hardware models
Hardware inventory:
```

Item	Version	Part number	Serial number	FRU model number
Routing Engine 0	REV 01	750-035700	GG0210271867	EX4500-40F-FB-C
FPC 0	REV 01	750-035700	GG0210271867	EX4500-40F-FB-C
PIC 0		BUILTIN	BUILTIN	EX4500-40F-FB-C
Power Supply 1	REV 01	740-029654	H884FS00JC09	EX4500-PWR1-AC-FB



## show chassis hardware detail (EX9200 Switch)

```
user@switch> show chassis hardware
```

```
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			JN111DA44RFB	EX9208
Midplane	REV 05	710-017414	TS2912	EX9208-BP
FPM Board	REV 02	710-017254	XN1804	Front Panel Display
PEM 0	Rev 01	740-022697	QCS0906C033	PS 1.2-1.7kW; 100-240V
AC in				
PEM 1	Rev 01	740-022697	QCS0906C095	PS 1.2-1.7kW; 100-240V
AC in				
Routing Engine 0	REV 08	740-031116	9009122883	RE-S-EX9200-1800X4
CB 0	REV 16	750-031391	CAAW4391	EX9200-SCBEF
PC 0	REV 07	750-049612	CABJ9312	EX9200 40x1G Copper
CPU	REV 04	711-038484	CABH8268	MPCE PMB 2G
MIC 0	REV 02	750-049607	CABT9623	40x 1GE RJ45
PIC 0		BUILTIN	BUILTIN	10x 1GE RJ45
PIC 1		BUILTIN	BUILTIN	10x 1GE RJ45
PIC 2		BUILTIN	BUILTIN	10x 1GE RJ45
PIC 3		BUILTIN	BUILTIN	10x 1GE RJ45
FPC 1	REV 10	710-013699	CAAN3529	EX9200-40x1G-SFP
CPU	REV 04	711-038484	CAAL7608	MPCE PMB 2G
MIC 0	REV 26	750-028392	CAAS5151	20x 1GE SFP
PIC 0		BUILTIN	BUILTIN	10x 1GE SFP
PIC 1		BUILTIN	BUILTIN	10x 1GE SFP
MIC 1	REV 26	750-028392	CAAC8006	20x 1GE SFP
PIC 2		BUILTIN	BUILTIN	10x 1GE SFP
Xcvr 8	REV 01	740-011613	E08L03674	SFP-SX
Xcvr 9	REV 01	740-011613	E08M00243	SFP-SX
PIC 3		BUILTIN	BUILTIN	10x 1GE SFP
FPC 3	REV 10	710-013699	CAAR5261	EX9200-40x1G-SFP
CPU	REV 04	711-038484	CAAS2118	MPCE PMB 2G
MIC 0	REV 26	750-028392	CAAS5067	20x 1GE SFP
PIC 0		BUILTIN	BUILTIN	10x 1GE SFP
Xcvr 2	REV 01	740-031851	PNA7L8U	SFP-SX
Xcvr 3	REV 02	740-011613	AM0943SEKGZ	SFP-SX
Xcvr 4	REV 02	740-011613	AM0943SEJZ9	SFP-SX
PIC 1		BUILTIN	BUILTIN	10x 1GE SFP
MIC 1	REV 26	750-028392	CAAS5132	20x 1GE SFP
PIC 2		BUILTIN	BUILTIN	10x 1GE SFP
Xcvr 4	REV 01	740-011613	E08D02625	SFP-SX
Xcvr 9	REV 02	740-011613	PJH4RD9	SFP-SX
PIC 3		BUILTIN	BUILTIN	10x 1GE SFP
Xcvr 0	REV 01	740-011613	AM0813S8YME	SFP-SX
Fan Tray				Left Fan Tray

## show chassis hardware detail (EX9251 Switch)

```
user@switch> show chassis hardware
```

```
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			BLANK	EX9251
Routing Engine 0		BUILTIN	BUILTIN	RE-S-2X00x6
CB 0	REV 05	750-069579	CAGT1382	EX9251
FPC 0		BUILTIN	BUILTIN	MPC
PIC 0		BUILTIN	BUILTIN	4XSFP28 PIC
Xcvr 0	REV 01	740-044512	APF14500007NHC	QSFP+-40G-CU50CM
Xcvr 2	REV 01	740-046565	QH21035H	QSFP+-40G-SR4

PIC 1		BUILTIN	BUILTIN	8XSFP PIC
Xcvr 0	REV 01	740-031980	AA15393URH7	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AA162832LVG	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	MXA0NKJ	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	MXA0K75	SFP+-10G-SR
Xcvr 4	REV 01	740-021308	MXA138L	SFP+-10G-SR
Xcvr 5	REV 01	740-021308	13T511102684	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	MXA138E	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	MXA152N	SFP+-10G-SR
PEM 0	REV 02	740-070749	1F186390060	AC AFO 650W PSU
PEM 1	REV 02	740-070749	1F186390045	AC AFO 650W PSU
Fan Tray 0				Fan Tray, Front to Back
Airflow - AFO				
Fan Tray 1				Fan Tray, Front to Back
Airflow - AFO				

### show chassis hardware detail (EX9253 Switch)

```
user@switch> show chassis hardware
```

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN126145CJCB	EX9253
Midplane	REV 06	750-074276	CAJE4108	Midplane 2
Routing Engine 0		BUILTIN	BUILTIN	RE-S-2X00x6
Routing Engine 1		BUILTIN	BUILTIN	RE-S-2X00x6
CB 0	REV 24	750-067071	CAJF6414	Control Board
Mezz	REV 14	711-066896	CAJF6327	Control Mezz Board
CB 1	REV 24	750-067071	CAJF6398	Control Board
Mezz	REV 14	711-066896	CAJF6314	Control Mezz Board
FPC 0	REV 19	750-066879	CAJD1692	LC2103
CPU		BUILTIN	BUILTIN	SMPC PMB
PIC 0		BUILTIN	BUILTIN	6xQSFP
Xcvr 0	REV 01	740-054053	QH20019A	QSFP+-4X10G-SR
PIC 1	REV 15	750-068806	CAJD1416	MIC1
Xcvr 0	REV 01	740-061405	1EQ1151163	QSFP-100GBASE-SR4
Xcvr 1	REV 01	740-061405	1EQ11511AK	QSFP-100GBASE-SR4
Xcvr 2	REV 01	740-032986	QB160112	QSFP+-40G-SR4
FPC 1	REV 19	750-066879	CAJD1685	LC2103
CPU		BUILTIN	BUILTIN	SMPC PMB
PIC 0		BUILTIN	BUILTIN	6xQSFP
PIC 1	REV 15	750-068806	CAJD1393	MIC1
Xcvr 0	REV 01	740-032986	QB120887	QSFP+-40G-SR4
Xcvr 1	REV 01	740-032986	QD465034	QSFP+-40G-SR4
Xcvr 2	REV 01	740-052009	UWE2CBQ	QSFP+-40G-LR4
Xcvr 4	REV 01	740-032986	QB120701	QSFP+-40G-SR4
PEM 0	REV 01	740-066937	1HS17070027	JNP-PWR1600-AC
PEM 1	REV 01	740-066937	1HS17070151	JNP-PWR1600-AC
PEM 4	REV 01	740-066937	1HS17070090	JNP-PWR1600-AC
PEM 5	REV 01	740-066937	1HS16480119	JNP-PWR1600-AC
Fan Tray 0	REV 08	760-069329	CAJF6944	JNP FAN 3RU
Fan Tray 1	REV 08	760-069329	CAJF6863	JNP FAN 3RU
Fan Tray 2	REV 08	760-069329	CAJF6891	JNP FAN 3RU
Fan Tray 3	REV 08	760-069329	CAJF6937	JNP FAN 3RU

### show chassis hardware detail (PTX10008 Routers)

```
user@switch> show chassis hardware detail
```

Hardware inventory:

Item	Version	Part number	Serial number	Description
------	---------	-------------	---------------	-------------

Chassis			DE487	JNP10008 [PTX10008 -
PILOT BUILD V1.1]				
Midplane	REV 27	750-054097	ACPD4307	Midplane 8
Routing Engine 0		BUILTIN	BUILTIN	RE-PTX-2X00x4
vtbd0 15360 MB				Virtio Block Disk
vtbd1 15360 MB				Virtio Block Disk
ada0 128 MB	QEMU		QM00002	Virtio Block Disk
usb0 (addr 0.1)	EHCI root HUB 0		Intel	uhub0
usb1 (addr 0.2)	product 0x0020 32		vendor 0x8087	uhub1
Routing Engine 1		BUILTIN	BUILTIN	RE-PTX-2X00x4
vtbd0 15360 MB				Virtio Block Disk
vtbd1 15360 MB				Virtio Block Disk
ada0 128 MB	QEMU		QM00002	Virtio Block Disk
usb0 (addr 0.1)	EHCI root HUB 0		Intel	uhub0
usb1 (addr 0.2)	product 0x0020 32		vendor 0x8087	uhub1
CB 0	REV 02	750-068820	ACNZ4440	Control Board
CB 1	REV 02	750-068820	ACNZ8284	Control Board
FPC 0	REV 36	750-051354	ACNP4679	LC1102 - 12C / 36Q /
144X				
CPU		BUILTIN	BUILTIN	FPC CPU
PIC 0		BUILTIN	BUILTIN	12x100GE/36x40GE/144x10GE
Xcvr 1	REV 01	740-058734	1ECQ113834D	QSFP-100GBASE-SR4
Xcvr 5	REV 01	740-058734	1ECQ1137067	QSFP-100GBASE-SR4
Xcvr 6	REV 01	740-054053	QF3205SD	QSFP+-4X10G-SR
Xcvr 7	REV 01	740-058734	1ECQ11381MP	QSFP-100GBASE-SR4
Xcvr 11	REV 01	740-061405	1ACQ110507K	QSFP-100GBASE-SR4
Xcvr 13	REV 01	740-058734	1ECQ11390ZB	QSFP-100GBASE-SR4
Xcvr 17	REV 01	740-058734	1ECQ11381M1	QSFP-100GBASE-SR4
Xcvr 19	REV 01	740-058734	1ECQ11381JS	QSFP-100GBASE-SR4
Xcvr 23	REV 01	740-058734	1ACQ112000E	QSFP-100GBASE-SR4
Xcvr 25	REV 01	740-058734	1ECQ11381NT	QSFP-100GBASE-SR4
Xcvr 28	REV 01	740-054053	QG1502WV	QSFP+-4X10G-SR
Xcvr 29	REV 01	740-058734	1ACQ112000D	QSFP-100GBASE-SR4
Xcvr 33	REV 01	740-058734	1ACQ1134065	QSFP-100GBASE-SR4
Xcvr 34	REV 01	740-067442	XV20L4L	QSFP+-40G-SR4
FPC 1	REV 33	750-051354	ACNX8831	LC1102 - 12C / 36Q /
144X				
CPU		BUILTIN	BUILTIN	FPC CPU
PIC 0		BUILTIN	BUILTIN	12x100GE/36x40GE/144x10GE
Xcvr 5		NON-JNPR	37700171YY0084	QSFP-100GBASE-LR4
Xcvr 25		NON-JNPR	GDA2017459	QSFP-100GBASE-LR4
Xcvr 29		NON-JNPR	GDF2008750	QSFP-100GBASE-LR4
FPC 2	REV 32	750-051357	ACPB0341	LC1101 - 30C / 30Q / 96X
CPU		BUILTIN	BUILTIN	FPC CPU
PIC 0		BUILTIN	BUILTIN	30x100GE/30x40GE/96x10GE
Xcvr 0		NON-JNPR	37700170YZC305	QSFP-100GBASE-LR4
Xcvr 4		NON-JNPR	37700170YZC306	QSFP-100GBASE-LR4
Xcvr 9	REV 01	740-054053	QF36013S	QSFP+-4X10G-SR
Xcvr 12	REV 01	740-067442	XV301AU	QSFP+-40G-SR4
Xcvr 14	REV 01	740-043308	UWE2CG9	QSFP+-40G-LR4
Xcvr 16	REV 01	740-043308	UWH141S	QSFP+-40G-LR4
Xcvr 17	REV 01	740-058734	1ECQ11180VH	QSFP-100GBASE-SR4
Xcvr 18	REV 01	740-054050	INF AJ0492237	QSFP+-4X10G-LR
Xcvr 26	REV 01	740-058734	1ACQ111803N	QSFP-100GBASE-SR4
Xcvr 27	REV 01	740-058734	1ACQ113405S	QSFP-100GBASE-SR4
FPC 3	REV 35	750-051357	ACPD2186	LC1101 - 30C / 30Q / 96X

CPU PIC 0		BUILTIN BUILTIN	BUILTIN BUILTIN	FPC CPU 30x100GE/30x40GE/96x10GE
Xcvr 0	REV 01	740-061409	1GCQA1470A3	QSFP-100GBASE-LR4-T2
Xcvr 1	REV 01	740-061409	1GCQA1470XC	QSFP-100GBASE-LR4-T2
Xcvr 7		NON-JNPR	FG4550500008	QSFP-100G-CWDM4
Xcvr 24	REV 01	740-058734	1ECQ11381LX	QSFP-100GBASE-SR4
Xcvr 29	REV 01	740-043308	UWE0UYS	QSFP+-40G-LR4
FPC 5	REV 08	750-068822	ACPF0057	LC1102 - 12C / 36Q /
144X				
CPU PIC 0		BUILTIN BUILTIN	BUILTIN BUILTIN	FPC CPU 12x100GE/36x40GE/144x10GE
FPC 6	REV 08	750-068822	ACPE9951	LC1102 - 12C / 36Q /
144X				
CPU PIC 0		BUILTIN BUILTIN	BUILTIN BUILTIN	FPC CPU 12x100GE/36x40GE/144x10GE
Xcvr 1	REV 01	740-054053	QF3208LG	QSFP+-4X10G-SR
Xcvr 7	REV 01	740-067442	XV20LGN	QSFP+-40G-SR4
Xcvr 8	REV 01	740-067442	XV20VMV	QSFP+-40G-SR4
Xcvr 9	REV 01	740-067442	XV20KCN	QSFP+-40G-SR4
Xcvr 10	REV 01	740-067442	XU504QD	QSFP+-40G-SR4
Xcvr 11	REV 01	740-067442	XU504X7	QSFP+-40G-SR4
Xcvr 12	REV 01	740-067442	XU504W8	QSFP+-40G-SR4
Xcvr 16	REV 01	740-032986	QF4301JP	QSFP+-40G-SR4
Xcvr 17	REV 01	740-032986	QF4303AE	QSFP+-40G-SR4
Xcvr 18	REV 01	740-054050	INF4J0492400	QSFP+-4X10G-LR
Xcvr 19	REV 01	740-054050	INF4J0492142	QSFP+-4X10G-LR
Xcvr 24	REV 01	740-032986	QF4301KB	QSFP+-40G-SR4
Xcvr 25	REV 01	740-032986	QF4303YP	QSFP+-40G-SR4
Xcvr 30	REV 01	740-067442	XV300ZX	QSFP+-40G-SR4
Xcvr 31	REV 01	740-043308	UWH2KBW	QSFP+-40G-LR4
Xcvr 34	REV 01	740-054053	QG1501YU	QSFP+-4X10G-SR
FPD Board	REV 07	711-054687	ACPC7142	Front Panel Display
Power Supply 0	REV 02	740-049388	1EDL62102N9	Power Supply AC
Power Supply 1	REV 02	740-049388	1EDL60300KX	Power Supply AC
Power Supply 2	REV 02	740-049388	1EDL60300DL	Power Supply AC
Power Supply 3	REV 02	740-049388	1EDL61701BT	Power Supply AC
Power Supply 4	REV 02	740-049388	1EDL62102P7	Power Supply AC
Power Supply 5	REV 02	740-049388	1EDL62102PP	Power Supply AC
FTC 0	REV 14	750-050108	ACPE4038	Fan Controller 8
FTC 1	REV 14	750-050108	ACPE4032	Fan Controller 8
Fan Tray 0	REV 09	760-054372	ACPD6799	Fan Tray 8
Fan Tray 1	REV 09	760-054372	ACNZ3584	Fan Tray 8
SIB 0	REV 24	750-050058	ACPD4587	Switch Fabric 8
SIB 1	REV 24	750-050058	ACNZ0635	Switch Fabric 8
SIB 2	REV 24	750-050058	ACPD4908	Switch Fabric 8
SIB 3	REV 24	750-050058	ACNZ0617	Switch Fabric 8
SIB 4	REV 24	750-050058	ACNZ0527	Switch Fabric 8
SIB 5	REV 23	750-050058	ACNX6980	Switch Fabric 8

### show chassis hardware detail (PTX10016 Routers)

```
user@switch> show chassis hardware detail
```

```
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			DH995	JNP10016 [PTX10016]
Midplane	REV 22	750-056555	ACPM7810	Midplane 16
Routing Engine 0		BUILTIN	BUILTIN	RE-PTX-2X00x4
vtbd0 15360 MB				Virtio Block Disk

vtbd1 15360 MB				Virtio Block Disk
ada0 128 MB QEMU			QM00002	Virtio Block Disk
usb0 (addr 0.1) EHCI root HUB 0			Intel	uhub0
usb1 (addr 0.2) product 0x0020 32			vendor 0x8087	uhub1
Routing Engine 1		BUILTIN	BUILTIN	RE-PTX-2X00x4
vtbd0 15360 MB				Virtio Block Disk
vtbd1 15360 MB				Virtio Block Disk
ada0 128 MB QEMU			QM00002	Virtio Block Disk
usb0 (addr 0.1) EHCI root HUB 0			Intel	uhub0
usb1 (addr 0.2) product 0x0020 32			vendor 0x8087	uhub1
CB 0	REV 03	750-068820	ACPL7238	Control Board
CB 1	REV 03	750-068820	ACPL7298	Control Board
FPC 1	REV 36	750-077140	ACNP4590	LC1102 - 12C / 36Q /
144X				
CPU		BUILTIN	BUILTIN	FPC CPU
PIC 0		BUILTIN	BUILTIN	12x100GE/36x40GE/144x10GE
Xcvr 0	REV 01	740-054053	QF3600AV	QSFP+-4X10G-SR
Xcvr 35	REV 01	740-061405	1ACQ110507K	QSFP-100GBASE-SR4
FPC 3	REV 07	750-071975	CAHA2224	LC1102 - 12C / 36Q /
144X				
CPU		BUILTIN	BUILTIN	FPC CPU
PIC 0		BUILTIN	BUILTIN	12x100GE/36x40GE/144x10GE
Xcvr 0	REV 01	740-054053	QG1505YM	QSFP+-4X10G-SR
Xcvr 11		NON-JNPR	GDA2017459	QSFP-100GBASE-LR4
Xcvr 35		NON-JNPR	GDF2008750	QSFP-100GBASE-LR4
FPC 5	REV 13	750-068822	ACPD6501	LC1102 - 12C / 36Q /
144X				
CPU		BUILTIN	BUILTIN	FPC CPU
PIC 0		BUILTIN	BUILTIN	12x100GE/36x40GE/144x10GE
Xcvr 1	REV 01	740-058734	1ECQ11381LA	QSFP-100GBASE-SR4
Xcvr 2	REV 01	740-043308	UWH141S	QSFP+-40G-LR4
Xcvr 3	REV 01	740-043308	UWE2CG9	QSFP+-40G-LR4
FPC 6	REV 37	750-077140	ACNS2793	LC1102 - 12C / 36Q /
144X				
CPU		BUILTIN	BUILTIN	FPC CPU
PIC 0		BUILTIN	BUILTIN	12x100GE/36x40GE/144x10GE
Xcvr 0	REV 01	740-032986	QH0400VH	QSFP+-40G-SR4
Xcvr 1	REV 01	740-032986	QH0400VM	QSFP+-40G-SR4
Xcvr 35	REV 01	740-058734	1ECQ11390ZB	QSFP-100GBASE-SR4
FPC 8	REV 36	750-077140	ACNP4625	LC1102 - 12C / 36Q /
144X				
CPU		BUILTIN	BUILTIN	FPC CPU
PIC 0		BUILTIN	BUILTIN	12x100GE/36x40GE/144x10GE
Xcvr 1	REV 01	740-058732	1AMQA14206D	QSFP-100GBASE-LR4
Xcvr 10	REV 01	740-032986	QF4301KB	QSFP+-40G-SR4
Xcvr 24	REV 01	740-054050	INF AJ0492244	QSFP+-4X10G-LR
FPC 9	REV 35	750-071976	ACPD3055	LC1101 - 30C / 30Q / 96X
CPU		BUILTIN	BUILTIN	FPC CPU
PIC 0		BUILTIN	BUILTIN	30x100GE/30x40GE/96x10GE
Xcvr 0		NON-JNPR	INGBT7970007	QSFP-100GBASE-LR4
Xcvr 1		NON-JNPR	UWQ24D9	QSFP-100GBASE-LR4
Xcvr 2		NON-JNPR	INGBT7970011	QSFP-100GBASE-LR4
Xcvr 3		NON-JNPR	UX60AF1	QSFP-100G-CWDM4
Xcvr 4		NON-JNPR	UX408JJ	QSFP-100GBASE-LR4

Xcvr 11	REV 01	740-058734	1ECQ113835F	QSFP-100GBASE-SR4
Xcvr 18		NON-JNPR	Q7496	QSFP-100G-CWDM4
Xcvr 29	REV 01	740-058734	1ECQ11380LZ	QSFP-100GBASE-SR4
Power Supply 0	REV 02	740-049388	1EDL625039E	Power Supply AC
Power Supply 1	REV 02	740-049388	1EDL62503AD	Power Supply AC
Power Supply 2	REV 02	740-049388	1EDL625039P	Power Supply AC
Power Supply 3	REV 02	740-049388	1EDL702004E	Power Supply AC
Power Supply 4	REV 02	740-049388	1EDL625039D	Power Supply AC
Power Supply 5	REV 02	740-049388	1EDL63706JD	Power Supply AC
Power Supply 6	REV 02	740-049388	1EDL63706JH	Power Supply AC
FTC 0	REV 10	750-050309	ACPM2918	Fan Controller 16
FTC 1	REV 10	750-050309	ACPE8185	Fan Controller 16
Fan Tray 0	REV 10	760-077141	ACPV7288	Fan Tray 16
Fan Tray 1	REV 10	760-057901	ACPL0546	Fan Tray 16
SIB 0	REV 15	750-058270	ACPM2804	Switch Fabric 16
SIB 1	REV 15	750-058270	ACPM2808	Switch Fabric 16
SIB 2	REV 15	750-058270	ACPL4450	Switch Fabric 16
SIB 3	REV 15	750-058270	ACPJ9834	Switch Fabric 16
SIB 4	REV 15	750-058270	ACPM2814	Switch Fabric 16
SIB 5	REV 15	750-058270	ACPL4277	Switch Fabric 16
FPD Board	REV 07	711-054687	ACPL1407	Front Panel Display

## show chassis hardware (M7i Router)

```
user@host> show chassis hardware
```

```
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			31959	M7i
Midplane	REV 02	710-008761	CA0209	M7i Midplane
Power Supply 0	Rev 04	740-008537	PD10272	AC Power Supply
Routing Engine	REV 01	740-008846	1000396803	RE-5.0
CFEB	REV 02	750-009492	CA0166	Internet Processor Iiv1
FPC 0				E-FPC
PIC 0	REV 04	750-003163	HJ6416	1x G/E, 1000 BASE-SX
PIC 1	REV 04	750-003163	HJ6423	1x G/E, 1000 BASE-SX
PIC 2	REV 04	750-003163	HJ6421	1x G/E, 1000 BASE-SX
PIC 3	REV 02	750-003163	HJ0425	1x G/E, 1000 BASE-SX
FPC 1				E-FPC
PIC 2	REV 01	750-009487	HM2275	ASP - Integrated
PIC 3	REV 01	750-009098	CA0142	2x F/E, 100 BASE-TX

```
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			B1157	M7i
Midplane	REV 05	710-008761	DM0840	M7i Midplane
Power Supply 0	Rev 08	740-008537	TE53755	AC Power Supply
Routing Engine	REV 07	740-011202	1000736567	RE-850
CFEB	REV 09	750-010463	DK6952	Internet Processor II
FPC 0				E-FPC
PIC 0	REV 12	750-012838	DL7993	4x 1GE(LAN), IQ2
Xcvr 0	REV 01	740-011614	PD94TDJ	SFP-LX10
Xcvr 1	REV 01	740-011615	PA05EER	UNSUPPORTED
Xcvr 2	REV 01	740-011614	PD94THU	SFP-LX10
Xcvr 3		NON-JNPR	PDC2E7A	SFP-LX10
PIC 1	REV 03	750-023116	JT0203	4x CHSTM1 SDH CE SFP
Xcvr 0	REV 01	740-012434	AGT063832PS	SFP-SR
Xcvr 1	REV 01	740-012434	AGT063832LY	SFP-SR
Xcvr 3	REV 01	740-016064	C06J19018	SFP-LR
PIC 2	REV 15	750-014895	DM5757	MultiServices 100
PIC 3	REV 01	750-025390	JW9448	12x T1/E1 CE
FPC 1				E-FPC

PIC 2		BUILTIN	BUILTIN	1x Tunnel
PIC 3	REV 09	750-009099	DM0899	1x G/E, 1000 BASE
Xcvr 0	REV 01	740-012434	AGT07150HGJ	UNSUPPORTED
Fan Tray				Rear Fan Tray

### show chassis hardware (M10 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               1122          M10
Midplane      REV 1.1  710-001950  S/N AC6626
Power supply A Rev 01    740-002497  S/N LC36095    AC
Power supply B Rev 01    740-002497  S/N LC36100    AC
Display       REV 1.2  710-001995  S/N AC6656
Host          18000005dfb3fb01 teknor
FEB           REV 01    710-001948  S/N AC6632     Internet Processor II
FPC 0
  PIC 0        REV 08    750-001072  S/N AB2485     1x G/E, 1000 BASE-SX
  PIC 1        REV 01    750-000613  S/N AA1048     1x OC-12 SONET, SMIR
FPC 1
Fan Tray 0
Fan Tray 1    FANTRAY-M10I-S
               FANTRAY-M10I-S
```

### show chassis hardware models (M10 Router)

```
user@host> show chassis hardware models
Hardware inventory:
Item          Version  Part number  CLEI code  FRU model number
Midplane      REV 04    710-008920
Power Supply 0 Rev 06    740-008537  PWR-M10i-M7i-AC-S
Power Supply 1 Rev 06    740-008537  PWR-M10i-M7i-AC-S
HCM 0         REV 03    710-010580  HCM-M10i-S
HCM 1         REV 03    710-010580  HCM-M10i-S
Routing Engine 0 REV 09    740-009459  RE-400-256-S
CFEB 0        REV 05    750-010465  FEB-M10i-M7i-S
FPC 0
  PIC 0        REV 10    750-002971  PE-40C3-SON-MM
  PIC 1        REV 11    750-002992  PE-4FE-TX
  PIC 2        REV 03    750-002977  PE-20C3-ATM-MM
  PIC 3        REV 08    750-005724  PE-20C3-ATM2-MM
FPC 1
  PIC 2        REV 12    750-008425  PE-AS
  PIC 3        REV 13    750-005636  PE-4CHDS3-QPP
Fan Tray 0    FANTRAY-M10I-S
Fan Tray 1    FANTRAY-M10I-S
```

### show chassis hardware (M20 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               20033        M20
Backplane     REV 07    710-001517  S/N AA7940
Power supply B Rev 01    740-001465  S/N 000001    AC
Display       REV 02    710-001519  S/N AA9704
Host 0        98000004f8f27501 teknor
SSB slot 0    REV 01    710-001951  S/N AD5905     Internet Processor II
  SSRAM bank 0 REV 01    710-001385  S00480         2 MB
  SSRAM bank 1 REV 01    710-001385  S00490         2 MB
```

SSRAM bank 2	REV 01	710-001385	S001:?	2 MB
SSRAM bank 3	REV 01	710-001385	S00483	2 MB
SSB slot 1	N/A	N/A	N/A	Backup
FPC 1	REV 01	710-001292	S/N AB7528	
SSRAM	REV 01	710-000077	S/N 304209	1 MB
SDRAM bank 0	REV 01	710-000099	S/N 000603	64 MB
SDRAM bank 1	REV 01	710-000099	S/N 000414	64 MB
PIC 0	REV 03	750-000612	S/N AB8433	2x OC-3 ATM, MM
PIC 1	REV 01	750-000616	S/N AA1168	1x OC-12 ATM, MM
PIC 2	REV 01	750-000613	S/N AA1008	1x OC-12 SONET, SMIR
PIC 3	REV 01	750-002501	S/N AD5810	4x E3
FPC 2	REV 01	710-001292	S/N AC0119	
SSRAM	REV 01	710-000077	S/N 503241	1 MB
SDRAM bank 0	REV 01	710-000099	S/N 306835	64 MB
SDRAM bank 1	REV 01	710-000099	S/N 306832	64 MB
Fan Tray 0				Front Upper Fan Tray
Fan Tray 1				Front Middle Fan Tray
Fan Tray 2				Front Bottom Fan Tray
Fan Tray 3				Rear Fan Tray

### show chassis hardware models (M20 Router)

```
user@host> show chassis hardware models
```

Hardware inventory:

Item	Version	Part number	CLEI code	FRU model number
Backplane	REV 03	710-002334		CHAS-MP-M20-S
Power Supply A	REV 06	740-001465		PWR-M20-AC-S
Display	REV 04	710-001519		CRAFT-M20-S
Routing Engine 0	REV 06	740-003239		RE-333-768-S
Routing Engine 1	REV 06	740-003239		RE-333-768-S
SSB 0	REV 02	710-001951		SSB-E-M20
SSB 1	N/A	N/A		
FPC 0	REV 03	710-003308		FPC-E
PIC 0	REV 08	750-002303		P-4FE-TX
PIC 1	REV 07	750-004745		P-2MCDS3
PIC 2	REV 03	750-002965		PE-4CHDS3
FPC 1	REV 03	710-003308		FPC-E
PIC 0	REV 03	750-002914		P-2OC3-ATM-MM
Fan Tray 0				FANTRAY-F-M20-S
Fan Tray 1				FANTRAY-F-M20-S
Fan Tray 2				FANTRAY-F-M20-S
Fan Tray 3				FANTRAY-R-M20-S

### show chassis hardware (M40 Router)

```
user@host> show chassis hardware
```

Hardware inventory:

Item	Version	Part number	Serial number	Description
Backplane	REV 02	710-000073	S/N AA0053	
Power supply A	Rev 2	740-000235	S/N 000042	DC
Maxicab	REV X1	710-000229	S/N AA0139	
Minicab	REV X1	710-000482	S/N AA0201	
Display	REV 06	710-000150	S/N AA0905	
Host				cpv5000
SCB	REV X1	710-000075	S/N AA0158	Internet Processor I
SSRAM bank 0	REV 02	710-000077	S/N AA2267	1 MB
SSRAM bank 1	REV 02	710-000077	S/N AA2270	1 MB
SSRAM bank 2	REV 02	710-000077	S/N AA2269	1 MB
SSRAM bank 3	REV 02	710-000077	S/N AA2268	1 MB
FPC 0	REV 01	710-000175	S/N AA0048	



SSRAM	REV 01	710-000077	S/N AA2333	1 MB
SDRAM bank 0	REV 01	710-000099	S/N AA2332	64 MB
SDRAM bank 1	REV X1	710-000099	S/N AA2337	64 MB
PIC 0	REV 04	750-000613	S/N aa0343	1x OC-12 SONET, SMIR
PIC 1	REV 04	750-000613	S/N AA0379	1x OC-12 SONET, SMIR
PIC 2	REV 04	750-000613	S/N AA0377	1x OC-12 SONET, SMIR
PIC 3	REV 04	750-000613	S/N AA0378	1x Tunnel
FPC 2	REV 01	710-000175	S/N AA0042	
SSRAM	REV 02	710-000077	S/N AA2288	1 MB
SDRAM bank 0	REV 01	710-000099	S/N AA2331	64 MB
SDRAM bank 1	REV 01	710-000099	S/N AA2330	64 MB
PIC 0	REV X1	750-000603	S/N AA0143	4x OC-3 SONET, SMIR
PIC 1	REV X1	750-000615	S/N AA0149	4x OC-3 SONET, MM
PIC 2	REV X1	750-000611	S/N AA0148	4x OC-3 SONET, MM
PIC 3	REV 04	750-000613	S/N AA0330	1x OC-12 SONET, SMIR
FPC 4	REV 01	710-000175	S/N AA0050	
SSRAM	REV 01	710-000077	S/N AA2327	1 MB
SDRAM bank 0	REV 01	710-000099	S/N AA2329	64 MB
SDRAM bank 1	REV 01	710-000099	S/N AA2328	64 MB
PIC 0	REV 04	750-000613	S/N AA0320	1x OC-12 SONET, SMIR
PIC 2	REV 05	750-000616	S/N AA1341	1x OC-12 ATM, MM
PIC 3	REV 08	750-001072	S/N AB2462	1x G/E, 1000 BASE-SX
FPC 5	REV 10	710-000175	S/N AA7663	
SSRAM	REV 01	710-000077	S/N 501590	1 MB
SDRAM bank 0	REV 01	710-000099	S/N 300949	64 MB
SDRAM bank 1	REV 01	710-000099	S/N 300868	64 MB
PIC 1	REV 01	750-001323	S/N AB1670	1x Tunnel

### show chassis hardware (M40e Router)

```
user@host> show chassis hardware
```

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis				m40e
Midplane	REV 01	710-005071	AX3671	
FPM CMB	REV 03	710-001642	AR9074	
FPM Display	REV 03	710-001647	AR7331	
CIP	REV 04	710-002649	BB4449	
PEM 0	Rev 01	740-003787	MC12364	Power Entry Module
PEM 1	Rev 01	740-003787	MC12383	Power Entry Module
PCG 0	REV 07	710-001568	AG1332	
PCG 1	REV 07	710-001568	AR3789	
Host 0			3e000007c8176601	Present
MCS 0	REV 11	710-001226	AN5813	
SFM 0 SPP	REV 07	710-001228	AG4676	
SFM 0 SPR	REV 05	710-002189	AE4735	Internet Processor II
SFM 1 SPP	REV 07	710-001228	AP1347	
SFM 1 SPR	REV 05	710-002189	BE0063	Internet Processor II
FPC 0	REV 01	710-011725	BE0669	M40e-EP-FPC Type 1
CPU	REV 01	710-004600	BD9504	
PIC 0	REV 03	750-003737	AY3991	4x G/E, 1000 BASE-SX
FPC 1	REV 01	710-005197	BD9842	M40e-FPC Type 2
CPU	REV 01	710-004600	BB4869	
PIC 0	REV 07	750-001900	AR8278	1x OC-48 SONET, SMSR
FPC 2	REV 02	710-005197	BD9824	M40e-FPC Type 2
CPU	REV 01	710-004600	BD9531	
PIC 0	REV 03	750-003737	AY3986	4x G/E, 1000 BASE-SX
FPC 4	REV 02	710-005078	BE0664	M40e-FPC Type 1
CPU	REV 01	710-004600	BD9559	
PIC 0	REV 03	750-001894	AG7963	1x G/E, 1000 BASE-SX
PIC 2	REV 01	750-002575	AF2472	4x OC-3 SONET, SMIR

FPC 6	REV 02	710-005078	BE0652	M40e-FPC Type 1
CPU	REV 01	710-004600	BD9607	
PIC 0	REV 02	750-002911	AN2286	4x F/E, 100 BASE-TX
PIC 2	REV 01	750-002577	AP6345	4x OC-3 SONET, MM

### show chassis hardware (M120 Router)

```
user@host> show chassis hardware
```

```
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			JN000054AC	M120
Midplane	REV 01	710-013667	RB4170	M120 Midplane
FPM Board	REV 02	710-011407	CJ9186	M120 FPM Board
FPM Display	REV 02	710-011405	CJ9173	M120 FPM Display
FPM CIP	REV 02	710-011410	CJ9221	M120 FPM CIP
PEM 0	Rev 05	740-011936	RM28320	AC Power Entry Module
PEM 1	Rev 05	740-011936	RM28321	AC Power Entry Module
Routing Engine 0	REV 03	740-014080	1000642883	RE-A-1000
CB 0	REV 03	710-011403	CM8346	M120 Control Board
CB 1	REV 06	710-011403	CP6728	M120 Control Board
FPC 1	REV 02	710-015908	CP6925	M120 CFPC 10GE
PIC 0		BUILTIN	BUILTIN	1x 10GE(LAN/WAN) XFP
Xcvr 0	REV 01	740-014279	62E204N00007	XFP-10G-LR
FPC 3	REV 03	710-011393	CJ9234	M120 FPC Type 2
PIC 0	REV 16	750-008155	NB5229	2x G/E IQ, 1000 BASE
Xcvr 0	REV 01	740-011613	P9F15JB	SFP-SX
Xcvr 1	REV 01	740-007326	P4QOR9G	SFP-SX
PIC 1	REV 09	750-007745	CG4360	4x OC-3 SONET, SMIR
PIC 2	REV 16	750-008155	ND7787	2x G/E IQ, 1000 BASE
Xcvr 0	REV 01	740-011613	P9F12AS	SFP-SX
Xcvr 1	REV 01	740-011613	P9F1ALU	SFP-SX
PIC 3	REV 07	750-011800	JW1284	8x 1GE(LAN), IQ2
Xcvr 0	REV 01	740-011613	P9F1AM6	SFP-SX
Xcvr 6	REV 01	740-011613	P9F16NN	SFP-SX
Xcvr 7	REV 01	740-011782	P8C29Y7	SFP-SX
Board B	REV 02	710-011395	CN3754	M120 FPC Mezz
FPC 4	REV 02	710-011398	CP6741	M120 FPC Type 3
PIC 0	REV 16	750-007141	NB2855	10x 1GE(LAN), 1000 BASE
Xcvr 0	REV 01	740-011782	P922A1F	SFP-SX
Xcvr 1	REV 01	740-011782	P922A16	SFP-SX
Xcvr 2	REV 01	740-011782	P922A0U	SFP-SX
Xcvr 3	REV 01	740-011782	P9229UZ	SFP-SX
Xcvr 4	REV 01	740-009029	P11JXWP	SFP-LX
Xcvr 6	REV 01	740-011613	P9F1ALW	SFP-SX
FPC 5	REV 01	710-011388	CJ9088	M120 FPC Type 1
PIC 0	*** Hardware Not Supported ***			
PIC 1	REV 05	750-012052	NB0410	1x CHOC3 IQ SONET, SMLR
PIC 2	REV 01	750-013167	CM3824	4x CHDS3 IQ
PIC 3	REV 01	750-010240	CB5366	1x G/E SFP, 1000 BASE
Board B	REV 01	710-011390	CJ9103	M120 FPC Mezz Board
FEB 3	REV 04	710-011663	CP6673	M120 FEB
FEB 4	REV 04	710-011663	CJ9368	M120 FEB
FEB 5	REV 04	710-011663	CJ9386	M120 FEB
Fan Tray 0				Front Top Fan Tray
Fan Tray 1				Front Bottom Fan Tray
Fan Tray 2				Rear Top Fan Tray
Fan Tray 3				Rear Bottom Fan Tray

## show chassis hardware detail (M120 Router)

```

user@host> show chassis hardware detail
Hardware inventory:
Item              Version  Part number  Serial number  Description
Chassis              REV 01   710-013667   JN000054AC     M120
Midplane             REV 02   710-011407   RB4170         M120 Midplane
FPM Board            REV 02   710-011405   CJ9186         M120 FPM Board
FPM Display          REV 02   710-011405   CJ9173         M120 FPM Display
FPM CIP              REV 02   710-011410   CJ9221         M120 FPM CIP
PEM 0                Rev 05   740-011936   RM28320        AC Power Entry Module
PEM 1                Rev 05   740-011936   RM28321        AC Power Entry Module
Routing Engine 0    REV 03   740-014080   1000642883     RE-A-1000
  ad0      248 MB   SILICONSYSTEMS INC 256M 126CT505S0763SC00110 Compact Flash
  ad2      38154 MB HTE541040G9SA00    MPBBTOX2HS2E3M Hard Disk
CB 0                 REV 03   710-011403   CM8346         M120 Control Board
CB 1                 REV 06   710-011403   CP6728         M120 Control Board
FPC 1                REV 02   710-015908   CP6925         M120 CFPC 10GE
  PIC 0              BUILTIN  BUILTIN        1x 10GE(LAN/WAN) XFP
    Xcvr 0            REV 01   740-014279   62E204N00007   XFP-10G-LR
FPC 3                REV 03   710-011393   CJ9234         M120 FPC Type 2
  PIC 0              REV 16   750-008155   NB5229         2x G/E IQ, 1000 BASE
    Xcvr 0            REV 01   740-011613   P9F15JB        SFP-SX
    Xcvr 1            REV 01   740-007326   P4Q0R9G        SFP-SX
  PIC 1              REV 09   750-007745   CG4360         4x OC-3 SONET, SMIR
  PIC 2              REV 16   750-008155   ND7787         2x G/E IQ, 1000 BASE
    Xcvr 0            REV 01   740-011613   P9F12AS        SFP-SX
    Xcvr 1            REV 01   740-011613   P9F1ALU        SFP-SX
  PIC 3              REV 07   750-011800   JW1284         8x 1GE(LAN), IQ2
    Xcvr 0            REV 01   740-011613   P9F1AM6        SFP-SX
    Xcvr 6            REV 01   740-011613   P9F16NN        SFP-SX
    Xcvr 7            REV 01   740-011782   P8C29Y7        SFP-SX
  Board B            REV 02   710-011395   CN3754         M120 FPC Mezz
FPC 4                REV 02   710-011398   CP6741         M120 FPC Type 3
  PIC 0              REV 16   750-007141   NB2855         10x 1GE(LAN), 1000 BASE

    Xcvr 0            REV 01   740-011782   P922A1F        SFP-SX
    Xcvr 1            REV 01   740-011782   P922A16        SFP-SX
    Xcvr 2            REV 01   740-011782   P922A0U        SFP-SX
    Xcvr 3            REV 01   740-011782   P9229UZ        SFP-SX
    Xcvr 4            REV 01   740-009029   P11JXWP        SFP-LX
    Xcvr 6            REV 01   740-011613   P9F1ALW        SFP-SX
FPC 5                REV 01   710-011388   CJ9088         M120 FPC Type 1
  PIC 0              *** Hardware Not Supported ***
  PIC 1              REV 05   750-012052   NB0410         1x CHOC3 IQ SONET, SMLR

    PIC 2              REV 01   750-013167   CM3824         4x CHDS3 IQ
    PIC 3              REV 01   750-010240   CB5366         1x G/E SFP, 1000 BASE
  Board B            REV 01   710-011390   CJ9103         M120 FPC Mezz Board
FEB 3                REV 04   710-011663   CP6673         M120 FEB
FEB 4                REV 04   710-011663   CJ9368         M120 FEB
FEB 5                REV 04   710-011663   CJ9386         M120 FEB
Fan Tray 0           Front Top Fan Tray
Fan Tray 1           Front Bottom Fan Tray
Fan Tray 2           Rear Top Fan Tray
Fan Tray 3           Rear Bottom Fan Tray

```

## show chassis hardware models (M120 Router)

```

user@host> show chassis hardware models

```

## Hardware inventory:

Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 01	710-013667		
FPM CIP	REV 02	710-011410		CRAFT-M120-S
PEM 0	Rev 05	740-011936		PWR-M120-AC-S
PEM 1	Rev 05	740-011936		PWR-M120-AC-S
Routing Engine 0	REV 03	740-014080		RE-A-1000-2048-S
CB 0	REV 03	710-011403		CB-M120-S
CB 1	REV 06	710-011403		CB-M120-S
FPC 1	REV 02	710-015908		M120-cFPC-1XGE-XFP
FPC 3				
PIC 0	REV 16	750-008155		PB-2GE-SFP-QPP
PIC 1	REV 09	750-007745		PC-40C3-SON-SMIR
PIC 2	REV 16	750-008155		PB-2GE-SFP-QPP
PIC 3	REV 07	750-011800		PB-8GE-TYPE2-SFP-IQ2
FPC 4				
PIC 0	REV 16	750-007141		PC-10GE-SFP
FPC 5				
PIC 1	REV 05	750-012052		PB-1CHOC3-SMIR-QPP
PIC 2	REV 01	750-013167		PE-4CHDS3-QPP
PIC 3	REV 01	750-010240		PB-1GE-SFP
Fan Tray 0				FFANTRAY-M120-S
Fan Tray 1				FFANTRAY-M120-S
Fan Tray 2				RFANTRAY-M120-S
Fan Tray 3				RFANTRAY-M120-S

## show chassis hardware (M160 Router)

user@host&gt; show chassis hardware

Item	Version	Part number	Serial number	Description
Chassis			101	M160
Midplane	REV 02	710-001245	S/N AB4107	
FPM CMB	REV 01	710-001642	S/N AA2911	
FPM Display	REV 01	710-001647	S/N AA2999	
CIP	REV 02	710-001593	S/N AA9563	
PEM 0	Rev 01	740-001243	S/N KJ35769	DC
PEM 1	Rev 01	740-001243	S/N KJ35765	DC
PCG 0	REV 01	710-001568	S/N AA9794	
PCG 1	REV 01	710-001568	S/N AA9804	
Host 1			da000004f8d57001	teknor
MCS 1	REV 03	710-001226	S/N AA9777	
SFM 0 SPP	REV 04	710-001228	S/N AA2975	
SFM 0 SPR	REV 02	710-001224	S/N AA9838	Internet Processor I
SFM 1 SPP	REV 04	710-001228	S/N AA2860	
SFM 1 SPR	REV 01	710-001224	S/N AB0139	Internet Processor I
FPC 0	REV 03	710-001255	S/N AA9806	FPC Type 1
CPU	REV 02	710-001217	S/N AA9590	
PIC 1	REV 05	750-000616	S/N AA1527	1x OC-12 ATM, MM
PIC 2	REV 05	750-000616	S/N AA1535	1x OC-12 ATM, MM
PIC 3	REV 01	750-000616	S/N AA1519	1x OC-12 ATM, MM
FPC 1	REV 02	710-001611	S/N AA9523	FPC Type 2
CPU	REV 02	710-001217	S/N AA9571	
PIC 0	REV 03	750-001900	S/N AA9626	1x STM-16 SDH, SMIR
PIC 1	REV 01	710-002381	S/N AD3633	2x G/E, 1000 BASE-SX
FPC 2				FPC Type OC192
CPU	REV 03	710-001217	S/N AB3329	
PIC 0	REV 01			1x OC-192 SM SR-2
Fan Tray 0				Rear Bottom Blower
Fan Tray 1				Rear Top Blower
Fan Tray 2				Front Top Blower
Fan Tray 3				Front Fan Tray

## show chassis hardware models (M160 Router)

```

user@host> show chassis hardware models
Hardware inventory:

```

Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 03	710-009120		CHAS-BP-M320-S
FPM Display	REV 02	710-009351		CRAFT-M320-S
CIP	REV 03	710-005926		CIP-M320-S
PEM 2	Rev X4	740-009148		PWR-M-DC-S
PEM 3	Rev X4	740-009148		PWR-M-DC-S
Routing Engine 0	REV 02	740-008883		RE-1600-2048-S
Routing Engine 1	REV 02	740-008883		RE-1600-2048-S
FPC 0	REV 02	710-010419		M320-FPC1
PIC 0	REV 01	750-001323		P-TUNNEL
PIC 1	REV 02	750-002987		PE-10C12-SON-SMIR
PIC 2	REV 04	750-001894		PB-1GE-SX
PIC 3	REV 04	750-001896		PB-10C12-SON-SMIR
FPC 1	REV 02	710-010419		M320-FPC1
PIC 0	REV 04	750-001894		PB-1GE-SX
PIC 1	REV 04	750-001894		PB-1GE-SX
PIC 3	REV 03	750-001894		PB-1GE-SX
FPC 2	REV 02	710-010419		M320-FPC1
PIC 0	REV 10	750-005634		PB-1CHOC12SMIR-QPP
PIC 1	REV 10	750-005634		PB-1CHOC12SMIR-QPP
PIC 2	REV 07	750-005634		PB-1CHOC12SMIR-QPP
PIC 3	REV 07	750-005634		PB-1CHOC12SMIR-QPP
PIC 1	REV 10	750-005634		PB-1CHOC12SMIR-QPP
PIC 2	REV 07	750-005634		PB-1CHOC12SMIR-QPP
PIC 3	REV 07	750-005634		PB-1CHOC12SMIR-QPP
FPC 3				
PIC 0	REV 03	750-001895		PB-10C12-SON-MM
PIC 1	REV 04	750-001894		PB-1GE-SX
PIC 3	REV 04	750-003141		PB-1GE-SX-B
FPC 4	REV 02	710-010419		M320-FPC1
FPC 5	REV 02	710-010419		M320-FPC1
FPC 6	REV 02	710-010419		M320-FPC1
FPC 7				
PIC 0	REV 15	750-001901		PB-40C12-SON-SMIR
PIC 1	REV 06	750-001900		PB-10C48-SON-SMSR
PIC 2	REV 07	750-001900		PB-10C48-SON-SMSR
PIC 3	REV 05	750-003737		PB-4GE-SX
SIB 0	REV 03	710-009184		SIB-M-S
SIB 1	REV 03	710-009184		SIB-M-S
SIB 2	REV 03	710-009184		SIB-M-S
SIB 3	REV 03	710-009184		SIB-M-S
Fan Tray 0				FFANTRAY-M320-S
Fan Tray 1				FFANTRAY-M320-S
Fan Tray 2				RFANTRAY-M320-S

## show chassis hardware detail (M160 Router)

```

user@host> show chassis hardware detail
Hardware inventory:

```

Item	Version	Part number	Serial number	Description
Chassis			101	M160
Midplane	REV 02	710-001245	S/N AB4107	
FPM CMB	REV 01	710-001642	S/N AA2911	
FPM Display	REV 01	710-001647	S/N AA2999	
CIP	REV 02	710-001593	S/N AA9563	
PEM 0	Rev 01	740-001243	S/N KJ35769	DC

PEM 1	Rev 01	740-001243	S/N KJ35765	DC
PCG 0	REV 01	710-001568	S/N AA9794	
PCG 1	REV 01	710-001568	S/N AA9804	
Host 1			da000004f8d57001	teknor
MCS 1	REV 03	710-001226	S/N AA9777	
SFM 0 SPP	REV 04	710-001228	S/N AA2975	
SFM 0 SPR	REV 02	710-001224	S/N AA9838	Internet Processor I
SSRAM bank 0	REV 01	710-000077	S/N 306456	1 MB
SSRAM bank 1	REV 01	710-000077	S/N 306474	1 MB
SSRAM bank 2	REV 01	710-000077	S/N 306388	1 MB
SSRAM bank 3	REV 01	710-000077	S/N 306392	1 MB
SFM 1 SPP	REV 04	710-001228	S/N AA2860	
SFM 1 SPR	REV 01	710-001224	S/N AB0139	Internet Processor I
SSRAM bank 0	REV 01	710-000077	S/N 302917	1 MB
SSRAM bank 1	REV 01	710-000077	S/N 302662	1 MB
SSRAM bank 2	REV 01	710-000077	S/N 302593	1 MB
SSRAM bank 3	REV 01	710-000077	S/N 100160	1 MB
FPC 0	REV 03	710-001255	S/N AA9806	FPC Type 1
CPU	REV 02	710-001217	S/N AA9590	
SSRAM	REV 01	710-000077	S/N 302836	1 MB
SDRAM 0	REV 01	710-001196	S00141	32 MB
SDRAM 1	REV 01	710-001196	S0010;	32 MB
SSRAM	REV 01	710-000077	S/N 302633	1 MB
SDRAM 0	REV 01	710-001196	S00143	32 MB
SDRAM 1	REV 01	710-001196	S00115	32 MB
SSRAM	REV 01	710-000077	S/N 302952	1 MB
SDRAM 0	REV 01	710-001196	S00135	32 MB
SDRAM 1	REV 01	710-001196	S001=3	32 MB
SSRAM	REV 01	710-000077	S/N 302892	1 MB
SDRAM 0	REV 01	710-001196	S000?6	32 MB
SDRAM 1	REV 01	710-001196	S001=5	32 MB
PIC 1	REV 05	750-000616	S/N AA1527	1x OC-12 ATM, MM
PIC 2	REV 05	750-000616	S/N AA1535	1x OC-12 ATM, MM
PIC 3	REV 01	750-000616	S/N AA1519	1x OC-12 ATM, MM
FPC 1	REV 02	710-001611	S/N AA9523	FPC Type 2
CPU	REV 02	710-001217	S/N AA9571	
SSRAM	REV 01	710-000077	S/N 306340	1 MB
SDRAM 0	REV 01	710-001196	S00012	32 MB
SDRAM 1	REV 01	710-001196	S0001?	32 MB
SSRAM	REV 01	710-000077	S/N 306454	1 MB
SDRAM 0	REV 01	710-001196	S00028	32 MB
SDRAM 1	REV 01	710-001196	S0002?	32 MB
SSRAM	REV 01	710-000077	S/N 306492	1 MB
SDRAM 0	REV 01	710-001196	S00015	32 MB
SDRAM 1	REV 01	710-001196	S00031	32 MB
SSRAM	REV 01	710-000077	S/N 306363	1 MB
SDRAM 0	REV 01	710-001196	S00013	32 MB
SDRAM 1	REV 01	710-001196	S00032	32 MB
PIC 0	REV 03	750-001900	S/N AA9626	1x STM-16 SDH, SMIR
PIC 1	REV 01	710-002381	S/N AD3633	2x G/E, 1000 BASE-SX
FPC 2				FPC Type OC192
... SSRAM	REV 01	710-000077	S/N 306466	1 MB

### show chassis hardware (M320 Router)

```
user@host> show chassis hardware
```

```
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			67245	M320
Midplane	REV 05	710-009120	RB1202	M320 Midplane
FPM GBUS	REV 04	710-005928	HZ5697	M320 Board

FPM Display	REV 05	710-009351	HR1464	M320 FPM Display
CIP	REV 04	710-005926	HT8672	M320 CIP
PEM 0	Rev 05	740-009148	QK34208	DC Power Entry Module
PEM 1	Rev 05	740-009148	QK34262	DC Power Entry Module
PEM 2	Rev 05	740-009148	QF10449	DC Power Entry Module
PEM 3	Rev 05	740-009148	QJ18257	DC Power Entry Module
Routing Engine 0	REV 06	740-008883	P11123901185	RE-4.0
CB 0	REV 07	710-009115	JB2382	M320 Control Board
FPC 0	REV 02	710-005017	CD9926	M320 FPC Type 2
CPU	REV 01	710-011659	CJ6940	M320 PCA SCPU
PIC 0	REV 07	750-001900	AT1594	1x OC-48 SONET, SMSR
PIC 1	REV 03	750-001850	HS2746	1x Tunnel
PIC 2	REV 05	750-010618	JE7117	4x G/E SFP, 1000 BASE
PIC 3	REV 06	750-001900	HE6083	1x OC-48 SONET, SMSR
FPC 2	REV 02	710-005017	CH0319	M320 FPC Type 1
CPU	REV 01	710-011659	CJ6942	M320 PCA SCPU
PIC 0	REV 05	750-003034	BD8705	4x OC-3 SONET, SMIR
FPC 5	REV 02	710-005017	CD9938	M320 FPC Type 2
CPU				
FPC 7	REV 02	710-005017	CD9934	M320 FPC Type 2
CPU				
SIB 0	REV 09	710-009184	JA6540	M320 SIB
SIB 1	REV 09	710-009184	HV9511	M320 SIB
SIB 2	REV 09	710-009184	HW2057	M320 SIB
SIB 3	REV 09	710-009184	JA6687	M320 SIB
Fan Tray 0				Front Top Fan Tray
Fan Tray 1				Front Bottom Fan Tray
Fan Tray 2				Rear Fan Tray

### show chassis hardware models (M320 Router)

```
user@host> show chassis hardware models
```

Hardware inventory:				
Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 03	710-009120		CHAS-BP-M320-S
FPM Display	REV 02	710-009351		CRAFT-M320-S
CIP	REV 03	710-005926		CIP-M320-S
PEM 2	Rev X4	740-009148		PWR-M-DC-S
PEM 3	Rev X4	740-009148		PWR-M-DC-S
Routing Engine 0	REV 02	740-008883		RE-1600-2048-S
Routing Engine 1	REV 02	740-008883		RE-1600-2048-S
FPC 0	REV 02	710-010419		M320-FPC1
PIC 0	REV 01	750-001323		P-TUNNEL
PIC 1	REV 02	750-002987		PE-10C12-SON-SMIR
PIC 2	REV 04	750-001894		PB-1GE-SX
PIC 3	REV 04	750-001896		PB-10C12-SON-SMIR
FPC 1	REV 02	710-010419		M320-FPC1
PIC 0	REV 04	750-001894		PB-1GE-SX
PIC 1	REV 04	750-001894		PB-1GE-SX
PIC 3	REV 03	750-001894		PB-1GE-SX
FPC 2	REV 02	710-010419		M320-FPC1
PIC 0	REV 10	750-005634		PB-1CHOC12SMIR-QPP
PIC 1	REV 10	750-005634		PB-1CHOC12SMIR-QPP
PIC 2	REV 07	750-005634		PB-1CHOC12SMIR-QPP
PIC 3	REV 07	750-005634		PB-1CHOC12SMIR-QPP
PIC 1	REV 10	750-005634		PB-1CHOC12SMIR-QPP
PIC 2	REV 07	750-005634		PB-1CHOC12SMIR-QPP
PIC 3	REV 07	750-005634		PB-1CHOC12SMIR-QPP
FPC 3				
PIC 0	REV 03	750-001895		PB-10C12-SON-MM
PIC 1	REV 04	750-001894		PB-1GE-SX

PIC 3	REV 04	750-003141	PB-1GE-SX-B
FPC 4	REV 02	710-010419	M320-FPC1
FPC 5	REV 02	710-010419	M320-FPC1
FPC 6	REV 02	710-010419	M320-FPC1
FPC 7			
PIC 0	REV 15	750-001901	PB-40C12-SON-SMIR
PIC 1	REV 06	750-001900	PB-10C48-SON-SMSR
PIC 2	REV 07	750-001900	PB-10C48-SON-SMSR
PIC 3	REV 05	750-003737	PB-4GE-SX
SIB 0	REV 03	710-009184	SIB-M-S
SIB 1	REV 03	710-009184	SIB-M-S
SIB 2	REV 03	710-009184	SIB-M-S
SIB 3	REV 03	710-009184	SIB-M-S
Fan Tray 0			FFANTRAY-M320-S
Fan Tray 1			FFANTRAY-M320-S
Fan Tray 2			RFANTRAY-M320-S

### show chassis hardware (MX5 Router)

```

user@host> show chassis hardware
Hardware inventory:
Item                Version  Part number  Serial number  Description
Chassis              E1368      MX5-T
Midplane             REV 01    711-038215   YF5288        MX5-T
PEM 0                Rev 04    740-028288   VA01215       AC Power Entry Module
PEM 1                Rev 04    740-028288   VA01218       AC Power Entry Module
Routing Engine       BUILTIN   BUILTIN      BUILTIN        Routing Engine
TFEB 0               BUILTIN   BUILTIN      BUILTIN        Forwarding Engine
Processor
  QXM 0              REV 05    711-028408   ZA9136        MPC QXM
FPC 0                BUILTIN   BUILTIN      BUILTIN        MPC BUILTIN
  MIC 0              BUILTIN   BUILTIN      BUILTIN        4x 10GE XFP
    PIC 0            BUILTIN   BUILTIN      BUILTIN        4x 10GE XFP
FPC 1                BUILTIN   BUILTIN      BUILTIN        MPC BUILTIN
  MIC 0              REV 24    750-028392   YX9820        3D 20x 1GE(LAN) SFP
    PIC 0            BUILTIN   BUILTIN      BUILTIN        10x 1GE(LAN) SFP
      Xcvr 0          REV 01    740-031851   AM1045SUAQ3   SFP-SX
      Xcvr 1          REV 01    740-031851   AM1045SUAPA   SFP-SX
      Xcvr 2          REV 01    740-031851   AM1045SUAN7   SFP-SX
      Xcvr 3          REV 01    740-031851   AM1045SU91Q   SFP-SX
      Xcvr 4          REV 01    740-031851   AM1045SUDDR   SFP-SX
      Xcvr 9          REV 01    740-011613   AM0848SB6A1   SFP-SX
    PIC 1            BUILTIN   BUILTIN      BUILTIN        10x 1GE(LAN) SFP
      Xcvr 0          REV 01    740-031851   AM1045SUANO   SFP-SX
      Xcvr 1          REV 01    740-011613   AS0812S0719   SFP-SX
      Xcvr 2          REV 01    740-011613   AM0821SA121   SFP-SX
      Xcvr 3          REV 01    740-011613   PF21K21       SFP-SX
      Xcvr 4          REV 01    740-011613   AM0848SB69Z   SFP-SX
      Xcvr 5          REV 01    740-011782   P9POXV3       SFP-SX
      Xcvr 6          REV 01    740-011613   AM0812S8WJN   SFP-SX
      Xcvr 7          REV 01    740-011613   PAM3G9Q       SFP-SX
      Xcvr 8          REV 01    740-011613   AM0848SB4A6   SFP-SX
      Xcvr 9          REV 01    740-011782   P9MOU37       SFP-SX
    MIC 1            REV 20    750-028380   ZG2657        3D 2x 10GE XFP
    PIC 2            BUILTIN   BUILTIN      BUILTIN        1x 10GE XFP
    PIC 3            BUILTIN   BUILTIN      BUILTIN        1x 10GE XFP
Fan Tray

```



## show chassis hardware (MX10 Router)

```

user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number  Description
Chassis                               E1372         MX10-T
Midplane          REV 01   711-038211   YF5285        MX10-T
PEM 0             Rev 04   740-028288   VB01678       AC Power Entry Module
Routing Engine    BUILTIN BUILTIN      BUILTIN       Routing Engine
TFEB 0            BUILTIN BUILTIN      BUILTIN       Forwarding Engine
Processor
  QXM 0           REV 05   711-028408   ZA9053        MPC QXM
  FPC 0            BUILTIN BUILTIN      BUILTIN       MPC BUILTIN
    MIC 0          BUILTIN BUILTIN      BUILTIN       4x 10GE XFP
      PIC 0        BUILTIN BUILTIN      BUILTIN       4x 10GE XFP
  FPC 1            BUILTIN BUILTIN      BUILTIN       MPC BUILTIN
    MIC 0           REV 24   750-028392   YX9436        3D 20x 1GE(LAN) SFP
      PIC 0        BUILTIN BUILTIN      BUILTIN       10x 1GE(LAN) SFP
        Xcvr 0     REV 01   740-031851   AM1107SUFQW   SFP-SX
          PIC 1    BUILTIN BUILTIN      BUILTIN       10x 1GE(LAN) SFP
Fan Tray

```

## show chassis hardware (MX40 Router)

```

user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number  Description
Chassis                               E1367         MX40-T
Midplane          REV 01   711-038211   YF5284        MX40-T
PEM 0             Rev 04   740-028288   VB01680       AC Power Entry Module
PEM 1             Rev 04   740-028288   VB01700       AC Power Entry Module
Routing Engine    BUILTIN BUILTIN      BUILTIN       Routing Engine
TFEB 0            BUILTIN BUILTIN      BUILTIN       Forwarding Engine
Processor
  QXM 0           REV 05   711-028408   ZA9048        MPC QXM
  FPC 0            BUILTIN BUILTIN      BUILTIN       MPC BUILTIN
    MIC 0          BUILTIN BUILTIN      BUILTIN       4x 10GE XFP
      PIC 0        BUILTIN BUILTIN      BUILTIN       4x 10GE XFP
        Xcvr 0     REV 01   740-014279   M7067UUPP     XFP-10G-LR
          Xcvr 1    NON-JNPR K9J02UN       XFP-10G-LR
  FPC 1            BUILTIN BUILTIN      BUILTIN       MPC BUILTIN
    MIC 0           REV 24   750-028392   YX3504        3D 20x 1GE(LAN) SFP
      PIC 0        BUILTIN BUILTIN      BUILTIN       10x 1GE(LAN) SFP
        Xcvr 0     REV 01   740-011613   AM0812S8WTE   SFP-SX
          Xcvr 1    REV 01   740-011613   PFA6KV2       SFP-SX
            Xcvr 2  REV 01   740-031851   AM1045SUDDM   SFP-SX
              Xcvr 3 REV 01   740-011613   PD63C7M       SFP-SX
                Xcvr 4 REV 01   740-011613   PD63DJY       SFP-SX
                  Xcvr 5 REV 02   740-011613   AA0950STLL9   SFP-SX
                    Xcvr 6 REV 01   740-011782   PAR1YHC       SFP-SX
                      Xcvr 7 REV 01   740-011782   P9P0XXL       SFP-SX
                        Xcvr 8 REV 01   740-011613   PD63D95       SFP-SX
                          Xcvr 9 REV 01   740-031851   AM1045SU9B8   SFP-SX
  PIC 1            BUILTIN BUILTIN      BUILTIN       10x 1GE(LAN) SFP
    Xcvr 0          REV 01   740-011613   PF21L3Z       SFP-SX
      Xcvr 1        REV 01   740-031851   AM1045SU7M9   SFP-SX
        Xcvr 2      REV 01   740-031851   AM1045SUAPT   SFP-SX
          Xcvr 3    REV 01   740-011613   PFF2BZH       SFP-SX
            Xcvr 4  REV 01   740-031851   AM1045SUDDN   SFP-SX
              Xcvr 5 REV 01   740-031851   AM1039S00ZR   SFP-SX

```

Xcvr 6	REV 01	740-031851	AM1045SUD6Y	SFP-SX
Xcvr 8	REV 01	740-011613	PFM1QBS	SFP-SX
Xcvr 9	REV 01	740-011613	PFF2E25	SFP-SX
MIC 1	REV 01	750-021130	KG4391	3D 2x 10GE XFP
PIC 2		BUILTIN	BUILTIN	1x 10GE XFP
Xcvr 0	REV 01	740-011571	C645XJ04G	XFP-10G-SR
PIC 3		BUILTIN	BUILTIN	1x 10GE XFP
Xcvr 0		NON-JNPR	CA49BK0AE	XFP-10G-SR
Fan Tray				Fan Tray

#### show chassis hardware (Fixed MX80 Router)

```
user@host> show chassis hardware
```

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis				MX80-48T
Midplane	REV 01	711-031603	KF9250	MX80-48T
Routing Engine		BUILTIN	BUILTIN	Routing Engine
FEB 0		BUILTIN	BUILTIN	Forwarding Engine Board
FPC 0		BUILTIN	BUILTIN	MPC BUILTIN
MIC 0		BUILTIN	BUILTIN	4x 10GE XFP
PIC 0		BUILTIN	BUILTIN	4x 10GE XFP
Xcvr 0		NON-JNPR	M6439D41	XFP-10G-LR
Xcvr 1	REV 01	740-014279	6XE931N00202	XFP-10G-LR
Xcvr 2	REV 01	740-014289	C715XU05F	XFP-10G-SR
Xcvr 3	REV 01	740-014289	C650XU0EP	XFP-10G-SR
FPC 1		BUILTIN	BUILTIN	MPC BUILTIN
MIC 0	REV 01	711-029399	JR6981	12x 1GE(LAN) RJ45
PIC 0		BUILTIN	BUILTIN	12x 1GE(LAN) RJ45
PIC 1		BUILTIN	BUILTIN	12x 1GE(LAN) RJ45
MIC 1	REV 01	BUILTIN	BUILTIN	12x 1GE(LAN) RJ45
PIC 2		BUILTIN	BUILTIN	12x 1GE(LAN) RJ45
PIC 3		BUILTIN	BUILTIN	12x 1GE(LAN) RJ45
Fan Tray				Fan Tray

#### show chassis hardware (Modular MX80 Router)

```
user@host> show chassis hardware
```

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis				MX80
Midplane	REV 02	711-031594	JR7084	MX80
PEM 0	Rev 01	740-028288	000018	AC Power Entry Module
Routing Engine		BUILTIN	BUILTIN	Routing Engine
FEB 0		BUILTIN	BUILTIN	Forwarding Engine Board
QXM 0	REV 05	711-028408	JR7041	MPC QXM
FPC 0		BUILTIN	BUILTIN	MPC BUILTIN
MIC 0		BUILTIN	BUILTIN	4x 10GE XFP
PIC 0		BUILTIN	BUILTIN	4x 10GE XFP
FPC 1		BUILTIN	BUILTIN	MPC BUILTIN
MIC 0	REV 02	750-028380	JR6598	3D 2x 10GE XFP
PIC 0		BUILTIN	BUILTIN	1x 10GE XFP
Xcvr 0	REV 01	740-014289	T07M86365	XFP-10G-SR
PIC 1		BUILTIN	BUILTIN	1x 10GE XFP
Xcvr 0	REV 01	740-014289	T07M71094	XFP-10G-SR
MIC 1	REV 02	750-028380	JG8548	3D 2x 10GE XFP
PIC 2		BUILTIN	BUILTIN	1x 10GE XFP
Xcvr 0	REV 02	740-014289	T08L86302	XFP-10G-SR

PIC 3		BUILTIN	BUILTIN	1x 10GE XFP
Xcvr 0	REV 02	740-014289	C810XU0BA	XFP-10G-SR
Fan Tray				Fan Tray

### show chassis hardware (MX150)

```
user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               DD2316AF0078  MX150
Midplane      REV 04   650-066113  DD2316AF0078  MX150
Power Supply 0
Routing Engine 0
CB 0          RE-VMX
CB 1          VMX SCB
FPC 0         VMX SCB
              Virtual FPC
CPU           Rev. 1.0 RIOT      BUILTIN
MIC 0
PIC 0
Xcvr 10      REV 02   740-013111  A331846       SFP-T
Xcvr 11      REV 02   740-013111  C248517       SFP-T
Fan Tray 0   fan-ctrl-0 0, Front to
Back Airflow - AFO
Fan Tray 1   fan-ctrl-0 1, Front to
Back Airflow - AFO
```

### show chassis hardware models (MX150)

```
user@host> show chassis hardware models
Hardware inventory:
Item          Version  Part number  Serial number  FRU model number
Midplane      REV 04   650-066113  DD2316AF0163  MX150
Fan Tray 0   Assy,Sub,Fan
Tray,AFO,Opus-AFO
Fan Tray 1   Assy,Sub,Fan
Tray,AFO,Opus-AFO
```

### show chassis hardware (MX104 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               G3503         MX104
Midplane      REV 28   750-044219  CAAX5741      MX104
PEM 0         REV 03   740-045933  1H072500016  AC Power Entry Module
PEM 1         REV 03   740-045932  1H073050017  DC Power Entry Module
Routing Engine 0 REV 20   750-044228  CAAY7935     RE-MX-104
Routing Engine 1 REV 13   750-044228  CAAM6380     RE-MX-104
AFEB 0        BUILTIN  BUILTIN      Forwarding Engine
Processor
FPC 0         BUILTIN  BUILTIN      MPC BUILTIN
FPC 1         BUILTIN  BUILTIN      MPC BUILTIN
MIC 0         REV 15   750-036132  CAAF7948     2xOC12/8xOC3 CC-CE
PIC 0
Xcvr 0      REV 01   740-011615  PCQ0U2J      SFP-IR
Xcvr 1      REV 01   740-016068  PJL7A6G      SFP-SR
Xcvr 2      REV 01   740-016068  PJL7A5J      SFP-SR
Xcvr 3      REV 01   740-016065  PJN5HPZ      SFP-SR
Xcvr 4      REV 01   740-029122  PKB38TL      SFP-LR
Xcvr 5      REV 01   740-011787  P6A107G      SFP-LR
```

Xcvr 6	REV 01	740-029122	PKB38TR	SFP-LR
Xcvr 7	REV 01	740-011787	PBKONK3	SFP-LR
MIC 1				
FPC 2		BUILTIN	BUILTIN	MPC BUILTIN
MIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B10F00465	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B10F00461	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B10G01545	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B10G01385	SFP+-10G-SR
Fan Tray 0	REV 02	711-049570	CAAX6538	Fan Tray

### show chassis hardware detail (MX104 Router)

```

user@host> show chassis hardware detail
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               G3503         MX104
Midplane      REV 28   750-044219   CAAX5741      MX104
PEM 0         REV 03   740-045933   1H072500016   AC Power Entry Module
PEM 1         REV 03   740-045932   1H073050017   DC Power Entry Module
Routing Engine 0 REV 20   750-044228   CAAY7935      RE-MX-104
  da0 7836 MB ATP IG eUSB SSD Nand Flash 0
  usb0 (addr 1) EHCI root hub 0 Freescale      uhub0
  usb0 (addr 2) USB2513Bi 9491 SMSC            uhub1
  usb0 (addr 3) ATP IG eUSB SSD 44801 ATP Electronics umass0
Routing Engine 1 REV 13   750-044228   CAAM6380      RE-MX-104
  da0 7836 MB ATP IG eUSB SSD Nand Flash 0
AFEB 0                               BUILTIN       BUILTIN       Forwarding Engine
Processor
FPC 0                               BUILTIN       BUILTIN       MPC BUILTIN
FPC 1                               BUILTIN       BUILTIN       MPC BUILTIN
MIC 0         REV 15   750-036132   CAAF7948      2xOC12/8xOC3 CC-CE
PIC 0                               BUILTIN       BUILTIN       2xOC12/8xOC3 CC-CE
  Xcvr 0      REV 01   740-011615   PCQOU2J      SFP-IR
  Xcvr 1      REV 01   740-016068   PjL7A6G      SFP-SR
  Xcvr 2      REV 01   740-016068   PjL7A5J      SFP-SR
  Xcvr 3      REV 01   740-016065   PjN5HPZ      SFP-SR
  Xcvr 4      REV 01   740-029122   PKB38TL      SFP-LR
  Xcvr 5      REV 01   740-011787   P6A107G      SFP-LR
  Xcvr 6      REV 01   740-029122   PKB38TR      SFP-LR
  Xcvr 7      REV 01   740-011787   PBKONK3      SFP-LR
MIC 1
FPC 2                               BUILTIN       BUILTIN       MPC BUILTIN
MIC 0                               BUILTIN       BUILTIN       4x 10GE(LAN) SFP+
PIC 0                               BUILTIN       BUILTIN       4x 10GE(LAN) SFP+
  Xcvr 0      REV 01   740-031980   B10F00465    SFP+-10G-SR
  Xcvr 1      REV 01   740-031980   B10F00461    SFP+-10G-SR
  Xcvr 2      REV 01   740-031980   B10G01545    SFP+-10G-SR
  Xcvr 3      REV 01   740-031980   B10G01385    SFP+-10G-SR
Fan Tray 0    REV 02   711-049570   CAAX6538     Fan Tray

```

### show chassis hardware detail (MX480 Packet Transport Router with details of virtual disk size)

```

user@host> show chassis hardware detail
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               JN122FFD9AFB  MX480
Midplane      REV 05   710-017414   ACRB8882      MX480 Midplane
FPM Board     REV 02   710-017254   CADF7623      Front Panel Display

```

PEM 0	Rev 07	740-017343	QCS1128A0TY	DC Power Entry Module
PEM 1	Rev 07	740-017343	QCS1128A0JM	DC Power Entry Module
Routing Engine 0	REV 07	750-054758	CADG2028	RE-S-2X00x6
vtbd0	15361 MB			Virtio Block Disk
vtbd1	15360 MB			Virtio Block Disk
ada0	511 MB	QEMU HARDDISK	QM00002	Emulated IDE Disk
usb0 (addr 1)	UHCI root HUB 0		Intel	uhub0
Routing Engine 1	REV 00	750-054758		RE-S-2X00x6
vtbd0	15361 MB			Virtio Block Disk
vtbd1	15360 MB			Virtio Block Disk
ada0	511 MB	QEMU HARDDISK	QM00002	Emulated IDE Disk
usb0 (addr 1)	UHCI root HUB 0		Intel	uhub0
CB 0	REV 01	750-055976	CACS1837	Enhanced MX SCB 2
CB 1	REV 01	750-055976	CADD9894	Enhanced MX SCB 2
Xcvr 1	REV 01	740-031980	AP41KCL	SFP+-10G-SR
FPC 0	REV 09	750-049040	CACX1759	LOAD MPC Type 2
CPU	REV 10	711-035209	CACP9324	HMPC PMB 2G
FPC 4	REV 28	750-037355	CACY8384	MPC4E 3D 2CGE+8XGE
CPU	REV 10	711-035209	CACX0428	HMPC PMB 2G
Fan Tray				Enhanced Left Fan Tray

#### show chassis hardware extensive (MX104 Router)

```

user@host> show chassis hardware extensive
Hardware inventory:
Item                Version  Part number  Serial number  Description
Chassis
Jedec Code:         0x7fb0                EEPROM Version: 0x02
                                      S/N:           G3503
Assembly ID:         0x0560                Assembly Version: 00.00
Date:                00-00-0000            Assembly Flags:  0x00
ID: MX104
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 7f b0 02 ff 05 60 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x20: 47 33 35 30 33 00 00 00 00 00 00 00 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane
Jedec Code:         0x7fb0                EEPROM Version: 0x02
P/N:                750-044219            S/N:           CAAX5741
Assembly ID:         0x0560                Assembly Version: 01.28
Date:                03-27-2013            Assembly Flags: 0x00
Version:            REV 28                CLEI Code:     PROTOXCLEI
ID: MX104                FRU Model Number: PROTO-ASSEMBLY
Board Information Record:
Address 0x00: ad 01 08 00 b0 a8 6e a7 f8 00 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 05 60 01 1c 52 45 56 20 32 38 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 32 31 39 00 00
Address 0x20: 53 2f 4e 20 43 41 41 58 35 37 34 31 00 1b 03 07
Address 0x30: dd ff ff ff ad 01 08 00 b0 a8 6e a7 f8 00 ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 47 33 35 30 33 00 00 00 00 00 00 00

```

```

PEM 0          REV 03  740-045933  1H072500016  AC Power Entry Module
Jedec Code:    0x7fb0          EEPROM Version: 0x02
P/N:           740-045933      S/N:           1H072500016
Assembly ID:   0x0475          Assembly Version: 00.03
Date:          12-14-2012      Assembly Flags: 0x00
Version:       REV 03          CLEI Code:      IPUPAJ9KAA
ID: AC Power Entry Module      FRU Model Number: PWR-AMX1100-AC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff 02 02 00 ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 75 00 03 52 45 56 20 30 33 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 35 39 33 33 00 00
Address 0x20: 31 48 30 37 32 35 30 30 30 31 36 00 00 0e 0c 07
Address 0x30: dc 30 43 ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: 02 02 00 ff 01 49 50 55 50 41 4a 39 4b 41 41 50
Address 0x50: 57 52 2d 41 4d 58 31 31 30 30 2d 41 43 2d 53 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 70 ff ff ff ff ff ff ff ff ff ff ff ff

PEM 1          REV 03  740-045932  1H073050017  DC Power Entry Module
Jedec Code:    0x7fb0          EEPROM Version: 0x02
P/N:           740-045932      S/N:           1H073050017
Assembly ID:   0x0476          Assembly Version: 00.03
Date:          01-30-2013      Assembly Flags: 0x00
Version:       REV 03          CLEI Code:      IPUPAJ8KAA
ID: DC Power Entry Module      FRU Model Number: PWR-AMX1100-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff 02 02 00 ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 76 00 03 52 45 56 20 30 33 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 35 39 33 32 00 00
Address 0x20: 31 48 30 37 33 30 35 30 30 31 37 00 00 1e 01 07
Address 0x30: dd 30 44 ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: 02 02 00 ff 01 49 50 55 50 41 4a 38 4b 41 41 50
Address 0x50: 57 52 2d 41 4d 58 31 31 30 30 2d 44 43 2d 53 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 72 ff ff ff ff ff ff ff ff ff ff ff ff

Routing Engine 0 REV 20  750-044228  CAAY7935  RE-MX-104
Jedec Code:    0x7fb0          EEPROM Version: 0x02
P/N:           750-044228      S/N:           CAAY7935
Assembly ID:   0x0b81          Assembly Version: 01.20
Date:          03-18-2013      Assembly Flags: 0x00
Version:       REV 20          CLEI Code:      PROTOXCLEI
ID: RE-MX-104      FRU Model Number: PROTO-ASSEMBLY
Board Information Record:
Address 0x00: ad 01 00 08 b0 a8 6e a6 fc 10 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 fe 0b 81 01 14 52 45 56 20 32 30 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 32 32 38 00 00
Address 0x20: 53 2f 4e 20 43 41 41 59 37 39 33 35 00 12 03 07
Address 0x30: dd ff ff ff ad 01 00 08 b0 a8 6e a6 fc 10 ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
da0  7836 MB  ATP IG eUSB SSD  Nand Flash 0
usb0 (addr 1) EHCI root hub 0  Freescale  uhub0
usb0 (addr 2) USB2513Bi 9491  SMSC  uhub1
usb0 (addr 3) ATP IG eUSB SSD 44801 ATP Electronics  umass0
Routing Engine 1 REV 13  750-044228  CAAM6380  RE-MX-104
Jedec Code:    0x7fb0          EEPROM Version: 0x02
P/N:           750-044228      S/N:           CAAM6380

```

```

Assembly ID: 0x0b81      Assembly Version: 01.13
Date: 09-17-2012      Assembly Flags: 0x00
Version: REV 13      CLEI Code: PROTOXCLEI
ID: RE-MX-104      FRU Model Number: PROTO-ASSEMBLY

Board Information Record:
Address 0x00: ad 01 00 08 64 87 88 27 08 18 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 fe 0b 81 01 0d 52 45 56 20 31 33 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 32 32 38 00 00
Address 0x20: 53 2f 4e 20 43 41 41 4d 36 33 38 30 00 11 09 07
Address 0x30: dc ff ff ff ad 01 00 08 64 87 88 27 08 18 ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
da0 7836 MB ATP IG eUSB SSD Nand Flash 0
AFEB 0 BUILTIN BUILTIN Forwarding Engine
Processor
FPC 0 BUILTIN BUILTIN MPC BUILTIN
FPC 1 BUILTIN BUILTIN MPC BUILTIN
MIC 0 REV 15 750-036132 CAAF7948 2x0C12/8x0C3 CC-CE
Jedec Code: 0x7fb0 EEPROM Version: 0x02
P/N: 750-036132 S/N: CAAF7948
Assembly ID: 0x0a1a Assembly Version: 01.15
Date: 07-03-2012 Assembly Flags: 0x00
Version: REV 15 CLEI Code: IP9IAM2DAA
ID: 2x0C12/8x0C3 CC-CE FRU Model Number: MIC-3D-80C3-20C12-ATM

Board Information Record:
Address 0x00: 12 01 05 03 05 ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0a 1a 01 0f 52 45 56 20 31 35 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 33 36 31 33 32 00 00
Address 0x20: 53 2f 4e 20 43 41 41 46 37 39 34 38 00 03 07 07
Address 0x30: dc ff ff ff 12 01 05 03 05 ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 39 49 41 4d 32 44 41 41 4d
Address 0x50: 49 43 2d 33 44 2d 38 4f 43 33 2d 32 4f 43 31 32
Address 0x60: 2d 41 54 4d 00 00 41 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff e3 c0 02 a3 9c 00 00 00 00 0a 60 00 00
PIC 0 BUILTIN BUILTIN 2x0C12/8x0C3 CC-CE
Xcvr 0 REV 01 740-011615 PCQOU2J SFP-IR
Xcvr 1 REV 01 740-016068 PJL7A6G SFP-SR
Xcvr 2 REV 01 740-016068 PJL7A5J SFP-SR
Xcvr 3 REV 01 740-016065 PJN5HPZ SFP-SR
Xcvr 4 REV 01 740-029122 PKB38TL SFP-LR
Xcvr 5 REV 01 740-011787 P6A107G SFP-LR
Xcvr 6 REV 01 740-029122 PKB38TR SFP-LR
Xcvr 7 REV 01 740-011787 PBKONK3 SFP-LR
MIC 1
FPC 2 BUILTIN BUILTIN MPC BUILTIN
MIC 0 BUILTIN BUILTIN 4x 10GE(LAN) SFP+
Jedec Code: 0x0000 EEPROM Version: 0x00
P/N: BUILTIN S/N: BUILTIN
Assembly ID: 0x0a60 Assembly Version: 00.00
Date: 00-00-0000 Assembly Flags: 0x00
ID: 4x 10GE(LAN) SFP+

Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 0a 60 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 4d 58 43 00
Address 0x20: 42 55 49 4c 54 49 4e 00 4d 58 43 00 00 00 00 00

```

```

Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 c0 02 a5 04 7f b0 02 ff 0a 1a 01 0f
PIC 0          BUILTIN          BUILTIN          4x 10GE(LAN) SFP+
  Xcvr 0      REV 01      740-031980      B10F00465      SFP+-10G-SR
  Xcvr 1      REV 01      740-031980      B10F00461      SFP+-10G-SR
  Xcvr 2      REV 01      740-031980      B10G01545      SFP+-10G-SR
  Xcvr 3      REV 01      740-031980      B10G01385      SFP+-10G-SR
Fan Tray 0    REV 02      711-049570      CAAX6538      Fan Tray
Jedec Code:   0x7fb0          EEPROM Version: 0x02
P/N:          711-049570      S/N:          CAAX6538
Assembly ID:  0x0b82          Assembly Version: 01.02
Date:         03-01-2013      Assembly Flags: 0x00
Version:      REV 02          CLEI Code:     PROTOXCLEI
ID: Fan Tray          FRU Model Number: PROTO-ASSEMBLY
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 82 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 34 39 35 37 30 00 00
Address 0x20: 53 2f 4e 20 43 41 41 58 36 35 33 38 00 01 03 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff

```

### show chassis hardware extensive (PTX10008 Router)

```

user@host> show chassis hardware extensive
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               DE487          JNP10008 [PTX10008 -
PILOT BUILD V1.1]
Jedec Code:   0x7fb0          EEPROM Version: 0x02
S/N:          DE487
Assembly ID:  0x0566          Assembly Version: 01.27
Date:         08-08-2016      Assembly Flags: 0x00
CLEI Code:     CMMUM00ARA
ID: JNP10008          FRU Model Number: QFX10008-CHAS
Board Information Record:
Address 0x00: ad 01 08 00 30 b6 4f e9 74 c4 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 05 66 01 1b 00 45 56 20 32 37 00 00
Address 0x10: 00 00 00 00 00 35 30 2d 30 35 34 30 39 37 00 00
Address 0x20: 44 45 34 38 37 00 00 00 00 00 00 00 00 08 08 07
Address 0x30: e0 ff ff ff ad 01 08 00 30 b6 4f e9 74 c4 ff ff
Address 0x40: ff ff ff ff 01 43 4d 4d 55 4d 30 30 41 52 41 51
Address 0x50: 46 58 31 30 30 30 38 2d 43 48 41 53 00 00 00 00
Address 0x60: 00 00 00 00 00 00 41 44 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 63 44 45 34 38 37 00 00 00 00 00 00 00
Midplane      REV 27      750-054097      ACPD4307      Midplane 8
Jedec Code:   0x7fb0          EEPROM Version: 0x02
P/N:          750-054097      S/N:          ACPD4307
Assembly ID:  0x0be3          Assembly Version: 01.27
Date:         08-08-2016      Assembly Flags: 0x00
Version:      REV 27          CLEI Code:     CMMUM00ARA
ID: QFX10008 Midplane          FRU Model Number: QFX10008-CHAS
Board Information Record:

```



```

Address 0x00: ad 01 08 00 30 b6 4f e9 74 c4 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b e3 01 1b 52 45 56 20 32 37 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 35 34 30 39 37 00 00
Address 0x20: 53 2f 4e 20 41 43 50 44 34 33 30 37 00 08 08 07
Address 0x30: e0 ff ff ff ad 01 08 00 30 b6 4f e9 74 c4 ff ff
Address 0x40: ff ff ff ff 01 43 4d 4d 55 4d 30 30 41 52 41 51
Address 0x50: 46 58 31 30 30 30 38 2d 43 48 41 53 00 00 00 00
Address 0x60: 00 00 00 00 00 00 41 44 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 63 44 45 34 38 37 00 00 00 00 00 00 00
Routing Engine 0          BUILTIN          BUILTIN          RE-PTX-2X00x4
vtbd0 15360 MB            Virtio Block Disk
vtbd1 15360 MB            Virtio Block Disk
ada0 128 MB QEMU          QM00002          Virtio Block Disk
usb0 (addr 0.1) EHCI root HUB 0 Intel          uhub0
usb1 (addr 0.2) product 0x0020 32 vendor 0x8087 uhub1
Routing Engine 1          BUILTIN          BUILTIN          RE-PTX-2X00x4
vtbd0 15360 MB            Virtio Block Disk
vtbd1 15360 MB            Virtio Block Disk
ada0 128 MB QEMU          QM00002          Virtio Block Disk
usb0 (addr 0.1) EHCI root HUB 0 Intel          uhub0
usb1 (addr 0.2) product 0x0020 32 vendor 0x8087 uhub1
CB 0          REV 02 750-068820 ACNZ4440          Control Board
Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N: 750-068820          S/N: ACNZ4440
Assembly ID: 0x0b9d          Assembly Version: 01.02
Date: 06-13-2016          Assembly Flags: 0x00
Version: REV 02          CLEI Code: CMUCAH3CTB
ID: Control Board          FRU Model Number: QFX10000-RE
Board Information Record:
Address 0x00: ad 01 00 10 84 c1 c1 54 10 be ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 9d 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 36 38 38 32 30 00 00
Address 0x20: 53 2f 4e 20 41 43 4e 5a 34 34 34 30 00 0d 06 07
Address 0x30: e0 ff ff ff ad 01 00 10 84 c1 c1 54 10 be ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 33 43 54 42 51
Address 0x50: 46 58 31 30 30 30 30 2d 52 45 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 42 41 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff db ff ff ff ff ff ff ff ff ff ff ff ff
CB 1          REV 02 750-068820 ACNZ8284          Control Board
Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N: 750-068820          S/N: ACNZ8284
Assembly ID: 0x0b9d          Assembly Version: 01.02
Date: 06-27-2016          Assembly Flags: 0x00
Version: REV 02          CLEI Code: CMUCAH3CTB
ID: Control Board          FRU Model Number: QFX10000-RE
Board Information Record:
Address 0x00: ad 01 00 10 84 c1 c1 e5 b1 46 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 9d 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 36 38 38 32 30 00 00
Address 0x20: 53 2f 4e 20 41 43 4e 5a 38 32 38 34 00 1b 06 07
Address 0x30: e0 ff ff ff ad 01 00 10 84 c1 c1 e5 b1 46 ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 33 43 54 42 51
Address 0x50: 46 58 31 30 30 30 30 2d 52 45 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 42 41 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff db ff ff ff ff ff ff ff ff ff ff ff ff
FPC 0          REV 36 750-051354 ACNP4679          LC1102 - 12C / 36Q /
144X
Jedec Code: 0x7fb0          EEPROM Version: 0x02

```

```

P/N:          750-051354          S/N:          ACNP4679
Assembly ID:  0x0be7             Assembly Version: 01.36
Date:         11-11-2016         Assembly Flags:  0x00
Version:      REV 36             CLEI Code:       CMUIAM9BAA
ID: ULC-36Q-12Q28              FRU Model Number: QFX10000-36Q

Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b e7 01 24 52 45 56 20 33 36 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 35 31 33 35 34 00 00
Address 0x20: 53 2f 4e 20 41 43 4e 50 34 36 37 39 00 0b 0b 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4d 39 42 41 41 51
Address 0x50: 46 58 31 30 30 30 30 2d 33 36 51 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 42 45 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff fe ff ff ff ff ff ff ff ff ff ff ff ff
CPU          BUILTIN          BUILTIN          FPC CPU
Jedec Code:  0x7fb0           EEPROM Version: 0x02
P/N:         BUILTIN          S/N:          BUILTIN
Assembly ID: 0xf020           Assembly Version: 02.17
Date:        04-19-2012       Assembly Flags:  0x00
Board Information Record:
Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff f0 20 02 11 00 e0 3c fa 09 00 70 87
Address 0x10: 09 38 bb ff 42 55 49 4c 54 49 4e 00 00 e0 3c fa
Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
PIC 0          BUILTIN          BUILTIN          12x100GE/36x40GE/144x10GE

Jedec Code:  0x7fb0           EEPROM Version: 0x02
P/N:         BUILTIN          S/N:          BUILTIN
Assembly ID: 0xf050           Assembly Version: 02.17
Date:        04-19-2012       Assembly Flags:  0x00
Board Information Record:
Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
Xcvr 1      REV 01      740-058734      1ECQ113834D      QSFP-100GBASE-SR4
Xcvr 5      REV 01      740-058734      1ECQ1137067      QSFP-100GBASE-SR4
Xcvr 6      REV 01      740-054053      QF3205SD         QSFP+-4X10G-SR
Xcvr 7      REV 01      740-058734      1ECQ11381MP      QSFP-100GBASE-SR4
Xcvr 11     REV 01      740-061405      1ACQ110507K      QSFP-100GBASE-SR4
Xcvr 13     REV 01      740-058734      1ECQ11390ZB      QSFP-100GBASE-SR4
Xcvr 17     REV 01      740-058734      1ECQ11381M1      QSFP-100GBASE-SR4
Xcvr 19     REV 01      740-058734      1ECQ11381JS      QSFP-100GBASE-SR4
Xcvr 23     REV 01      740-058734      1ACQ112000E      QSFP-100GBASE-SR4
Xcvr 25     REV 01      740-058734      1ECQ11381NT      QSFP-100GBASE-SR4
Xcvr 28     REV 01      740-054053      QG1502WV         QSFP+-4X10G-SR
Xcvr 29     REV 01      740-058734      1ACQ112000D      QSFP-100GBASE-SR4

```

```

Xcvr 33      REV 01  740-058734  1ACQ1134065      QSFP-100GBASE-SR4
Xcvr 34      REV 01  740-067442  XV20L4L          QSFP+-40G-SR4
FPC 1        REV 33  750-051354  ACNX8831         LC1102 - 12C / 36Q /
144X
Jedec Code:  0x7fb0      EEPROM Version:  0x02
P/N:         750-051354  S/N:         ACNX8831
Assembly ID: 0x0be7      Assembly Version: 01.33
Date:        06-03-2016  Assembly Flags: 0x00
Version:     REV 33      CLEI Code:    CMUIAM9BAA
ID: ULC-36Q-12Q28      FRU Model Number: QFX10000-36Q
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b e7 01 21 52 45 56 20 33 33 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 35 31 33 35 34 00 00
Address 0x20: 53 2f 4e 20 41 43 4e 58 38 38 33 31 00 03 06 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4d 39 42 41 41 51
Address 0x50: 46 58 31 30 30 30 30 2d 33 36 51 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 42 42 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff fb ff ff ff ff ff ff ff ff ff ff ff ff
CPU          BUILTIN      BUILTIN      FPC CPU
Jedec Code:  0x7fb0      EEPROM Version:  0x02
P/N:         BUILTIN     S/N:         BUILTIN
Assembly ID: 0xf020      Assembly Version: 02.17
Date:        04-19-2012  Assembly Flags: 0x00
Board Information Record:
Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff f0 20 02 11 00 20 3e fa 09 00 10 8a
Address 0x10: 09 38 bb ff 42 55 49 4c 54 49 4e 00 00 20 3e fa
Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
PIC 0          BUILTIN      BUILTIN      12x100GE/36x40GE/144x10GE

Jedec Code:  0x7fb0      EEPROM Version:  0x02
P/N:         BUILTIN     S/N:         BUILTIN
Assembly ID: 0xf050      Assembly Version: 02.17
Date:        04-19-2012  Assembly Flags: 0x00
Board Information Record:
Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
Xcvr 5       NON-JNPR    37700171YY0084    QSFP-100GBASE-LR4
Xcvr 25      NON-JNPR    GDA2017459        QSFP-100GBASE-LR4
Xcvr 29      NON-JNPR    GDF2008750        QSFP-100GBASE-LR4
FPC 2        REV 32  750-051357  ACPB0341         LC1101 - 30C / 30Q / 96X

Jedec Code:  0x7fb0      EEPROM Version:  0x02
P/N:         750-051357  S/N:         ACPB0341

```

```

Assembly ID: 0x0be8      Assembly Version: 01.32
Date:          06-04-2016  Assembly Flags: 0x00
Version:       REV 32      CLEI Code:      CMUIANABAA
ID: ULC-30Q28           FRU Model Number: QFX10000-30C

```

## Board Information Record:

```
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```

## I2C Hex Data:

```

Address 0x00: 7f b0 02 ff 0b e8 01 20 52 45 56 20 33 32 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 35 31 33 35 37 00 00
Address 0x20: 53 2f 4e 20 41 43 50 42 30 33 34 31 00 04 06 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4e 41 42 41 41 51
Address 0x50: 46 58 31 30 30 30 30 2d 33 30 43 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff ef ff ff ff ff ff ff ff ff ff ff ff ff
CPU          BUILTIN      BUILTIN      FPC CPU

```

```

Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N:         BUILTIN    S/N:         BUILTIN
Assembly ID: 0xf020     Assembly Version: 02.17
Date:        04-19-2012 Assembly Flags: 0x00

```

## Board Information Record:

```
Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
```

## I2C Hex Data:

```

Address 0x00: 7f b0 02 ff f0 20 02 11 00 00 67 00 0a 00 b0 8c
Address 0x10: 09 38 bb ff 42 55 49 4c 54 49 4e 00 00 00 67 00
Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
PIC 0          BUILTIN      BUILTIN      30x100GE/30x40GE/96x10GE

```

```

Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N:         BUILTIN    S/N:         BUILTIN
Assembly ID: 0xf050     Assembly Version: 02.17
Date:        04-19-2012 Assembly Flags: 0x00

```

## Board Information Record:

```
Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
```

## I2C Hex Data:

```

Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f3 de ad be ef de ad be ef de ad be ef
Xcvr 0          NON-JNPR    37700170YZC305    QSFP-100GBASE-LR4
Xcvr 4          NON-JNPR    37700170YZC306    QSFP-100GBASE-LR4
Xcvr 9          REV 01      740-054053    QF36013S    QSFP+-4X10G-SR
Xcvr 12         REV 01      740-067442    XV301AU     QSFP+-40G-SR4
Xcvr 14         REV 01      740-043308    UWE2CG9     QSFP+-40G-LR4
Xcvr 16         REV 01      740-043308    UWH141S     QSFP+-40G-LR4
Xcvr 17         REV 01      740-058734    1ECQ11180VH QSFP-100GBASE-SR4
Xcvr 18         REV 01      740-054050    INF4J0492237 QSFP+-4X10G-LR
Xcvr 26         REV 01      740-058734    1ACQ111803N QSFP-100GBASE-SR4
Xcvr 27         REV 01      740-058734    1ACQ113405S QSFP-100GBASE-SR4
FPC 3          REV 35      750-051357    ACPD2186    LC1101 - 30C / 30Q / 96X

```

```

Jedec Code: 0x7fb0      EEPROM Version: 0x02

```

```

P/N:          750-051357      S/N:          ACPD2186
Assembly ID:  0x0be8         Assembly Version: 01.35
Date:         09-21-2016     Assembly Flags:  0x00
Version:      REV 35         CLEI Code:       CMUIANABAA
ID: ULC-30Q28                FRU Model Number: QFX10000-30C

```

## Board Information Record:

```
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```

## I2C Hex Data:

```

Address 0x00: 7f b0 02 ff 0b e8 01 23 52 45 56 20 33 35 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 35 31 33 35 37 00 00
Address 0x20: 53 2f 4e 20 41 43 50 44 32 31 38 36 00 15 09 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4e 41 42 41 41 51
Address 0x50: 46 58 31 30 30 30 30 2d 33 30 43 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 41 44 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f1 ff ff ff ff ff ff ff ff ff ff ff ff

```

```
CPU          BUILTIN      BUILTIN      FPC CPU
```

```

Jedec Code:  0x7fb0         EEPROM Version:  0x02
P/N:         BUILTIN        S/N:            BUILTIN
Assembly ID: 0xf020         Assembly Version: 02.17
Date:        04-19-2012     Assembly Flags:  0x00

```

## Board Information Record:

```
Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
```

## I2C Hex Data:

```

Address 0x00: 7f b0 02 ff f0 20 02 11 00 80 70 fa 09 00 50 8f
Address 0x10: 09 38 bb ff 42 55 49 4c 54 49 4e 00 00 80 70 fa
Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
PIC 0          BUILTIN      BUILTIN      30x100GE/30x40GE/96x10GE

```

```

Jedec Code:  0x7fb0         EEPROM Version:  0x02
P/N:         BUILTIN        S/N:            BUILTIN
Assembly ID: 0xf050         Assembly Version: 02.17
Date:        04-19-2012     Assembly Flags:  0x00

```

## Board Information Record:

```
Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
```

## I2C Hex Data:

```

Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
Xcvr 0      REV 01  740-061409  1GCQA1470A3  QSFP-100GBASE-LR4-T2
Xcvr 1      REV 01  740-061409  1GCQA1470XC  QSFP-100GBASE-LR4-T2
Xcvr 7              NON-JNPR    FG4550500008 QSFP-100G-CWDM4
Xcvr 24      REV 01  740-058734  1ECQ11381LX  QSFP-100GBASE-SR4
Xcvr 29      REV 01  740-043308  UWE0UYS      QSFP+-40G-LR4
FPC 5        REV 08  750-068822  ACPF0057     LC1102 - 12C / 36Q /
144X

```

```

Jedec Code:  0x7fb0         EEPROM Version:  0x02
P/N:         750-068822     S/N:            ACPF0057
Assembly ID: 0x0be7         Assembly Version: 01.08
Date:        09-01-2016     Assembly Flags:  0x00
Version:      REV 08         CLEI Code:       CMUIAM9BAB

```

ID: ULC-36Q-12Q28 FRU Model Number: QFX10000-36Q

Board Information Record:

Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

I2C Hex Data:

Address 0x00: 7f b0 02 ff 0b e7 01 08 52 45 56 20 30 38 00 00

Address 0x10: 00 00 00 00 37 35 30 2d 30 36 38 38 32 32 00 00

Address 0x20: 53 2f 4e 20 41 43 50 46 30 30 35 37 00 01 09 07

Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff

Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4d 39 42 41 42 51

Address 0x50: 46 58 31 30 30 30 30 2d 33 36 51 00 00 00 00 00

Address 0x60: 00 00 00 00 00 00 42 45 00 ff ff ff ff ff ff ff

Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

CPU BUILTIN BUILTIN FPC CPU

Jedec Code: 0x7fb0 EEPROM Version: 0x02

P/N: BUILTIN S/N: BUILTIN

Assembly ID: 0xf020 Assembly Version: 02.17

Date: 04-19-2012 Assembly Flags: 0x00

Board Information Record:

Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff

I2C Hex Data:

Address 0x00: 7f b0 02 ff f0 20 02 11 00 00 3d fa 09 00 90 94

Address 0x10: 09 38 bb ff 42 55 49 4c 54 49 4e 00 00 00 3d fa

Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07

Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff

Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00

Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff

Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00

PIC 0 BUILTIN BUILTIN 12x100GE/36x40GE/144x10GE

Jedec Code: 0x7fb0 EEPROM Version: 0x02

P/N: BUILTIN S/N: BUILTIN

Assembly ID: 0xf050 Assembly Version: 02.17

Date: 04-19-2012 Assembly Flags: 0x00

Board Information Record:

Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff

I2C Hex Data:

Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45

Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20

Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07

Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff

Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00

Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff

Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55

FPC 6 REV 08 750-068822 ACPE9951 LC1102 - 12C / 36Q / 144X

Jedec Code: 0x7fb0 EEPROM Version: 0x02

P/N: 750-068822 S/N: ACPE9951

Assembly ID: 0x0be7 Assembly Version: 01.08

Date: 09-01-2016 Assembly Flags: 0x00

Version: REV 08 CLEI Code: CMUIAM9BAB

ID: ULC-36Q-12Q28 FRU Model Number: QFX10000-36Q

Board Information Record:

Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

I2C Hex Data:

Address 0x00: 7f b0 02 ff 0b e7 01 08 52 45 56 20 30 38 00 00

Address 0x10: 00 00 00 00 37 35 30 2d 30 36 38 38 32 32 00 00

Address 0x20: 53 2f 4e 20 41 43 50 45 39 39 35 31 00 01 09 07

Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff

Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4d 39 42 41 42 51

```

Address 0x50: 46 58 31 30 30 30 30 2d 33 36 51 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 42 45 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
CPU          BUILTIN          BUILTIN          FPC CPU
Jedec Code:  0x7fb0          EEPROM Version: 0x02
P/N:         BUILTIN        S/N:         BUILTIN
Assembly ID: 0xf020          Assembly Version: 02.17
Date:        04-19-2012     Assembly Flags: 0x00
Board Information Record:
Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff f0 20 02 11 00 c0 3e fa 09 00 30 97
Address 0x10: 09 38 bb ff 42 55 49 4c 54 49 4e 00 00 c0 3e fa
Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
PIC 0          BUILTIN          BUILTIN          12x100GE/36x40GE/144x10GE

Jedec Code:  0x7fb0          EEPROM Version: 0x02
P/N:         BUILTIN        S/N:         BUILTIN
Assembly ID: 0xf050          Assembly Version: 02.17
Date:        04-19-2012     Assembly Flags: 0x00
Board Information Record:
Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
Xcvr 1      REV 01 740-054053 QF3208LG QSFPA+-4X10G-SR
Xcvr 7      REV 01 740-067442 XV20LGN  QSFPA+-40G-SR4
Xcvr 8      REV 01 740-067442 XV20VMV  QSFPA+-40G-SR4
Xcvr 9      REV 01 740-067442 XV20KCN  QSFPA+-40G-SR4
Xcvr 10     REV 01 740-067442 XU504QD  QSFPA+-40G-SR4
Xcvr 11     REV 01 740-067442 XU504X7  QSFPA+-40G-SR4
Xcvr 12     REV 01 740-067442 XU504W8  QSFPA+-40G-SR4
Xcvr 16     REV 01 740-032986 QF4301JP QSFPA+-40G-SR4
Xcvr 17     REV 01 740-032986 QF4303AE QSFPA+-40G-SR4
Xcvr 18     REV 01 740-054050 INF4J0492400 QSFPA+-4X10G-LR
Xcvr 19     REV 01 740-054050 INF4J0492142 QSFPA+-4X10G-LR
Xcvr 24     REV 01 740-032986 QF4301KB QSFPA+-40G-SR4
Xcvr 25     REV 01 740-032986 QF4303YP QSFPA+-40G-SR4
Xcvr 30     REV 01 740-067442 XV300ZX  QSFPA+-40G-SR4
Xcvr 31     REV 01 740-043308 UWH2KBW  QSFPA+-40G-LR4
Xcvr 34     REV 01 740-054053 QG1501YU QSFPA+-4X10G-SR
FPD Board   REV 07 711-054687 ACPC7142 Front Panel Display
Jedec Code: 0x7fb0          EEPROM Version: 0x01
P/N:        711-054687     S/N:        ACPC7142
Assembly ID: 0x0bf2          Assembly Version: 01.07
Date:       07-22-2016     Assembly Flags: 0x00
Version:    REV 07
ID: QFX10000 FPD
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

```

## I2C Hex Data:

Address 0x00: 7f b0 01 ff 0b f2 01 07 52 45 56 20 30 37 00 00  
 Address 0x10: 00 00 00 00 37 31 31 2d 30 35 34 36 38 37 00 00  
 Address 0x20: 53 2f 4e 20 41 43 50 43 37 31 34 32 00 16 07 07  
 Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff  
 Address 0x40: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff  
 Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff  
 Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff  
 Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

Power Supply 0 REV 02 740-049388 1EDL62102N9 Power Supply AC

Jedec Code: 0x7fb0 EEPROM Version: 0x02  
 P/N: 740-049388 S/N: 1EDL62102N9  
 Assembly ID: 0x0483 Assembly Version: 01.02  
 Date: 05-25-2016 Assembly Flags: 0x00  
 Version: REV 02 CLEI Code: CMUPADNBAA  
 ID: QFX10000 AC FRU Model Number: QFX10000-PWR-AC

## Board Information Record:

Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

## I2C Hex Data:

Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00  
 Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00  
 Address 0x20: 31 45 44 4c 36 32 31 30 32 4e 39 00 00 19 05 07  
 Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff  
 Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51  
 Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00  
 Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff ff  
 Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff ff

Power Supply 1 REV 02 740-049388 1EDL60300KX Power Supply AC

Jedec Code: 0x7fb0 EEPROM Version: 0x02  
 P/N: 740-049388 S/N: 1EDL60300KX  
 Assembly ID: 0x0483 Assembly Version: 01.02  
 Date: 01-20-2016 Assembly Flags: 0x00  
 Version: REV 02 CLEI Code: CMUPADNBAA  
 ID: QFX10000 AC FRU Model Number: QFX10000-PWR-AC

## Board Information Record:

Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

## I2C Hex Data:

Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00  
 Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00  
 Address 0x20: 31 45 44 4c 36 30 33 30 30 4b 58 00 00 14 01 07  
 Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff  
 Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51  
 Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00  
 Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff ff  
 Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff ff

Power Supply 2 REV 02 740-049388 1EDL60300DL Power Supply AC

Jedec Code: 0x7fb0 EEPROM Version: 0x02  
 P/N: 740-049388 S/N: 1EDL60300DL  
 Assembly ID: 0x0483 Assembly Version: 01.02  
 Date: 01-20-2016 Assembly Flags: 0x00  
 Version: REV 02 CLEI Code: CMUPADNBAA  
 ID: QFX10000 AC FRU Model Number: QFX10000-PWR-AC

## Board Information Record:

Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

## I2C Hex Data:

Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00  
 Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00  
 Address 0x20: 31 45 44 4c 36 30 33 30 30 44 4c 00 00 14 01 07  
 Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff  
 Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51  
 Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00



```

Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff
Power Supply 3  REV 02  740-049388  1EDL61701BT  Power Supply AC
Jedec Code: 0x7fb0  EEPROM Version: 0x02
P/N: 740-049388  S/N: 1EDL61701BT
Assembly ID: 0x0483  Assembly Version: 01.02
Date: 05-01-2016  Assembly Flags: 0x00
Version: REV 02  CLEI Code: CMUPADNBAA
ID: QFX10000 AC  FRU Model Number: QFX10000-PWR-AC
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
Address 0x20: 31 45 44 4c 36 31 37 30 31 42 54 00 00 01 05 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff
Power Supply 4  REV 02  740-049388  1EDL62102P7  Power Supply AC
Jedec Code: 0x7fb0  EEPROM Version: 0x02
P/N: 740-049388  S/N: 1EDL62102P7
Assembly ID: 0x0483  Assembly Version: 01.02
Date: 05-25-2016  Assembly Flags: 0x00
Version: REV 02  CLEI Code: CMUPADNBAA
ID: QFX10000 AC  FRU Model Number: QFX10000-PWR-AC
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
Address 0x20: 31 45 44 4c 36 32 31 30 32 50 37 00 00 19 05 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff
Power Supply 5  REV 02  740-049388  1EDL62102PP  Power Supply AC
Jedec Code: 0x7fb0  EEPROM Version: 0x02
P/N: 740-049388  S/N: 1EDL62102PP
Assembly ID: 0x0483  Assembly Version: 01.02
Date: 05-25-2016  Assembly Flags: 0x00
Version: REV 02  CLEI Code: CMUPADNBAA
ID: QFX10000 AC  FRU Model Number: QFX10000-PWR-AC
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
Address 0x20: 31 45 44 4c 36 32 31 30 32 50 50 00 00 19 05 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff
FTC 0  REV 14  750-050108  ACPE4038  Fan Controller 8
Jedec Code: 0x7fb0  EEPROM Version: 0x02
P/N: 750-050108  S/N: ACPE4038
Assembly ID: 0x0bee  Assembly Version: 01.14
Date: 09-27-2016  Assembly Flags: 0x00

```

```

Version:      REV 14          CLEI Code:      CMUCAHZCAA
ID: QFX10000 FTC          FRU Model Number: QFX10008-FAN-CTRL
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ee 01 0e 52 45 56 20 31 34 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 31 30 38 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 45 34 30 33 38 00 1b 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 5a 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 46 41 4e 2d 43 54 52 4c
  Address 0x60: 00 00 00 00 00 00 41 44 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 98 ff ff ff ff ff ff ff ff ff ff ff ff
Fan Tray 1          REV 14    750-050108    ACPE4032          Fan Controller 8
Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N: 750-050108          S/N: ACPE4032
Assembly ID: 0x0bee          Assembly Version: 01.14
Date: 09-27-2016          Assembly Flags: 0x00
Version: REV 14          CLEI Code: CMUCAHZCAA
ID: QFX10000 FTC          FRU Model Number: QFX10008-FAN-CTRL
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ee 01 0e 52 45 56 20 31 34 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 31 30 38 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 45 34 30 33 32 00 1b 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 5a 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 46 41 4e 2d 43 54 52 4c
  Address 0x60: 00 00 00 00 00 00 41 44 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 98 ff ff ff ff ff ff ff ff ff ff ff ff
Fan Tray 0          REV 09    760-054372    ACPD6799          Fan Tray 8
Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N: 760-054372          S/N: ACPD6799
Assembly ID: 0x0bf0          Assembly Version: 01.09
Date: 09-28-2016          Assembly Flags: 0x00
Version: REV 09          CLEI Code: CMUCAHYCAA
ID: QFX10008 FHB          FRU Model Number: QFX10008-FAN
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b f0 01 09 52 45 56 20 30 39 00 00
  Address 0x10: 00 00 00 00 37 36 30 2d 30 35 34 33 37 32 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 44 36 37 39 39 00 1c 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 59 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 46 41 4e 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f1 ff ff ff ff ff ff ff ff ff ff ff ff
Fan Tray 1          REV 09    760-054372    ACNZ3584          Fan Tray 8
Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N: 760-054372          S/N: ACNZ3584
Assembly ID: 0x0bf0          Assembly Version: 01.09
Date: 08-30-2016          Assembly Flags: 0x00
Version: REV 09          CLEI Code: CMUCAHYCAA
ID: QFX10008 FHB          FRU Model Number: QFX10008-FAN
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b f0 01 09 52 45 56 20 30 39 00 00
  Address 0x10: 00 00 00 00 37 36 30 2d 30 35 34 33 37 32 00 00

```

```

Address 0x20: 53 2f 4e 20 41 43 4e 5a 33 35 38 34 00 1e 08 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 59 43 41 41 51
Address 0x50: 46 58 31 30 30 30 38 2d 46 41 4e 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f1 ff ff ff ff ff ff ff ff ff ff ff ff
SIB 0          REV 24    750-050058    ACPD4587          Switch Fabric 8
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-050058      S/N:             ACPD4587
Assembly ID:   0x0bec          Assembly Version: 01.24
Date:          06-19-2016      Assembly Flags:   0x00
Version:       REV 24          CLEI Code:        CMUCAH0CAA
ID: QFX10008 SIB              FRU Model Number: QFX10008-SF
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b ec 01 18 52 45 56 20 32 34 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 35 38 00 00
Address 0x20: 53 2f 4e 20 41 43 50 44 34 35 38 37 00 13 06 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 30 43 41 41 51
Address 0x50: 46 58 31 30 30 30 38 2d 53 46 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 41 45 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff d1 00 00 00 00 00 00 00 00 00 00 00 00
SIB 1          REV 24    750-050058    ACNZ0635          Switch Fabric 8
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-050058      S/N:             ACNZ0635
Assembly ID:   0x0bec          Assembly Version: 01.24
Date:          06-06-2016      Assembly Flags:   0x00
Version:       REV 24          CLEI Code:        CMUCAH0CAA
ID: QFX10008 SIB              FRU Model Number: QFX10008-SF
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b ec 01 18 52 45 56 20 32 34 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 35 38 00 00
Address 0x20: 53 2f 4e 20 41 43 4e 5a 30 36 33 35 00 06 06 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 30 43 41 41 51
Address 0x50: 46 58 31 30 30 30 38 2d 53 46 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 41 45 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff d1 00 00 00 00 00 00 00 00 00 00 00 00
SIB 2          REV 24    750-050058    ACPD4908          Switch Fabric 8
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-050058      S/N:             ACPD4908
Assembly ID:   0x0bec          Assembly Version: 01.24
Date:          07-12-2016      Assembly Flags:   0x00
Version:       REV 24          CLEI Code:        CMUCAH0CAA
ID: QFX10008 SIB              FRU Model Number: QFX10008-SF
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b ec 01 18 52 45 56 20 32 34 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 35 38 00 00
Address 0x20: 53 2f 4e 20 41 43 50 44 34 39 30 38 00 0c 07 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 30 43 41 41 51
Address 0x50: 46 58 31 30 30 30 38 2d 53 46 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 41 45 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff d1 00 00 00 00 00 00 00 00 00 00 00 00
SIB 3          REV 24    750-050058    ACNZ0617          Switch Fabric 8

```

```

Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N: 750-050058        S/N: ACNZ0617
Assembly ID: 0x0bec     Assembly Version: 01.24
Date: 06-07-2016       Assembly Flags: 0x00
Version: REV 24         CLEI Code: CMUCAHOCAA
ID: QFX10008 SIB        FRU Model Number: QFX10008-SF
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ec 01 18 52 45 56 20 32 34 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 35 38 00 00
  Address 0x20: 53 2f 4e 20 41 43 4e 5a 30 36 31 37 00 07 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 30 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 53 46 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 45 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff d1 00 00 00 00 00 00 00 00 00 00 00 00
SIB 4      REV 24      750-050058      ACNZ0527      Switch Fabric 8
Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N: 750-050058        S/N: ACNZ0527
Assembly ID: 0x0bec     Assembly Version: 01.24
Date: 06-06-2016       Assembly Flags: 0x00
Version: REV 24         CLEI Code: CMUCAHOCAA
ID: QFX10008 SIB        FRU Model Number: QFX10008-SF
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ec 01 18 52 45 56 20 32 34 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 35 38 00 00
  Address 0x20: 53 2f 4e 20 41 43 4e 5a 30 35 32 37 00 06 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 30 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 53 46 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 45 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff d1 00 00 00 00 00 00 00 00 00 00 00 00
SIB 5      REV 23      750-050058      ACNX6980      Switch Fabric 8
Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N: 750-050058        S/N: ACNX6980
Assembly ID: 0x0bec     Assembly Version: 01.23
Date: 05-16-2016       Assembly Flags: 0x00
Version: REV 23         CLEI Code: CMUCAHOCAA
ID: QFX10008 SIB        FRU Model Number: QFX10008-SF
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ec 01 17 52 45 56 20 32 33 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 35 38 00 00
  Address 0x20: 53 2f 4e 20 41 43 4e 58 36 39 38 30 00 10 05 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 30 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 53 46 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ce 00 00 00 00 00 00 00 00 00 00 00 00

```

### show chassis hardware extensive (PTX10016 Router)

```
user@host> show chassis hardware extensive
```

```
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			DH995	JNP10016 [PTX10016]

```

Jedec Code: 0x7fb0      EEPROM Version: 0x02
                        S/N: DH995
Assembly ID: 0x0566     Assembly Version: 01.22
Date: 02-16-2017      Assembly Flags: 0x00
                        CLEI Code: CMMUN00ARA
ID: JNP10016           FRU Model Number: QFX10016-CHAS

Board Information Record:
Address 0x00: ad 01 10 00 44 aa 50 ab 1b b6 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 05 66 01 16 00 45 56 20 32 32 00 00
Address 0x10: 00 00 00 00 00 35 30 2d 30 35 36 35 35 35 00 00
Address 0x20: 44 48 39 39 35 00 00 00 00 00 00 00 00 10 02 07
Address 0x30: e1 ff ff ff ad 01 10 00 44 aa 50 ab 1b b6 ff ff
Address 0x40: ff ff ff ff 01 43 4d 4d 55 4e 30 30 41 52 41 51
Address 0x50: 46 58 31 30 30 31 36 2d 43 48 41 53 00 00 00 00
Address 0x60: 00 00 00 00 00 00 32 41 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 51 44 48 39 39 35 00 00 00 00 00 00 00

Midplane REV 22 750-056555 ACPM7810 Midplane 16
Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N: 750-056555        S/N: ACPM7810
Assembly ID: 0x0be4     Assembly Version: 01.22
Date: 02-16-2017      Assembly Flags: 0x00
Version: REV 22        CLEI Code: CMMUN00ARA
ID: QFX10016 Midplane  FRU Model Number: QFX10016-CHAS

Board Information Record:
Address 0x00: ad 01 10 00 44 aa 50 ab 1b b6 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b e4 01 16 52 45 56 20 32 32 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 35 36 35 35 35 00 00
Address 0x20: 53 2f 4e 20 41 43 50 4d 37 38 31 30 00 10 02 07
Address 0x30: e1 ff ff ff ad 01 10 00 44 aa 50 ab 1b b6 ff ff
Address 0x40: ff ff ff ff 01 43 4d 4d 55 4e 30 30 41 52 41 51
Address 0x50: 46 58 31 30 30 31 36 2d 43 48 41 53 00 00 00 00
Address 0x60: 00 00 00 00 00 00 32 41 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 51 44 48 39 39 35 00 00 00 00 00 00 00

Routing Engine 0 BUILTIN BUILTIN RE-PTX-2X00x4
vtbd0 15360 MB Virtio Block Disk
vtbd1 15360 MB Virtio Block Disk
ada0 128 MB QEMU QM00002 Virtio Block Disk
usb0 (addr 0.1) EHCI root HUB 0 Intel uhub0
usb1 (addr 0.2) product 0x0020 32 vendor 0x8087 uhub1
Routing Engine 1 BUILTIN BUILTIN RE-PTX-2X00x4
vtbd0 15360 MB Virtio Block Disk
vtbd1 15360 MB Virtio Block Disk
ada0 128 MB QEMU QM00002 Virtio Block Disk
usb0 (addr 0.1) EHCI root HUB 0 Intel uhub0
usb1 (addr 0.2) product 0x0020 32 vendor 0x8087 uhub1
CB 0 REV 03 750-068820 ACPL7238 Control Board
Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N: 750-068820        S/N: ACPL7238
Assembly ID: 0x0b9d     Assembly Version: 01.03
Date: 03-15-2017      Assembly Flags: 0x00
Version: REV 03        CLEI Code: CMUCAH3CTB
ID: Control Board      FRU Model Number: QFX10000-RE

Board Information Record:
Address 0x00: ad 01 00 10 e8 b6 c2 46 aa 29 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 9d 01 03 52 45 56 20 30 33 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 36 38 38 32 30 00 00
Address 0x20: 53 2f 4e 20 41 43 50 4c 37 32 33 38 00 0f 03 07
Address 0x30: e1 ff ff ff ad 01 00 10 e8 b6 c2 46 aa 29 ff ff

```

```

Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 33 43 54 42 51
Address 0x50: 46 58 31 30 30 30 30 2d 52 45 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 42 41 00 ff ff ff ff ff ff
Address 0x70: ff ff ff db ff ff ff ff ff ff ff ff ff ff ff
CB 1          REV 03    750-068820    ACPL7298          Control Board
Jedec Code:   0x7fb0          EEPROM Version:   0x02
P/N:         750-068820      S/N:         ACPL7298
Assembly ID: 0x0b9d          Assembly Version: 01.03
Date:        03-15-2017      Assembly Flags: 0x00
Version:     REV 03          CLEI Code:    CMUCAH3CTB
ID: Control Board          FRU Model Number: QFX10000-RE
Board Information Record:
Address 0x00: ad 01 00 10 e8 b6 c2 46 99 b9 ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 9d 01 03 52 45 56 20 30 33 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 36 38 38 32 30 00 00
Address 0x20: 53 2f 4e 20 41 43 50 4c 37 32 39 38 00 0f 03 07
Address 0x30: e1 ff ff ff ad 01 00 10 e8 b6 c2 46 99 b9 ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 33 43 54 42 51
Address 0x50: 46 58 31 30 30 30 30 2d 52 45 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 42 41 00 ff ff ff ff ff ff
Address 0x70: ff ff ff db ff ff ff ff ff ff ff ff ff ff ff
FPC 1          REV 36    750-077140    ACNP4590          LC1102 - 12C / 36Q /
144X
Jedec Code:   0x7fb0          EEPROM Version:   0x02
P/N:         750-077140      S/N:         ACNP4590
Assembly ID: 0x0be7          Assembly Version: 01.36
Date:        10-17-2016      Assembly Flags: 0x00
Version:     REV 36          CLEI Code:    CMUIAM9BAA
ID: ULC-36Q-12Q28          FRU Model Number: QFX10000-36Q
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b e7 01 24 52 45 56 20 33 36 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 37 37 31 34 30 00 00
Address 0x20: 53 2f 4e 20 41 43 4e 50 34 35 39 30 00 11 0a 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4d 39 42 41 41 51
Address 0x50: 46 58 31 30 30 30 30 2d 33 36 51 00 00 00 00
Address 0x60: 00 00 00 00 00 00 42 45 00 ff ff ff ff ff ff
Address 0x70: ff ff ff fe ff ff ff ff ff ff ff ff ff ff ff
CPU          BUILTIN      BUILTIN      FPC CPU
Jedec Code:   0x7fb0          EEPROM Version:   0x02
P/N:         BUILTIN          S/N:         BUILTIN
Assembly ID: 0xf020          Assembly Version: 02.17
Date:        04-19-2012      Assembly Flags: 0x00
Board Information Record:
Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff f0 20 02 11 00 40 36 bd 09 40 25 32
Address 0x10: 09 e8 ba ff 42 55 49 4c 54 49 4e 00 00 40 36 bd
Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff
Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00
PIC 0          BUILTIN      BUILTIN          12x100GE/36x40GE/144x10GE

Jedec Code:   0x7fb0          EEPROM Version:   0x02
P/N:         BUILTIN          S/N:         BUILTIN

```

```

Assembly ID: 0xf050          Assembly Version: 02.17
Date: 04-19-2012           Assembly Flags: 0x00
Board Information Record:
Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
Xcvr 0      REV 01      740-054053      QF3600AV      QSPF+-4X10G-SR
Xcvr 35     REV 01      740-061405      1ACQ110507K     QSPF-100GBASE-SR4
FPC 3       REV 07      750-071975      CAHA2224        LC1102 - 12C / 36Q /
144X
Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N: 750-071975            S/N: CAHA2224
Assembly ID: 0x0be7         Assembly Version: 01.07
Date: 01-17-2017           Assembly Flags: 0x00
Version: REV 07             CLEI Code: PROTOXCLEI
ID: ULC-36Q-12Q28          FRU Model Number: PROTO-ASSEMBLY
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b e7 01 07 52 45 56 20 30 37 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 37 31 39 37 35 00 00
Address 0x20: 53 2f 4e 20 43 41 48 41 32 32 32 34 00 11 01 07
Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
CPU          BUILTIN      BUILTIN      FPC CPU
Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N: BUILTIN                S/N: BUILTIN
Assembly ID: 0xf020         Assembly Version: 02.17
Date: 04-19-2012           Assembly Flags: 0x00
Board Information Record:
Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff f0 20 02 11 00 60 b6 be 09 c0 cf 38
Address 0x10: 09 e8 ba ff 42 55 49 4c 54 49 4e 00 00 60 b6 be
Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
PIC 0          BUILTIN      BUILTIN      12x100GE/36x40GE/144x10GE

Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N: BUILTIN                S/N: BUILTIN
Assembly ID: 0xf050         Assembly Version: 02.17
Date: 04-19-2012           Assembly Flags: 0x00
Board Information Record:
Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20

```

```

Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
Xcvr 0          REV 01    740-054053    QG1505YM          QSFP+-4X10G-SR
Xcvr 11         NON-JNPR    GDA2017459        QSFP-100GBASE-LR4
Xcvr 35         NON-JNPR    GDF2008750        QSFP-100GBASE-LR4
FPC 5           REV 13    750-068822    ACPD6501          LC1102 - 12C / 36Q /
144X
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-068822      S/N:              ACPD6501
Assembly ID:   0x0be7          Assembly Version:  01.13
Date:          06-29-2017      Assembly Flags:    0x00
Version:       REV 13         CLEI Code:        CMUIAM9BAC
ID: ULC-36Q-12Q28            FRU Model Number: QFX10000-36Q
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b e7 01 0d 52 45 56 20 31 33 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 36 38 38 32 32 00 00
Address 0x20: 53 2f 4e 20 41 43 50 44 36 35 30 31 00 1d 06 07
Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4d 39 42 41 43 51
Address 0x50: 46 58 31 30 30 30 30 2d 33 36 51 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 43 41 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff fd ff ff ff ff ff ff ff ff ff ff ff ff
CPU          BUILTIN      BUILTIN      FPC CPU
Jedec Code:   0x7fb0          EEPROM Version:    0x02
P/N:          BUILTIN        S/N:              BUILTIN
Assembly ID:  0xf020          Assembly Version:  02.17
Date:         04-19-2012      Assembly Flags:    0x00
Board Information Record:
Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff f0 20 02 11 00 c0 c6 bc 09 c0 ca 40
Address 0x10: 09 e8 ba ff 42 55 49 4c 54 49 4e 00 00 c0 c6 bc
Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
PIC 0          BUILTIN      BUILTIN      12x100GE/36x40GE/144x10GE

Jedec Code:   0x7fb0          EEPROM Version:    0x02
P/N:          BUILTIN        S/N:              BUILTIN
Assembly ID:  0xf050          Assembly Version:  02.17
Date:         04-19-2012      Assembly Flags:    0x00
Board Information Record:
Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55

```



```

Xcvr 1      REV 01  740-058734  1ECQ11381LA  QSF+100GBASE-SR4
Xcvr 2      REV 01  740-043308  UWH141S     QSF+-40G-LR4
Xcvr 3      REV 01  740-043308  UWE2CG9     QSF+-40G-LR4
FPC 6       REV 37  750-077140  ACNS2793    LC1102 - 12C / 36Q /
144X
Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N:         750-077140 S/N:         ACNS2793
Assembly ID: 0x0be7     Assembly Version: 01.37
Date:        03-25-2017 Assembly Flags: 0x00
Version:     REV 37     CLEI Code:    CMUIAM9BAA
ID: ULC-36Q-12Q28      FRU Model Number: QFX10000-36Q
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b e7 01 25 52 45 56 20 33 37 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 37 37 31 34 30 00 00
Address 0x20: 53 2f 4e 20 41 43 4e 53 32 37 39 33 00 19 03 07
Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4d 39 42 41 41 51
Address 0x50: 46 58 31 30 30 30 30 2d 33 36 51 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 42 45 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff fe ff ff ff ff ff ff ff ff ff ff ff ff
CPU          BUILTIN    BUILTIN    FPC CPU
Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N:         BUILTIN    S/N:         BUILTIN
Assembly ID: 0xf020     Assembly Version: 02.17
Date:        04-19-2012 Assembly Flags: 0x00
Board Information Record:
Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff f0 20 02 11 00 a0 e6 d4 09 00 bd 43
Address 0x10: 09 e8 ba ff 42 55 49 4c 54 49 4e 00 00 a0 e6 d4
Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
PIC 0          BUILTIN    BUILTIN    12x100GE/36x40GE/144x10GE

Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N:         BUILTIN    S/N:         BUILTIN
Assembly ID: 0xf050     Assembly Version: 02.17
Date:        04-19-2012 Assembly Flags: 0x00
Board Information Record:
Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
Xcvr 0      REV 01  740-032986  QH0400VH     QSF+-40G-SR4
Xcvr 1      REV 01  740-032986  QH0400VM     QSF+-40G-SR4
Xcvr 35     REV 01  740-058734  1ECQ11390ZB  QSF+100GBASE-SR4
FPC 8       REV 36  750-077140  ACNP4625     LC1102 - 12C / 36Q /
144X
Jedec Code: 0x7fb0      EEPROM Version: 0x02

```

```

P/N:          750-077140      S/N:          ACNP4625
Assembly ID:  0x0be7         Assembly Version: 01.36
Date:         10-17-2016     Assembly Flags:  0x00
Version:      REV 36         CLEI Code:      CMUIAM9BAA
ID: ULC-36Q-12Q28          FRU Model Number:  QFX10000-36Q

```

## Board Information Record:

```
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```

## I2C Hex Data:

```

Address 0x00: 7f b0 02 ff 0b e7 01 24 52 45 56 20 33 36 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 37 37 31 34 30 00 00
Address 0x20: 53 2f 4e 20 41 43 4e 50 34 36 32 35 00 11 0a 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4d 39 42 41 41 51
Address 0x50: 46 58 31 30 30 30 30 2d 33 36 51 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 42 45 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff fe ff ff ff ff ff ff ff ff ff ff ff

```

```
CPU          BUILTIN      BUILTIN      FPC CPU
```

```

Jedec Code:  0x7fb0         EEPROM Version:  0x02
P/N:         BUILTIN        S/N:            BUILTIN
Assembly ID: 0xf020         Assembly Version: 02.17
Date:        04-19-2012     Assembly Flags:  0x00

```

## Board Information Record:

```
Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
```

## I2C Hex Data:

```

Address 0x00: 7f b0 02 ff f0 20 02 11 00 c0 e6 d4 09 40 59 4a
Address 0x10: 09 e8 ba ff 42 55 49 4c 54 49 4e 00 00 c0 e6 d4
Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
PIC 0          BUILTIN      BUILTIN      12x100GE/36x40GE/144x10GE

```

```

Jedec Code:  0x7fb0         EEPROM Version:  0x02
P/N:         BUILTIN        S/N:            BUILTIN
Assembly ID: 0xf050         Assembly Version: 02.17
Date:        04-19-2012     Assembly Flags:  0x00

```

## Board Information Record:

```
Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
```

## I2C Hex Data:

```

Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
Xcvr 1      REV 01      740-058732      1AMQA14206D      QSFP-100GBASE-LR4
Xcvr 10     REV 01      740-032986      QF4301KB        QSFP+-40G-SR4
Xcvr 24     REV 01      740-054050      INFJA0492244    QSFP+-4X10G-LR
FPC 9       REV 35      750-071976      ACPD3055        LC1101 - 30C / 30Q / 96X

```

```

Jedec Code:  0x7fb0         EEPROM Version:  0x02
P/N:         750-071976     S/N:            ACPD3055
Assembly ID: 0x0be8         Assembly Version: 01.35
Date:        05-26-2016     Assembly Flags:  0x00
Version:      REV 35         CLEI Code:      CMUIANABAA
ID: ULC-30Q28          FRU Model Number: JNP10K-LC1101
Board Information Record:

```

Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

I2C Hex Data:

Address 0x00: 7f b0 02 ff 0b e8 01 23 52 45 56 20 33 35 00 00

Address 0x10: 00 00 00 00 37 35 30 2d 30 37 31 39 37 36 00 00

Address 0x20: 53 2f 4e 20 41 43 50 44 33 30 35 35 00 1a 05 07

Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4e 41 42 41 41 4a

Address 0x50: 4e 50 31 30 4b 2d 4c 43 31 31 30 31 00 00 00 00

Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff

Address 0x70: ff ff ff ef ff ff ff ff ff ff ff ff ff ff ff ff

CPU BUILTIN BUILTIN FPC CPU

Jedec Code: 0x7fb0 EEPROM Version: 0x02

P/N: BUILTIN S/N: BUILTIN

Assembly ID: 0xf020 Assembly Version: 02.17

Date: 04-19-2012 Assembly Flags: 0x00

Board Information Record:

Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff

I2C Hex Data:

Address 0x00: 7f b0 02 ff f0 20 02 11 00 20 e7 d4 09 00 a6 4d

Address 0x10: 09 e8 ba ff 42 55 49 4c 54 49 4e 00 00 20 e7 d4

Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07

Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff

Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00

Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff

Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00

PIC 0 BUILTIN BUILTIN 30x100GE/30x40GE/96x10GE

Jedec Code: 0x7fb0 EEPROM Version: 0x02

P/N: BUILTIN S/N: BUILTIN

Assembly ID: 0xf050 Assembly Version: 02.17

Date: 04-19-2012 Assembly Flags: 0x00

Board Information Record:

Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff

I2C Hex Data:

Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45

Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20

Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07

Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff

Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00

Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff

Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55

Xcvr 0 NON-JNPR INGBT7970007 QSFP-100GBASE-LR4

Xcvr 1 NON-JNPR UWQ24D9 QSFP-100GBASE-LR4

Xcvr 2 NON-JNPR INGBT7970011 QSFP-100GBASE-LR4

Xcvr 3 NON-JNPR UX60AF1 QSFP-100G-CWDM4

Xcvr 4 NON-JNPR UX408JJ QSFP-100GBASE-LR4

Xcvr 11 REV 01 740-058734 1ECQ113835F QSFP-100GBASE-SR4

Xcvr 18 NON-JNPR Q7496 QSFP-100G-CWDM4

Xcvr 29 REV 01 740-058734 1ECQ11380LZ QSFP-100GBASE-SR4

Power Supply 0 REV 02 740-049388 1EDL625039E Power Supply AC

Jedec Code: 0x7fb0 EEPROM Version: 0x02

P/N: 740-049388 S/N: 1EDL625039E

Assembly ID: 0x0483 Assembly Version: 01.02

Date: 06-19-2016 Assembly Flags: 0x00

Version: REV 02 CLEI Code: CMUPADNBAA

ID: QFX10000 AC FRU Model Number: QFX10000-PWR-AC

Board Information Record:

Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

I2C Hex Data:

```

Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
Address 0x20: 31 45 44 4c 36 32 35 30 33 39 45 00 00 13 06 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 1  REV 02  740-049388  1EDL62503AD  Power Supply AC
Jedec Code: 0x7fb0  EEPROM Version: 0x02
P/N: 740-049388  S/N: 1EDL62503AD
Assembly ID: 0x0483  Assembly Version: 01.02
Date: 06-19-2016  Assembly Flags: 0x00
Version: REV 02  CLEI Code: CMUPADNBAA
ID: QFX10000 AC  FRU Model Number: QFX10000-PWR-AC
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
Address 0x20: 31 45 44 4c 36 32 35 30 33 41 44 00 00 13 06 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 2  REV 02  740-049388  1EDL625039P  Power Supply AC
Jedec Code: 0x7fb0  EEPROM Version: 0x02
P/N: 740-049388  S/N: 1EDL625039P
Assembly ID: 0x0483  Assembly Version: 01.02
Date: 06-19-2016  Assembly Flags: 0x00
Version: REV 02  CLEI Code: CMUPADNBAA
ID: QFX10000 AC  FRU Model Number: QFX10000-PWR-AC
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
Address 0x20: 31 45 44 4c 36 32 35 30 33 39 50 00 00 13 06 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 3  REV 02  740-049388  1EDL702004E  Power Supply AC
Jedec Code: 0x7fb0  EEPROM Version: 0x02
P/N: 740-049388  S/N: 1EDL702004E
Assembly ID: 0x0483  Assembly Version: 01.02
Date: 01-18-2017  Assembly Flags: 0x00
Version: REV 02  CLEI Code: CMUPADNBAA
ID: QFX10000 AC  FRU Model Number: QFX10000-PWR-AC
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
Address 0x20: 31 45 44 4c 37 30 32 30 30 34 45 00 00 12 01 07
Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff

```

```

Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff
Power Supply 4  REV 02  740-049388  1EDL625039D  Power Supply AC
Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N: 740-049388      S/N: 1EDL625039D
Assembly ID: 0x0483    Assembly Version: 01.02
Date: 06-19-2016      Assembly Flags: 0x00
Version: REV 02      CLEI Code: CMUPADNBAA
ID: QFX10000 AC      FRU Model Number: QFX10000-PWR-AC
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
Address 0x20: 31 45 44 4c 36 32 35 30 33 39 44 00 00 13 06 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff
Power Supply 5  REV 02  740-049388  1EDL63706JD  Power Supply AC
Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N: 740-049388      S/N: 1EDL63706JD
Assembly ID: 0x0483    Assembly Version: 01.02
Date: 09-13-2016      Assembly Flags: 0x00
Version: REV 02      CLEI Code: CMUPADNBAA
ID: QFX10000 AC      FRU Model Number: QFX10000-PWR-AC
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
Address 0x20: 31 45 44 4c 36 33 37 30 36 4a 44 00 00 0d 09 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff
Power Supply 6  REV 02  740-049388  1EDL63706JH  Power Supply AC
Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N: 740-049388      S/N: 1EDL63706JH
Assembly ID: 0x0483    Assembly Version: 01.02
Date: 09-13-2016      Assembly Flags: 0x00
Version: REV 02      CLEI Code: CMUPADNBAA
ID: QFX10000 AC      FRU Model Number: QFX10000-PWR-AC
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
Address 0x20: 31 45 44 4c 36 33 37 30 36 4a 48 00 00 0d 09 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff
FTC 0          REV 10  750-050309  ACPM2918  Fan Controller 16
Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N: 750-050309      S/N: ACPM2918
Assembly ID: 0x0b9c    Assembly Version: 01.10
Date: 01-13-2017      Assembly Flags: 0x00
Version: REV 10      CLEI Code: CMUCAH5CAA

```

```

ID: QFX10016 FTC                      FRU Model Number: QFX10016-FAN-CTRL
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 9c 01 0a 52 45 56 20 31 30 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 33 30 39 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 4d 32 39 31 38 00 0d 01 07
  Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 35 43 41 41 51
  Address 0x50: 46 58 31 30 30 31 36 2d 46 41 4e 2d 43 54 52 4c
  Address 0x60: 00 00 00 00 00 00 41 41 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 6f ff ff ff ff ff ff ff ff ff ff ff ff
Fan Tray 1          REV 10    750-050309    ACPE8185          Fan Controller 16
Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N: 750-050309          S/N: ACPE8185
Assembly ID: 0x0b9c        Assembly Version: 01.10
Date: 12-22-2016          Assembly Flags: 0x00
Version: REV 10          CLEI Code: CMUCAH5CAA
ID: QFX10016 FTC          FRU Model Number: QFX10016-FAN-CTRL
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 9c 01 0a 52 45 56 20 31 30 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 33 30 39 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 45 38 31 38 35 00 16 0c 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 35 43 41 41 51
  Address 0x50: 46 58 31 30 30 31 36 2d 46 41 4e 2d 43 54 52 4c
  Address 0x60: 00 00 00 00 00 00 41 41 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 6f ff ff ff ff ff ff ff ff ff ff ff ff
Fan Tray 0          REV 10    760-077141    ACPV7288          Fan Tray 16
Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N: 760-077141          S/N: ACPV7288
Assembly ID: 0x0bf1        Assembly Version: 01.10
Date: 06-07-2017          Assembly Flags: 0x00
Version: REV 10          CLEI Code: CMUCAH4CAA
ID: QFX10016 FHB          FRU Model Number: JNP10016-FAN
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b f1 01 0a 52 45 56 20 31 30 00 00
  Address 0x10: 00 00 00 00 37 36 30 2d 30 37 37 31 34 31 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 56 37 32 38 38 00 07 06 07
  Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 34 43 41 41 4a
  Address 0x50: 4e 50 31 30 30 31 36 2d 46 41 4e 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 0d ff ff ff ff ff ff ff ff ff ff ff ff
Fan Tray 1          REV 10    760-057901    ACPL0546          Fan Tray 16
Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N: 760-057901          S/N: ACPL0546
Assembly ID: 0x0bf1        Assembly Version: 01.10
Date: 02-14-2017          Assembly Flags: 0x00
Version: REV 10          CLEI Code: CMUCAH4CAA
ID: QFX10016 FHB          FRU Model Number: QFX10016-FAN
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b f1 01 0a 52 45 56 20 31 30 00 00
  Address 0x10: 00 00 00 00 37 36 30 2d 30 35 37 39 30 31 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 4c 30 35 34 36 00 0e 02 07

```

```

Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 34 43 41 41 51
Address 0x50: 46 58 31 30 30 31 36 2d 46 41 4e 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 0d ff ff ff ff ff ff ff ff ff ff ff ff
SIB 0          REV 15    750-058270    ACPM2804          Switch Fabric 16
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-058270      S/N:             ACPM2804
Assembly ID:   0x0bed          Assembly Version: 01.15
Date:          12-21-2016      Assembly Flags:   0x00
Version:       REV 15          CLEI Code:        CMUCAH6CAA
ID: QFX10016 SIB              FRU Model Number: QFX10016-SF
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b ed 01 0f 52 45 56 20 31 35 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 35 38 32 37 30 00 00
Address 0x20: 53 2f 4e 20 41 43 50 4d 32 38 30 34 00 15 0c 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 36 43 41 41 51
Address 0x50: 46 58 31 30 30 31 36 2d 53 46 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff d3 00 00 00 00 00 00 00 00 00 00 00 00
SIB 1          REV 15    750-058270    ACPM2808          Switch Fabric 16
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-058270      S/N:             ACPM2808
Assembly ID:   0x0bed          Assembly Version: 01.15
Date:          12-21-2016      Assembly Flags:   0x00
Version:       REV 15          CLEI Code:        CMUCAH6CAA
ID: QFX10016 SIB              FRU Model Number: QFX10016-SF
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b ed 01 0f 52 45 56 20 31 35 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 35 38 32 37 30 00 00
Address 0x20: 53 2f 4e 20 41 43 50 4d 32 38 30 38 00 15 0c 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 36 43 41 41 51
Address 0x50: 46 58 31 30 30 31 36 2d 53 46 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff d3 00 00 00 00 00 00 00 00 00 00 00 00
SIB 2          REV 15    750-058270    ACPL4450          Switch Fabric 16
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-058270      S/N:             ACPL4450
Assembly ID:   0x0bed          Assembly Version: 01.15
Date:          02-17-2017      Assembly Flags:   0x00
Version:       REV 15          CLEI Code:        CMUCAH6CAA
ID: QFX10016 SIB              FRU Model Number: QFX10016-SF
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b ed 01 0f 52 45 56 20 31 35 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 35 38 32 37 30 00 00
Address 0x20: 53 2f 4e 20 41 43 50 4c 34 34 35 30 00 11 02 07
Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 36 43 41 41 51
Address 0x50: 46 58 31 30 30 31 36 2d 53 46 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff d3 00 00 00 00 00 00 00 00 00 00 00 00
SIB 3          REV 15    750-058270    ACPJ9834          Switch Fabric 16
Jedec Code:    0x7fb0          EEPROM Version:    0x02

```

```

P/N:          750-058270      S/N:          ACPJ9834
Assembly ID:  0x0bed          Assembly Version: 01.15
Date:         12-17-2016     Assembly Flags:  0x00
Version:      REV 15         CLEI Code:       CMUCAH6CAA
ID: QFX10016 SIB            FRU Model Number: QFX10016-SF
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b ed 01 0f 52 45 56 20 31 35 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 35 38 32 37 30 00 00
Address 0x20: 53 2f 4e 20 41 43 50 4a 39 38 33 34 00 11 0c 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 36 43 41 41 51
Address 0x50: 46 58 31 30 30 31 36 2d 53 46 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff d3 00 00 00 00 00 00 00 00 00 00 00 00

SIB 4          REV 15      750-058270      ACPM2814      Switch Fabric 16
Jedec Code:    0x7fb0      EEPROM Version: 0x02
P/N:          750-058270   S/N:          ACPM2814
Assembly ID:   0x0bed      Assembly Version: 01.15
Date:         12-21-2016  Assembly Flags:  0x00
Version:      REV 15      CLEI Code:    CMUCAH6CAA
ID: QFX10016 SIB          FRU Model Number: QFX10016-SF
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b ed 01 0f 52 45 56 20 31 35 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 35 38 32 37 30 00 00
Address 0x20: 53 2f 4e 20 41 43 50 4d 32 38 31 34 00 15 0c 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 36 43 41 41 51
Address 0x50: 46 58 31 30 30 31 36 2d 53 46 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff d3 00 00 00 00 00 00 00 00 00 00 00 00

SIB 5          REV 15      750-058270      ACPL4277      Switch Fabric 16
Jedec Code:    0x7fb0      EEPROM Version: 0x02
P/N:          750-058270   S/N:          ACPL4277
Assembly ID:   0x0bed      Assembly Version: 01.15
Date:         02-17-2017  Assembly Flags:  0x00
Version:      REV 15      CLEI Code:    CMUCAH6CAA
ID: QFX10016 SIB          FRU Model Number: QFX10016-SF
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b ed 01 0f 52 45 56 20 31 35 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 35 38 32 37 30 00 00
Address 0x20: 53 2f 4e 20 41 43 50 4c 34 32 37 37 00 11 02 07
Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 36 43 41 41 51
Address 0x50: 46 58 31 30 30 31 36 2d 53 46 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff d3 00 00 00 00 00 00 00 00 00 00 00 00

FPD Board      REV 07      711-054687      ACPL1407      Front Panel Display
Jedec Code:    0x7fb0      EEPROM Version: 0x01
P/N:          711-054687   S/N:          ACPL1407
Assembly ID:   0x0bf2      Assembly Version: 01.07
Date:         02-12-2017  Assembly Flags:  0x00
Version:      REV 07
ID: QFX10000 FPD
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

```



## I2C Hex Data:

```

Address 0x00: 7f b0 01 ff 0b f2 01 07 52 45 56 20 30 37 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 35 34 36 38 37 00 00
Address 0x20: 53 2f 4e 20 41 43 50 4c 31 34 30 37 00 0c 02 07
Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

```

## show chassis hardware models (MX104 Router)

```
user@host> show chassis hardware models
```

```
Hardware inventory:
```

Item	Version	Part number	Serial number	FRU model number
Midplane	REV 20	750-044219	CAAS5849	PROTO-ASSEMBLY
PEM 0	REV 01	740-045932	1H072400065	
Routing Engine 0	REV 16	750-044228	CAAR5915	PROTO-ASSEMBLY
AFEB 0		BUILTIN	BUILTIN	
FPC 0		BUILTIN	BUILTIN	
FPC 1		BUILTIN	BUILTIN	
MIC 0	REV 01	750-046905	CAAK7103	MIC-3D-20GE-SFP-EH
FPC 2		BUILTIN	BUILTIN	
Fan Tray	REV 02	711-049570	CAAX6538	PROTO-ASSEMBLY

## show chassis hardware models (PTX10008 Router)

```
user@host> show chassis hardware models
```

```
Hardware inventory:
```

Item	Version	Part number	Serial number	FRU model number
Midplane	REV 27	750-054097	ACPD4307	QFX10008-CHAS
CB 0	REV 02	750-068820	ACNZ4440	QFX10000-RE
CB 1	REV 02	750-068820	ACNZ8284	QFX10000-RE
FPC 0	REV 36	750-051354	ACNP4679	QFX10000-36Q
PIC 0		BUILTIN	BUILTIN	
FPC 1	REV 33	750-051354	ACNX8831	QFX10000-36Q
PIC 0		BUILTIN	BUILTIN	
FPC 2	REV 32	750-051357	ACPB0341	QFX10000-30C
PIC 0		BUILTIN	BUILTIN	
FPC 3	REV 35	750-051357	ACPD2186	QFX10000-30C
PIC 0		BUILTIN	BUILTIN	
FPC 5	REV 08	750-068822	ACPF0057	QFX10000-36Q
PIC 0		BUILTIN	BUILTIN	
FPC 6	REV 08	750-068822	ACPE9951	QFX10000-36Q
PIC 0		BUILTIN	BUILTIN	
FPD Board	REV 07	711-054687	ACPC7142	
Power Supply 0	REV 02	740-049388	1EDL62102N9	QFX10000-PWR-AC
Power Supply 1	REV 02	740-049388	1EDL60300KX	QFX10000-PWR-AC
Power Supply 2	REV 02	740-049388	1EDL60300DL	QFX10000-PWR-AC
Power Supply 3	REV 02	740-049388	1EDL61701BT	QFX10000-PWR-AC
Power Supply 4	REV 02	740-049388	1EDL62102P7	QFX10000-PWR-AC
Power Supply 5	REV 02	740-049388	1EDL62102PP	QFX10000-PWR-AC
FTC 0	REV 14	750-050108	ACPE4038	QFX10008-FAN-CTRL
FTC 1	REV 14	750-050108	ACPE4032	QFX10008-FAN-CTRL
Fan Tray 0	REV 09	760-054372	ACPD6799	QFX10008-FAN
Fan Tray 1	REV 09	760-054372	ACNZ3584	QFX10008-FAN
SIB 0	REV 24	750-050058	ACPD4587	QFX10008-SF
SIB 1	REV 24	750-050058	ACNZ0635	QFX10008-SF
SIB 2	REV 24	750-050058	ACPD4908	QFX10008-SF
SIB 3	REV 24	750-050058	ACNZ0617	QFX10008-SF

SIB 4	REV 24	750-050058	ACNZ0527	QFX10008-SF
SIB 5	REV 23	750-050058	ACNX6980	QFX10008-SF

### show chassis hardware models (PTX10016 Router)

```

user@host> show chassis hardware models
Hardware inventory:

```

Item	Version	Part number	Serial number	FRU model number
Midplane	REV 24	750-077138	ACPR5157	JNP10016
CB 0	REV 04	711-065897	CAHA9983	PROTO-ASSEMBLY
CB 1	REV 05	711-065897	CAJD3802	PROTO-ASSEMBLY
FPC 2				
PIC 0		BUILTIN	BUILTIN	
FPC 4	REV 35	750-071976	ACPD2168	JNP10K-LC1101
PIC 0		BUILTIN	BUILTIN	
FPC 5	REV 13	750-068822	ACPA0336	JNP10K-LC1101
PIC 0		BUILTIN	BUILTIN	
FPC 6	REV 41	750-071976	ACPF0695	JNP10K-LC1101
PIC 0		BUILTIN	BUILTIN	
FPC 7	REV 35	750-071976	ACPD2139	JNP10K-LC1101
PIC 0		BUILTIN	BUILTIN	
FPC 8	REV 35	750-071976	ACPD2142	JNP10K-LC1101
PIC 0		BUILTIN	BUILTIN	
FPC 9	REV 41	750-071976	ACPM5461	JNP10K-LC1101
PIC 0		BUILTIN	BUILTIN	
FPC 10	REV 35	750-071976	ACNS6795	JNP10K-LC1101
PIC 0		BUILTIN	BUILTIN	
FPC 11	REV 35	750-071976	ACPD1831	JNP10K-LC1101
PIC 0		BUILTIN	BUILTIN	
FPC 13	REV 41	750-071976	ACPS2075	JNP10K-LC1101
PIC 0		BUILTIN	BUILTIN	
FPC 15	REV 37	750-071976	ACPL7163	JNP10K-LC1101
PIC 0		BUILTIN	BUILTIN	
Power Supply 0	REV 01	740-073147	1EDM6171155	JNP10K-PWR-DC
Power Supply 1	REV 01	740-073147	1EDM6281575	JNP10K-PWR-DC
Power Supply 2	REV 01	740-073147	1EDM6171044	JNP10K-PWR-DC
Power Supply 3	REV 01	740-073147	1EDM6281244	JNP10K-PWR-DC
Power Supply 4	REV 01	740-073147	1EDM6282093	JNP10K-PWR-DC
Power Supply 5	REV 01	740-073147	1EDM6281413	JNP10K-PWR-DC
Power Supply 6	REV 01	740-073147	1EDM6171071	JNP10K-PWR-DC
Power Supply 7	REV 01	740-073147	1EDM6170709	JNP10K-PWR-DC
Power Supply 8	REV 01	740-073147	1EDM6171169	JNP10K-PWR-DC
Power Supply 9	REV 01	740-073147	1EDM6170754	JNP10K-PWR-DC
Fan Tray 0				QFX5100-FAN-AFO
Fan Tray 1				QFX5100-FAN-AFO
SIB 0	REV 15	750-077140	ACPV3933	JNP10016-SF
SIB 1	REV 15	750-077140	ACPV3938	JNP10016-SF
SIB 2	REV 15	750-077140	ACPV3974	JNP10016-SF
SIB 3	REV 15	750-077140	ACPV3879	JNP10016-SF
SIB 4	REV 15	750-077140	ACPV3964	JNP10016-SF
SIB 5	REV 15	750-077140	ACPV3981	JNP10016-SF
FPD Board	REV 07	711-054687	ACPS8855	

### show chassis hardware clei-models (MX104 Router)

```

user@host> show chassis hardware clei-models
Hardware inventory:

```

Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 20	750-044219	PROTOXCLEI	PROTO-ASSEMBLY
PEM 0	REV 01	740-045932		

Routing Engine 0	REV 16	750-044228	PROTOXCLEI	PROTO-ASSEMBLY
AFEB 0		BUILTIN		
FPC 0		BUILTIN		
FPC 1		BUILTIN		
MIC 0	REV 01	750-046905	PROTOXCLEI	MIC-3D-20GE-SFP-EH
FPC 2		BUILTIN		
Fan Tray	REV 02	711-049570	CAAX6538	PROTO-ASSEMBLY

### show chassis hardware (MX240 Router)

```
user@host> show chassis hardware
```

```
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			JN10C7F7EAFC	MX240
Midplane	REV 01	710-021041	TR1502	MX240 Backplane
FPM Board	REV 01	710-017254	KD4017	Front Panel Display
PEM 0	Rev 02	740-017330	000332	PS 1.2-1.7kW; 100-240V
AC in				
PEM 1	Rev 02	740-017330	000226	PS 1.2-1.7kW; 100-240V
AC in				
Routing Engine 0	REV 06	740-013063	1000703522	RE-S-2000
Routing Engine 1	REV 06	740-015113	1000687625	RE-S-1300
CB 0	REV 07	710-013385	KC9057	MX SCB
CB 1	REV 05	710-013385	JY4760	MX SCB
FPC 1	REV 01	750-021679	KC7340	DPCE 40x 1GE R
CPU	REV 06	710-013713	KD4078	DPC PMB
PIC 0		BUILTIN	BUILTIN	10x 1GE(LAN)
Xcvr 0	REV 01	740-011613	P9F18ME	SFP-SX
PIC 1		BUILTIN	BUILTIN	10x 1GE(LAN)
PIC 2		BUILTIN	BUILTIN	10x 1GE(LAN)
PIC 3		BUILTIN	BUILTIN	10x 1GE(LAN)
FPC 2	REV 04	710-016669	JS4529	DPCE 40x 1GE R EQ
CPU	REV 06	710-013713	KB3969	DPC PMB
PIC 0		BUILTIN	BUILTIN	10x 1GE(LAN) EQ
Xcvr 0	REV 01	740-011613	PBG3Y79	SFP-SX
Xcvr 1	REV 01	740-011613	PBG3XU8	SFP-SX
Xcvr 2	REV 01	740-011613	PBG3YG6	SFP-SX
Xcvr 3	REV 01	740-011613	PBG3XUG	SFP-SX
Xcvr 4	REV 01	740-011613	PBG3XTJ	SFP-SX
PIC 1		BUILTIN	BUILTIN	10x 1GE(LAN) EQ
Xcvr 0	REV 01	740-011613	PBG3ZUM	SFP-SX
Xcvr 1	REV 01	740-011613	PBG3Y5H	SFP-SX
Xcvr 2	REV 01	740-011613	PBG3UZT	SFP-SX
Xcvr 3	REV 01	740-011613	PBG3US1	SFP-SX
PIC 2		BUILTIN	BUILTIN	10x 1GE(LAN) EQ
Xcvr 0	REV 01	740-011613	PBG3YG7	SFP-SX
Xcvr 1	REV 01	740-011613	PBG3XZ9	SFP-SX
Xcvr 2	REV 01	740-011613	PBG3XTY	SFP-SX
Xcvr 3	REV 01	740-011613	PBG3UZG	SFP-SX
PIC 3		BUILTIN	BUILTIN	10x 1GE(LAN) EQ
Xcvr 0	REV 01	740-011613	PBG3Y8W	SFP-SX
Xcvr 1	REV 01	740-011613	PBG3YVX	SFP-SX
Xcvr 2	REV 01	740-011613	PBG3YB3	SFP-SX
Xcvr 3	REV 01	740-011613	PBG43VQ	SFP-SX
Fan Tray 0	REV 01	710-021113	JS4642	MX240 Fan Tray

### show chassis hardware detail (MX 240 Router with Routing Engine Displaying DIMM Information)

```
user@host> show chassis hardware detail
```

Item	Version	Part number	Serial number	Description
Chassis			JN11279B4AFC	MX240 Backplane
Midplane	REV 07	760-021404	TS2474	MX240 Backplane
FPM Board	REV 03	760-021392	XC2643	Front Panel Display
PEM 0	Rev 03	740-017343	QCS0908A068	DC Power Entry Module
Routing Engine 0	REV 01	740-031117	AARCH00	RE-S-1800x4
ad0 3764 MB	STEC M2+	CF 9.0.2	STM2Q3209239145303	Removable Compact Flash
ad1 28626 MB	WDC SSD-F0030S-5000		C933Z036237215548S00	Compact Flash
usb0 (addr 1)	EHCI root hub 0		Intel	uhub0
usb0 (addr 2)	product 0x0020 32		vendor 0x8087	uhub1
DIMM 0	VL31B5263E-F8S DIE REV-0	PCB REV-0		MFR ID-ce80
DIMM 1	VL31B5263E-F8S DIE REV-0	PCB REV-0		MFR ID-ce80
DIMM 2	VL31B5263E-F8S DIE REV-0	PCB REV-0		MFR ID-ce80
DIMM 3	SL31B5263E-F8S DIE REV-0	PCB REV-0		MFR ID-ce80
CB 0	REV 03	710-021523	XD7225	MX SCB
Fan Tray 0	REV 01	710-021113	WZ4986	MX240 Fan Tray

### show chassis hardware (MX240 Router with Enhanced MX SCB)

```
user@host> show chassis hardware
```

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN10C7F7EAFC	MX240
Midplane	REV 01	710-021041	TR1502	MX240 Backplane
FPM Board	REV 01	710-017254	KD4017	Front Panel Display
PEM 0	Rev 02	740-017330	000332	PS 1.2-1.7kW; 100-240V
AC in				
PEM 1	Rev 02	740-017330	000226	PS 1.2-1.7kW; 100-240V
AC in				
Routing Engine 0	REV 06	740-013063	1000703522	RE-S-2000
Routing Engine 1	REV 06	740-015113	1000687625	RE-S-1300
CB 0	REV 02	710-031391	YE8494	Enhanced MX SCB
CB 1	REV 05	710-031391	YOP5764	Enhanced MX SCB
FPC 1	REV 01	750-021679	KC7340	DPCE 40x 1GE R
CPU	REV 06	710-013713	KD4078	DPC PMB
PIC 0		BUILTIN	BUILTIN	10x 1GE(LAN)
Xcvr 0	REV 01	740-011613	P9F18ME	SFP-SX
PIC 1		BUILTIN	BUILTIN	10x 1GE(LAN)
PIC 2		BUILTIN	BUILTIN	10x 1GE(LAN)
PIC 3		BUILTIN	BUILTIN	10x 1GE(LAN)
FPC 2	REV 04	710-016669	JS4529	DPCE 40x 1GE R EQ
CPU	REV 06	710-013713	KB3969	DPC PMB
PIC 0		BUILTIN	BUILTIN	10x 1GE(LAN) EQ
Xcvr 0	REV 01	740-011613	PBG3Y79	SFP-SX
Xcvr 1	REV 01	740-011613	PBG3XU8	SFP-SX
Xcvr 2	REV 01	740-011613	PBG3YG6	SFP-SX
Xcvr 3	REV 01	740-011613	PBG3XUG	SFP-SX
Xcvr 4	REV 01	740-011613	PBG3XTJ	SFP-SX
PIC 1		BUILTIN	BUILTIN	10x 1GE(LAN) EQ
Xcvr 0	REV 01	740-011613	PBG3ZUM	SFP-SX
Xcvr 1	REV 01	740-011613	PBG3Y5H	SFP-SX
Xcvr 2	REV 01	740-011613	PBG3UZT	SFP-SX
Xcvr 3	REV 01	740-011613	PBG3US1	SFP-SX
PIC 2		BUILTIN	BUILTIN	10x 1GE(LAN) EQ
Xcvr 0	REV 01	740-011613	PBG3YG7	SFP-SX
Xcvr 1	REV 01	740-011613	PBG3XZ9	SFP-SX
Xcvr 2	REV 01	740-011613	PBG3XTY	SFP-SX
Xcvr 3	REV 01	740-011613	PBG3UZG	SFP-SX
PIC 3		BUILTIN	BUILTIN	10x 1GE(LAN) EQ

Xcvr 0	REV 01	740-011613	PBG3Y8W	SFP-SX
Xcvr 1	REV 01	740-011613	PBG3YVX	SFP-SX
Xcvr 2	REV 01	740-011613	PBG3YB3	SFP-SX
Xcvr 3	REV 01	740-011613	PBG43VQ	SFP-SX
Fan Tray 0	REV 01	710-021113	JS4642	MX240 Fan Tray

#### show chassis hardware (MX480 Router)

```
user@host> show chassis hardware
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			JN10C7F7FAFB	MX480
Midplane	REV 04	710-017414	TR2071	MX480 Midplane
FPM Board	REV 02	710-017254	KB8459	Front Panel Display
PEM 0	Rev 02	740-017330	QCS07519029	PS 1.2-1.7kW; 100-240V
AC in				
PEM 1	Rev 02	740-017330	QCS07519041	PS 1.2-1.7kW; 100-240V
AC in				
PEM 2	Rev 02	740-017330	QCS07519097	PS 1.2-1.7kW; 100-240V
AC in				
Routing Engine 0	REV 07	740-013063	1000733381	RE-S-2000
Routing Engine 1	REV 07	740-013063	1000733540	RE-S-2000
CB 0	REV 07	710-013385	KA8022	MX SCB
CB 1	REV 07	710-013385	KA8303	MX SCB
FPC 0	REV 09	750-020452	KA8660	DPCE 40x 1GE X EQ
CPU	REV 06	710-013713	KA8185	DPC PMB
PIC 0		BUILTIN	BUILTIN	10x 1GE(LAN) EQ
PIC 1		BUILTIN	BUILTIN	10x 1GE(LAN) EQ
PIC 2		BUILTIN	BUILTIN	10x 1GE(LAN) EQ
PIC 3		BUILTIN	BUILTIN	10x 1GE(LAN) EQ
Fan Tray				Left Fan Tray

#### show chassis hardware (MX480 Router with Enhanced MX SCB)

```
user@host> show chassis hardware
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			JN10C7F7FAFB	MX480
Midplane	REV 04	710-017414	TR2071	MX480 Midplane
FPM Board	REV 02	710-017254	KB8459	Front Panel Display
PEM 0	Rev 02	740-017330	QCS07519029	PS 1.2-1.7kW; 100-240V
AC in				
PEM 1	Rev 02	740-017330	QCS07519041	PS 1.2-1.7kW; 100-240V
AC in				
PEM 2	Rev 02	740-017330	QCS07519097	PS 1.2-1.7kW; 100-240V
AC in				
Routing Engine 0	REV 07	740-013063	1000733381	RE-S-2000
Routing Engine 1	REV 07	740-013063	1000733540	RE-S-2000
CB 0	REV 07	710-013385	KA8022	Enhanced MX SCB
CB 1	REV 07	710-013385	KA8303	Enhanced MX SCB
FPC 0	REV 09	750-020452	KA8660	DPCE 40x 1GE X EQ
CPU	REV 06	710-013713	KA8185	DPC PMB
PIC 0		BUILTIN	BUILTIN	10x 1GE(LAN) EQ
PIC 1		BUILTIN	BUILTIN	10x 1GE(LAN) EQ
PIC 2		BUILTIN	BUILTIN	10x 1GE(LAN) EQ
PIC 3		BUILTIN	BUILTIN	10x 1GE(LAN) EQ
Fan Tray				Left Fan Tray

## show chassis hardware (MX480 Routers with MPC5E and Built-In OTN PIC)

```

user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               JN11C0338AFB  MX480
Midplane      REV 05   710-017414   ABAB8430      MX480 Midplane
FPM Board     REV 02   710-017254   ZS8005        Front Panel Display
PEM 0         Rev 05   740-029970   QCS1024U089   PS 1.4-2.52kW; 90-264V
AC in
PEM 1         Rev 10   740-029970   QCS1314U0FJ   PS 1.4-2.52kW; 90-264V
AC in
PEM 2         Rev 07   740-029970   QCS1121U076   PS 1.4-2.52kW; 90-264V
AC in
Routing Engine 0 REV 05   740-031116   9009092471    RE-S-1800x4
Routing Engine 1 REV 05   740-031116   9009097958    RE-S-1800x4
CB 0          REV 16   750-031391   CAAX0789      Enhanced MX SCB
CB 1          REV 16   750-031391   CAAX0856      Enhanced MX SCB
FPC 0         REV 32   750-028467   ABBP1782      MPC 3D 16x 10GE
CPU           REV 10   711-029089   ABBP5410      AMPC PMB
PIC 0         BUILTIN BUILTIN      4x 10GE(LAN) SFP+
  Xcvr 0      REV 01   740-021308   983152A00038  SFP+-10G-SR
  Xcvr 1      REV 01   740-031980   B11F00211     SFP+-10G-SR
  Xcvr 2      REV 01   740-031980   AQ72LPB       SFP+-10G-SR
  Xcvr 3      REV 01   740-031980   AHNOWR5       SFP+-10G-SR
PIC 1         BUILTIN BUILTIN      4x 10GE(LAN) SFP+
  Xcvr 0      REV 01   740-031980   B11J03627     SFP+-10G-SR
  Xcvr 1      REV 01   740-031980   B11F00300     SFP+-10G-SR
  Xcvr 2      REV 01   740-021308   AQ42WSS       SFP+-10G-SR
  Xcvr 3      REV 01   740-021308   AQ43HGC       SFP+-10G-SR
PIC 2         BUILTIN BUILTIN      4x 10GE(LAN) SFP+
  Xcvr 0      REV 01   740-021308   ANAONDO       SFP+-10G-SR
  Xcvr 1      REV 01   740-021308   ANAONGF       SFP+-10G-SR
  Xcvr 2      REV 01   740-021308   ANAONG9       SFP+-10G-SR
  Xcvr 3      REV 01   740-021308   ANAOMP9       SFP+-10G-SR
PIC 3         BUILTIN BUILTIN      4x 10GE(LAN) SFP+
  Xcvr 0      REV 01   740-021308   AQA06CG       SFP+-10G-SR
  Xcvr 1      REV 01   740-021308   19T511100493  SFP+-10G-SR
  Xcvr 2      REV 01   740-031980   APR040J       SFP+-10G-SR
FPC 1         REV 26   750-046005   CACN1894      MPC5E 3D Q 2CGE+4XGE
CPU           REV 09   711-045719   CACN8698      RMPC PMB
PIC 0         BUILTIN BUILTIN      2X10GE SFPP OTN
  Xcvr 0      REV 01   740-031980   163363A03046  SFP+-10G-SR
  Xcvr 1      REV 01   740-031980   AJ40JS8       SFP+-10G-SR
PIC 1         BUILTIN BUILTIN      1X100GE CFP2 OTN
PIC 2         BUILTIN BUILTIN      2X10GE SFPP OTN
  Xcvr 0      REV 01   740-031980   153363A00593  SFP+-10G-SR
  Xcvr 1      REV 01   740-031980   AJ40JUJ       SFP+-10G-SR
PIC 3         BUILTIN BUILTIN      1X100GE CFP2 OTN
  Xcvr 0      NON-JNPR UQCOB53       CFP2-100G-LR4-D
FPC 2         REV 26   750-046005   CACN1891      MPC5E 3D Q 2CGE+4XGE
CPU           REV 09   711-045719   CACN8694      RMPC PMB
PIC 0         BUILTIN BUILTIN      2X10GE SFPP OTN
  Xcvr 0      NON-JNPR URA012A       SFP+-10G-LR
PIC 1         BUILTIN BUILTIN      1X100GE CFP2 OTN
  Xcvr 0      NON-JNPR J13F47042     CFP2-100G-LR4-D
PIC 2         BUILTIN BUILTIN      2X10GE SFPP OTN
  Xcvr 0      REV 01   740-031980   AJC0BM3       SFP+-10G-SR
  Xcvr 1      REV 01   740-021308   11T511100917  SFP+-10G-SR
PIC 3         BUILTIN BUILTIN      1X100GE CFP2 OTN
  Xcvr 0      NON-JNPR UQK07SU       CFP2-100G-LR4-D

```

FPC 3	REV 03	750-045372	CAAD9425	MPCE Type 3 3D
CPU	REV 08	711-035209	CAAD9094	HMPC PMB 2G
MIC 0	REV 14	750-033196	CAAW9204	1X100GE CXF
PIC 0		BUILTIN	BUILTIN	1X100GE CXF
Xcvr 0	REV 01	740-046563	XD16FC034	CFP2-100G-SR10
MIC 1	REV 19	750-033199	CAAJ1814	1X100GE CFP
PIC 2		BUILTIN	BUILTIN	1X100GE CFP
FPC 4	REV 21.0.11	750-045715	CAAY3568	MPC5E 3D Q 24XGE+6XLGE
CPU	REV 07	711-045719	CAAW7430	RMPC PMB
PIC 0		BUILTIN	BUILTIN	12X10GE SFPP OTN
Xcvr 0	REV 01	740-031980	AP406NG	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AR41NLP	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11D05630	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	12X10GE SFPP OTN
PIC 2		BUILTIN	BUILTIN	3X40GE QSFPP
PIC 3		BUILTIN	BUILTIN	3X40GE QSFPP
WAN MEZZ	REV 12	750-049136	CACM6678	MPC5E 24XGE OTN Mezz
FPC 5	REV 11	750-045372	CABK7539	MPCE Type 3 3D
CPU	REV 08	711-035209	CABJ2466	HMPC PMB 2G
MIC 0	REV 19	750-033199	CAAJ9719	1X100GE CFP
PIC 0		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-035329	UP1020P	CFP-100G-SR10
MIC 1	REV 07	750-033196	YZ0797	1X100GE CXF
PIC 2		BUILTIN	BUILTIN	1X100GE CXF
Xcvr 0	REV 01	740-046563	XC42FC022	CFP2-100G-SR10
Fan Tray				Enhanced Left Fan Tray

#### show chassis hardware detail (MX480 Routers with MPC5E and Built-In OTN PIC)

```
user@host> show chassis hardware detail
```

Hardware inventory:				
Item	Version	Part number	Serial number	Description
Chassis			JN11C0338AFB	MX480
Midplane	REV 05	710-017414	ABAB8430	MX480 Midplane
FPM Board	REV 02	710-017254	ZS8005	Front Panel Display
PEM 0	Rev 05	740-029970	QCS1024U089	PS 1.4-2.52kW; 90-264V
AC in				
PEM 1	Rev 10	740-029970	QCS1314U0FJ	PS 1.4-2.52kW; 90-264V
AC in				
PEM 2	Rev 07	740-029970	QCS1121U076	PS 1.4-2.52kW; 90-264V
AC in				
Routing Engine 0	REV 05	740-031116	9009092471	RE-S-1800x4
ad0 3896 MB	VRFCF14096DIHK1		VM4096MB 6862	Compact Flash
ad1 30533 MB	UGB94ARF32H0S3-KC		UNIGEN-478612-001127	Disk 1
usb0 (addr 1)	EHCI root hub 0		Intel	uhub0
usb0 (addr 2)	product 0x0020 32		vendor 0x8087	uhub1
DIMM 0	SGU04G72H1BB2SA-BB	DIE REV-52 PCB REV-54	MFR ID-ce80	
DIMM 1	SGU04G72H1BB2SA-BB	DIE REV-52 PCB REV-54	MFR ID-ce80	
DIMM 2	SGU04G72H1BB2SA-BB	DIE REV-52 PCB REV-54	MFR ID-ce80	
DIMM 3	SGU04G72H1BB2SA-BB	DIE REV-52 PCB REV-54	MFR ID-ce80	
Routing Engine 1	REV 05	740-031116	9009097958	RE-S-1800x4
ad0 3896 MB	VRFCF14096DIHK1		VM4096MB 6145	Compact Flash
ad1 30533 MB	UGB94ARF32H0S3-KC		UNIGEN-499551-000273	Disk 1
CB 0	REV 16	750-031391	CAAX0789	Enhanced MX SCB
CB 1	REV 16	750-031391	CAAX0856	Enhanced MX SCB
FPC 0	REV 32	750-028467	ABBP1782	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBP5410	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	983152A00038	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11F00211	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AQ72LPB	SFP+-10G-SR

Xcvr 3	REV 01	740-031980	AHNRW5	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11J03627	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11F00300	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQ42WSS	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ43HGC	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	ANAOND0	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	ANAONGF	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	ANAONG9	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	ANAOMP9	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQA06CG	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	19T511100493	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	APR040J	SFP+-10G-SR
FPC 1	REV 26	750-046005	CACN1894	MPC5E 3D Q 2CGE+4XGE
CPU	REV 09	711-045719	CACN8698	RMPC PMB
PIC 0		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-031980	163363A03046	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AJ40JS8	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP2 OTN
PIC 2		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-031980	153363A00593	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AJ40JUJ	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0		NON-JNPR	UQC0B53	CFP2-100G-LR4-D
FPC 2	REV 26	750-046005	CACN1891	MPC5E 3D Q 2CGE+4XGE
CPU	REV 09	711-045719	CACN8694	RMPC PMB
PIC 0		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0		NON-JNPR	URA012A	SFP+-10G-LR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0		NON-JNPR	J13F47042	CFP2-100G-LR4-D
PIC 2		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-031980	AJC0BM3	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	11T511100917	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0		NON-JNPR	UQK07SU	CFP2-100G-LR4-D
FPC 3	REV 03	750-045372	CAAD9425	MPCE Type 3 3D
CPU	REV 08	711-035209	CAAD9094	HMPD PMB 2G
MIC 0	REV 14	750-033196	CAAW9204	1X100GE CXP
PIC 0		BUILTIN	BUILTIN	1X100GE CXP
Xcvr 0	REV 01	740-046563	XD16FC034	CFP2-100G-SR10
MIC 1	REV 19	750-033199	CAAJ1814	1X100GE CFP
PIC 2		BUILTIN	BUILTIN	1X100GE CFP
FPC 4	REV 21.0.11	750-045715	CAAY3568	MPC5E 3D Q 24XGE+6XLGE
CPU	REV 07	711-045719	CAAW7430	RMPC PMB
PIC 0		BUILTIN	BUILTIN	12X10GE SFPP OTN
Xcvr 0	REV 01	740-031980	AP406NG	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AR41NLP	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11D05630	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	12X10GE SFPP OTN
PIC 2		BUILTIN	BUILTIN	3X40GE QSFPP
PIC 3		BUILTIN	BUILTIN	3X40GE QSFPP
WAN MEZZ	REV 12	750-049136	CACM6678	MPC5E 24XGE OTN Mezz
FPC 5	REV 11	750-045372	CABK7539	MPCE Type 3 3D
CPU	REV 08	711-035209	CABJ2466	HMPD PMB 2G
MIC 0	REV 19	750-033199	CAAJ9719	1X100GE CFP
PIC 0		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-035329	UP1020P	CFP-100G-SR10
MIC 1	REV 07	750-033196	YZ0797	1X100GE CXP
PIC 2		BUILTIN	BUILTIN	1X100GE CXP



```

Xcvr 0      REV 01   740-046563   XC42FC022      CFP2-100G-SR10
Fan Tray                                Enhanced Left Fan Tray

```

### show chassis hardware extensive (MX480 Routers with MPC5E and Built-In OTN PIC)

```

user@host> show chassis hardware extensive
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               JN11C0338AFB  MX480
  Jedec Code:  0x7fb0                EEPROM Version: 0x02
                                     S/N:           JN11C0338AFB
  Assembly ID: 0x01fe                Assembly Version: 00.00
  Date:         00-00-0000           Assembly Flags:  0x02
  ID: MX480
Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  I2C Hex Data:
    Address 0x00: 7f b0 02 ff 01 fe 00 00 00 00 00 00 00 00 00 00
    Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
    Address 0x20: 4a 4e 31 31 43 30 33 33 38 41 46 42 02 00 00 00
    Address 0x30: 00 00 00 ff 00 00 00 00 00 00 00 00 00 00 00 00
    Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
    Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
    Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
    Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane      REV 05   710-017414  ABAB8430      MX480 Midplane
  Jedec Code:  0x7fb0                EEPROM Version: 0x01
  P/N:         710-017414            S/N:           ABAB8430
  Assembly ID: 0x01fe                Assembly Version: 01.05
  Date:        12-13-2011            Assembly Flags: 0x00
  Version:     REV 05
  ID: MX480 Midplane                FRU Model Number: CHAS-BP-MX480-S
Board Information Record:
  Address 0x00: ad 01 08 00 00 23 9c fc 98 00 ff ff ff ff ff ff
  I2C Hex Data:
    Address 0x00: 7f b0 01 ff 01 fe 01 05 52 45 56 20 30 35 00 00
    Address 0x10: 00 00 00 00 37 31 30 2d 30 31 37 34 31 34 00 00
    Address 0x20: 53 2f 4e 20 41 42 41 42 38 34 33 30 00 0d 0c 07
    Address 0x30: db ff ff ff ad 01 08 00 00 23 9c fc 98 00 ff ff
    Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 43
    Address 0x50: 48 41 53 2d 42 50 2d 4d 58 34 38 30 2d 53 00 00
    Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff
    Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
FPM Board     REV 02   710-017254  ZS8005        Front Panel Display
  Jedec Code:  0x7fb0                EEPROM Version: 0x01
  P/N:         710-017254            S/N:           ZS8005
  Assembly ID: 0x01ff                Assembly Version: 01.02
  Date:        11-21-2011            Assembly Flags: 0x00
  Version:     REV 02
  ID: Front Panel Display            FRU Model Number: CRAFT-MX480-S
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
    Address 0x00: 7f b0 01 ff 01 ff 01 02 52 45 56 20 30 32 00 00
    Address 0x10: 00 00 00 00 37 31 30 2d 30 31 37 32 35 34 00 00
    Address 0x20: 53 2f 4e 20 5a 53 38 30 30 35 00 00 00 15 0b 07
    Address 0x30: db ff ff ff ff ff ff ff ff ff ff ff ff ff ff
    Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 43
    Address 0x50: 52 41 46 54 2d 4d 58 34 38 30 2d 53 00 00 00 00
    Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff

```

```

Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
PEM 0          Rev 05   740-029970   QCS1024U089   PS 1.4-2.52kW; 90-264V
AC in
Jedec Code:    0x7fb0          EEPROM Version: 0x01
P/N:           740-029970      S/N:           QCS1024U089
Assembly ID:   0x0432          Assembly Version: 01.05
Date:          06-17-2010      Assembly Flags: 0x00
Version:       Rev 05
ID: PS 1.4-2.52kW; 90-264V AC in FRU Model Number: PWR-MX480-2520-AC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 04 32 01 05 52 65 76 20 30 35 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 32 39 39 37 30 00 00
Address 0x20: 51 43 53 31 30 32 34 55 30 38 39 00 00 11 06 07
Address 0x30: da ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: 00 00 00 00 01 00 00 00 00 00 00 00 00 00 00 50
Address 0x50: 57 52 2d 4d 58 34 38 30 2d 32 35 32 30 2d 41 43
Address 0x60: 2d 53 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
PEM 1          Rev 10   740-029970   QCS1314U0FJ   PS 1.4-2.52kW; 90-264V
AC in
Jedec Code:    0x7fb0          EEPROM Version: 0x01
P/N:           740-029970      S/N:           QCS1314U0FJ
Assembly ID:   0x0432          Assembly Version: 01.10
Date:          04-04-2013      Assembly Flags: 0x00
Version:       Rev 10
ID: PS 1.4-2.52kW; 90-264V AC in FRU Model Number: PWR-MX480-2520-AC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 04 32 01 0a 52 65 76 20 31 30 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 32 39 39 37 30 00 00
Address 0x20: 51 43 53 31 33 31 34 55 30 46 4a 00 00 04 04 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: 00 00 00 00 01 00 00 00 00 00 00 00 00 00 00 50
Address 0x50: 57 52 2d 4d 58 34 38 30 2d 32 35 32 30 2d 41 43
Address 0x60: 2d 53 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
PEM 2          Rev 07   740-029970   QCS1121U076   PS 1.4-2.52kW; 90-264V
AC in
Jedec Code:    0x7fb0          EEPROM Version: 0x01
P/N:           740-029970      S/N:           QCS1121U076
Assembly ID:   0x0432          Assembly Version: 01.07
Date:          05-23-2011      Assembly Flags: 0x00
Version:       Rev 07
ID: PS 1.4-2.52kW; 90-264V AC in FRU Model Number: PWR-MX480-2520-AC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 04 32 01 07 52 65 76 20 30 37 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 32 39 39 37 30 00 00
Address 0x20: 51 43 53 31 31 32 31 55 30 37 36 00 00 17 05 07
Address 0x30: db ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: 00 00 00 00 01 00 00 00 00 00 00 00 00 00 00 50
Address 0x50: 57 52 2d 4d 58 34 38 30 2d 32 35 32 30 2d 41 43
Address 0x60: 2d 53 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Routing Engine 0 REV 05   740-031116   9009092471   RE-S-1800x4
Jedec Code:    0x7fb0          EEPROM Version: 0x02
P/N:           740-031116      S/N:           9009092471

```

```

Assembly ID: 0x09c0      Assembly Version: 01.05
Date: 11-01-2011        Assembly Flags: 0x00
Version: REV 05         CLEI Code: COUCALDBAA
ID: RE-S-1800x4         FRU Model Number: RE-S-1800X4-16G-S
Board Information Record:
Address 0x00: 54 32 30 32 37 43 41 2d 34 32 46 42 23 23 23 00
I2C Hex Data:
Address 0x00: 7f b0 02 ff 09 c0 01 05 52 45 56 20 30 35 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 33 31 31 31 36 00 00
Address 0x20: 39 30 30 39 30 39 32 34 37 31 00 00 00 01 0b 07
Address 0x30: db ff ff ff 54 32 30 32 37 43 41 2d 34 32 46 42
Address 0x40: 23 23 23 00 01 43 4f 55 43 41 4c 44 42 41 41 52
Address 0x50: 45 2d 53 2d 31 38 30 30 58 34 2d 31 36 47 2d 53
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 4b ff ff ff ff ff ff ff ff ff ff ff ff
ad0 3896 MB VRFCF14096DIHK1 VM4096MB 6862 Compact Flash
ad1 30533 MB UGB94ARF32H0S3-KC UNIGEN-478612-001127 Disk 1
usb0 (addr 1) EHCI root hub 0 Intel uhub0
usb0 (addr 2) product 0x0020 32 vendor 0x8087 uhub1
DIMM 0 SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
DIMM 1 SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
DIMM 2 SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
DIMM 3 SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
Routing Engine 1 REV 05 740-031116 9009097958 RE-S-1800x4
Jedec Code: 0x7fb0 EEPROM Version: 0x02
P/N: 740-031116 S/N: 9009097958
Assembly ID: 0x09c0      Assembly Version: 01.05
Date: 02-06-2012        Assembly Flags: 0x00
Version: REV 05         CLEI Code: COUCALDBAA
ID: RE-S-1800x4         FRU Model Number: RE-S-1800X4-16G-S
Board Information Record:
Address 0x00: 54 32 30 32 37 43 41 2d 34 32 46 42 23 23 23 00
I2C Hex Data:
Address 0x00: 7f b0 02 ff 09 c0 01 05 52 45 56 20 30 35 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 33 31 31 31 36 00 00
Address 0x20: 39 30 30 39 30 39 37 39 35 38 00 00 00 06 02 07
Address 0x30: dc ff ff ff 54 32 30 32 37 43 41 2d 34 32 46 42
Address 0x40: 23 23 23 00 01 43 4f 55 43 41 4c 44 42 41 41 52
Address 0x50: 45 2d 53 2d 31 38 30 30 58 34 2d 31 36 47 2d 53
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 4b ff ff ff ff ff ff ff ff ff ff ff ff
ad0 3896 MB VRFCF14096DIHK1 VM4096MB 6145 Compact Flash
ad1 30533 MB UGB94ARF32H0S3-KC UNIGEN-499551-000273 Disk 1

```

...

### show chassis hardware (MX960 Router)

```

user@host> show chassis hardware
Hardware inventory:

```

Item	Version	Part number	Serial number	Description
Chassis				MX960
Midplane	REV 01	710-013698	AA6082	MX960 Midplane
PIM	Rev 01	740-013110	000008	Power Inlet Module
PEM 2				
PEM 3	Rev 01	740-013682	000038	PS 1.7kW; 200-240VAC in
Routing Engine 0	REV 00	740-015113	1000617944	RE-S-1300
CB 0	REV 05	710-013725	JK6947	MX960 Test SCB
FPC 4	REV 01	710-013305	JM7617	MX960 Test DPC
CPU				
PIC 0		BUILTIN	BUILTIN	1x 10GE(LAN/WAN)

PIC 1		BUILTIN	BUILTIN	10x 1GE
FPC 7	REV 01	710-013305	JL9634	MX960 Test DPC
CPU				
PIC 0		BUILTIN	BUILTIN	1x 10GE(LAN/WAN)
Xcvr 0		NON-JNPR	MYBG65I82C	XFP-10G-SR
PIC 1		BUILTIN	BUILTIN	10x 1GE
Xcvr 1	REV 01	740-011782	P7N0368	SFP-SX
Xcvr 4	REV 01	740-011782	P8J1W27	SFP-SX
Xcvr 6	REV 01	740-011782	P8J1VSD	SFP-SX
Xcvr 9	REV 01	740-011782	P8J1W25	SFP-SX
Fan Tray 0				
Fan Tray 1				

### show chassis hardware (MX960 Router with Bidirectional Optics)

```
user@host> show chassis hardware
```

```
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			JN10BA5B9AFA	MX960
Midplane	REV 03	710-013698	TR0234	MX960 Backplane
FPM Board	REV 03	710-014974	JA0878	Front Panel Display
PDM	Rev 03	740-013110	QCS11135028	Power Distribution Module
PEM 0	Rev 03	740-013682	QCS11154036	PS 1.7kW; 200-240VAC in
PEM 1	Rev 03	740-013682	QCS11154010	PS 1.7kW; 200-240VAC in
PEM 2	Rev 03	740-013682	QCS11154022	PS 1.7kW; 200-240VAC in
Routing Engine 0	REV 06	740-013063	1000691458	RE-S-2000
CB 0	REV 07	710-013385	KA2190	MX SCB
CB 1	REV 07	710-013385	KA0837	MX SCB
FPC 3	REV 02	750-018122	KB3890	DPCE 40x 1GE R
CPU				
FPC 4	REV 01	750-018122	KB3889	DPCE 40x 1GE R
CPU	REV 06	710-013713	KB3976	DPC PMB
PIC 0		BUILTIN	BUILTIN	10x 1GE(LAN)
Xcvr 1	REV 01	740-020426	4910549	SFP-1000BASE-BX40-D
Xcvr 2	REV 01	740-020426	4910551	SFP-1000BASE-BX40-D
Xcvr 5	REV 01	740-021340	77E245N00006	SFP-1000BASE-BX10-U
Xcvr 6	REV 01	740-020425	4882821	SFP-1000BASE-BX40-U
Xcvr 8	REV 01	740-020425	4882820	SFP-1000BASE-BX40-U
PIC 1		BUILTIN	BUILTIN	10x 1GE(LAN)
Xcvr 0	REV 01	740-020465	77E555N00894	SFP-1000BASE-BX10-D
Xcvr 1	REV 01	740-020465	75E467X00818	SFP-1000BASE-BX10-D
Xcvr 2	REV 01	740-020465	75E467X00573	SFP-1000BASE-BX10-D
Xcvr 3	REV 01	740-020465	4888227	SFP-1000BASE-BX10-D
Xcvr 4	REV 01	740-020465	4888241	SFP-1000BASE-BX10-D
Xcvr 5	REV 01	740-021340	77E245N00005	SFP-1000BASE-BX10-U
Xcvr 6	REV 01	740-021340	76E245X00487	SFP-1000BASE-BX10-U
Xcvr 7	REV 01	740-021341	5255889	SFP-1000BASE-BX10-U
Xcvr 8	REV 01	740-021341	5255887	SFP-1000BASE-BX10-U
Xcvr 9	REV 01	740-021340	77E245N00004	SFP-1000BASE-BX10-U
PIC 2		BUILTIN	BUILTIN	10x 1GE(LAN)
Xcvr 0	REV 01	740-020424	5007582	SFP-1000BASE-BX10-D
Xcvr 1	REV 01	740-020424	4888187	SFP-1000BASE-BX10-D
Xcvr 2	REV 01	740-020424	4656500	SFP-1000BASE-BX10-D
Xcvr 5	REV 01	740-021341	5255886	SFP-1000BASE-BX10-U
Xcvr 7	REV 01	740-021340	77E245N00003	SFP-1000BASE-BX10-U
Xcvr 8	REV 01	740-021341	5255888	SFP-1000BASE-BX10-U
PIC 3		BUILTIN	BUILTIN	10x 1GE(LAN)
Xcvr 0	REV 01	740-017726	74S184H30341	SFP-EX
Xcvr 1	REV 01	740-017726	4814061	SFP-EX
Xcvr 5	REV 01	740-017726	6ZS184H31108	SFP-EX
Xcvr 9	REV 01	740-021340	76E245X00486	SFP-1000BASE-BX10-U

```

Fan Tray 0
Fan Tray 1      REV 03   740-014971   TP0850      Fan Tray

```

### show chassis hardware (MX960 Router with Enhanced MX SCB)

```
user@host> show chassis hardware
```

```
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			JN1096805AFA	MX960
Midplane	REV 03	710-013698	TR0183	MX960 Backplane
Fan Extender	REV 02	710-018051	JY5227	Extended Cable Manager
FPM Board	REV 03	710-014974	JZ6876	Front Panel Display
PDM	Rev 03	740-013110	QCS11035023	Power Distribution Module
PEM 1	Rev 03	740-013682	QCS1109400L	PS 1.7kW; 200-240VAC in
PEM 2	Rev 03	740-013682	QCS11094015	PS 1.7kW; 200-240VAC in
PEM 3	Rev 03	740-013682	QCS11094012	PS 1.7kW; 200-240VAC in
Routing Engine 0	REV 06	740-013063	1000687969	RE-S-2000
Routing Engine 1	REV 06	740-013063	1000687955	RE-S-2000
CB 0	REV 11	750-031391	YZ6072	Enhanced MX SCB
CB 1	REV 11	750-031391	YZ6068	Enhanced MX SCB
CB 2	REV 11	750-031391	YZ6081	Enhanced MX SCB
FPC 0	REV 01	750-018122	KA5576	DPCE 40x 1GE R
CPU	REV 06	710-013713	KB3961	DPC PMB
PIC 0		BUILTIN	BUILTIN	10x 1GE(LAN)
Xcvr 0	REV 01	740-011613	P9F18GF	SFP-SX
Xcvr 2	REV 01	740-011782	P9M0TL9	SFP-SX
Xcvr 7	REV 01	740-011782	P9POXXH	SFP-SX
Xcvr 9	REV 01	740-011782	P9M0TN1	SFP-SX
PIC 1		BUILTIN	BUILTIN	10x 1GE(LAN)
Xcvr 0	REV 01	740-011613	PAJ4UHC	SFP-SX
PIC 2		BUILTIN	BUILTIN	10x 1GE(LAN)
Xcvr 0	REV 01	740-011613	PFF2CD0	SFP-SX
Xcvr 1	REV 01	740-011613	PBG3ZUT	SFP-SX
Xcvr 2	REV 01	740-011613	PFF2DDV	SFP-SX
Xcvr 5	REV 01	740-011613	P8E2SST	SFP-SX
Xcvr 9	REV 01	740-011782	PB8329N	SFP-SX
PIC 3		BUILTIN	BUILTIN	10x 1GE(LAN)
Xcvr 0	REV 01	740-026192	1U0201084503342	SFP-100BASE-BX10-U
Xcvr 1	REV 01	740-026193	1U1201084503313	SFP-100BASE-BX10-D
Xcvr 2	REV 01	740-011613	PAJ4Y5B	SFP-SX
Xcvr 6	REV 01	740-011782	P9MOU3M	SFP-SX
Xcvr 7	REV 01	740-011782	P9M0TLA	SFP-SX
FPC 1	REV 16	750-031089	YL0719	MPC Type 2 3D
CPU	REV 06	711-030884	YL1463	MPC PMB 2G
MIC 0	REV 07	750-028387	JR6500	3D 4x 10GE XFP
PIC 0		BUILTIN	BUILTIN	2x 10GE XFP
Xcvr 0	REV 01	740-014279	733019A00154	XFP-10G-LR
Xcvr 1	REV 02	740-014289	T09F55034	XFP-10G-SR
PIC 1		BUILTIN	BUILTIN	2x 10GE XFP
Xcvr 0	REV 01	740-014279	913019B00791	XFP-10G-LR
Xcvr 1	REV 01	740-014289	98S803A90384	XFP-10G-SR
MIC 1	REV 24	750-028387	YJ3950	3D 4x 10GE XFP
PIC 2		BUILTIN	BUILTIN	2x 10GE XFP
Xcvr 0	REV 02	740-014279	T10B36134	XFP-10G-LR
Xcvr 1	REV 01	740-014289	T07M86354	XFP-10G-SR
PIC 3		BUILTIN	BUILTIN	2x 10GE XFP
FPC 2	REV 08	710-014219	JY9654	DPCE 4x 10GE R
CPU	REV 06	710-013713	JZ6549	DPC PMB
PIC 0		BUILTIN	BUILTIN	1x 10GE(LAN/WAN)
PIC 1		BUILTIN	BUILTIN	1x 10GE(LAN/WAN)
PIC 2		BUILTIN	BUILTIN	1x 10GE(LAN/WAN)

Xcvr 0	REV 03	740-011571	C931BK028	XFP-10G-SR
PIC 3		BUILTIN	BUILTIN	1x 10GE(LAN/WAN)
FPC 3	REV 10	750-024199	XJ6692	MX FPC Type 3
CPU	REV 03	710-022351	XF5182	DPC PMB
PIC 0	REV 17	750-009553	RJ2945	4x OC-48 SONET
Xcvr 1	REV 01	740-011785	PCP3YLL	SFP-SR
Xcvr 3	REV 01	740-011785	PDSOMRY	SFP-SR
PIC 1	REV 32	750-003700	DP2113	1x OC-192 12xMM VSR
FPC 5	REV 25	750-028467	YM8256	MPC 3D 16x 10GE
CPU	REV 10	711-029089	YL3029	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 1	REV 01	740-031980	AHNOX1Z	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
FPC 7	REV 02	750-031092	JR6658	MPC Type 1 3D Q
CPU	REV 01	711-030884	JZ9038	MPC PMB 2G
MIC 0	REV 08	750-028392	JZ8737	3D 20x 1GE(LAN) SFP
PIC 0		BUILTIN	BUILTIN	10x 1GE(LAN) SFP
Xcvr 0	REV 01	740-011782	PBE2C6Y	SFP-SX
Xcvr 2		NON-JNPR	U8105N8	SFP-SX
Xcvr 4	REV 01	740-011613	PFM18EF	SFP-SX
Xcvr 7	REV 01	740-011613	PFF2AM8	SFP-SX
Xcvr 8	REV 01	740-011613	PFF2CT6	SFP-SX
PIC 1		BUILTIN	BUILTIN	10x 1GE(LAN) SFP
Xcvr 0	REV 01	740-011782	PB82VHH	SFP-SX
Xcvr 1	REV 01	740-011613	PFF2CSW	SFP-SX
Xcvr 9	REV 01	740-011613	PFF2BY0	SFP-SX
QXM 0	REV 04	711-028408	JR6372	MPC QXM
FPC 8	REV 05	750-024387	JW9754	MX FPC Type 2
CPU	REV 03	710-022351	KF1651	DPC PMB
PIC 0	REV 08	750-014730	DM3664	4x OC-3 1x OC-12 SFP
Xcvr 0	REV 01	740-016065	81S290N00077	SFP-SR
Xcvr 1		NON-JNPR	2191844	SFP-SR
Xcvr 2	REV 01	740-011618	PD81EE5	SFP-IR
PIC 1	REV 08	750-014637	DM3671	4x OC-12-3 SFP
Xcvr 0	REV 01	740-011785	PCK3UNK	SFP-SR
Xcvr 3	REV 01	740-011785	PDSOMPZ	SFP-SR
FPC 10	REV 04	710-013699	JY4654	DPCE 40x 1GE R
CPU	REV 05	710-013713	JS9717	DPC PMB
PIC 0		BUILTIN	BUILTIN	10x 1GE(LAN)
Xcvr 5	REV 01	740-011782	PAR1L72	SFP-SX
Xcvr 6	REV 01	740-011782	P8N1YQ4	SFP-SX
PIC 1		BUILTIN	BUILTIN	10x 1GE(LAN)
PIC 2		BUILTIN	BUILTIN	10x 1GE(LAN)
Xcvr 0	REV 01	740-011782	P8Q2AVL	SFP-SX
Xcvr 5	REV 01	740-011782	PAR1L7B	SFP-SX
Xcvr 6	REV 01	740-011782	PAR1L2J	SFP-SX
Xcvr 8	REV 01	740-011782	P8N1YMY	SFP-SX
PIC 3		BUILTIN	BUILTIN	10x 1GE(LAN)
Fan Tray 0	REV 03	740-014971	TP0567	Fan Tray
Fan Tray 1	REV 03	740-014971	TP0702	Fan Tray

### show chassis hardware models (MX960 Router with Enhanced MX SCB)

```
user@host> show chassis hardware models
```

```
Hardware inventory:
```

Item	Version	Part number	Serial number	FRU model number
Midplane	REV 03	710-013698	TR0183	CHAS-BP-MX960-S
Fan Extender	REV 02	710-018051	JY5227	ECM-MX960
FPM Board	REV 03	710-014974	JZ6876	CRAFT-MX960-S

Routing Engine 0	REV 06	740-013063	1000687969	RE-S-2000-4096-S
Routing Engine 1	REV 06	740-013063	1000687955	RE-S-2000-4096-S
CB 0	REV 11	750-031391	YZ6072	SCBE-MX-S
CB 1	REV 11	750-031391	YZ6068	SCBE-MX-S
CB 2	REV 11	750-031391	YZ6081	SCBE-MX-S
FPC 0	REV 01	750-018122	KA5576	DPCE-R-40GE-SFP
FPC 1	REV 16	750-031089	YL0719	MX-MPC2-3D
MIC 0	REV 07	750-028387	JR6500	MIC-3D-4XGE-XFP
MIC 1	REV 24	750-028387	YJ3950	MIC-3D-4XGE-XFP
FPC 2	REV 08	710-014219	JY9654	DPC-R-4XGE-XFP
FPC 3	REV 10	750-024199	XJ6692	MX-FPC3
PIC 0	REV 17	750-009553	RJ2945	PC-40C48-SON-SFP
PIC 1	REV 32	750-003700	DP2113	PC-10C192-SON-VSR
FPC 5	REV 25	750-028467	YM8256	MPC-3D-16XGE-SFPP
FPC 7	REV 02	750-031092	JR6658	MX-MPC1-3D-Q
MIC 0	REV 08	750-028392	JZ8737	MIC-3D-20GE-SFP
FPC 8	REV 05	750-024387	JW9754	MX-FPC2
PIC 0	REV 08	750-014730	DM3664	PB-40C3-10C12-SON2-SFP
PIC 1	REV 08	750-014637	DM3671	PB-40C3-40C12-SON-SFP
FPC 10	REV 04	710-013699	JY4654	DPC-R-40GE-SFP
Fan Tray 0	REV 03	740-014971	TP0567	FFANTRAY-MX960-S
Fan Tray 1	REV 03	740-014971	TP0702	FFANTRAY-MX960-S

#### show chassis hardware (MX960 Router with MPC5EQ)

```
user@host> show chassis hardware
```

```
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			JN1214852AFA	MX960
Midplane	REV 01	710-030012	ACAX3674	MX960 Backplane
FPM Board	REV 03	710-014974	CAAZ9326	Front Panel Display
PDM	Rev 03	740-013110	QCS17025017	Power Distribution Module
PEM 0	Rev 10	740-027760	QCS1702N062	PS 4.1kW; 200-240V AC
in				
PEM 1	Rev 04	740-027760	QCS1422N02C	PS 4.1kW; 200-240V AC
in				
PEM 2	Rev 09	740-027760	QCS1614N01X	PS 4.1kW; 200-240V AC
in				
Routing Engine 0	REV 08	740-031116	9009131803	RE-S-1800x4
Routing Engine 1	REV 08	740-031116	9009124913	RE-S-1800x4
CB 0	REV 18	750-031391	CABF0579	Enhanced MX SCB
CB 1	REV 16	750-031391	CAAZ2471	Enhanced MX SCB
CB 2	REV 16	750-031391	CAAW9595	Enhanced MX SCB
FPC 0	REV 18	750-046005	CACE6574	MPC5E 3D Q 2CGE+4XGE
CPU	REV 09	711-045719	CACG8908	RMPC PMB
PIC 0		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	AQA0DYT	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQGOMS7	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0	REV 01	740-046563	XD16FC03Z	CFP2-100G-SR10
PIC 2		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	ANAONAJ	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQGOMRQ	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0	REV 01	740-049775	J13K72993	CFP2-100G-LR4
FPC 1	REV 11	750-045372	CABK8154	MPCE Type 3 3D
CPU	REV 08	711-035209	CABE7370	HMPC PMB 2G
MIC 0	REV 07	750-033307	CABD5255	10X10GE SFPP
PIC 0		BUILTIN	BUILTIN	10X10GE SFPP
Xcvr 0	REV 01	740-021308	AQ50319	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ5035V	SFP+-10G-SR

Xcvr 2	REV 01	740-021308	AQ502XJ	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ43HHR	SFP+-10G-SR
Xcvr 4	REV 01	740-021308	AQ502YA	SFP+-10G-SR
Xcvr 5	REV 01	740-021308	AQ502EU	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	AQ502HR	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	AQ502A6	SFP+-10G-SR
Xcvr 8	REV 01	740-021308	AQ43H8M	SFP+-10G-SR
MIC 1	REV 14	750-033196	CAAP1398	1X100GE CXP
PIC 2		BUILTIN	BUILTIN	1X100GE CXP
Xcvr 0	REV 01	740-046563	XD16FC064	CFP-100G-SR10
FPC 3	REV 35	750-028467	CAAT9156	MPC 3D 16x 10GE
CPU	REV 11	711-029089	CAAV4645	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQ43HZ1	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ43HZC	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQ43HD2	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ502HN	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQ43HGF	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ501RZ	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQ5029V	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ501X9	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQ502ZN	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ43H86	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQ502ZY	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ502PZ	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQ503E6	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ502XN	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11F00213	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ50336	SFP+-10G-SR
FPC 4	REV 18	750-046005	CACE6568	MPC5E 3D Q 2CGE+4XGE
CPU	REV 09	711-045719	CACG8900	RMPC PMB
PIC 0		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	AQA095A	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQGOM1E	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0		NON-JNPR	FE13F000F	CFP2-100G-SR10
PIC 2		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	AQGOLYC	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQGOLYB	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0	REV 01	740-048813	XD32FE00Z	CFP2-100G-SR10
FPC 5	REV 18	750-046005	CACE6577	MPC5E 3D Q 2CGE+4XGE
CPU	REV 09	711-045719	CACG8902	RMPC PMB
PIC 0		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	AQGOMXE	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQGOLVY	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0	REV 01	740-046563	XD16FC03T	CFP2-100G-SR10
PIC 2		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	AQGOLW1	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQGOLW3	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0		NON-JNPR	FE13F000J	CFP2-100G-SR10
FPC 7	REV 09	750-037355	CAAF0937	MPC4E 3D 2CGE+8XGE
CPU	REV 08	711-035209	CAAD8004	HMPC PMB 2G
PIC 0		BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-021308	ANAOMM3	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP



Xcvr 0	REV 01	740-035329	X000C163	CFP-100G-SR10
PIC 2		BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-021308	AQGOMS6	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQGOMRX	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQGOM6Y	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQGOLZM	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-035329	X12J00499	CFP-100G-SR10
FPC 8	REV 39	750-045715	CACD1903	MPC5E 3D Q 24XGE+6XLGE
CPU	REV 09	711-045719	CACD1815	RMPD PMB
PIC 0		BUILTIN	BUILTIN	12X10GE SFPP OTN
PIC 1		BUILTIN	BUILTIN	12X10GE SFPP OTN
PIC 2		BUILTIN	BUILTIN	3X40GE QSFPP
Xcvr 0	REV 01	740-046565	QC480289	QSFP+-40G-SR4
Xcvr 1	REV 01	740-046565	QC480274	QSFP+-40G-SR4
Xcvr 2	REV 01	740-046565	QD130190	QSFP+-40G-SR4
PIC 3		BUILTIN	BUILTIN	3X40GE QSFPP
Xcvr 0	REV 01	740-046565	QD130197	QSFP+-40G-SR4
Xcvr 1	REV 01	740-046565	QD130180	QSFP+-40G-SR4
Xcvr 2	REV 01	740-046565	QD130199	QSFP+-40G-SR4
WAN MEZZ	REV 09	750-049136	CABN0415	MPC5E 24XGE OTN Mezz
FPC 9	REV 05	750-044444	CAAY9801	MPCE Type 2 3D P
CPU	REV 04	711-038484	CAAW3673	MPCE PMB 2G
MIC 0	REV 28	750-028387	CAAX1071	3D 4x 10GE XFP
PIC 0		BUILTIN	BUILTIN	2x 10GE XFP
Xcvr 0		NON-JNPR	T12L92342	XFP-10G-SR
Xcvr 1		NON-JNPR	T12L92303	XFP-10G-SR
PIC 1		BUILTIN	BUILTIN	2x 10GE XFP
Xcvr 0		NON-JNPR	CC07BK02X	XFP-10G-SR
QXM 0	REV 06	711-028408	CAAW4883	MPC QXM
QXM 1	REV 06	711-028408	CAAW4603	MPC QXM
FPC 10	REV 21.0.11	750-045715	CAAY3541	MPC5E 3D Q 24XGE+6XLGE
CPU	REV 07	711-045719	CAAW7426	RMPD PMB
PIC 0		BUILTIN	BUILTIN	12X10GE SFPP
Xcvr 0	REV 01	740-031980	AHK01AP	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ502ZU	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AP41BLS	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQA08YA	SFP+-10G-SR
Xcvr 4	REV 01	740-021308	AQA0K26	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	AQA06S3	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	AQA06AS	SFP+-10G-SR
Xcvr 8	REV 01	740-021308	AQA053N	SFP+-10G-SR
Xcvr 9	REV 01	740-021308	AQA0E97	SFP+-10G-SR
Xcvr 10	REV 01	740-021308	AQA0GS4	SFP+-10G-SR
Xcvr 11	REV 01	740-021308	AQA0JVA	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	12X10GE SFPP
Xcvr 0	REV 01	740-021308	AQA057A	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	ANA0MLS	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQA093A	SFP+-10G-SR
Xcvr 3	REV 01	740-021309	943153A00075	SFP+-10G-LR
Xcvr 4	REV 01	740-021308	AQA077B	SFP+-10G-SR
Xcvr 5	REV 01	740-021308	AQA0JSC	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	AQA0735	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	AQ5028N	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	AP40VN5	SFP+-10G-SR
Xcvr 9	REV 01	740-021308	AQA0K0J	SFP+-10G-SR
Xcvr 10	REV 01	740-021308	AQA07AP	SFP+-10G-SR
Xcvr 11	REV 01	740-021308	AQA08YB	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	3X40GE QSFPP
PIC 3		BUILTIN	BUILTIN	3X40GE QSFPP
WAN MEZZ	REV 07	750-045717	CAAX3123	MPC5E 24XGE Mezz

FPC 11	REV 17	750-037355	CAAT3986	MPC4E 3D 2CGE+8XGE
CPU	REV 08	711-035209	CAAR3972	HMPC PMB 2G
PIC 0		BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-021308	AQA0DSE	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ501Y3	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQ501XU	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ5036Y	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0		NON-JNPR	X12J00247	CFP-100G-SR10
PIC 2		BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-031980	ALQ1DKF	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AJ403YA	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AP40TY0	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	ALQ14G0	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-035329	X12J00095	CFP-100G-SR10
Fan Tray 0	REV 08	740-031521	ACAF4219	Enhanced Fan Tray
Fan Tray 1	REV 08	740-031521	ACAF4225	Enhanced Fan Tray

### show chassis hardware detail (MX960 Router)

```
user@host> show chassis hardware detail
```

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis				MX960
Midplane	REV 01	710-013698	AA6082	MX960 Midplane
PIM	Rev 01	740-013110	000008	Power Inlet Module
PEM 2				
PEM 3	Rev 01	740-013682	000038	PS 1.7kW; 200-240VAC in
Routing Engine 0	REV 00	740-015113	1000617944	RE-S-1300
ad0 245 MB	SanDisk	SDCFB-256	111419E1805T1141	Compact Flash
ad2 38154 MB	FUJITSU	MHT2040BH	NR0WT5925N77	Hard Disk
CB 0	REV 05	710-013725	JK6947	MX960 Test SCB
FPC 4	REV 01	710-013305	JM7617	MX960 Test DPC
CPU				
PIC 0		BUILTIN	BUILTIN	1x 10GE(LAN/WAN)
PIC 1		BUILTIN	BUILTIN	10x 1GE
FPC 7	REV 01	710-013305	JL9634	MX960 Test DPC
CPU				
PIC 0		BUILTIN	BUILTIN	1x 10GE(LAN/WAN)
Xcvr 0		NON-JNPR	MYBG65I82C	XFP-10G-SR
PIC 1		BUILTIN	BUILTIN	10x 1GE
Xcvr 1	REV 01	740-011782	P7N0368	SFP-SX
Xcvr 4	REV 01	740-011782	P8J1W27	SFP-SX
Xcvr 6	REV 01	740-011782	P8J1VSD	SFP-SX
Xcvr 9	REV 01	740-011782	P8J1W25	SFP-SX
Fan Tray 0				
Fan Tray 1				

### show chassis hardware detail (MX960 Router with MPC5EQ)

```
user@host> show chassis hardware detail
```

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN1214852AFA	MX960
Midplane	REV 01	710-030012	ACAX3674	MX960 Backplane
FPM Board	REV 03	710-014974	CAAZ9326	Front Panel Display
PDM	Rev 03	740-013110	QCS17025017	Power Distribution Module
PEM 0	Rev 10	740-027760	QCS1702N062	PS 4.1kW; 200-240V AC in

PEM 1	Rev 04	740-027760	QCS1422N02C	PS 4.1kW; 200-240V AC
in				
PEM 2	Rev 09	740-027760	QCS1614N01X	PS 4.1kW; 200-240V AC
in				
Routing Engine 0	REV 08	740-031116	9009131803	RE-S-1800x4
ad0 3831 MB	UGB30SFA4000T1		SFA4000T1 000016CD	Compact Flash
ad1 30533 MB	UGB94BPH32H0S1-KCI		11000061346	Disk 1
usb0 (addr 1)	EHCI root hub 0		Intel	uhub0
usb0 (addr 2)	product 0x0020 32		vendor 0x8087	uhub1
DIMM 0	VL31B5263F-F8SD DIE	REV-0 PCB REV-0		MFR ID-ce80
DIMM 1	VL31B5263F-F8SD DIE	REV-0 PCB REV-0		MFR ID-ce80
DIMM 2	VL31B5263F-F8SD DIE	REV-0 PCB REV-0		MFR ID-ce80
DIMM 3	VL31B5263F-F8SD DIE	REV-0 PCB REV-0		MFR ID-ce80
Routing Engine 1	REV 08	740-031116	9009124913	RE-S-1800x4
ad0 3831 MB	UGB30SFA4000T1		SFA4000T1 0000106D	Compact Flash
ad1 30533 MB	UGB94BPH32H0S1-KCI		11000052402	Disk 1
CB 0	REV 18	750-031391	CABF0579	Enhanced MX SCB
CB 1	REV 16	750-031391	CAAZ2471	Enhanced MX SCB
CB 2	REV 16	750-031391	CAAW9595	Enhanced MX SCB
FPC 0	REV 18	750-046005	CACE6574	MPC5E 3D Q 2CGE+4XGE
CPU	REV 09	711-045719	CACG8908	RMPD PMB
PIC 0		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	AQA0DYT	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQGOMS7	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0	REV 01	740-046563	XD16FC03Z	CFP2-100G-SR10
PIC 2		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	ANAONAJ	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQGOMRQ	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0	REV 01	740-049775	J13K72993	CFP2-100G-LR4
FPC 1	REV 11	750-045372	CABK8154	MPCE Type 3 3D
CPU	REV 08	711-035209	CABE7370	HMPD PMB 2G
MIC 0	REV 07	750-033307	CABD5255	10X10GE SFPP
PIC 0		BUILTIN	BUILTIN	10X10GE SFPP
Xcvr 0	REV 01	740-021308	AQ50319	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ5035V	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQ502XJ	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ43HHR	SFP+-10G-SR
Xcvr 4	REV 01	740-021308	AQ502YA	SFP+-10G-SR
Xcvr 5	REV 01	740-021308	AQ502EU	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	AQ502HR	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	AQ502A6	SFP+-10G-SR
Xcvr 8	REV 01	740-021308	AQ43H8M	SFP+-10G-SR
MIC 1	REV 14	750-033196	CAAP1398	1X100GE CXP
PIC 2		BUILTIN	BUILTIN	1X100GE CXP
Xcvr 0	REV 01	740-046563	XD16FC064	CFP2-100G-SR10
FPC 3	REV 35	750-028467	CAAT9156	MPC 3D 16x 10GE
CPU	REV 11	711-029089	CAAV4645	AMPD PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQ43HZ1	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ43HZC	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQ43HD2	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ502HN	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQ43HGF	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ501RZ	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQ5029V	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ501X9	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQ502ZN	SFP+-10G-SR

Xcvr 1	REV 01	740-021308	AQ43H86	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQ502ZY	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ502PZ	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQ503E6	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ502XN	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11F00213	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ50336	SFP+-10G-SR
FPC 4	REV 18	750-046005	CACE6568	MPC5E 3D Q 2CGE+4XGE
CPU	REV 09	711-045719	CACG8900	RMPC PMB
PIC 0		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	AQA095A	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQGOM1E	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0		NON-JNPR	FE13F000F	CFP2-100G-SR10
PIC 2		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	AQGOLYC	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQGOLYB	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0	REV 01	740-048813	XD32FE00Z	CFP2-100G-SR10
FPC 5	REV 18	750-046005	CACE6577	MPC5E 3D Q 2CGE+4XGE
CPU	REV 09	711-045719	CACG8902	RMPC PMB
PIC 0		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	AQGOMXE	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQGOLVY	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0	REV 01	740-046563	XD16FC03T	CFP2-100G-SR10
PIC 2		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	AQGOLW1	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQGOLW3	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0		NON-JNPR	FE13F000J	CFP2-100G-SR10
FPC 7	REV 09	750-037355	CAAF0937	MPC4E 3D 2CGE+8XGE
CPU	REV 08	711-035209	CAAD8004	HMPC PMB 2G
PIC 0		BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-021308	ANAOMM3	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-035329	X000C163	CFP-100G-SR10
PIC 2		BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-021308	AQGOMS6	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQGOMRX	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQGOM6Y	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQGOLZM	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-035329	X12J00499	CFP-100G-SR10
FPC 8	REV 39	750-045715	CACD1903	MPC5E 3D Q 24XGE+6XLGE
CPU	REV 09	711-045719	CACD1815	RMPC PMB
PIC 0		BUILTIN	BUILTIN	12X10GE SFPP OTN
PIC 1		BUILTIN	BUILTIN	12X10GE SFPP OTN
PIC 2		BUILTIN	BUILTIN	3X40GE QSFPP
Xcvr 0	REV 01	740-046565	QC480289	QSFP+-40G-SR4
Xcvr 1	REV 01	740-046565	QC480274	QSFP+-40G-SR4
Xcvr 2	REV 01	740-046565	QD130190	QSFP+-40G-SR4
PIC 3		BUILTIN	BUILTIN	3X40GE QSFPP
Xcvr 0	REV 01	740-046565	QD130197	QSFP+-40G-SR4
Xcvr 1	REV 01	740-046565	QD130180	QSFP+-40G-SR4
Xcvr 2	REV 01	740-046565	QD130199	QSFP+-40G-SR4
WAN MEZZ	REV 09	750-049136	CABN0415	MPC5E 24XGE OTN Mezz
FPC 9	REV 05	750-044444	CAAY9801	MPCE Type 2 3D P
CPU	REV 04	711-038484	CAAW3673	MPCE PMB 2G
MIC 0	REV 28	750-028387	CAAX1071	3D 4x 10GE XFP

PIC 0		BUILTIN	BUILTIN	2x 10GE XFP
Xcvr 0		NON-JNPR	T12L92342	XFP-10G-SR
Xcvr 1		NON-JNPR	T12L92303	XFP-10G-SR
PIC 1		BUILTIN	BUILTIN	2x 10GE XFP
Xcvr 0		NON-JNPR	CC07BK02X	XFP-10G-SR
QXM 0	REV 06	711-028408	CAAW4883	MPC QXM
QXM 1	REV 06	711-028408	CAAW4603	MPC QXM
FPC 10	REV 21.0.11	750-045715	CAAY3541	MPC5E 3D Q 24XGE+6XLGE
CPU	REV 07	711-045719	CAAW7426	RMPM PMB
PIC 0		BUILTIN	BUILTIN	12X10GE SFPP
Xcvr 0	REV 01	740-031980	AHK01AP	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ502ZU	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AP41BLS	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQA08YA	SFP+-10G-SR
Xcvr 4	REV 01	740-021308	AQA0K26	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	AQA06S3	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	AQA06AS	SFP+-10G-SR
Xcvr 8	REV 01	740-021308	AQA053N	SFP+-10G-SR
Xcvr 9	REV 01	740-021308	AQA0E97	SFP+-10G-SR
Xcvr 10	REV 01	740-021308	AQA0GS4	SFP+-10G-SR
Xcvr 11	REV 01	740-021308	AQA0JVA	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	12X10GE SFPP
Xcvr 0	REV 01	740-021308	AQA057A	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	ANA0MLS	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQA093A	SFP+-10G-SR
Xcvr 3	REV 01	740-021309	943153A00075	SFP+-10G-LR
Xcvr 4	REV 01	740-021308	AQA077B	SFP+-10G-SR
Xcvr 5	REV 01	740-021308	AQA0JSC	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	AQA0735	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	AQ5028N	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	AP40VN5	SFP+-10G-SR
Xcvr 9	REV 01	740-021308	AQA0K0J	SFP+-10G-SR
Xcvr 10	REV 01	740-021308	AQA07AP	SFP+-10G-SR
Xcvr 11	REV 01	740-021308	AQA08YB	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	3X40GE QSFPP
PIC 3		BUILTIN	BUILTIN	3X40GE QSFPP
WAN MEZZ	REV 07	750-045717	CAAX3123	MPC5E 24XGE Mezz
FPC 11	REV 17	750-037355	CAAT3986	MPC4E 3D 2CGE+8XGE
CPU	REV 08	711-035209	CAAR3972	HMPM PMB 2G
PIC 0		BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-021308	AQA0DSE	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ501Y3	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQ501XU	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ5036Y	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0		NON-JNPR	X12J00247	CFP-100G-SR10
PIC 2		BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-031980	ALQ1DKF	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AJ403YA	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AP40TY0	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	ALQ14G0	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-035329	X12J00095	CFP-100G-SR10
Fan Tray 0	REV 08	740-031521	ACAF4219	Enhanced Fan Tray
Fan Tray 1	REV 08	740-031521	ACAF4225	Enhanced Fan Tray

### show chassis hardware extensive (MX960 Router with MPC5EQ)

```
user@host> show chassis hardware extensive
```

```
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
------	---------	-------------	---------------	-------------

```

Chassis                               JN1214852AFA      MX960
Jedec Code: 0x7fb0                    EEPROM Version: 0x02
                                           S/N:           JN1214852AFA
Assembly ID: 0x0512                   Assembly Version: 00.00
Date: 00-00-0000                      Assembly Flags: 0x00
ID: MX960
Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 05 12 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x20: 4a 4e 31 32 31 34 38 35 32 41 46 41 00 00 00 00
  Address 0x30: 00 00 00 ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane                               REV 01      710-030012      ACAX3674      MX960 Backplane
Jedec Code: 0x7fb0                    EEPROM Version: 0x02
P/N: 710-030012                      S/N:           ACAX3674
Assembly ID: 0x01df                   Assembly Version: 01.01
Date: 01-19-2013                     Assembly Flags: 0x00
Version: REV 01                      CLEI Code:     COM8T00CRB
ID: MX960 Backplane                 FRU Model Number: CHAS-BP-MX960-S
Board Information Record:
  Address 0x00: ad 01 08 00 54 e0 32 bc 68 00 ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 01 df 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 31 30 2d 30 33 30 30 31 32 00 00
  Address 0x20: 53 2f 4e 20 41 43 41 58 33 36 37 34 00 13 01 07
  Address 0x30: dd ff ff ff ad 01 08 00 54 e0 32 bc 68 00 ff ff
  Address 0x40: ff ff ff ff 01 43 4f 4d 38 54 30 30 43 52 42 43
  Address 0x50: 48 41 53 2d 42 50 2d 4d 58 39 36 30 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 42 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff aa ff ff ff ff ff ff ff ff ff ff ff ff
FPM Board                             REV 03      710-014974      CAAZ9326      Front Panel Display
Jedec Code: 0x7fb0                    EEPROM Version: 0x01
P/N: 710-014974                      S/N:           CAAZ9326
Assembly ID: 0x01e6                   Assembly Version: 01.03
Date: 12-31-2012                     Assembly Flags: 0x00
Version: REV 03
ID: Front Panel Display              FRU Model Number: CRAFT-MX960-S
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 01 ff 01 e6 01 03 52 45 56 20 30 33 00 00
  Address 0x10: 00 00 00 00 37 31 30 2d 30 31 34 39 37 34 00 00
  Address 0x20: 53 2f 4e 20 43 41 41 5a 39 33 32 36 00 1f 0c 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 43
  Address 0x50: 52 41 46 54 2d 4d 58 39 36 30 2d 53 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
PDM                                   Rev 03      740-013110      QCS17025017      Power Distribution Module
Jedec Code: 0x7fb0                    EEPROM Version: 0x01
P/N: 740-013110                      S/N:           QCS17025017
Assembly ID: 0x0416                   Assembly Version: 01.03
Date: 01-10-2013                     Assembly Flags: 0x00
Version: Rev 03
ID: Power Distribution Module
Board Information Record:

```

```

Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00
I2C Hex Data:
Address 0x00: 7f b0 01 ff 04 16 01 03 52 65 76 20 30 33 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 31 33 31 31 30 00 00
Address 0x20: 51 43 53 31 37 30 32 35 30 31 37 00 00 0a 01 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
PEM 0          Rev 10    740-027760    QCS1702N062    PS 4.1kW; 200-240V AC
in
Jedec Code:    0x7fb0          EEPROM Version: 0x01
P/N:           740-027760      S/N:           QCS1702N062
Assembly ID:   0x0430          Assembly Version: 01.10
Date:          01-15-2013      Assembly Flags: 0x00
Version:       Rev 10
ID: PS 4.1kW; 200-240V AC in    FRU Model Number: PWR-MX960-4100-AC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00 00
I2C Hex Data:
Address 0x00: 7f b0 01 ff 04 30 01 0a 52 65 76 20 31 30 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 32 37 37 36 30 00 00
Address 0x20: 51 43 53 31 37 30 32 4e 30 36 32 00 00 0f 01 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: 00 00 00 00 01 00 00 00 00 00 00 00 00 00 00 50
Address 0x50: 57 52 2d 4d 58 39 36 30 2d 34 31 30 30 2d 41 43
Address 0x60: 2d 53 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
PEM 1          Rev 04    740-027760    QCS1422N02C    PS 4.1kW; 200-240V AC
in
Jedec Code:    0x7fb0          EEPROM Version: 0x01
P/N:           740-027760      S/N:           QCS1422N02C
Assembly ID:   0x0430          Assembly Version: 01.04
Date:          06-04-2010      Assembly Flags: 0x00
Version:       Rev 04
ID: PS 4.1kW; 200-240V AC in    FRU Model Number: PWR-MX960-4100-AC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00 00
I2C Hex Data:
Address 0x00: 7f b0 01 ff 04 30 01 04 52 65 76 20 30 34 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 32 37 37 36 30 00 00
Address 0x20: 51 43 53 31 34 32 32 4e 30 32 43 00 00 04 06 07
Address 0x30: da ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: 00 00 00 00 01 00 00 00 00 00 00 00 00 00 00 50
Address 0x50: 57 52 2d 4d 58 39 36 30 2d 34 31 30 30 2d 41 43
Address 0x60: 2d 53 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
PEM 2          Rev 09    740-027760    QCS1614N01X    PS 4.1kW; 200-240V AC
in
Jedec Code:    0x7fb0          EEPROM Version: 0x01
P/N:           740-027760      S/N:           QCS1614N01X
Assembly ID:   0x0430          Assembly Version: 01.09
Date:          04-07-2012      Assembly Flags: 0x00
Version:       Rev 09
ID: PS 4.1kW; 200-240V AC in    FRU Model Number: PWR-MX960-4100-AC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00 00
I2C Hex Data:
Address 0x00: 7f b0 01 ff 04 30 01 09 52 65 76 20 30 39 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 32 37 37 36 30 00 00

```

```

Address 0x20: 51 43 53 31 36 31 34 4e 30 31 58 00 00 07 04 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: 00 00 00 00 01 00 00 00 00 00 00 00 00 00 00 50
Address 0x50: 57 52 2d 4d 58 39 36 30 2d 34 31 30 30 2d 41 43
Address 0x60: 2d 53 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Routing Engine 0 REV 08 740-031116 9009131803 RE-S-1800x4
Jedec Code: 0x7fb0 EEPROM Version: 0x02
P/N: 740-031116 S/N: 9009131803
Assembly ID: 0x09c0 Assembly Version: 01.08
Date: 03-04-2013 Assembly Flags: 0x00
Version: REV 08 CLEI Code: COUCASKBAA
ID: RE-S-1800x4 FRU Model Number: RE-S-1800X4-16G-S
Board Information Record:
Address 0x00: 54 32 30 32 37 44 42 2d 34 34 47 42 23 42 23 00
I2C Hex Data:
Address 0x00: 7f b0 02 ff 09 c0 01 08 52 45 56 20 30 38 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 33 31 31 31 36 00 00
Address 0x20: 39 30 30 39 31 33 31 38 30 33 00 00 00 04 03 07
Address 0x30: dd ff ff ff 54 32 30 32 37 44 42 2d 34 34 47 42
Address 0x40: 23 42 23 00 01 43 4f 55 43 41 53 4b 42 41 41 52
Address 0x50: 45 2d 53 2d 31 38 30 30 58 34 2d 31 36 47 2d 53
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 59 ff ff ff ff ff ff ff ff ff ff ff ff
ad0 3831 MB UGB30SFA4000T1 SFA4000T1 000016CD Compact Flash
ad1 30533 MB UGB94BPH32H0S1-KCI 11000061346 Disk 1
usb0 (addr 1) EHCI root hub 0 Intel uhub0
usb0 (addr 2) product 0x0020 32 vendor 0x8087 uhub1
DIMM 0 VL31B5263F-F8SD DIE REV-0 PCB REV-0 MFR ID-ce80
DIMM 1 VL31B5263F-F8SD DIE REV-0 PCB REV-0 MFR ID-ce80
DIMM 2 VL31B5263F-F8SD DIE REV-0 PCB REV-0 MFR ID-ce80
DIMM 3 VL31B5263F-F8SD DIE REV-0 PCB REV-0 MFR ID-ce80
Routing Engine 1 REV 08 740-031116 9009124913 RE-S-1800x4
Jedec Code: 0x7fb0 EEPROM Version: 0x02
P/N: 740-031116 S/N: 9009124913
Assembly ID: 0x09c0 Assembly Version: 01.08
Date: 01-09-2013 Assembly Flags: 0x00
Version: REV 08 CLEI Code: COUCASKBAA
ID: RE-S-1800x4 FRU Model Number: RE-S-1800X4-16G-S
Board Information Record:
Address 0x00: 54 32 30 32 37 44 42 2d 34 34 47 42 23 42 23 00
I2C Hex Data:
Address 0x00: 7f b0 02 ff 09 c0 01 08 52 45 56 20 30 38 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 33 31 31 31 36 00 00
Address 0x20: 39 30 30 39 31 32 34 39 31 33 00 00 00 09 01 07
Address 0x30: dd ff ff ff 54 32 30 32 37 44 42 2d 34 34 47 42
Address 0x40: 23 42 23 00 01 43 4f 55 43 41 53 4b 42 41 41 52
Address 0x50: 45 2d 53 2d 31 38 30 30 58 34 2d 31 36 47 2d 53
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 59 ff ff ff ff ff ff ff ff ff ff ff ff
ad0 3831 MB UGB30SFA4000T1 SFA4000T1 0000106D Compact Flash
ad1 30533 MB UGB94BPH32H0S1-KCI 11000052402 Disk 1
CB 0 REV 18 750-031391 CABF0579 Enhanced MX SCB
Jedec Code: 0x7fb0 EEPROM Version: 0x02
P/N: 750-031391 S/N: CABF0579
Assembly ID: 0x09b0 Assembly Version: 01.18
Date: 04-15-2013 Assembly Flags: 0x00
Version: REV 18 CLEI Code: COUCASRBAA
ID: Enhanced MX SCB FRU Model Number: SCBE-MX-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

```



```

I2C Hex Data:
Address 0x00: 7f b0 02 ff 09 b0 01 12 52 45 56 20 31 38 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 33 31 33 39 31 00 00
Address 0x20: 53 2f 4e 20 43 41 42 46 30 35 37 39 00 0f 04 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4f 55 43 41 53 52 42 41 41 53
Address 0x50: 43 42 45 2d 4d 58 2d 53 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 43 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 7d ff ff ff ff ff ff ff ff ff ff ff ff

CB 1          REV 16    750-031391    CAAZ2471          Enhanced MX SCB
Jedec Code:   0x7fb0          EEPROM Version:   0x02
P/N:          750-031391      S/N:             CAAZ2471
Assembly ID:  0x09b0          Assembly Version: 01.16
Date:         03-09-2013      Assembly Flags:   0x00
Version:      REV 16          CLEI Code:        COUCARCBAB
ID: Enhanced MX SCB          FRU Model Number: SCBE-MX-S

Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 09 b0 01 10 52 45 56 20 31 36 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 33 31 33 39 31 00 00
Address 0x20: 53 2f 4e 20 43 41 41 5a 32 34 37 31 00 09 03 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4f 55 43 41 52 43 42 41 42 53
Address 0x50: 43 42 45 2d 4d 58 2d 53 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 42 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 6d ff ff ff ff ff ff ff ff ff ff ff ff

CB 2          REV 16    750-031391    CAAW9595          Enhanced MX SCB
Jedec Code:   0x7fb0          EEPROM Version:   0x02
P/N:          750-031391      S/N:             CAAW9595
Assembly ID:  0x09b0          Assembly Version: 01.16
Date:         02-01-2013      Assembly Flags:   0x00
Version:      REV 16          CLEI Code:        COUCARCBAB
ID: Enhanced MX SCB          FRU Model Number: SCBE-MX-S

Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 09 b0 01 10 52 45 56 20 31 36 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 33 31 33 39 31 00 00
Address 0x20: 53 2f 4e 20 43 41 41 57 39 35 39 35 00 01 02 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4f 55 43 41 52 43 42 41 42 53
Address 0x50: 43 42 45 2d 4d 58 2d 53 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 42 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 6d ff ff ff ff ff ff ff ff ff ff ff ff

FPC 0          REV 18    750-046005    CACE6574          MPC5E 3D Q 2CGE+4XGE
Jedec Code:   0x7fb0          EEPROM Version:   0x02
P/N:          750-046005      S/N:             CACE6574
Assembly ID:  0x0b8c          Assembly Version: 01.18
Date:         11-20-2013      Assembly Flags:   0x00
Version:      REV 18          CLEI Code:        PROTOXCLEI
ID: MPC5E 3D Q 2CGE+4XGE      FRU Model Number: PROTO-ASSEMBLY

Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 8c 01 12 52 45 56 20 31 38 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 34 36 30 30 35 00 00
Address 0x20: 53 2f 4e 20 43 41 43 45 36 35 37 34 00 14 0b 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00

```

```

Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff
CPU          REV 09   711-045719   CACG8908           RMPC PMB
Jedec Code:  0x7fb0           EEPROM Version:  0x02
P/N:         711-045719       S/N:         CACG8908
Assembly ID: 0x0b85           Assembly Version: 01.09
Date:        11-13-2013       Assembly Flags: 0x00
Version:     REV 09
ID: RMPC PMB
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 85 01 09 52 45 56 20 30 39 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 34 35 37 31 39 00 00
Address 0x20: 53 2f 4e 20 43 41 43 47 38 39 30 38 00 0d 0b 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 00 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff
Address 0x70: ff ff ff c2 00 00 00 00 00 00 00 00 00 00 00 00
PIC 0          BUILTIN      BUILTIN          2X10GE SFPP OTN
Jedec Code:  0x0000           EEPROM Version:  0x00
P/N:         BUILTIN          S/N:         BUILTIN
Assembly ID: 0x0a90           Assembly Version: 00.00
Date:        00-00-0000       Assembly Flags: 0x00
ID: 2X10GE SFPP OTN
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 0a 90 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 c0 02 ae dc 00 00 00 00 0a 6e 00 00
Xcvr 0        REV 01   740-021308   AQA0DYT           SFP+-10G-SR
Xcvr 1        REV 01   740-021308   AQGOMS7           SFP+-10G-SR
PIC 1          BUILTIN      BUILTIN          1X100GE CFP2 OTN
Jedec Code:  0x0000           EEPROM Version:  0x00
P/N:         BUILTIN          S/N:         BUILTIN
Assembly ID: 0x0a6e           Assembly Version: 00.00
Date:        00-00-0000       Assembly Flags: 0x00
ID: 1X100GE CFP2 OTN
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 0a 6e 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 c0 03 f3 8c 31 5c e7 80 00 00 00 02
Xcvr 0        REV 01   740-046563   XD16FC03Z         CFP2-100G-SR10
PIC 2          BUILTIN      BUILTIN          2X10GE SFPP OTN
Jedec Code:  0x0000           EEPROM Version:  0x00
P/N:         BUILTIN          S/N:         BUILTIN
Assembly ID: 0x0a90           Assembly Version: 00.00

```

```

Date:          00-00-0000      Assembly Flags:    0x00
ID: 2X10GE SFPP OTN
Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
  Address 0x00: 00 00 00 00 0a 90 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 c0 03 f5 6c 31 5c db 40 00 00 00 02
    Xcvr 0      REV 01    740-021308    ANA0NAJ      SFP+-10G-SR
    Xcvr 1      REV 01    740-021308    AQGOMRQ      SFP+-10G-SR
    PIC 3              BUILTIN    BUILTIN    1X100GE CFP2 OTN
Jedec Code: 0x0000      EEPROM Version: 0x00
P/N:      BUILTIN      S/N:      BUILTIN
Assembly ID: 0x0a6e      Assembly Version: 00.00
Date:      00-00-0000      Assembly Flags: 0x00
ID: 1X100GE CFP2 OTN
Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
  Address 0x00: 00 00 00 00 0a 6e 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 c0 03 ed ec 31 5c e2 e8 00 00 00 02
    Xcvr 0      REV 01    740-049775    J13K72993      CFP2-100G-LR4
    FPC 1      REV 11    750-045372    CABK8154      MPCE Type 3 3D
Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N:      750-045372    S/N:      CABK8154
Assembly ID: 0x09db      Assembly Version: 04.11
Date:      05-18-2013    Assembly Flags: 0x00
Version:    REV 11      CLEI Code:    COUIBBNBA
ID: MPCE Type 3 3D      FRU Model Number: MX-MPC3E-3D
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 09 db 04 0b 52 45 56 20 31 31 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 34 35 33 37 32 00 00
  Address 0x20: 53 2f 4e 20 43 41 42 4b 38 31 35 34 00 12 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4f 55 49 42 42 4e 42 41 41 4d
  Address 0x50: 58 2d 4d 50 43 33 45 2d 33 44 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 44 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff cf ff ff ff ff ff ff ff ff ff ff ff ff
    CPU      REV 08    711-035209    CABE7370      HMPC PMB 2G
Jedec Code: 0x7fb0      EEPROM Version: 0x01
P/N:      711-035209    S/N:      CABE7370
Assembly ID: 0x0b04      Assembly Version: 01.08
Date:      05-08-2013    Assembly Flags: 0x00
Version:    REV 08
ID: HMPC PMB 2G
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:

```

```

Address 0x00: 7f b0 01 ff 0b 04 01 08 52 45 56 20 30 38 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 33 35 32 30 39 00 00
Address 0x20: 53 2f 4e 20 43 41 42 45 37 33 37 30 00 08 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff
Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
MIC 0          REV 07    750-033307    CABD5255          10X10GE SFPP
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-033307      S/N:           CABD5255
Assembly ID:   0x0a2a          Assembly Version: 02.07
Date:          04-25-2013      Assembly Flags: 0x00
Version:       REV 07          CLEI Code:     COUIBBJBAA
ID: 10X10GE SFPP              FRU Model Number: MIC3-3D-10XGE-SFPP
Board Information Record:
Address 0x00: 34 01 03 03 05 ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 fe 0a 2a 02 07 52 45 56 20 30 37 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 33 33 33 30 37 00 00
Address 0x20: 53 2f 4e 20 43 41 42 44 35 32 35 35 00 19 04 07
Address 0x30: dd ff ff ff 34 01 03 03 05 ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4f 55 49 42 42 4a 42 41 41 4d
Address 0x50: 49 43 33 2d 33 44 2d 31 30 58 47 45 2d 53 46 50
Address 0x60: 50 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 82 c0 03 f0 bc 57 79 83 80 00 00 00 02
PIC 0          BUILTIN    BUILTIN          10X10GE SFPP
Xcvr 0         REV 01    740-021308    AQ50319          SFP+-10G-SR
Xcvr 1         REV 01    740-021308    AQ5035V          SFP+-10G-SR
Xcvr 2         REV 01    740-021308    AQ502XJ          SFP+-10G-SR
Xcvr 3         REV 01    740-021308    AQ43HHR          SFP+-10G-SR
Xcvr 4         REV 01    740-021308    AQ502YA          SFP+-10G-SR
Xcvr 5         REV 01    740-021308    AQ502EU          SFP+-10G-SR
Xcvr 6         REV 01    740-021308    AQ502HR          SFP+-10G-SR
Xcvr 7         REV 01    740-021308    AQ502A6          SFP+-10G-SR
Xcvr 8         REV 01    740-021308    AQ43H8M          SFP+-10G-SR
MIC 1          REV 14    750-033196    CAAP1398          1X100GE CXP
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-033196      S/N:           CAAP1398
Assembly ID:   0x0a29          Assembly Version: 03.14
Date:          10-27-2012      Assembly Flags: 0x00
Version:       REV 14          CLEI Code:     COUIBBKBAA
ID: 1X100GE CXP              FRU Model Number: MIC3-3D-1X100GE-CXP
Board Information Record:
Address 0x00: 34 01 07 07 08 ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 fe 0a 29 03 0e 52 45 56 20 31 34 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 33 33 31 39 36 00 00
Address 0x20: 53 2f 4e 20 43 41 41 50 31 33 39 38 00 1b 0a 07
Address 0x30: dc ff ff ff 34 01 07 07 08 ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4f 55 49 42 42 4b 42 41 41 4d
Address 0x50: 49 43 33 2d 33 44 2d 31 58 31 30 30 47 45 2d 43
Address 0x60: 58 50 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 96 c0 03 ef cc 57 79 85 08 00 00 00 02
PIC 2          BUILTIN    BUILTIN          1X100GE CXP
Xcvr 0         REV 01    740-046563    XD16FC064        CFP2-100G-SR10
FPC 3          REV 35    750-028467    CAAT9156          MPC 3D 16x 10GE
Jedec Code:    0x7fb0          EEPROM Version:    0x01
P/N:           750-028467      S/N:           CAAT9156
Assembly ID:   0x0997          Assembly Version: 01.35
Date:          12-17-2012      Assembly Flags: 0x00

```

```

Version:          REV 35
ID: MPC 3D 16x 10GE          FRU Model Number: MPC-3D-16XGE-SFPP
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 01 ff 09 97 01 23 52 45 56 20 33 35 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 32 38 34 36 37 00 00
  Address 0x20: 53 2f 4e 20 43 41 41 54 39 31 35 36 00 11 0c 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 4d
  Address 0x50: 50 43 2d 33 44 2d 31 36 58 47 45 2d 53 46 50 50
  Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
CPU          REV 11    711-029089    CAAV4645          AMPC PMB
Jedec Code:  0x7fb0          EEPROM Version:  0x01
P/N:         711-029089      S/N:          CAAV4645
Assembly ID: 0x0998          Assembly Version: 01.11
Date:        12-13-2012      Assembly Flags: 0x00
Version:     REV 11
ID: AMPC PMB
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 01 ff 09 98 01 0b 52 45 56 20 31 31 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 32 39 30 38 39 00 00
  Address 0x20: 53 2f 4e 20 43 41 41 56 34 36 34 35 00 0d 0c 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
PIC 0          BUILTIN    BUILTIN          4x 10GE(LAN) SFP+
Jedec Code:  0x0000          EEPROM Version:  0x00
P/N:         BUILTIN        S/N:          BUILTIN
Assembly ID: 0x02fe          Assembly Version: 00.00
Date:        00-00-0000      Assembly Flags: 0x00
ID: 4x 10GE(LAN) SFP+
Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
  Address 0x00: 00 00 00 00 02 fe 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 c0 02 6b 94 00 00 00 00 02 fe 00 00
  Xcvr 0      REV 01    740-021308    AQ43HZ1          SFP+-10G-SR
  Xcvr 1      REV 01    740-021308    AQ43HZC          SFP+-10G-SR
  Xcvr 2      REV 01    740-021308    AQ43HD2          SFP+-10G-SR
  Xcvr 3      REV 01    740-021308    AQ502HN          SFP+-10G-SR
PIC 1          BUILTIN    BUILTIN          4x 10GE(LAN) SFP+
Jedec Code:  0x0000          EEPROM Version:  0x00
P/N:         BUILTIN        S/N:          BUILTIN
Assembly ID: 0x02fe          Assembly Version: 00.00
Date:        00-00-0000      Assembly Flags: 0x00
ID: 4x 10GE(LAN) SFP+
Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:

```

```

Address 0x00: 00 00 00 00 02 fe 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 c0 02 ac 0c 00 00 00 00 02 fe 00 00
  Xcvr 0      REV 01  740-021308  AQ43HGF      SFP+-10G-SR
  Xcvr 1      REV 01  740-021308  AQ501RZ      SFP+-10G-SR
  Xcvr 2      REV 01  740-021308  AQ5029V      SFP+-10G-SR
  Xcvr 3      REV 01  740-021308  AQ501X9      SFP+-10G-SR
  PIC 2              BUILTIN      BUILTIN      4x 10GE(LAN) SFP+
Jedec Code:  0x0000      EEPROM Version:  0x00
P/N:         BUILTIN      S/N:         BUILTIN
Assembly ID: 0x02fe      Assembly Version: 00.00
Date:        00-00-0000   Assembly Flags: 0x00
.....

```

### show chassis hardware models (MX960 Router with MPC5EQ)

```

user@host> show chassis hardware models
Hardware inventory:
Item          Version  Part number  Serial number  FRU model number
Midplane      REV 01  710-030012  ACAX3674      CHAS-BP-MX960-S
FPM Board     REV 03  710-014974  CAAZ9326      CRAFT-MX960-S
PEM 0         Rev 10  740-027760  QCS1702N062   PWR-MX960-4100-AC-S
PEM 1         Rev 04  740-027760  QCS1422N02C   PWR-MX960-4100-AC-S
PEM 2         Rev 09  740-027760  QCS1614N01X   PWR-MX960-4100-AC-S
Routing Engine 0 REV 08  740-031116  9009131803    RE-S-1800X4-16G-S
Routing Engine 1 REV 08  740-031116  9009124913    RE-S-1800X4-16G-S
CB 0          REV 18  750-031391  CABF0579      SCBE-MX-S
CB 1          REV 16  750-031391  CAAZ2471      SCBE-MX-S
CB 2          REV 16  750-031391  CAAW9595      SCBE-MX-S
FPC 0         REV 18  750-046005  CACE6574      PROTO-ASSEMBLY
FPC 1         REV 11  750-045372  CABK8154      MX-MPC3E-3D
  MIC 0       REV 07  750-033307  CABD5255      MIC3-3D-10XGE-SFP
  MIC 1       REV 14  750-033196  CAAP1398      MIC3-3D-1X100GE-CXP
FPC 3         REV 35  750-028467  CAAT9156      MPC-3D-16XGE-SFP
FPC 4         REV 18  750-046005  CACE6568      PROTO-ASSEMBLY
FPC 5         REV 18  750-046005  CACE6577      PROTO-ASSEMBLY
FPC 7         REV 09  750-037355  CAAF0937      MPC4E-2CGE-8XGE
FPC 8         REV 39  750-045715  CACD1903      PROTO-ASSEMBLY
FPC 9         REV 05  750-044444  CAAY9801      MX-MPC2E-3D-P
  MIC 0       REV 28  750-028387  CAAX1071      MIC-3D-4XGE-XFP
FPC 10        REV 21.0.11 750-045715  CAAY3541      PROTO-ASSEMBLY
FPC 11        REV 17  750-037355  CAAT3986      MPC4E-3D-2CGE-8XGE
Fan Tray 0    REV 08  740-031521  ACAF4219      FFANTRAY-MX960-HC-S
Fan Tray 1    REV 08  740-031521  ACAF4225      FFANTRAY-MX960-HC-S

```

### show chassis hardware clei-models (MX960 Router with MPC5EQ)

```

user@host> show chassis hardware clei-models
Hardware inventory:
Item          Version  Part number  CLEI code      FRU model number
Midplane      REV 01  710-030012  COM8T00CRB     CHAS-BP-MX960-S
FPM Board     REV 03  710-014974  CAAZ9326      CRAFT-MX960-S
PEM 0         Rev 10  740-027760  QCS1702N062   PWR-MX960-4100-AC-S
PEM 1         Rev 04  740-027760  QCS1422N02C   PWR-MX960-4100-AC-S
PEM 2         Rev 09  740-027760  QCS1614N01X   PWR-MX960-4100-AC-S

```

Routing Engine 0	REV 08	740-031116	COUCASKBAA	RE-S-1800X4-16G-S
Routing Engine 1	REV 08	740-031116	COUCASKBAA	RE-S-1800X4-16G-S
CB 0	REV 18	750-031391	COUCASRBAA	SCBE-MX-S
CB 1	REV 16	750-031391	COUCARCBAB	SCBE-MX-S
CB 2	REV 16	750-031391	COUCARCBAB	SCBE-MX-S
FPC 0	REV 18	750-046005	PROTOXCLEI	PROTO-ASSEMBLY
FPC 1	REV 11	750-045372	COUIBBNBAA	MX-MPC3E-3D
MIC 0	REV 07	750-033307	COUIBBJBAA	MIC3-3D-10XGE-SFPP
MIC 1	REV 14	750-033196	COUIBBKBAA	MIC3-3D-1X100GE-CXP
FPC 3	REV 35	750-028467		MPC-3D-16XGE-SFPP
FPC 4	REV 18	750-046005	PROTOXCLEI	PROTO-ASSEMBLY
FPC 5	REV 18	750-046005	PROTOXCLEI	PROTO-ASSEMBLY
FPC 7	REV 09	750-037355	PROTOXCLEI	MPC4E-2CGE-8XGE
FPC 8	REV 39	750-045715	PROTOXCLEI	PROTO-ASSEMBLY
FPC 9	REV 05	750-044444	COUIBBGBAA	MX-MPC2E-3D-P
MIC 0	REV 28	750-028387	COUIA16BAA	MIC-3D-4XGE-XFP
FPC 10	REV 21.0.11	750-045715	PROTOXCLEI	PROTO-ASSEMBLY
FPC 11	REV 17	750-037355	IPU3A4DHAA	MPC4E-3D-2CGE-8XGE
Fan Tray 0	REV 08	740-031521		FFANTRAY-MX960-HC-S
Fan Tray 1	REV 08	740-031521		FFANTRAY-MX960-HC-S

### show chassis hardware (MX960 Router with MPC3E and 100-Gigabit DWDM OTN MIC)

user@host> show chassis hardware

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN123F6D9AFA	MX960
Midplane	REV 04	750-047849	ACRC8764	Enhanced MX960 Backplane
FPM Board	REV 03	710-014974	CACS4395	Front Panel Display
PDM	Rev 03	740-013110	QCS1809500Z	Power Distribution Module
PEM 0	Rev 08	740-029344	QCS1817V0LK	DC 4.1kW Power Entry
Module				
PEM 1	Rev 08	740-029344	QCS1814V01F	DC 4.1kW Power Entry
Module				
PEM 2	Rev 08	740-029344	QCS1810V1EW	DC 4.1kW Power Entry
Module				
PEM 3	Rev 08	740-029344	QCS1810V1K5	DC 4.1kW Power Entry
Module				
Routing Engine 0	REV 11	740-031116	9013103483	RE-S-1800x4
Routing Engine 1	REV 10	740-031116	9009198513	RE-S-1800x4
CB 0	REV 23	750-031391	CADW3218	Enhanced MX SCB
CB 1	REV 14	750-031391	ABBK5220	Enhanced MX SCB
FPC 1	REV 14	750-045372	CADK0464	MPCE Type 3 3D
CPU	REV 10	711-035209	CADM9839	HMPD PMB 2G
MIC 0	REV 19	750-033199	CAAE5870	1X100GE CFP
PIC 0		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-032210	UTH0H0W	CFP-100G-LR4
FPC 2	REV 14	750-045372	CADN3262	MPCE Type 3 3D
CPU	REV 10	711-035209	CADN8129	HMPD PMB 2G
FPC 3	REV 14	750-045372	CADH0146	MPCE Type 3 3D
CPU	REV 10	711-035209	CADT2458	HMPD PMB 2G
MIC 0	REV 03	750-057666	CADP1386	1X100GE DWDM CFP2-ACO
PIC 0		BUILTIN	BUILTIN	1X100GE DWDM CFP2-ACO
Xcvr 0	REV 01	740-062357	SMD5136.1	OTN-100G-LH
FPC 4	REV 18	750-045372	CAEV5668	MPCE Type 3 3D
CPU	REV 10	711-035209	CAET7827	HMPD PMB 2G
FPC 7	REV 14	750-045372	CADJ1947	MPCE Type 3 3D
CPU	REV 10	711-035209	CADJ1561	HMPD PMB 2G
MIC 0	REV 05	750-057666	CAEB5763	1X100GE DWDM CFP2-ACO
PIC 0		BUILTIN	BUILTIN	1X100GE DWDM CFP2-ACO
Xcvr 0	REV 01	740-062357	1DJBZ052002	OTN-100G-LH

FPC 8	REV 14	750-045372	CADK0485	MPCE Type 3 3D
CPU	REV 10	711-035209	CADM9828	HMPCE PMB 2G
MIC 0	REV 03	750-057666	CADP1390	1X100GE DWDM CFP2-ACO
PIC 0		BUILTIN	BUILTIN	1X100GE DWDM CFP2-ACO
FPC 9	REV 14	750-045372	CADJ1936	MPCE Type 3 3D
CPU	REV 10	711-035209	CADJ1566	HMPCE PMB 2G
MIC 0	REV 14	750-057666	CAFF7544	1X100GE DWDM CFP2-ACO
PIC 0		BUILTIN	BUILTIN	1X100GE DWDM CFP2-ACO
Xcvr 0	REV 01	740-062357	1DJBZ05100K	OTN-100G-LH
FPC 10	REV 14	750-054901	CADJ3846	MPC3E NG HQoS
CPU	REV 11	711-045719	CADN5471	RMPC PMB
MIC 0	REV 05	750-057666	CAEB5760	1X100GE DWDM CFP2-ACO
PIC 0		BUILTIN	BUILTIN	1X100GE DWDM CFP2-ACO
Xcvr 0	REV 01	740-062357	SMD5091.1	CFP-Loopback
Fan Tray 0	REV 08	740-031521	ACDB4083	Enhanced Fan Tray
Fan Tray 1	REV 08	740-031521	ACDB3995	Enhanced Fan Tray

### show chassis hardware clei-models(MX960 Router with MPC3E and 100-Gigabit DWDM OTN MIC)

```
user@host> show chassis hardware clei-models
```

Hardware inventory:

Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 04	750-047849	CMMJA10BRA	CHAS-BP3-MX960-S
FPM Board	REV 03	710-014974		CRAFT-MX960-S
PEM 0	Rev 08	740-029344		PWR-MX960-4100-DC-S
PEM 1	Rev 08	740-029344		PWR-MX960-4100-DC-S
PEM 2	Rev 08	740-029344		PWR-MX960-4100-DC-S
PEM 3	Rev 08	740-029344		PWR-MX960-4100-DC-S
Routing Engine 0	REV 11	740-031116	COUCASYBAB	RE-S-1800X4-16G-S
Routing Engine 1	REV 10	740-031116	COUCASYBAA	RE-S-1800X4-16G-S
CB 0	REV 23	750-031391	COUCATXBAA	SCBE-MX-S
CB 1	REV 14	750-031391	COUCARCBAA	SCBE-MX-S
FPC 1	REV 14	750-045372	COUIBBNBAB	MX-MPC3E-3D
MIC 0	REV 19	750-033199	COUIBA8BAA	MIC3-3D-1X100GE-CFP
FPC 2	REV 14	750-045372	COUIBBNBAB	MX-MPC3E-3D
FPC 3	REV 14	750-045372	COUIBBNBAB	MX-MPC3E-3D
MIC 0	REV 03	750-057666	PROTOXCLEI	PROTO-ASSEMBLY
FPC 4	REV 18	750-045372	COUIBBNBAC	MX-MPC3E-3D
FPC 7	REV 14	750-045372	COUIBBNBAB	MX-MPC3E-3D
MIC 0	REV 05	750-057666	PROTOXCLEI	PROTO-ASSEMBLY
FPC 8	REV 14	750-045372	COUIBBNBAB	MX-MPC3E-3D
MIC 0	REV 03	750-057666	PROTOXCLEI	PROTO-ASSEMBLY
FPC 9	REV 14	750-045372	COUIBBNBAB	MX-MPC3E-3D
MIC 0	REV 14	750-057666	PROTOXCLEI	PROTO-ASSEMBLY
FPC 10	REV 14	750-054901	PROTOXCLEI	PROTO-ASSEMBLY
MIC 0	REV 05	750-057666	PROTOXCLEI	PROTO-ASSEMBLY
Fan Tray 0	REV 08	740-031521		FFANTRAY-MX960-HC-S
Fan Tray 1	REV 08	740-031521		FFANTRAY-MX960-HC-S

### show chassis hardware (MX10008 Router)

```
user@host> show chassis hardware
```

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			DE487	JNP10008 [MX10008]
Midplane	REV 27	750-054097	ACPD4307	Midplane 8
Routing Engine 0		BUILTIN	BUILTIN	RE X10 LT
Routing Engine 1		BUILTIN	BUILTIN	RE X10
CB 0	REV 02	750-079563	CAFF4580	Control Board
CB 1	REV 04	750-079563	CAGL8034	Control Board



```

..
...
..
4
FPC 3          REV 04  750-084779  CAKR7019      JNP10K-LC2101
CPU            REV 05  750-073391  CAKJ2854      LC 2101 PMB
PIC 0          BUILTIN  BUILTIN       4xQSFP28 SYNCE
  Xcvr 0       REV 01  740-058734  1ACQ104300K   QSFP-100GBASE-SR4
PIC 1          BUILTIN  BUILTIN       4xQSFP28 SYNCE
  Xcvr 0       REV 01  740-061405  1ACQ12110AN   QSFP-100GBASE-SR4
PIC 2          BUILTIN  BUILTIN       4xQSFP28 SYNCE
  Xcvr 0       REV 01  740-046565  QG1105B2      QSFP+-40G-SR4
PIC 3          BUILTIN  BUILTIN       4xQSFP28 SYNCE
  Xcvr 0       REV 01  740-045627  QH08036X      40GBASE eSR4
PIC 4          BUILTIN  BUILTIN       4xQSFP28 SYNCE
  Xcvr 0       REV 01  740-067443  XWRORY7       QSFP+-40G-SR4
  Xcvr 1       REV 01  740-067443  XWRORYH       QSFP+-40G-SR4
  Xcvr 2       REV 01  740-067443  XWRORYP       QSFP+-40G-SR4
  Xcvr 3       REV 01  740-067443  XWS028S       QSFP+-40G-SR4
PIC 5          BUILTIN  BUILTIN       4xQSFP28 SYNCE
  Xcvr 3       REV 01  740-058734  1ACQ113406C   QSFP-100GBASE-SR4
FPD Board     REV 07  711-054687  ACPC7142      Front Panel Display
PEM 0         REV 02  740-049388  1EDL62102N9   Power Supply AC
PEM 1         REV 02  740-049388  1EDL60300KX   Power Supply AC
PEM 2         REV 02  740-049388  1EDL60300DL   Power Supply AC
PEM 3         REV 02  740-049388  1EDL61701BT   Power Supply AC
PEM 4         REV 02  740-049388  1EDL62102P7   Power Supply AC
PEM 5         REV 02  740-049388  1EDL62102PP   Power Supply AC
FTC 0         REV 14  750-050108  ACPE4038      Fan Controller 8
FTC 1         REV 14  750-050108  ACPE4032      Fan Controller 8
Fan Tray 0    REV 09  760-054372  ACPD6799      Fan Tray 8
Fan Tray 1    REV 09  760-054372  ACNZ3584      Fan Tray 8
SFB 0         REV 24  750-050058  ACPD4587      Switch Fabric (SIB) 8

SFB 1         REV 24  750-050058  ACNZ0635      Switch Fabric (SIB) 8
SFB 2         REV 24  750-050058  ACPD4908      Switch Fabric (SIB) 8
SFB 3         REV 24  750-050058  ACNZ0617      Switch Fabric (SIB) 8
SFB 4         REV 24  750-050058  ACNZ0527      Switch Fabric (SIB) 8
SFB 5         REV 23  750-050058  ACNX6980      Switch Fabric (SIB) 8

```

#### show chassis hardware clei-models (MX10008 Router)

```

user@host> show chassis hardware clei-models
Hardware inventory:
Item          Version  Part number  CLEI code      FRU model number
Midplane     REV 27   750-054097  CMMUM00ARA     QFX10008-CHAS
CB 0         REV 02   750-079563
CB 1         REV 04   750-079563
FPC 0        REV 12   750-073174  PROTOXCLEI     PROTO-ASSEMBLY
FPC 2        REV 03   750-073174  PROTOXCLEI     PROTO-ASSEMBLY
FPC 3        REV 04   750-084779  PROTOXCLEI     PROTO-ASSEMBLY
FPD Board    REV 07   711-054687
PEM 0        REV 02   740-049388  CMUPADNBAA     QFX10000-PWR-AC
PEM 1        REV 02   740-049388  CMUPADNBAA     QFX10000-PWR-AC
PEM 2        REV 02   740-049388  CMUPADNBAA     QFX10000-PWR-AC
PEM 3        REV 02   740-049388  CMUPADNBAA     QFX10000-PWR-AC
PEM 4        REV 02   740-049388  CMUPADNBAA     QFX10000-PWR-AC
PEM 5        REV 02   740-049388  CMUPADNBAA     QFX10000-PWR-AC
FTC 0        REV 14   750-050108  CMUCAHZCAA     QFX10008-FAN-CTRL
FTC 1        REV 14   750-050108  CMUCAHZCAA     QFX10008-FAN-CTRL
Fan Tray 0   REV 09   760-054372  CMUCAHYCAA     QFX10008-FAN

```

Fan Tray 1	REV 09	760-054372	CMUCAHYCAA	QFX10008-FAN
SFB 0	REV 24	750-050058	CMUCAH0CAA	QFX10008-SF
SFB 1	REV 24	750-050058	CMUCAH0CAA	QFX10008-SF
SFB 2	REV 24	750-050058	CMUCAH0CAA	QFX10008-SF
SFB 3	REV 24	750-050058	CMUCAH0CAA	QFX10008-SF
SFB 4	REV 24	750-050058	CMUCAH0CAA	QFX10008-SF
SFB 5	REV 23	750-050058	CMUCAH0CAA	QFX10008-SF

### show chassis hardware detail(MX10008 Router)

```

user@host> show chassis hardware detail
Hardware inventory:
Item                Version  Part number  Serial number  Description
Chassis
Midplane            REV 27    750-054097   ACPD4307       Midplane 8
Routing Engine 0
  vtbd0 17408 MB
  vtbd1 57344 MB
  vtbd2 12288 MB
  ada0 128 MB      QEMU
  usb0 (addr 0.1) XHCI root HUB 0  QM00002        Virtio Block Disk
Routing Engine 1
  vtbd0 17408 MB
  vtbd1 57344 MB
  vtbd2 12288 MB
  ada0 128 MB      QEMU
  usb0 (addr 0.1) XHCI root HUB 0  QM00002        Virtio Block Disk
CB 0                REV 02    750-079563   CAFF4580       Control Board
CB 1                REV 04    750-079563   CAGL8034       Control Board
FPC 0               REV 12    750-073174   CAJK0253       JNP10K-LC2102
CPU                 REV 04    750-073391   CAKJ0761       LC 2101 PMB
PIC 0
  Xcvr 0            REV 01    740-054053   QF4807XH       QSFP+-4X10G-SR
  Xcvr 1            REV 01    740-046565   QF121734       QSFP+-40G-SR4
  Xcvr 3            REV 01    740-067443   XWS027R        QSFP+-40G-SR4
PIC 1
  Xcvr 0            REV 01    740-045627   QH080366       40GBASE eSR4
  Xcvr 1            REV 01    740-054053   XYJ0A4P        QSFP+-4X10G-SR
PIC 2
  Xcvr 0            REV 01    740-058734   1ACQ113404E    QSFP-100GBASE-SR4
PIC 3
  Xcvr 0            REV 01    740-058734   1ACQ1041018    QSFP-100GBASE-SR4
  Xcvr 1            REV 01    740-067443   XWS08JK        QSFP+-40G-SR4
  Xcvr 2            REV 01    740-032986   QF340C63       QSFP+-40G-SR4
  Xcvr 3            REV 01    740-067443   XWS08JL        QSFP+-40G-SR4
PIC 4
  Xcvr 0            NON-JNPR   37700171YY0083 QSFP-100GBASE-LR4
PIC 5
  Xcvr 0            REV 01    740-032986   QE201294       QSFP+-40G-SR4
  Xcvr 1            REV 01    740-046565   QH0603VK       QSFP+-40G-SR4
  Xcvr 2            REV 01    740-046565   QD510321       QSFP+-40G-SR4
  Xcvr 3            REV 01    740-054053   QF3208KP       QSFP+-4X10G-SR
FPC 2               REV 03    750-073174   CAJB6004       JNP10K-LC2102
CPU                 REV 01    750-073391   CAHM7956       LC 2101 PMB
PIC 0
  Xcvr 0            REV 01    740-061405   1ACQ12110JK    QSFP-100GBASE-SR4
PIC 1
  Xcvr 0            REV 01    740-046565   XYH0P6F        QSFP+-40G-SR4
PIC 2
  Xcvr 0            REV 01    740-067442   XX401TT        QSFP+-40G-SR4
  Xcvr 1            REV 01    740-067443   XV3002D        QSFP+-40G-SR4

```

Xcvr 2	REV 01	740-067442	XX401SL	QSFP+-40G-SR4
Xcvr 3	REV 01	740-067443	XV30A78	QSFP+-40G-SR4
PIC 3		BUILTIN	BUILTIN	4xQSFP28 MACSEC
Xcvr 0	REV 01	740-067442	XX401T2	QSFP+-40G-SR4
Xcvr 1	REV 01	740-067442	XX401SZ	QSFP+-40G-SR4
PIC 4		BUILTIN	BUILTIN	4xQSFP28 MACSEC
Xcvr 0	REV 01	740-061405	1ACQ12110JS	QSFP-100GBASE-SR4
Xcvr 1	REV 01	740-061405	1ACQ12110JP	QSFP-100GBASE-SR4
Xcvr 2	REV 01	740-061405	1ACQ12110JQ	QSFP-100GBASE-SR4
Xcvr 3	REV 01	740-061405	1ACQ121109R	QSFP-100GBASE-SR4
PIC 5		BUILTIN	BUILTIN	4xQSFP28 MACSEC
Xcvr 0	REV 01	740-061405	1ACQ121109P	QSFP-100GBASE-SR4
Xcvr 1	REV 01	740-061405	1ACQ12110JC	QSFP-100GBASE-SR4
FPC 3	REV 04	750-084779	CAKR7019	JNP10K-LC2101
CPU	REV 05	750-073391	CAKJ2854	LC 2101 PMB
PIC 0		BUILTIN	BUILTIN	4xQSFP28 SYNCE
Xcvr 0	REV 01	740-058734	1ACQ104300K	QSFP-100GBASE-SR4
PIC 1		BUILTIN	BUILTIN	4xQSFP28 SYNCE
Xcvr 0	REV 01	740-061405	1ACQ12110AN	QSFP-100GBASE-SR4
PIC 2		BUILTIN	BUILTIN	4xQSFP28 SYNCE
Xcvr 0	REV 01	740-046565	QG1105B2	QSFP+-40G-SR4
PIC 3		BUILTIN	BUILTIN	4xQSFP28 SYNCE
Xcvr 0	REV 01	740-045627	QH08036X	40GBASE eSR4
PIC 4		BUILTIN	BUILTIN	4xQSFP28 SYNCE
Xcvr 0	REV 01	740-067443	XWRORY7	QSFP+-40G-SR4
Xcvr 1	REV 01	740-067443	XWRORYH	QSFP+-40G-SR4
Xcvr 2	REV 01	740-067443	XWRORYP	QSFP+-40G-SR4
Xcvr 3	REV 01	740-067443	XWS028S	QSFP+-40G-SR4
PIC 5		BUILTIN	BUILTIN	4xQSFP28 SYNCE
Xcvr 3	REV 01	740-058734	1ACQ113406C	QSFP-100GBASE-SR4
FPD Board	REV 07	711-054687	ACPC7142	Front Panel Display
PEM 0	REV 02	740-049388	1EDL62102N9	Power Supply AC
PEM 1	REV 02	740-049388	1EDL60300KX	Power Supply AC
PEM 2	REV 02	740-049388	1EDL60300DL	Power Supply AC
PEM 3	REV 02	740-049388	1EDL61701BT	Power Supply AC
PEM 4	REV 02	740-049388	1EDL62102P7	Power Supply AC
PEM 5	REV 02	740-049388	1EDL62102PP	Power Supply AC
FTC 0	REV 14	750-050108	ACPE4038	Fan Controller 8
FTC 1	REV 14	750-050108	ACPE4032	Fan Controller 8
Fan Tray 0	REV 09	760-054372	ACPD6799	Fan Tray 8
Fan Tray 1	REV 09	760-054372	ACNZ3584	Fan Tray 8
SFB 0	REV 24	750-050058	ACPD4587	Switch Fabric (SIB) 8
SFB 1	REV 24	750-050058	ACNZ0635	Switch Fabric (SIB) 8
SFB 2	REV 24	750-050058	ACPD4908	Switch Fabric (SIB) 8
SFB 3	REV 24	750-050058	ACNZ0617	Switch Fabric (SIB) 8
SFB 4	REV 24	750-050058	ACNZ0527	Switch Fabric (SIB) 8
SFB 5	REV 23	750-050058	ACNX6980	Switch Fabric (SIB) 8

### show chassis hardware extensive(MX10008 Router)

```

user@host> show chassis hardware extensive
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis
Jedec Code:   0x7fb0          EEPROM Version: 0x02
S/N:          DE487
Assembly ID:  0x0566          Assembly Version: 01.27
Date:         08-08-2016      Assembly Flags:  0x00
CLEI Code:    CMMUM00ARA
ID: JNP10008  FRU Model Number: QFX10008-CHAS
Board Information Record:

```

```

Address 0x00: ad 01 08 00 30 b6 4f e9 74 c4 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 05 66 01 1b 00 45 56 20 32 37 00 00
Address 0x10: 00 00 00 00 00 35 30 2d 30 35 34 30 39 37 00 00
Address 0x20: 44 45 34 38 37 00 00 00 00 00 00 00 08 08 07
Address 0x30: e0 ff ff ff ad 01 08 00 30 b6 4f e9 74 c4 ff ff
Address 0x40: ff ff ff ff 01 43 4d 4d 55 4d 30 30 41 52 41 51
Address 0x50: 46 58 31 30 30 30 38 2d 43 48 41 53 00 00 00 00
Address 0x60: 00 00 00 00 00 00 41 44 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 63 44 45 34 38 37 00 00 00 00 00 00 00
Midplane REV 27 750-054097 ACPD4307 Midplane 8
Jedec Code: 0x7fb0 EEPROM Version: 0x02
P/N: 750-054097 S/N: ACPD4307
Assembly ID: 0x0be3 Assembly Version: 01.27
Date: 08-08-2016 Assembly Flags: 0x00
Version: REV 27 CLEI Code: CMMUM00ARA
ID: Midplane 8 FRU Model Number: QFX10008-CHAS
Board Information Record:
Address 0x00: ad 01 08 00 30 b6 4f e9 74 c4 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b e3 01 1b 52 45 56 20 32 37 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 35 34 30 39 37 00 00
Address 0x20: 53 2f 4e 20 41 43 50 44 34 33 30 37 00 08 08 07
Address 0x30: e0 ff ff ff ad 01 08 00 30 b6 4f e9 74 c4 ff ff
Address 0x40: ff ff ff ff 01 43 4d 4d 55 4d 30 30 41 52 41 51
Address 0x50: 46 58 31 30 30 30 38 2d 43 48 41 53 00 00 00 00
Address 0x60: 00 00 00 00 00 00 41 44 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 63 44 45 34 38 37 00 00 00 00 00 00 00
Routing Engine 0 BUILTIN BUILTIN RE X10 LT
vtbd0 17408 MB Virtio Block Disk
vtbd1 57344 MB Virtio Block Disk
vtbd2 12288 MB Virtio Block Disk
ada0 128 MB QEMU QM00002 Virtio Block Disk
usb0 (addr 0.1) XHCI root HUB 0 0x8086 uhub0
Routing Engine 1 BUILTIN BUILTIN RE X10
vtbd0 17408 MB Virtio Block Disk
vtbd1 57344 MB Virtio Block Disk
vtbd2 12288 MB Virtio Block Disk
ada0 128 MB QEMU QM00002 Virtio Block Disk
usb0 (addr 0.1) XHCI root HUB 0 0x8086 uhub0
CB 0 REV 02 750-079563 CAFF4580 Control Board
Jedec Code: 0x7fb0 EEPROM Version: 0x01
P/N: 750-079563 S/N: CAFF4580
Assembly ID: 0x0ca3 Assembly Version: 01.02
Date: 06-06-2016 Assembly Flags: 0x00
Version: REV 02
ID: Control Board
Board Information Record:
Address 0x00: ad 01 00 40 4c 16 fc 91 7c 85 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 fe 0c a3 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 37 39 35 36 33 00 00
Address 0x20: 53 2f 4e 20 43 41 46 46 34 35 38 30 00 06 06 07
Address 0x30: e0 fe ff ff ad 01 00 40 4c 16 fc 91 7c 85 ff ff
Address 0x40: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
CB 1 REV 04 750-079563 CAGL8034 Control Board
Jedec Code: 0x7fb0 EEPROM Version: 0x01
P/N: 750-079563 S/N: CAGL8034

```

```

Assembly ID: 0x0ca3      Assembly Version: 01.04
Date:          06-28-2018    Assembly Flags: 0x00
Version:       REV 04
ID: Control Board
Board Information Record:
  Address 0x00: ad 01 00 40 4c 16 fc 91 7c c5 ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 01 fe 0c a3 01 04 52 45 56 20 30 34 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 37 39 35 36 33 00 00
  Address 0x20: 53 2f 4e 20 43 41 47 4c 38 30 33 34 00 1c 06 07
  Address 0x30: e2 fc ff ff ad 01 00 40 4c 16 fc 91 7c c5 ff ff
  Address 0x40: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
FPC 0          REV 12    750-073174    CAJK0253          JNP10K-LC2102
Jedec Code:    0x7fb0      EEPROM Version:    0x02
P/N:          750-073174    S/N:            CAJK0253
Assembly ID:   0x0ca5      Assembly Version: 01.12
Date:          09-28-2017    Assembly Flags: 0x00
Version:       REV 12      CLEI Code:       PROTOXCLEI
ID: JNP10K-LC2102          FRU Model Number: PROTO-ASSEMBLY
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0c a5 01 0c 52 45 56 20 31 32 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 37 33 31 37 34 00 00
  Address 0x20: 53 2f 4e 20 43 41 4a 4b 30 32 35 33 00 1c 09 07
  Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
CPU          REV 04    750-073391    CAKJ0761          LC 2101 PMB
Jedec Code:    0x7fb0      EEPROM Version:    0x02
P/N:          750-073391    S/N:            CAKJ0761
Assembly ID:   0x0cda      Assembly Version: 01.04
Date:          01-22-2018    Assembly Flags: 0x00
Version:       REV 04
ID: LC 2101 PMB
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0c da 01 04 52 45 56 20 30 34 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 37 33 33 39 31 00 00
  Address 0x20: 53 2f 4e 20 43 41 4b 4a 30 37 36 31 00 16 01 07
  Address 0x30: e2 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 00 00 00 00 00 00 00 00 00 00 00 00
PIC 0          BUILTIN    BUILTIN          4xQSFP28 MACSEC
Jedec Code:    0x0000      EEPROM Version:    0x00
P/N:          BUILTIN      S/N:            BUILTIN
Assembly ID:   0x0af1      Assembly Version: 00.00
Date:          00-00-0000    Assembly Flags: 0x00
ID: 4x QSFP28 10/40/100GE MACSec PIC
Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
  Address 0x00: 00 00 00 00 0a f1 00 00 00 00 00 00 00 00 00 00

```

```

Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 83 00 d1 f1 00 00 00 00 0a f1 00 00
  Xcvr 0      REV 01  740-054053  QF4807XH      QSFP+-4X10G-SR
  Xcvr 1      REV 01  740-046565  QF121734     QSFP+-40G-SR4
  Xcvr 3      REV 01  740-067443  XWS027R      QSFP+-40G-SR4
PIC 1        BUILTIN  BUILTIN      4xQSFP28 MACSEC
Jedec Code:  0x0000      EEPROM Version:  0x00
P/N:         BUILTIN      S/N:         BUILTIN
Assembly ID: 0x0af1      Assembly Version: 00.00
Date:        00-00-0000   Assembly Flags: 0x00
ID: 4x QSFP28 10/40/100GE MACSec PIC
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 0a f1 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 83 80 b1 f3 00 00 00 00 0a f1 00 00
  Xcvr 0      REV 01  740-045627  QH080366     40GBASE eSR4
  Xcvr 1      REV 01  740-054053  XYJ0A4P      QSFP+-4X10G-SR
PIC 2        BUILTIN  BUILTIN      4xQSFP28 MACSEC
Jedec Code:  0x0000      EEPROM Version:  0x00
P/N:         BUILTIN      S/N:         BUILTIN
Assembly ID: 0x0af1      Assembly Version: 00.00
Date:        00-00-0000   Assembly Flags: 0x00
ID: 4x QSFP28 10/40/100GE MACSec PIC
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 0a f1 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 83 80 73 e8 00 00 00 00 00 00 00 00
  Xcvr 0      REV 01  740-058734  1ACQ113404E  QSFP-100GBASE-SR4
PIC 3        BUILTIN  BUILTIN      4xQSFP28 MACSEC
Jedec Code:  0x0000      EEPROM Version:  0x00
P/N:         BUILTIN      S/N:         BUILTIN
Assembly ID: 0x0af1      Assembly Version: 00.00
Date:        00-00-0000   Assembly Flags: 0x00
ID: 4x QSFP28 10/40/100GE MACSec PIC
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 0a f1 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

```

```

Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 83 80 51 ea 00 00 00 00 0a f1 00 00
Xcvr 0      REV 01 740-058734 1ACQ1041018 QSPF-100GBASE-SR4
Xcvr 1      REV 01 740-067443 XWS08JK QSPF+-40G-SR4
Xcvr 2      REV 01 740-032986 QF340C63 QSPF+-40G-SR4
Xcvr 3      REV 01 740-067443 XWS08JL QSPF+-40G-SR4
PIC 4      BUILTIN BUILTIN 4xQSPF28 MACSEC
Jedec Code: 0x0000 EEPROM Version: 0x00
P/N:      BUILTIN S/N:      BUILTIN
Assembly ID: 0x0af1 Assembly Version: 00.00
Date:      00-00-0000 Assembly Flags: 0x00
ID: 4x QSPF28 10/40/100GE MACSec PIC
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 0a f1 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 83 80 31 ec 00 00 00 00 0a f1 00 00
Xcvr 0      NON-JNPR 37700171YY0083 QSPF-100GBASE-LR4
PIC 5      BUILTIN BUILTIN 4xQSPF28 MACSEC
Jedec Code: 0x0000 EEPROM Version: 0x00
P/N:      BUILTIN S/N:      BUILTIN
Assembly ID: 0x0af1 Assembly Version: 00.00
Date:      00-00-0000 Assembly Flags: 0x00
ID: 4x QSPF28 10/40/100GE MACSec PIC
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 0a f1 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 83 80 11 ee 00 00 00 00 0a f1 00 00
Xcvr 0      REV 01 740-032986 QE201294 QSPF+-40G-SR4
Xcvr 1      REV 01 740-046565 QH0603VK QSPF+-40G-SR4
Xcvr 2      REV 01 740-046565 QD510321 QSPF+-40G-SR4
Xcvr 3      REV 01 740-054053 QF3208KP QSPF+-4X10G-SR
FPC 2      REV 03 750-073174 CAJB6004 JNP10K-LC2102
Jedec Code: 0x7fb0 EEPROM Version: 0x02
P/N:      750-073174 S/N:      CAJB6004
Assembly ID: 0x0ca5 Assembly Version: 01.03
Date:      06-20-2017 Assembly Flags: 0x00
Version:    REV 03 CLEI Code:  PROTOXCLEI
ID: JNP10K-LC2102 FRU Model Number:  PROTO-ASSEMBLY
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0c a5 01 03 52 45 56 20 30 33 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 37 33 31 37 34 00 00
Address 0x20: 53 2f 4e 20 43 41 4a 42 36 30 30 34 00 14 06 07
Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50

```

```

Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff
Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff
CPU          REV 01    750-073391    CAHM7956          LC 2101 PMB
Jedec Code:  0x7fb0          EEPROM Version:  0x02
P/N:         750-073391      S/N:           CAHM7956
Assembly ID: 0x0cda          Assembly Version: 01.01
Date:        05-08-2017      Assembly Flags: 0x00
Version:     REV 01
ID: LC 2101 PMB
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0c da 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 37 33 33 39 31 00 00
Address 0x20: 53 2f 4e 20 43 41 48 4d 37 39 35 36 00 08 05 07
Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 00 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff
Address 0x70: ff ff ff c2 00 00 00 00 00 00 00 00 00 00 00 00
PIC 0          BUILTIN      BUILTIN          4xQSFP28 MACSEC
Jedec Code:  0x0000          EEPROM Version:  0x00
P/N:         BUILTIN        S/N:           BUILTIN
Assembly ID: 0x0af1          Assembly Version: 00.00
Date:        00-00-0000      Assembly Flags: 0x00
ID: 4x QSFP28 10/40/100GE MACSec PIC
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 0a f1 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 83 00 d1 f1 00 00 00 00 0a f1 00 00
Xcvr 0        REV 01    740-061405    1ACQ12110JK      QSFP-100GBASE-SR4
PIC 1          BUILTIN      BUILTIN          4xQSFP28 MACSEC
Jedec Code:  0x0000          EEPROM Version:  0x00
P/N:         BUILTIN        S/N:           BUILTIN
Assembly ID: 0x0af1          Assembly Version: 00.00
Date:        00-00-0000      Assembly Flags: 0x00
ID: 4x QSFP28 10/40/100GE MACSec PIC
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 0a f1 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 83 80 b1 f3 00 00 00 00 0a f1 00 00
Xcvr 0        REV 01    740-046565    XYH0P6F          QSFP+-40G-SR4
PIC 2          BUILTIN      BUILTIN          4xQSFP28 MACSEC
Jedec Code:  0x0000          EEPROM Version:  0x00
P/N:         BUILTIN        S/N:           BUILTIN
Assembly ID: 0x0af1          Assembly Version: 00.00

```



```

Date:          00-00-0000          Assembly Flags:    0x00
ID: 4x QSFP28 10/40/100GE MACSec PIC
Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
  Address 0x00: 00 00 00 00 0a f1 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 83 80 73 e8 00 00 00 00 00 00 00 00
    Xcvr 0      REV 01    740-067442    XX401TT      QSFP+-40G-SR4
    Xcvr 1      REV 01    740-067443    XV3002D      QSFP+-40G-SR4
    Xcvr 2      REV 01    740-067442    XX401SL      QSFP+-40G-SR4
    Xcvr 3      REV 01    740-067443    XV30A78      QSFP+-40G-SR4
  PIC 3          BUILTIN    BUILTIN      4xQSFP28 MACSEC
Jedec Code:    0x0000          EEPROM Version:    0x00
P/N:          BUILTIN          S/N:          BUILTIN
Assembly ID:   0x0af1          Assembly Version: 00.00
Date:          00-00-0000          Assembly Flags:    0x00
ID: 4x QSFP28 10/40/100GE MACSec PIC
Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
  Address 0x00: 00 00 00 00 0a f1 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 83 80 51 ea 00 00 00 00 0a f1 00 00
    Xcvr 0      REV 01    740-067442    XX401T2      QSFP+-40G-SR4
    Xcvr 1      REV 01    740-067442    XX401SZ      QSFP+-40G-SR4
  PIC 4          BUILTIN    BUILTIN      4xQSFP28 MACSEC
Jedec Code:    0x0000          EEPROM Version:    0x00
P/N:          BUILTIN          S/N:          BUILTIN
Assembly ID:   0x0af1          Assembly Version: 00.00
Date:          00-00-0000          Assembly Flags:    0x00
ID: 4x QSFP28 10/40/100GE MACSec PIC
Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
  Address 0x00: 00 00 00 00 0a f1 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 83 80 31 ec 00 00 00 00 0a f1 00 00
    Xcvr 0      REV 01    740-061405    1ACQ12110JS   QSFP-100GBASE-SR4
    Xcvr 1      REV 01    740-061405    1ACQ12110JP   QSFP-100GBASE-SR4
    Xcvr 2      REV 01    740-061405    1ACQ12110JQ   QSFP-100GBASE-SR4
    Xcvr 3      REV 01    740-061405    1ACQ121109R   QSFP-100GBASE-SR4
  PIC 5          BUILTIN    BUILTIN      4xQSFP28 MACSEC
Jedec Code:    0x0000          EEPROM Version:    0x00
P/N:          BUILTIN          S/N:          BUILTIN
Assembly ID:   0x0af1          Assembly Version: 00.00

```

```

Date:          00-00-0000      Assembly Flags:    0x00
ID: 4x QSFP28 10/40/100GE MACSec PIC
Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
  Address 0x00: 00 00 00 00 0a f1 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 83 80 11 ee 00 00 00 00 0a f1 00 00
    Xcvr 0      REV 01    740-061405    1ACQ121109P    QSFP-100GBASE-SR4
    Xcvr 1      REV 01    740-061405    1ACQ12110JC    QSFP-100GBASE-SR4
FPC 3          REV 04    750-084779    CAKR7019        JNP10K-LC2101
Jedec Code:    0x7fb0      EEPROM Version:    0x02
P/N:           750-084779  S/N:             CAKR7019
Assembly ID:   0x0cff      Assembly Version: 01.04
Date:          03-11-2018  Assembly Flags:   0x00
Version:       REV 04      CLEI Code:       PROTOXCLEI
ID: JNP10K-LC2101        FRU Model Number:  PROTO-ASSEMBLY
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0c ff 01 04 52 45 56 20 30 34 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 38 34 37 37 39 00 00
  Address 0x20: 53 2f 4e 20 43 41 4b 52 37 30 31 39 00 0b 03 07
  Address 0x30: e2 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff ff
CPU          REV 05    750-073391    CAKJ2854        LC 2101 PMB
Jedec Code:    0x7fb0      EEPROM Version:    0x01
P/N:           750-073391  S/N:             CAKJ2854
Assembly ID:   0x0cda      Assembly Version: 01.05
Date:          03-12-2018  Assembly Flags:   0x00
Version:       REV 05
ID: LC 2101 PMB
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 01 ff 0c da 01 05 52 45 56 20 30 35 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 37 33 33 39 31 00 00
  Address 0x20: 53 2f 4e 20 43 41 4b 4a 32 38 35 34 00 0c 03 07
  Address 0x30: e2 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
PIC 0          BUILTIN    BUILTIN        4xQSFP28 SYNCE
Jedec Code:    0x0000      EEPROM Version:    0x00
P/N:           BUILTIN     S/N:             BUILTIN
Assembly ID:   0x0af3      Assembly Version: 00.00
Date:          00-00-0000  Assembly Flags:   0x00
ID: 4x QSFP28 10/40/100GE SYNCE PIC
Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
  Address 0x00: 00 00 00 00 0a f3 00 00 00 00 00 00 00 00 00 00

```

```

Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 00 83 00 b1 f3 00 00 00 00 0a f3 00 00
  Xcvr 0      REV 01    740-058734    1ACQ104300K    QSFP-100GBASE-SR4
PIC 1          BUILTIN    BUILTIN          4xQSFP28 SYNCE
Jedec Code:   0x0000          EEPROM Version:   0x00
P/N:          BUILTIN          S/N:            BUILTIN
Assembly ID:  0x0af3          Assembly Version: 00.00
Date:         00-00-0000      Assembly Flags:  0x00
ID: 4x QSFP28 10/40/100GE SYNCE PIC
Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
  Address 0x00: 00 00 00 00 0a f3 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Xcvr 0      REV 01    740-061405    1ACQ12110AN    QSFP-100GBASE-SR4
PIC 2          BUILTIN    BUILTIN          4xQSFP28 SYNCE
Jedec Code:   0x0000          EEPROM Version:   0x00
P/N:          BUILTIN          S/N:            BUILTIN
Assembly ID:  0x0af3          Assembly Version: 00.00
Date:         00-00-0000      Assembly Flags:  0x00
ID: 4x QSFP28 10/40/100GE SYNCE PIC
Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
  Address 0x00: 00 00 00 00 0a f3 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 83 80 b1 8a b5 cf 0b 5f 08 00 73 6d
  Xcvr 0      REV 01    740-046565    QG1105B2      QSFP+-40G-SR4
PIC 3          BUILTIN    BUILTIN          4xQSFP28 SYNCE
Jedec Code:   0x0000          EEPROM Version:   0x00
P/N:          BUILTIN          S/N:            BUILTIN
Assembly ID:  0x0af3          Assembly Version: 00.00
Date:         00-00-0000      Assembly Flags:  0x00
ID: 4x QSFP28 10/40/100GE SYNCE PIC
Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
  Address 0x00: 00 00 00 00 0a f3 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 83 80 11 94 b5 cf 0b 5f 0c 00 73 6d

```

```

Xcvr 0      REV 01  740-045627  QH08036X      40GBASE eSR4
PIC 4      BUILTIN  BUILTIN      4xQSFP28 SYNC
Jedec Code: 0x0000      EEPROM Version: 0x00
P/N:      BUILTIN      S/N:      BUILTIN
Assembly ID: 0x0af3      Assembly Version: 00.00
Date:      00-00-0000      Assembly Flags: 0x00
ID: 4x QSFP28 10/40/100GE SYNC PIC
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 0a f3 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 83 80 71 9d b5 cf 0b 5f 10 00 73 6d
Xcvr 0      REV 01  740-067443  XWRORY7      QSFP+-40G-SR4
Xcvr 1      REV 01  740-067443  XWRORYH      QSFP+-40G-SR4
Xcvr 2      REV 01  740-067443  XWRORYP      QSFP+-40G-SR4
Xcvr 3      REV 01  740-067443  XWS028S      QSFP+-40G-SR4
PIC 5      BUILTIN  BUILTIN      4xQSFP28 SYNC
Jedec Code: 0x0000      EEPROM Version: 0x00
P/N:      BUILTIN      S/N:      BUILTIN
Assembly ID: 0x0af3      Assembly Version: 00.00
Date:      00-00-0000      Assembly Flags: 0x00
ID: 4x QSFP28 10/40/100GE SYNC PIC
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 0a f3 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 83 80 d1 a6 b5 cf 0b 5f 14 00 73 6d
Xcvr 3      REV 01  740-058734  1ACQ113406C  QSFP-100GBASE-SR4
FPD Board  REV 07  711-054687  ACPC7142      Front Panel Display
Jedec Code: 0x7fb0      EEPROM Version: 0x01
P/N:      711-054687      S/N:      ACPC7142
Assembly ID: 0x0bf2      Assembly Version: 01.07
Date:      07-22-2016      Assembly Flags: 0x00
Version:      REV 07
ID: Front Panel Display
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 0b f2 01 07 52 45 56 20 30 37 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 35 34 36 38 37 00 00
Address 0x20: 53 2f 4e 20 41 43 50 43 37 31 34 32 00 16 07 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
PEM 0      REV 02  740-049388  1EDL62102N9  Power Supply AC
Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N:      740-049388      S/N:      1EDL62102N9

```

```

Assembly ID: 0x0483      Assembly Version: 01.02
Date:          05-25-2016    Assembly Flags: 0x00
Version:       REV 02        CLEI Code:      CMUPADNBAA
ID: Power Supply AC        FRU Model Number: QFX10000-PWR-AC
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
  Address 0x20: 31 45 44 4c 36 32 31 30 32 4e 39 00 00 19 05 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
  Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
PEM 1          REV 02    740-049388    1EDL60300KX    Power Supply AC
Jedec Code: 0x00b0      EEPROM Version: 0x02
P/N:          740-049388    S/N:          1EDL60300KX
Assembly ID: 0x0483      Assembly Version: 01.02
Date:          01-20-2016    Assembly Flags: 0x00
Version:       REV 02        CLEI Code:      CMUPADNBAA
ID: Power Supply AC        FRU Model Number: QFX10000-PWR-AC
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 00 b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
  Address 0x20: 31 45 44 4c 36 30 33 30 30 4b 58 00 00 14 01 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
  Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
PEM 2          REV 02    740-049388    1EDL60300DL    Power Supply AC
Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N:          740-049388    S/N:          1EDL60300DL
Assembly ID: 0x0483      Assembly Version: 01.02
Date:          01-20-2016    Assembly Flags: 0x00
Version:       REV 02        CLEI Code:      CMUPADNBAA
ID: Power Supply AC        FRU Model Number: QFX10000-PWR-AC
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
  Address 0x20: 31 45 44 4c 36 30 33 30 30 44 4c 00 00 14 01 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
  Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
PEM 3          REV 02    740-049388    1EDL61701BT    Power Supply AC
Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N:          740-049388    S/N:          1EDL61701BT
Assembly ID: 0x0483      Assembly Version: 01.02
Date:          05-01-2016    Assembly Flags: 0x00
Version:       REV 02        CLEI Code:      CMUPADNBAA
ID: Power Supply AC        FRU Model Number: QFX10000-PWR-AC
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:

```

```

Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
Address 0x20: 31 45 44 4c 36 31 37 30 31 42 54 00 00 01 05 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
PEM 4          REV 02    740-049388    1EDL62102P7    Power Supply AC
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           740-049388      S/N:             1EDL62102P7
Assembly ID:   0x0483          Assembly Version: 01.02
Date:          05-25-2016      Assembly Flags:   0x00
Version:       REV 02          CLEI Code:        CMUPADNBAA
ID: Power Supply AC          FRU Model Number: QFX10000-PWR-AC
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
Address 0x20: 31 45 44 4c 36 32 31 30 32 50 37 00 00 19 05 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
PEM 5          REV 02    740-049388    1EDL62102PP    Power Supply AC
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           740-049388      S/N:             1EDL62102PP
Assembly ID:   0x0483          Assembly Version: 01.02
Date:          05-25-2016      Assembly Flags:   0x00
Version:       REV 02          CLEI Code:        CMUPADNBAA
ID: Power Supply AC          FRU Model Number: QFX10000-PWR-AC
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
Address 0x20: 31 45 44 4c 36 32 31 30 32 50 50 00 00 19 05 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
FTC 0          REV 14    750-050108    ACPE4038      Fan Controller 8
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-050108      S/N:             ACPE4038
Assembly ID:   0x0bee          Assembly Version: 01.14
Date:          09-27-2016      Assembly Flags:   0x00
Version:       REV 14          CLEI Code:        CMUCAHZCAA
ID: Fan Controller 8          FRU Model Number: QFX10008-FAN-CTRL
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b ee 01 0e 52 45 56 20 31 34 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 31 30 38 00 00
Address 0x20: 53 2f 4e 20 41 43 50 45 34 30 33 38 00 1b 09 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 5a 43 41 41 51
Address 0x50: 46 58 31 30 30 30 38 2d 46 41 4e 2d 43 54 52 4c
Address 0x60: 00 00 00 00 00 00 41 44 00 ff ff ff ff ff ff ff

```

```

Address 0x70: ff ff ff 98 ff ff ff ff ff ff ff ff ff ff ff
FTC 1          REV 14    750-050108    ACPE4032          Fan Controller 8
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-050108      S/N:           ACPE4032
Assembly ID:   0x0bee          Assembly Version: 01.14
Date:          09-27-2016      Assembly Flags: 0x00
Version:       REV 14          CLEI Code:     CMUCAHZCAA
ID: Fan Controller 8          FRU Model Number: QFX10008-FAN-CTRL
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b ee 01 0e 52 45 56 20 31 34 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 31 30 38 00 00
Address 0x20: 53 2f 4e 20 41 43 50 45 34 30 33 32 00 1b 09 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 5a 43 41 41 51
Address 0x50: 46 58 31 30 30 30 38 2d 46 41 4e 2d 43 54 52 4c
Address 0x60: 00 00 00 00 00 00 41 44 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 98 ff ff ff ff ff ff ff ff ff ff ff ff

Fan Tray 0      REV 09    760-054372    ACPD6799          Fan Tray 8
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           760-054372      S/N:           ACPD6799
Assembly ID:   0x0bf0          Assembly Version: 01.09
Date:          09-28-2016      Assembly Flags: 0x00
Version:       REV 09          CLEI Code:     CMUCAHYCAA
ID: Fan Tray 8          FRU Model Number: QFX10008-FAN
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b f0 01 09 52 45 56 20 30 39 00 00
Address 0x10: 00 00 00 00 37 36 30 2d 30 35 34 33 37 32 00 00
Address 0x20: 53 2f 4e 20 41 43 50 44 36 37 39 39 00 1c 09 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 59 43 41 41 51
Address 0x50: 46 58 31 30 30 30 38 2d 46 41 4e 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f1 ff ff ff ff ff ff ff ff ff ff ff ff

Fan Tray 1      REV 09    760-054372    ACNZ3584          Fan Tray 8
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           760-054372      S/N:           ACNZ3584
Assembly ID:   0x0bf0          Assembly Version: 01.09
Date:          08-30-2016      Assembly Flags: 0x00
Version:       REV 09          CLEI Code:     CMUCAHYCAA
ID: Fan Tray 8          FRU Model Number: QFX10008-FAN
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b f0 01 09 52 45 56 20 30 39 00 00
Address 0x10: 00 00 00 00 37 36 30 2d 30 35 34 33 37 32 00 00
Address 0x20: 53 2f 4e 20 41 43 4e 5a 33 35 38 34 00 1e 08 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 59 43 41 41 51
Address 0x50: 46 58 31 30 30 30 38 2d 46 41 4e 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f1 ff ff ff ff ff ff ff ff ff ff ff ff

SFB 0          REV 24    750-050058    ACPD4587          Switch Fabric (SIB) 8
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-050058      S/N:           ACPD4587
Assembly ID:   0x0bec          Assembly Version: 01.24
Date:          06-19-2016      Assembly Flags: 0x00
Version:       REV 24          CLEI Code:     CMUCAHOC AA

```

```

ID: Switch Fabric (SIB) 8          FRU Model Number: QFX10008-SF
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ec 01 18 52 45 56 20 32 34 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 35 38 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 44 34 35 38 37 00 13 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 30 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 53 46 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 45 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff d1 00 00 00 00 00 00 00 00 00 00 00 00
SFB 1          REV 24    750-050058    ACNZ0635          Switch Fabric (SIB) 8
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-050058      S/N:             ACNZ0635
Assembly ID:   0x0bec          Assembly Version: 01.24
Date:          06-06-2016      Assembly Flags:   0x00
Version:       REV 24          CLEI Code:        CMUCAH0CAA
ID: Switch Fabric (SIB) 8      FRU Model Number: QFX10008-SF
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ec 01 18 52 45 56 20 32 34 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 35 38 00 00
  Address 0x20: 53 2f 4e 20 41 43 4e 5a 30 36 33 35 00 06 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 30 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 53 46 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 45 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff d1 00 00 00 00 00 00 00 00 00 00 00 00
SFB 2          REV 24    750-050058    ACPD4908          Switch Fabric (SIB) 8
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-050058      S/N:             ACPD4908
Assembly ID:   0x0bec          Assembly Version: 01.24
Date:          07-12-2016      Assembly Flags:   0x00
Version:       REV 24          CLEI Code:        CMUCAH0CAA
ID: Switch Fabric (SIB) 8      FRU Model Number: QFX10008-SF
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ec 01 18 52 45 56 20 32 34 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 35 38 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 44 34 39 30 38 00 0c 07 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 30 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 53 46 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 45 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff d1 00 00 00 00 00 00 00 00 00 00 00 00
SFB 3          REV 24    750-050058    ACNZ0617          Switch Fabric (SIB) 8
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-050058      S/N:             ACNZ0617
Assembly ID:   0x0bec          Assembly Version: 01.24
Date:          06-07-2016      Assembly Flags:   0x00
Version:       REV 24          CLEI Code:        CMUCAH0CAA
ID: Switch Fabric (SIB) 8      FRU Model Number: QFX10008-SF
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ec 01 18 52 45 56 20 32 34 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 35 38 00 00
  Address 0x20: 53 2f 4e 20 41 43 4e 5a 30 36 31 37 00 07 06 07

```



```

Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 30 43 41 41 51
Address 0x50: 46 58 31 30 30 30 38 2d 53 46 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 41 45 00 ff ff ff ff ff ff
Address 0x70: ff ff ff d1 00 00 00 00 00 00 00 00 00 00 00
SFB 4          REV 24    750-050058    ACNZ0527          Switch Fabric (SIB) 8
Jedec Code:   0x7fb0          EEPROM Version:   0x02
P/N:          750-050058      S/N:           ACNZ0527
Assembly ID:  0x0bec          Assembly Version: 01.24
Date:         06-06-2016      Assembly Flags:  0x00
Version:      REV 24          CLEI Code:      CMUCAHOCAA
ID: Switch Fabric (SIB) 8      FRU Model Number: QFX10008-SF
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b ec 01 18 52 45 56 20 32 34 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 35 38 00 00
Address 0x20: 53 2f 4e 20 41 43 4e 5a 30 35 32 37 00 06 06 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 30 43 41 41 51
Address 0x50: 46 58 31 30 30 30 38 2d 53 46 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 41 45 00 ff ff ff ff ff ff
Address 0x70: ff ff ff d1 00 00 00 00 00 00 00 00 00 00 00
SFB 5          REV 23    750-050058    ACNX6980          Switch Fabric (SIB) 8
Jedec Code:   0x7fb0          EEPROM Version:   0x02
P/N:          750-050058      S/N:           ACNX6980
Assembly ID:  0x0bec          Assembly Version: 01.23
Date:         05-16-2016      Assembly Flags:  0x00
Version:      REV 23          CLEI Code:      CMUCAHOCAA
ID: Switch Fabric (SIB) 8      FRU Model Number: QFX10008-SF
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b ec 01 17 52 45 56 20 32 33 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 35 38 00 00
Address 0x20: 53 2f 4e 20 41 43 4e 58 36 39 38 30 00 10 05 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 30 43 41 41 51
Address 0x50: 46 58 31 30 30 30 38 2d 53 46 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff
Address 0x70: ff ff ff ce 00 00 00 00 00 00 00 00 00 00 00

```

### show chassis hardware models(MX10008 Router)

```

user@host> show chassis hardware models

```

Item	Version	Part number	Serial number	FRU model number
Midplane	REV 27	750-054097	ACPD4307	QFX10008-CHAS
CB 0	REV 02	750-079563	CAFF4580	
CB 1	REV 04	750-079563	CAGL8034	
FPC 0	REV 12	750-073174	CAJK0253	PROTO-ASSEMBLY
FPC 2	REV 03	750-073174	CAJB6004	PROTO-ASSEMBLY
FPC 3	REV 04	750-084779	CAKR7019	PROTO-ASSEMBLY
FPD Board	REV 07	711-054687	ACPC7142	
PEM 0	REV 02	740-049388	1EDL62102N9	QFX10000-PWR-AC
PEM 1	REV 02	740-049388	1EDL60300KX	QFX10000-PWR-AC
PEM 2	REV 02	740-049388	1EDL60300DL	QFX10000-PWR-AC
PEM 3	REV 02	740-049388	1EDL61701BT	QFX10000-PWR-AC
PEM 4	REV 02	740-049388	1EDL62102P7	QFX10000-PWR-AC
PEM 5	REV 02	740-049388	1EDL62102PP	QFX10000-PWR-AC
FTC 0	REV 14	750-050108	ACPE4038	QFX10008-FAN-CTRL
FTC 1	REV 14	750-050108	ACPE4032	QFX10008-FAN-CTRL

Fan Tray 0	REV 09	760-054372	ACPD6799	QFX10008-FAN
Fan Tray 1	REV 09	760-054372	ACNZ3584	QFX10008-FAN
SFB 0	REV 24	750-050058	ACPD4587	QFX10008-SF
SFB 1	REV 24	750-050058	ACNZ0635	QFX10008-SF
SFB 2	REV 24	750-050058	ACPD4908	QFX10008-SF
SFB 3	REV 24	750-050058	ACNZ0617	QFX10008-SF
SFB 4	REV 24	750-050058	ACNZ0527	QFX10008-SF
SFB 5	REV 23	750-050058	ACNX6980	QFX10008-SF

### show chassis hardware (PTX3000 Router with 5-port 100-Gigabit DWDM OTN PIC)

user@host> show chassis hardware

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN123AC42AJC	PTX3000
Midplane	REV 22	750-044645	ACLP6640	Backplane
FPM	REV 07	760-044663	ACMX2146	Front Panel Display
PSM 1	REV 02	740-044980	1EDD3080169	DC 12V Power Supply
PSM 2	REV 06	740-044981	1EDK5040563	AC 12V Power Supply
PSM 3	REV 06	740-044981	1EDK5040313	AC 12V Power Supply
PSM 4	REV 04	740-044980	1EDJ3330088	DC 12V Power Supply
Routing Engine 0	REV 12	740-026942	P737A-006029	RE-DUO-2600
CB 0	REV 18	750-044656	ACMZ3179	Control Board
FPC 2	REV 06	750-057064	ACAM6098	FPC3-SFF-PTX-1X
CPU		BUILTIN	BUILTIN	SMPC PMB
PIC 0	REV 17	750-059747	ACNW3510	5X100GE DWDM CFP2-ACO
Xcvr 0	REV 01	740-062357	1DJBZ040003	OTN-100G-LH
Xcvr 2	REV 01	740-062357	1DJBZ044004	OTN-100G-LH
Xcvr 3	REV 01	740-062357	1DJBZ03500P	OTN-100G-LH
Xcvr 4	REV 01	740-062357	1DJBZ03700C	OTN-100G-LH
FPC 4	REV 12	750-057064	ACAM7153	FPC3-SFF-PTX-1X
CPU		BUILTIN	BUILTIN	SMPC PMB
PIC 0	REV 17	750-059747	ACNW3511	5X100GE DWDM CFP2-ACO
Xcvr 0	REV 01	740-061663	47	OTN-100G-LH
Xcvr 1	REV 01	740-061663	39	OTN-100G-LH
Xcvr 2	REV 01	740-062357	1DJBZ044002	OTN-100G-LH
Xcvr 3	REV 01	740-062357	1DJBZ03700G	OTN-100G-LH
Xcvr 4	REV 01	740-062357	1DJBZ041001	OTN-100G-LH
FPC 8	REV 11	750-057064	ACAM6808	FPC3-SFF-PTX-1X
CPU		BUILTIN	BUILTIN	SMPC PMB
PIC 0	REV 17	750-059747	ACNW3508	5X100GE DWDM CFP2-ACO
Xcvr 0	REV 01	740-061663	194	OTN-100G-LH
Xcvr 1	REV 01	740-061663	168	OTN-100G-LH
Xcvr 2	REV 01	740-061663	52	OTN-100G-LH
Xcvr 3	REV 01	740-061663	85	OTN-100G-LH
Xcvr 4	REV 01	740-061663	218	OTN-100G-LH
SIB 0	REV 03	750-057067	ACAM8513	SIB3-SFF-PTX
SIB 1	REV 01	750-057067	ACAM5918	SIB3-SFF-PTX
SIB 2	REV 01	711-057066	ACAM4325	SIB3-SFF-PTX
SIB 3	REV 01	711-057066	ACAM4328	SIB3-SFF-PTX
SIB 4	REV 01	711-057066	ACAM4349	SIB3-SFF-PTX
SIB 5	REV 01	711-057066	ACAM4323	SIB3-SFF-PTX
SIB 6	REV 01	711-057066	ACAM4344	SIB3-SFF-PTX
SIB 7	REV 01	750-057067	ACAM4346	SIB3-SFF-PTX
SIB 8	REV 01	750-057067	ACAM5911	SIB3-SFF-PTX
Fan Tray 0	REV 13	760-044659	ACMP6395	Fan Tray (Exhaust)
Fan Tray 1	REV 13	760-044659	ACMZ6957	Fan Tray (Exhaust)

**show chassis hardware clei-models (PTX3000 Router with 5-port 100-Gigabit DWDM OTN PIC)**

```

user@host> show chassis hardware clei-models
Hardware inventory:

```

Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 22	750-044645	IPMVN10FRA	CHAS-MP-PTX3000-S
FPM	REV 07	760-044663	IPUCBE5CAA	FPD-SFF-PTX-S
PSM 1	REV 02	740-044980	PROTOPWRDC	PSM-SFF-PTX-DC-2200-S
PSM 2	REV 06	740-044981	IPUPAK0KAB	PSM-SFF-PTX-AC-S
PSM 3	REV 06	740-044981	IPUPAK0KAB	PSM-SFF-PTX-AC-S
PSM 4	REV 04	740-044980	IPUPAK1KAA	PSM-SFF-PTX-DC-S
Routing Engine 0	REV 12	740-026942		RE-DUO-C2600-16G-S
CB 0	REV 18	750-044656	IPUCBE6CAB	CB-SFF-PTX-S
FPC 2	REV 06	750-057064	PROTOXCLEI	PROTO-ASSEMBLY
PIC 0	REV 17	750-059747	IPU3BC5HAA	PTX-5-100G-WDM
FPC 4	REV 12	750-057064		
PIC 0	REV 17	750-059747	IPU3BC5HAA	PTX-5-100G-WDM
FPC 8	REV 11	750-057064		
PIC 0	REV 17	750-059747	IPU3BC5HAA	PTX-5-100G-WDM
SIB 0	REV 03	750-057067	PROTOXCLEI	PROTO-ASSEMBLY
SIB 1	REV 01	750-057067	PROTOXCLEI	PROTO-ASSEMBLY
SIB 2	REV 01	711-057066	PROTOXCLEI	PROTO-ASSEMBLY
SIB 3	REV 01	711-057066	PROTOXCLEI	PROTO-ASSEMBLY
SIB 4	REV 01	711-057066	PROTOXCLEI	PROTO-ASSEMBLY
SIB 5	REV 01	711-057066	PROTOXCLEI	PROTO-ASSEMBLY
SIB 6	REV 01	711-057066	PROTOXCLEI	PROTO-ASSEMBLY
SIB 7	REV 01	750-057067	PROTOXCLEI	PROTO-ASSEMBLY
SIB 8	REV 01	750-057067	PROTOXCLEI	PROTO-ASSEMBLY
Fan Tray 0	REV 13	760-044659	IPUCBE8CAA	FAN-SFF-PTX-S
Fan Tray 1	REV 13	760-044659	IPUCBE8CAA	FAN-SFF-PTX-S

**show chassis hardware (MX2010 Router)**

```

user@host > show chassis hardware
Hardware inventory:

```

Item	Version	Part number	Serial number	Description
Chassis			JN11E3217AFK	MX2010
Midplane	REV 01	750-044636	ABAB8506	Lower Backplane
Midplane 1	REV 01	711-044557	ZY8296	Upper Backplane
PMP	REV 03	711-032426	ACA11388	Power Midplane
FPM Board	REV 06	711-032349	ZX8744	Front Panel Display
PSM 4	REV 0C	740-033727	VK00254	DC 52V Power Supply
Module				
PSM 5	REV 0B	740-033727	VG00015	DC 52V Power Supply
Module				
PSM 6	REV 0B	740-033727	VH00097	DC 52V Power Supply
Module				
PSM 7	REV 0C	740-033727	VJ00151	DC 52V Power Supply
Module				
PSM 8	REV 0C	740-033727	VJ00149	DC 52V Power Supply
Module				
PDM 0	REV 0B	740-038109	WA00008	DC Power Dist Module
PDM 1	REV 0B	740-038109	WA00014	DC Power Dist Module
Routing Engine 0	REV 02	740-041821	9009094134	RE-S-1800x4
Routing Engine 1	REV 02	740-041821	9009094141	RE-S-1800x4
CB 0	REV 08	750-040257	CAAB3491	Control Board
CB 1	REV 08	750-040257	CAAB3489	Control Board
SPMB 0	REV 02	711-041855	CAAA6135	PMB Board
SPMB 1	REV 02	711-041855	CAAA6137	PMB Board
SFB 0	REV 06	711-032385	ZV1828	Switch Fabric Board

SFB 1	REV 07	711-032385	ZZ2568	Switch Fabric Board
SFB 2	REV 07	711-032385	ZZ2563	Switch Fabric Board
SFB 3	REV 07	711-032385	ZZ2564	Switch Fabric Board
SFB 4	REV 07	711-032385	ZZ2580	Switch Fabric Board
SFB 5	REV 07	711-032385	ZZ2579	Switch Fabric Board
SFB 6	REV 07	711-032385	CAAB4882	Switch Fabric Board
SFB 7	REV 07	711-032385	CAAB4898	Switch Fabric Board
FPC 0	REV 33	750-028467	CAAB1919	MPC 3D 16x 10GE
CPU	REV 11	711-029089	CAAB7174	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AMH02RE	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AMH038C	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AMH0390	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AMG0SUA	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AMH0579	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AMG0SGP	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AMH04SV	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AMH04X3	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AMH0135	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AMH02NC	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AMH02XB	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AMH02PN	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AMH057Y	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AMG0JHE	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AMH02HT	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AMH04V4	SFP+-10G-SR
FPC 1	REV 21	750-033205	ZG5027	MPC Type 3
CPU	REV 04	711-035209	YT4780	HMPC PMB 2G
MIC 0	REV 03	750-033307	ZV6299	10X10GE SFPP
PIC 0		BUILTIN	BUILTIN	10X10GE SFPP
Xcvr 0	REV 01	740-031980	083363A00410	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	083363A00334	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	113363A00125	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	083363A00953	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	AHR013D	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	AJ40JUR	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	AJ40JKL	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	AJ30ECK	SFP+-10G-SR
Xcvr 8	REV 01	740-021308	19T511100864	SFP+-10G-SR
Xcvr 9	REV 01	740-021308	19T511100868	SFP+-10G-SR
MIC 1	REV 03	750-033307	ZV6268	10X10GE SFPP
PIC 2		BUILTIN	BUILTIN	10X10GE SFPP
Xcvr 0	REV 01	740-031980	AJC0JML	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AJ403PC	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AJ10N25	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AJ40JF4	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	AJ40JSJ	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	AJ403V7	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	AJ40JN3	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	AJ40JSU	SFP+-10G-SR
Xcvr 8	REV 01	740-021308	19T511100468	SFP+-10G-SR
Xcvr 9	REV 01	740-021308	19T511101363	SFP+-10G-SR
FPC 8	REV 22	750-031089	ZT9746	MPC Type 2 3D
CPU	REV 06	711-030884	ZS1271	MPC PMB 2G
MIC 0	REV 26	750-028392	ABBS1150	3D 20x 1GE(LAN) SFP
PIC 0		BUILTIN	BUILTIN	10x 1GE(LAN) SFP
Xcvr 0	REV 01	740-031851	PLG023C	SFP-SX
Xcvr 1	REV 01	740-031851	PLG09C6	SFP-SX

Xcvr 2	REV 02	740-011613	AM0950SF9L7	SFP-SX
Xcvr 3	REV 02	740-011613	AM1001SFN1H	SFP-SX
Xcvr 4	REV 02	740-011613	AM1001SFM9D	SFP-SX
Xcvr 5	REV 02	740-011613	AM1001SFLTJ	SFP-SX
Xcvr 6	REV 01	740-031851	AC1108S03L9	SFP-SX
Xcvr 7	REV 01	740-031851	AC1102S00NC	SFP-SX
Xcvr 8	REV 01	740-031851	AC1102S00MX	SFP-SX
Xcvr 9	REV 01	740-031851	AC1102S0085	SFP-SX
PIC 1		BUILTIN	BUILTIN	10x 1GE(LAN) SFP
Xcvr 0	REV 01	740-031851	AC1102S00KU	SFP-SX
Xcvr 1	REV 01	740-031851	AC1102S00NG	SFP-SX
Xcvr 2	REV 01	740-031851	AC1102S00K3	SFP-SX
Xcvr 3	REV 01	740-031851	AC1102S008R	SFP-SX
Xcvr 4	REV 01	740-031851	AM1107SUFVJ	SFP-SX
Xcvr 5	REV 01	740-031851	AC1108S03LG	SFP-SX
MIC 1	REV 26	750-028387	ABBR9582	3D 4x 10GE XFP
PIC 2		BUILTIN	BUILTIN	2x 10GE XFP
Xcvr 0		NON-JNPR	T10A91703	XFP-10G-SR
Xcvr 1		NON-JNPR	T09L42604	XFP-10G-SR
PIC 3		BUILTIN	BUILTIN	2x 10GE XFP
FPC 9	REV 11	750-036284	ZL3591	MPC 3D 16x 10GE EM
CPU	REV 10	711-029089	ZL0513	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	1YT517101825	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	1YT517101821	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	1YT517101682	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	ALQ13R6	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	1YT517101828	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	1YT517101716	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	1YT517101732	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	ALP0TR1	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	1YT517101741	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	1YT517101829	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	1YT517101669	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	ALQ14E3	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	1YT517101826	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	1YT517101817	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	1YT517101735	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	ALQ159A	SFP+-10G-SR
ADC 0	REV 05	750-043596	CAAC2073	Adapter Card
ADC 1	REV 01	750-043596	ZV4117	Adapter Card
ADC 8	REV 01	750-043596	ZV4107	Adapter Card
ADC 9	REV 02	750-043596	ZW1555	Adapter Card
Fan Tray 0	REV 2A	760-046960	ACAY0015	172mm FanTray - 6 Fans
Fan Tray 1	REV 2A	760-046960	ACAY0019	172mm FanTray - 6 Fans
Fan Tray 2	REV 2A	760-046960	ACAY0020	172mm FanTray - 6 Fans
Fan Tray 3	REV 2A	760-046960	ACAY0021	172mm FanTray - 6 Fans

### show chassis hardware detail (MX2010 Router)

```
user@host > show chassis hardware detail
```

```
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			JN11E233DAFK	MX2010
Midplane	REV 26	750-044636	ABAB9357	Lower Backplane
Midplane 1	REV 01	711-044557	ABAB8643	Upper Backplane
PMP	REV 04	711-032426	ACAJ1677	Power Midplane
FPM Board	REV 08	760-044634	ABBV9726	Front Panel Display

PSM 0 Module	REV 01	740-045050	1E02224000P	DC 52V Power Supply
PSM 1 Module	REV 01	740-045050	1E02224000M	DC 52V Power Supply
PSM 2 Module	REV 01	740-045050	1E022240010	DC 52V Power Supply
PSM 3 Module	REV 01	740-045050	1E02224000G	DC 52V Power Supply
PSM 4 Module	REV 01	740-045050	1E022240013	DC 52V Power Supply
PSM 5 Module	REV 01	740-045050	1E022240007	DC 52V Power Supply
PSM 6 Module	REV 01	740-045050	1E02224001C	DC 52V Power Supply
PSM 7 Module	REV 01	740-045050	1E02224001D	DC 52V Power Supply
PSM 8 Module	REV 01	740-045050	1E02224001B	DC 52V Power Supply
PDM 0	REV 01	740-045234	1E262250067	DC Power Dist Module
Routing Engine 0	REV 02	740-041821	9009099704	RE-S-1800x4
ad0 3831 MB		UGB30SFA4000T1	SFA4000T1 00000651	Compact Flash
ad1 30533 MB		UGB94BPH32H0S1-KCI	11000019592	Disk 1
usb0 (addr 1)		EHCI root hub 0	Intel	uhub0
usb0 (addr 2)		product 0x0020 32	vendor 0x8087	uhub1
DIMM 0		SGU04G72H1BD2SA-BB DIE	REV-52 PCB REV-54	MFR ID-ce80
DIMM 1		SGU04G72H1BD2SA-BB DIE	REV-52 PCB REV-54	MFR ID-ce80
DIMM 2		SGU04G72H1BD2SA-BB DIE	REV-52 PCB REV-54	MFR ID-ce80
DIMM 3		SGU04G72H1BD2SA-BB DIE	REV-52 PCB REV-54	MFR ID-ce80
Routing Engine 1	REV 02	740-041821	9009099706	RE-S-1800x4
ad0 3998 MB		Virtium - TuffDrive	VCF P1T0200262860208 114	Compact Flash
ad1 30533 MB		UGB94ARF32H0S3-KC	UNIGEN-499551-000404	Disk 1
CB 0	REV 13	750-040257	CAAF8436	Control Board
CB 1	REV 13	750-040257	CAAF8434	Control Board
SPMB 0	REV 02	711-041855	ABBV3825	PMB Board
SPMB 1	REV 02	711-041855	ABBV3833	PMB Board
SFB 0	REV 05	711-044466	ABBX5682	Switch Fabric Board
SFB 1	REV 05	711-044466	ABBX5676	Switch Fabric Board
SFB 2	REV 05	711-044466	ABBX5665	Switch Fabric Board
SFB 3	REV 05	711-044466	ABBX5699	Switch Fabric Board
SFB 4	REV 05	711-044466	ABBX5603	Switch Fabric Board
SFB 5	REV 05	711-044466	ABBX5587	Switch Fabric Board
SFB 6	REV 05	711-044466	ABBX5607	Switch Fabric Board
SFB 7	REV 05	711-044466	ABBX5669	Switch Fabric Board
FPC 0	REV 09	750-037355	CAAF0924	MPC Type 4-2
CPU	REV 08	711-035209	CAAB9842	HMPC PMB 2G
PIC 0		BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-021308	19T511101656	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AMA04RU	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	193363A00558	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B10M00202	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0		NON-JNPR	X12J00328	CFP-100G-SR10
PIC 2		BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-031980	AMA088W	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B10L04211	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	19T511101602	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B10L04151	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0		NON-JNPR	X12J00332	CFP-100G-SR10
FPC 1	REV 18	750-033205	ZE0128	MPC Type 3
CPU	REV 06	711-035209	ZG5431	HMPC PMB 2G

MIC 0	REV 15	750-033199	ZP6435	1X100GE CFP
PIC 0		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-032210	J11E46118	CFP-100G-LR4
MIC 1	REV 15	750-033199	ZP6442	1X100GE CFP
PIC 2		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-032210	UMN03T4	CFP-100G-LR4
FPC 2	REV 16	750-037358	CAAL1001	MPC Type 4-1
CPU	REV 08	711-035209	CAAK7927	HMPC PMB 2G
PIC 0		BUILTIN	BUILTIN	8X10GE SFPP
Xcvr 0	REV 01	740-031980	193363A00589	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	973152A00028	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	193363A00376	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	973152A00016	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	193363A00499	SFP+-10G-SR
Xcvr 5	REV 01	740-021308	973152A00039	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	B11E01239	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	973152A00058	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	8X10GE SFPP
Xcvr 0	REV 01	740-031980	B10M00075	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	973152A00014	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AMA0638	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	973152A00063	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	AMA0629	SFP+-10G-SR
Xcvr 5	REV 01	740-021308	973152A00053	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	193363A00344	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	973152A00046	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	8X10GE SFPP
Xcvr 0	REV 01	740-031980	AMA062M	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	973152A00080	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	193363A00580	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	973152A00064	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	093363A01494	SFP+-10G-SR
Xcvr 5	REV 01	740-021308	973152A00020	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	123363A00047	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	973152A00072	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	8X10GE SFPP
Xcvr 0	REV 01	740-021308	03DZ06A01033	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	973152A00022	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	03DZ06A01026	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	973152A00013	SFP+-10G-SR
Xcvr 4	REV 01	740-021308	03DZ06A01028	SFP+-10G-SR
Xcvr 5	REV 01	740-021308	973152A00079	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	03DZ06A01018	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	973152A00025	SFP+-10G-SR
FPC 3	REV 33	750-028467	CAAF5400	MPC 3D 16x 10GE
CPU	REV 11	711-029089	CAAH7626	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	973152A00066	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	973152A00021	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	973152A00062	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	973152A00027	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	973152A00065	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	973152A00069	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	973152A00026	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	973152A00003	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	973152A00035	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	973152A00004	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	973152A00049	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	973152A00055	SFP+-10G-SR

PIC 3			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	973152A00010	SFP+-10G-SR	
Xcvr 1	REV 01	740-021308	973152A00001	SFP+-10G-SR	
Xcvr 2	REV 01	740-021308	973152A00073	SFP+-10G-SR	
Xcvr 3	REV 01	740-021308	973152A00012	SFP+-10G-SR	
FPC 4	REV 21	750-033205	ZG5028	MPC Type 3	
CPU	REV 05	711-035209	YX3911	HMPC PMB 2G	
MIC 0	REV 03	750-036233	ZL2036	2X40GE QSFP	
PIC 0		BUILTIN	BUILTIN	2X40GE QSFP	
Xcvr 0	REV 01	740-032986	QB220708	QSFP+-40G-SR4	
Xcvr 1	REV 01	740-032986	QB220735	QSFP+-40G-SR4	
MIC 1	REV 03	750-036233	ZL2028	2X40GE QSFP	
PIC 2		BUILTIN	BUILTIN	2X40GE QSFP	
Xcvr 0	REV 01	740-032986	QB220727	QSFP+-40G-SR4	
Xcvr 1	REV 01	740-032986	QB220715	QSFP+-40G-SR4	
FPC 5	REV 11	750-037358	CAAE2196	MPC Type 4-1	
CPU	REV 08	711-035209	CAAD9074	HMPC PMB 2G	
PIC 0		BUILTIN	BUILTIN	8X10GE SFPP	
Xcvr 0	REV 01	740-031980	AMA062S	SFP+-10G-SR	
Xcvr 1	REV 01	740-031980	AMA062P	SFP+-10G-SR	
Xcvr 2	REV 01	740-031980	AMA052R	SFP+-10G-SR	
Xcvr 3	REV 01	740-031980	AMA0632	SFP+-10G-SR	
Xcvr 4	REV 01	740-031980	193363A00564	SFP+-10G-SR	
Xcvr 5	REV 01	740-031980	193363A00229	SFP+-10G-SR	
Xcvr 6	REV 01	740-031980	193363A00363	SFP+-10G-SR	
Xcvr 7	REV 01	740-031980	193363A00278	SFP+-10G-SR	
PIC 1		BUILTIN	BUILTIN	8X10GE SFPP	
Xcvr 0	REV 01	740-031980	AMA04CC	SFP+-10G-SR	
Xcvr 1	REV 01	740-021308	AD0927A001W	SFP+-10G-SR	
Xcvr 2	REV 01	740-031980	AMA04N2	SFP+-10G-SR	
Xcvr 3	REV 01	740-031980	AMA062U	SFP+-10G-SR	
Xcvr 4	REV 01	740-031980	193363A00491	SFP+-10G-SR	
Xcvr 5	REV 01	740-031980	183363A01511	SFP+-10G-SR	
Xcvr 6	REV 01	740-031980	193363A00565	SFP+-10G-SR	
Xcvr 7	REV 01	740-031980	193363A00405	SFP+-10G-SR	
PIC 2		BUILTIN	BUILTIN	8X10GE SFPP	
Xcvr 0	REV 01	740-031980	AMA07QX	SFP+-10G-SR	
Xcvr 1	REV 01	740-031980	AMA06MS	SFP+-10G-SR	
Xcvr 2	REV 01	740-031980	193363A00318	SFP+-10G-SR	
Xcvr 3	REV 01	740-031980	193363A00402	SFP+-10G-SR	
Xcvr 4	REV 01	740-031980	193363A00174	SFP+-10G-SR	
Xcvr 5	REV 01	740-031980	193363A00388	SFP+-10G-SR	
Xcvr 6	REV 01	740-031980	193363A00377	SFP+-10G-SR	
Xcvr 7	REV 01	740-031980	193363A00234	SFP+-10G-SR	
PIC 3		BUILTIN	BUILTIN	8X10GE SFPP	
Xcvr 0	REV 01	740-031980	AMA062T	SFP+-10G-SR	
Xcvr 1	REV 01	740-031980	193363A00550	SFP+-10G-SR	
Xcvr 2	REV 01	740-031980	193363A00364	SFP+-10G-SR	
Xcvr 3	REV 01	740-031980	AMA0630	SFP+-10G-SR	
Xcvr 4	REV 01	740-031980	193363A00509	SFP+-10G-SR	
Xcvr 5	REV 01	740-031980	193363A00459	SFP+-10G-SR	
Xcvr 6	REV 01	740-031980	113363A00191	SFP+-10G-SR	
Xcvr 7	REV 01	740-031980	193363A00352	SFP+-10G-SR	
FPC 6	REV 33	750-028467	CAAF5552	MPC 3D 16x 10GE	
CPU	REV 11	711-029089	CAAH7601	AMPC PMB	
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+	
Xcvr 0	REV 01	740-021308	AD0927A0036	SFP+-10G-SR	
Xcvr 1	REV 01	740-021308	AD0927A003M	SFP+-10G-SR	
Xcvr 2	REV 01	740-021308	AD0927A003G	SFP+-10G-SR	
Xcvr 3	REV 01	740-021308	AD0927A0031	SFP+-10G-SR	
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+	



Xcvr 0	REV 01	740-031980	193363A00331	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	193363A00325	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	193363A00417	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	183363A02509	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	T09K75140	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11A04356	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K01952	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K01914	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	T09K75157	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	T09K75194	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K01926	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K01936	SFP+-10G-SR
FPC 7	REV 16	750-037358	CAAL1012	MPC Type 4-1
CPU	REV 08	711-035209	CAAJ3851	HMPC PMB 2G
PIC 0		BUILTIN	BUILTIN	8X10GE SFPP
Xcvr 0	REV 01	740-031980	AMA04NK	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11F00260	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11E02192	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AMA04CP	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	AJ40JJK	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	B11F00238	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	B10M00275	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	193363A00211	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	8X10GE SFPP
Xcvr 0	REV 01	740-031980	B11D05577	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11G00586	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AMA08B7	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AMA04Q0	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	B11D05840	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	B11E00467	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	B11E00029	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	19T511101712	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	8X10GE SFPP
Xcvr 0	REV 01	740-031980	193363A00568	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B10M00166	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B10M00212	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11D05823	SFP+-10G-SR
Xcvr 4	REV 01	740-021308	03DZ06A01005	SFP+-10G-SR
Xcvr 5	REV 01	740-021308	03DZ06A01003	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	03DZ06A01009	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	03DZ06A01004	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	8X10GE SFPP
Xcvr 0	REV 01	740-021308	03DZ06A01017	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	03DZ06A01016	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	03DZ06A01024	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	03DZ06A01008	SFP+-10G-SR
Xcvr 4	REV 01	740-030658	AD0946A02UH	SFP+-10G-USR
Xcvr 5	REV 01	740-021308	T09J67913	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	AD0837ES09G	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	03DZ06A01015	SFP+-10G-SR
FPC 8	REV 03	750-045372	CAAD3111	MPC Type 3
CPU	REV 08	711-035209	CAAD8033	HMPC PMB 2G
MIC 0	REV 03	750-036233	ZL2032	2X40GE QSFP
PIC 0		BUILTIN	BUILTIN	2X40GE QSFP
Xcvr 0	REV 01	740-032986	QB230273	QSFP+-40G-SR4
Xcvr 1	REV 01	740-032986	QB230254	QSFP+-40G-SR4
MIC 1	REV 03	750-036233	ZL2021	2X40GE QSFP
PIC 2		BUILTIN	BUILTIN	2X40GE QSFP
Xcvr 0	REV 01	740-032986	QB390962	QSFP+-40G-SR4

Xcvr 1	REV 01	740-032986	QB390960	QSFP+-40G-SR4
FPC 9	REV 09	750-037355	CAAF1531	MPC Type 4-2
CPU	REV 08	711-035209	CAAB9927	HMPC PMB 2G
PIC 0		BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-031980	193363A00525	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	193363A00504	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	193363A00368	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AJ40JSS	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP
PIC 2		BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-031980	123363A00042	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B10M00023	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AJ802EM	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11E02348	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP
ADC 0	REV 13	750-043596	ABBX5532	Adapter Card
ADC 1	REV 13	750-043596	ABBX5550	Adapter Card
ADC 2	REV 13	750-043596	ABBX5571	Adapter Card
ADC 3	REV 13	750-043596	ABBX5568	Adapter Card
ADC 4	REV 13	750-043596	ABBX5556	Adapter Card
ADC 5	REV 13	750-043596	ABBX5553	Adapter Card
ADC 6	REV 13	750-043596	ABBX5541	Adapter Card
ADC 7	REV 13	750-043596	ABBX5578	Adapter Card
ADC 8	REV 13	750-043596	ABBX5560	Adapter Card
ADC 9	REV 07	750-043596	ABBV7188	Adapter Card
Fan Tray 0	REV 03	760-046960	ACAY0127	172mm FanTray - 6 Fans
Fan Tray 1	REV 2A	760-046960	ACAY0068	172mm FanTray - 6 Fans
Fan Tray 2	REV 2A	760-046960	ACAY0072	172mm FanTray - 6 Fans
Fan Tray 3	REV 2A	760-046960	ACAY0070	172mm FanTray - 6 Fans

### show chassis hardware extensive (MX2010 Router)

```

user@host > show chassis hardware extensive
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis
Jedec Code:   0x7fb0          EEPROM Version: 0x02
S/N:          JN11E233DAFK
Assembly ID:  0x0557          Assembly Version: 00.00
Date:         00-00-0000      Assembly Flags:  0x00
ID: MX2010
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 7f b0 02 ff 05 57 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x20: 4a 4e 31 31 45 32 33 33 44 41 46 4b 00 00 00 00
Address 0x30: 00 00 00 ff 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane      REV 26      750-044636  ABAB9357      Lower Backplane
Jedec Code:   0x7fb0          EEPROM Version: 0x02
P/N:         750-044636      S/N:          ABAB9357
Assembly ID:  0x0b66          Assembly Version: 01.26
Date:         08-28-2012      Assembly Flags: 0x00
Version:      REV 26          CLEI Code:    PROTOXCLEI
ID: Lower Backplane          FRU Model Number: PROTO-ASSEMBLY
Board Information Record:
Address 0x00: ad 01 08 00 2c 21 72 70 a0 00 ff ff ff ff ff ff

```

```

I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 66 01 1a 52 45 56 20 32 36 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 36 33 36 00 00
Address 0x20: 53 2f 4e 20 41 42 41 42 39 33 35 37 00 1c 08 07
Address 0x30: dc ff ff ff ad 01 08 00 2c 21 72 70 a0 00 ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff

Midplane 1      REV 01    711-044557    ABAB8643      Upper Backplane
Jedec Code:    0x7fb0      EEPROM Version:    0x01
P/N:          711-044557    S/N:              ABAB8643
Assembly ID:   0x0b65      Assembly Version:  01.01
Date:         07-27-2012    Assembly Flags:    0x00
Version:      REV 01
ID: Upper Backplane
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 0b 65 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 34 34 35 35 37 00 00
Address 0x20: 53 2f 4e 20 41 42 41 42 38 36 34 33 00 1b 07 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

PMP            REV 04    711-032426    ACAJ1677      Power Midplane
Jedec Code:    0x7fb0      EEPROM Version:    0x01
P/N:          711-032426    S/N:              ACAJ1677
Assembly ID:   0x045d      Assembly Version:  01.04
Date:         07-20-2012    Assembly Flags:    0x00
Version:      REV 04
ID: Power Midplane
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 04 5d 01 04 52 45 56 20 30 34 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 33 32 34 32 36 00 00
Address 0x20: 53 2f 4e 20 41 43 41 4a 31 36 37 37 00 14 07 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

FPM Board      REV 08    760-044634    ABBV9726      Front Panel Display
Jedec Code:    0x7fb0      EEPROM Version:    0x02
P/N:          760-044634    S/N:              ABBV9726
Assembly ID:   0x0b64      Assembly Version:  01.08
Date:         09-10-2012    Assembly Flags:    0x00
Version:      REV 08      CLEI Code:         IPMYA4EJRA
ID: Front Panel Display    FRU Model Number:  MX2010-CRAFT-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 64 01 08 52 45 56 20 30 38 00 00
Address 0x10: 00 00 00 00 37 36 30 2d 30 34 34 36 33 34 00 00
Address 0x20: 53 2f 4e 20 41 42 42 56 39 37 32 36 00 0a 09 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 4d 59 41 34 45 4a 52 41 4d
Address 0x50: 58 32 30 31 30 2d 43 52 41 46 54 2d 53 00 00 00

```

```

Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 93 ff ff ff ff ff ff ff ff ff ff ff
PSM 0          REV 01   740-045050   1E02224000P   DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version: 0x02
P/N:           740-045050      S/N:           1E02224000P
Assembly ID:   0x0478          Assembly Version: 01.01
Date:          12-06-2012      Assembly Flags: 0x00
Version:       REV 01          CLEI Code:     XXXXXXXXXX
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-HC-DC-S-A
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 35 30 35 30 00 00
Address 0x20: 31 45 30 32 32 32 34 30 30 30 50 00 00 06 0c 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 58 58 58 58 58 58 58 58 58 58 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 48 43 2d 44 43 2d
Address 0x60: 53 2d 41 00 00 00 31 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 4a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 1          REV 01   740-045050   1E02224000M   DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version: 0x02
P/N:           740-045050      S/N:           1E02224000M
Assembly ID:   0x0478          Assembly Version: 01.01
Date:          12-06-2012      Assembly Flags: 0x00
Version:       REV 01          CLEI Code:     XXXXXXXXXX
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-HC-DC-S-A
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 35 30 35 30 00 00
Address 0x20: 31 45 30 32 32 32 34 30 30 30 4d 00 00 06 0c 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 58 58 58 58 58 58 58 58 58 58 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 48 43 2d 44 43 2d
Address 0x60: 53 2d 41 00 00 00 31 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 4a 00 00 00 00 00 00 00 00 00 00 00 00
...
PDM 0          REV 01   740-045234   1E262250067   DC Power Dist Module
Jedec Code:    0x7fb0          EEPROM Version: 0x02
P/N:           740-045234      S/N:           1E262250067
Assembly ID:   0x047b          Assembly Version: 01.01
Date:          06-28-2012      Assembly Flags: 0x00
Version:       REV 01          CLEI Code:     IPUPAJSKAA
ID: DC Power Dist Module      FRU Model Number: MX2000-PDM-DC-S-A
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 7b 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 35 32 33 34 00 00
Address 0x20: 31 45 32 36 32 32 35 30 30 36 37 00 00 1c 06 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4a 53 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 44 4d 2d 44 43 2d 53 2d 41
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 89 00 00 00 00 00 00 00 00 00 00 00 00
Routing Engine 0 REV 02   740-041821   9009099704   RE-S-1800x4
Jedec Code:    0x7fb0          EEPROM Version: 0x02

```

```

P/N:          740-041821          S/N:          9009099704
Assembly ID:  0x09c0              Assembly Version: 01.02
Date:         03-15-2012          Assembly Flags:  0x00
Version:      REV 02
ID: RE-S-1800x4                  FRU Model Number: RE-S-1800X4-16G-S

Board Information Record:
Address 0x00: 54 32 30 32 37 44 41 2d 34 34 47 42 23 41 23 00
I2C Hex Data:
Address 0x00: 7f b0 02 ff 09 c0 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 31 38 32 31 00 00
Address 0x20: 39 30 30 39 30 39 39 37 30 34 00 00 00 0f 03 07
Address 0x30: dc ff ff ff 54 32 30 32 37 44 41 2d 34 34 47 42
Address 0x40: 23 41 23 00 01 00 00 00 00 00 00 00 00 00 00 52
Address 0x50: 45 2d 53 2d 31 38 30 30 58 34 2d 31 36 47 2d 53
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 8c ff ff ff ff ff ff ff ff ff ff ff ff
ad0  3831 MB  UGB30SFA4000T1      SFA4000T1 00000651 Compact Flash
ad1  30533 MB UGB94BPH32H0S1-KCI 11000019592 Disk 1
usb0 (addr 1) EHCI root hub 0    Intel      uhub0
usb0 (addr 2) product 0x0020 32   vendor 0x8087 uhub1
DIMM 0      SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
DIMM 1      SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
DIMM 2      SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
DIMM 3      SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
Routing Engine 1 REV 02 740-041821 9009099706 RE-S-1800x4
Jedec Code:  0x7fb0              EEPROM Version:  0x02
P/N:         740-041821          S/N:         9009099706
Assembly ID:  0x09c0              Assembly Version: 01.02
Date:         02-23-2012          Assembly Flags:  0x00
Version:      REV 02
ID: RE-S-1800x4                  FRU Model Number: RE-S-1800X4-16G-S

Board Information Record:
Address 0x00: 54 32 30 32 37 44 41 2d 34 34 47 42 23 41 23 00
I2C Hex Data:
Address 0x00: 7f b0 02 ff 09 c0 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 31 38 32 31 00 00
Address 0x20: 39 30 30 39 30 39 39 37 30 36 00 00 00 17 02 07
Address 0x30: dc ff ff ff 54 32 30 32 37 44 41 2d 34 34 47 42
Address 0x40: 23 41 23 00 01 00 00 00 00 00 00 00 00 00 00 52
Address 0x50: 45 2d 53 2d 31 38 30 30 58 34 2d 31 36 47 2d 53
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 8c ff ff ff ff ff ff ff ff ff ff ff ff
ad0  3998 MB  Virtium - TuffDrive VCF P1T0200262860208 114 Compact Flash
ad1  30533 MB UGB94ARF32H0S3-KC UNIGEN-499551-000404 Disk 1
CB 0      REV 13 750-040257 CAAF8436 Control Board
Jedec Code:  0x7fb0              EEPROM Version:  0x02
P/N:         750-040257          S/N:         CAAF8436
Assembly ID:  0x0b26              Assembly Version: 01.13
Date:         08-29-2012          Assembly Flags:  0x00
Version:      REV 13              CLEI Code:      PROTOXCLEI
ID: Control Board                  FRU Model Number: PROTO-ASSEMBLY

Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 26 01 0d 52 45 56 20 31 33 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 34 30 32 35 37 00 00
Address 0x20: 53 2f 4e 20 43 41 41 46 38 34 33 36 00 1d 08 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff

```

```

Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff
...
SPMB 0          REV 02   711-041855   ABBV3825          PMB Board
Jedec Code:    0x7fb0          EEPROM Version:    0x01
P/N:          711-041855      S/N:            ABBV3825
Assembly ID:   0x0b29          Assembly Version: 01.02
Date:         08-14-2012      Assembly Flags:  0x00
Version:      REV 02
ID: PMB Board
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 0b 29 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 34 31 38 35 35 00 00
Address 0x20: 53 2f 4e 20 41 42 42 56 33 38 32 35 00 0e 08 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff
Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
...
SFB 0          REV 05   711-044466   ABBX5682          Switch Fabric Board
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:          711-044466      S/N:            ABBX5682
Assembly ID:   0x0b25          Assembly Version:  01.05
Date:         09-07-2012      Assembly Flags:    0x00
Version:      REV 05          CLEI Code:        PROTOXCLEI
ID: Switch Fabric Board      FRU Model Number: PROTO-ASSEMBLY
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 25 01 05 52 45 56 20 30 35 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 34 34 34 36 36 00 00
Address 0x20: 53 2f 4e 20 41 42 42 58 35 36 38 32 00 07 09 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff
Address 0x70: ff ff ff c2 00 00 00 01 00 00 00 00 00 00 48 00
...
FPC 0          REV 09   750-037355   CAAF0924          MPC Type 4-2
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:          750-037355      S/N:            CAAF0924
Assembly ID:   0x0b4e          Assembly Version:  01.09
Date:         05-21-2012      Assembly Flags:    0x00
Version:      REV 09          CLEI Code:        PROTOXCLEI
ID: MPC Type 4-2            FRU Model Number: MPC4E-2CGE-8XGE
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 4e 01 09 52 45 56 20 30 39 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 33 35 35 00 00
Address 0x20: 53 2f 4e 20 43 41 41 46 30 39 32 34 00 15 05 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 4d
Address 0x50: 50 43 34 45 2d 32 43 47 45 2d 38 58 47 45 00 00
Address 0x60: 00 00 00 00 00 00 30 39 00 ff ff ff ff ff ff
Address 0x70: ff ff ff c6 ff ff ff ff ff ff ff ff ff ff ff
CPU          REV 08   711-035209   CAAB9842          HMPC PMB 2G
Jedec Code:    0x7fb0          EEPROM Version:    0x01
P/N:          711-035209      S/N:            CAAB9842

```

```

Assembly ID: 0x0b04          Assembly Version: 01.08
Date:          05-17-2012    Assembly Flags: 0x00
Version:       REV 08
ID: HMPD PMB 2G
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 0b 04 01 08 52 45 56 20 30 38 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 33 35 32 30 39 00 00
Address 0x20: 53 2f 4e 20 43 41 41 42 39 38 34 32 00 11 05 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff
Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
PIC 0          BUILTIN      BUILTIN      4x10GE SFPP
Jedec Code:    0x0000        EEPROM Version: 0x00
P/N:           BUILTIN      S/N:          BUILTIN
Assembly ID:   0x0a53        Assembly Version: 00.00
Date:          00-00-0000    Assembly Flags: 0x00
ID: 4x10GE SFPP
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 0a 53 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 4d 58 43 00
Address 0x20: 42 55 49 4c 54 49 4e 00 4d 58 43 00 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 c0 02 ae 64 00 00 00 00 0a 52 00 00
Xcvr 0      REV 01    740-021308    19T511101656    SFP+-10G-SR
Xcvr 1      REV 01    740-031980    AMA04RU        SFP+-10G-SR
Xcvr 2      REV 01    740-031980    193363A00558   SFP+-10G-SR
Xcvr 3      REV 01    740-031980    B10M00202      SFP+-10G-SR
...
ADC 0      REV 13    750-043596    ABBX5532      Adapter Card
Jedec Code: 0x7fb0        EEPROM Version: 0x02
P/N:        750-043596    S/N:          ABBX5532
Assembly ID: 0x0b3d        Assembly Version: 01.13
Date:       09-12-2012    Assembly Flags: 0x00
Version:    REV 13        CLEI Code:    IPUCBA8CAA
ID: Adapter Card          FRU Model Number: MX2000-LC-ADAPTER
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 3d 01 0d 52 45 56 20 31 33 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 34 33 35 39 36 00 00
Address 0x20: 53 2f 4e 20 41 42 42 58 35 35 33 32 00 0c 09 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 43 42 41 38 43 41 41 4d
Address 0x50: 58 32 30 30 30 2d 4c 43 2d 41 44 41 50 54 45 52
Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff
Address 0x70: ff ff ff 3a 00 00 00 00 00 00 00 00 00 00 00
...

```

### show chassis hardware models (MX2010 Router)

```
user@host > show chassis hardware models
```

## Hardware inventory:

Item	Version	Part number	Serial number	FRU model number
FPM Board	REV 06	711-032349	ZX8744	711-032349
PSM 4	REV 0C	740-033727	VK00254	000000000000000000000000
PSM 5	REV 0B	740-033727	VG00015	000000000000000000000000
PSM 6	REV 0B	740-033727	VH00097	000000000000000000000000
PSM 7	REV 0C	740-033727	VJ00151	000000000000000000000000
PSM 8	REV 0C	740-033727	VJ00149	000000000000000000000000
PDM 0	REV 0B	740-038109	WA00008	
PDM 1	REV 0B	740-038109	WA00014	
Routing Engine 0	REV 02	740-041821	9009094134	RE-S-1800X4-16G-S
Routing Engine 1	REV 02	740-041821	9009094141	RE-S-1800X4-16G-S
CB 0	REV 08	750-040257	CAAB3491	750-040257
CB 1	REV 08	750-040257	CAAB3489	750-040257
SFB 0	REV 06	711-032385	ZV1828	711-032385
SFB 1	REV 07	711-032385	ZZ2568	711-032385
SFB 2	REV 07	711-032385	ZZ2563	711-032385
SFB 3	REV 07	711-032385	ZZ2564	711-032385
SFB 4	REV 07	711-032385	ZZ2580	711-032385
SFB 5	REV 07	711-032385	ZZ2579	711-0323856
SFB 6	REV 07	711-032385	CAAB4882	711-044170
SFB 7	REV 07	711-032385	CAAB4898	711-044170
FPC 0	REV 33	750-028467	CAAB1919	MPC-3D-16XGE-SFPP
FPC 1	REV 21	750-033205	ZG5027	MX-MPC3-3D
MIC 0	REV 03	750-033307	ZV6299	MIC3-3D-10XGE-SFPP
MIC 1	REV 03	750-033307	ZV6268	MIC3-3D-10XGE-SFPP
FPC 8	REV 22	750-031089	ZT9746	MX-MPC2-3D
MIC 0	REV 26	750-028392	ABBS1150	MIC-3D-20GE-SFP
MIC 1	REV 26	750-028387	ABBR9582	MIC-3D-4XGE-XFP
FPC 9	REV 11	750-036284	ZL3591	MPCE-3D-16XGE-SFPP
ADC 0	REV 05	750-043596	CAAC2073	750-043596
ADC 1	REV 01	750-043596	ZV4117	750-043596
ADC 8	REV 01	750-043596	ZV4107	750-043596
ADC 9	REV 02	750-043596	ZW1555	750-043596
Fan Tray 0	REV 2A	760-046960	ACAY0015	
Fan Tray 1	REV 2A	760-046960	ACAY0019	
Fan Tray 2	REV 2A	760-046960	ACAY0020	
Fan Tray 3	REV 2A	760-046960	ACAY0021	

## show chassis hardware clei-models (MX2010 Routers)

user@host &gt; show chassis hardware clei-models

## Hardware inventory:

Item	Version	Part number	CLEI code	FRU model number
FPM Board	REV 06	711-032349	PROTOXCLEI	711-032349
PSM 4	REV 0C	740-033727	0000000000	000000000000000000000000
PSM 5	REV 0B	740-033727	0000000000	000000000000000000000000
PSM 6	REV 0B	740-033727	0000000000	000000000000000000000000
PSM 7	REV 0C	740-033727	0000000000	000000000000000000000000
PSM 8	REV 0C	740-033727	0000000000	000000000000000000000000
PDM 0	REV 0B	740-038109		
PDM 1	REV 0B	740-038109		
Routing Engine 0	REV 02	740-041821		RE-S-1800X4-16G-S
Routing Engine 1	REV 02	740-041821		RE-S-1800X4-16G-S
CB 0	REV 08	750-040257	PROTOXCLEI	750-040257
CB 1	REV 08	750-040257	PROTOXCLEI	750-040257
SFB 0	REV 06	711-032385	PROTOXCLEI	711-032385
SFB 1	REV 07	711-032385	PROTOXCLEI	711-032385
SFB 2	REV 07	711-032385	PROTOXCLEI	711-032385
SFB 3	REV 07	711-032385	PROTOXCLEI	711-032385
SFB 4	REV 07	711-032385	PROTOXCLEI	711-032385



SFB 5	REV 07	711-032385	PROTOXCLEI	711-0323856
SFB 6	REV 07	711-032385	PROTOXCLEI	711-044170
SFB 7	REV 07	711-032385	PROTOXCLEI	711-044170
FPC 0	REV 33	750-028467		MPC-3D-16XGE-SFPP
FPC 1	REV 21	750-033205		MX-MPC3-3D
MIC 0	REV 03	750-033307	PROTOXCLEI	MIC3-3D-10XGE-SFPP
MIC 1	REV 03	750-033307	PROTOXCLEI	MIC3-3D-10XGE-SFPP
FPC 8	REV 22	750-031089	COUIBAYBAA	MX-MPC2-3D
MIC 0	REV 26	750-028392	COUIA15BAA	MIC-3D-20GE-SFP
MIC 1	REV 26	750-028387	COUIA16BAA	MIC-3D-4XGE-XFP
FPC 9	REV 11	750-036284	CMUIACGBAA	MPCE-3D-16XGE-SFPP
ADC 0	REV 05	750-043596	PROTOXCLEI	750-043596
ADC 1	REV 01	750-043596	PROTOXCLEI	750-043596
ADC 8	REV 01	750-043596	PROTOXCLEI	750-043596
ADC 9	REV 02	750-043596	PROTOXCLEI	750-043596
Fan Tray 0	REV 2A	760-046960		
Fan Tray 1	REV 2A	760-046960		
Fan Tray 2	REV 2A	760-046960		
Fan Tray 3	REV 2A	760-046960		

### show chassis hardware (MX2010 Routers with MPC6E and OTN MIC)

```
user@host> show chassis hardware
```

```
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			JN11C9AFEAFK	MX2010
Midplane	REV 35	750-044636	ABAB9188	Lower Backplane
Midplane 1	REV 02	711-044557	ABAB8729	Upper Backplane
PMP	REV 04	711-032426	ACAJ2432	Power Midplane
FPM Board	REV 09	760-044634	ABCA4314	Front Panel Display
PSM 0	REV 01	740-050037	1EDB321015C	DC 52V Power Supply
Module				
PSM 1	REV 01	740-050037	1EDB321015J	DC 52V Power Supply
Module				
PSM 2	REV 01	740-050037	1EDB32000K8	DC 52V Power Supply
Module				
PSM 3	REV 01	740-050037	1EDB32101JW	DC 52V Power Supply
Module				
PSM 4	REV 01	740-050037	1EDB321015G	DC 52V Power Supply
Module				
PSM 5	REV 01	740-050037	1EDB32101HH	DC 52V Power Supply
Module				
PSM 6	REV 01	740-050037	1EDB32101HD	DC 52V Power Supply
Module				
PSM 7	REV 01	740-050037	1EDB321015F	DC 52V Power Supply
Module				
PSM 8	REV 01	740-050037	1EDB321015B	DC 52V Power Supply
Module				
PDM 0	REV 03	740-045234	1EFA3220433	DC Power Dist Module
PDM 1	REV 03	740-045234	1EFA3220425	DC Power Dist Module
Routing Engine 0	REV 02	740-041821	9009115685	RE-S-1800x4
Routing Engine 1	REV 02	740-041821	9009099711	RE-S-1800x4
CB 0	REV 23	750-040257	CABE8395	Control Board
CB 1	REV 12	750-040257	CAAD9499	Control Board
SPMB 0	REV 02	711-041855	ABCG8426	PMB Board
SPMB 1	REV 02	711-041855	ABBS1481	PMB Board
SFB 0	REV 06	711-044466	ABCD5013	Switch Fabric Board
SFB 1	REV 06	711-044466	ABCD5160	Switch Fabric Board
SFB 2	REV 06	711-044466	ABCD5175	Switch Fabric Board
SFB 3	REV 06	711-044466	ABCD4938	Switch Fabric Board
SFB 4	REV 06	711-044466	ABCD4944	Switch Fabric Board

SFB 5	REV 06	711-044466	ABCD4968	Switch Fabric Board
SFB 6	REV 06	711-044466	ABCD5267	Switch Fabric Board
SFB 7	REV 06	711-044466	ABCD4997	Switch Fabric Board
FPC 0	REV 59	750-044130	ABCT7676	MPC6E 3D
CPU	REV 10	711-045719	ABCK8527	RMPD PMB
XLM 0	REV 13	711-046638	ABCT7810	MPC6E XL
XLM 1	REV 13	711-046638	ABCT7811	MPC6E XL
FPC 2	REV 27	750-033205	ZL6014	MPCE Type 3 3D
CPU	REV 07	711-035209	ZK9068	HMPD PMB 2G
MIC 0	REV 14	750-033196	CAAW9214	1X100GE CXP
PIC 0		BUILTIN	BUILTIN	1X100GE CXP
Xcvr 0	REV 01	740-046563	XC49FC030	CFP2-100G-SR10
MIC 1	REV 18	750-033199	CAAC3231	1X100GE CFP
PIC 2		BUILTIN	BUILTIN	1X100GE CFP
FPC 3	REV 59	750-044130	ABCT7682	MPC6E 3D
CPU	REV 10	711-045719	ABCK8531	RMPD PMB
XLM 0	REV 13	711-046638	ABCT7818	MPC6E XL
XLM 1	REV 13	711-046638	ABCT7819	MPC6E XL
FPC 4	REV 33	750-044130	ABBY9278	MPC6E 3D
CPU	REV 09	711-045719	ABBY8677	RMPD PMB
XLM 0	REV 06.2.00	711-046638	ABBY8844	MPC6E XL
XLM 1	REV 06.2.00	711-046638	ABBY8830	MPC6E XL
FPC 5	REV 59	750-044130	ABCT7675	MPC6E 3D
CPU	REV 10	711-045719	ABCK8526	RMPD PMB
XLM 0	REV 13	711-046638	ABCT7808	MPC6E XL
XLM 1	REV 13	711-046638	ABCT7809	MPC6E XL
FPC 6	REV 30	750-028467	ZM4986	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ZP6541	AMPD PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQ43GAC	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	ALMOA6D	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AQFORB3	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	153363A00333	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AN10KYE	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	APK04YM	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AQFOH44	SFP+-10G-SR
FPC 8	REV 38	750-031090	CABF7313	MPC Type 2 3D EQ
CPU	REV 08	711-030884	CABE6727	MPC PMB 2G
MIC 0	REV 18	750-028380	YK8253	3D 2x 10GE XFP
PIC 0		BUILTIN	BUILTIN	1x 10GE XFP
Xcvr 0	REV 03	740-014289	AD1148M00TP	XFP-10G-SR
PIC 1		BUILTIN	BUILTIN	1x 10GE XFP
QXM 0	REV 06	711-028408	CABC5614	MPC QXM
QXM 1	REV 06	711-028408	CABC5550	MPC QXM
FPC 9	REV 39	750-044130	ABCK1652	MPC6E 3D
CPU	REV 09	711-045719	ABCK1655	RMPD PMB
MIC 0	REV 09	750-049457	ABCP1230	2X100GE CFP2 OTN
PIC 0		BUILTIN	BUILTIN	2X100GE CFP2 OTN
Xcvr 0		NON-JNPR	37300222WP0002	CFP2-100G-LR4-D
Xcvr 1		NON-JNPR	FD46F001Y	CFP2-100G-SR10
MIC 1	REV 07	750-049457	ABCV6662	2X100GE CFP2 OTN
PIC 1		BUILTIN	BUILTIN	2X100GE CFP2 OTN
Xcvr 0		NON-JNPR	UQD0014	CFP2-100G-LR4-D
Xcvr 1		NON-JNPR	J13J68335	CFP2-100G-LR4-D
XLM 0	REV 07.2.00	711-046638	ABCK5491	MPC6E XL
XLM 1	REV 07.2.00	711-046638	ABCK5475	MPC6E XL
ADC 1	REV 17	750-043596	ABCG9023	Adapter Card
ADC 2	REV 01	750-043596	ZV4079	Adapter Card

ADC 6	REV 17	750-043596	ABCG8866	Adapter Card
ADC 8	REV 17	750-043596	ABCA8993	Adapter Card
Fan Tray 0	REV 06	760-046960	ACAY0354	172mm FanTray - 6 Fans
Fan Tray 1	REV 06	760-046960	ACAY0831	172mm FanTray - 6 Fans
Fan Tray 2	REV 06	760-046960	ACAY0892	172mm FanTray - 6 Fans
Fan Tray 3	REV 06	760-046960	ACAY0839	172mm FanTray - 6 Fans

### show chassis hardware detail (MX2010 Routers with MPC6E and OTN MIC)

```

user@host> show chassis hardware detail
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis
Midplane      REV 35    750-044636   ABAB9188      Lower Backplane
Midplane 1    REV 02    711-044557   ABAB8729      Upper Backplane
PMP            REV 04    711-032426   ACAJ2432      Power Midplane
FPM Board     REV 09    760-044634   ABCA4314      Front Panel Display
PSM 0         REV 01    740-050037   1EDB321015C   DC 52V Power Supply
Module
PSM 1         REV 01    740-050037   1EDB321015J   DC 52V Power Supply
Module
PSM 2         REV 01    740-050037   1EDB32000K8   DC 52V Power Supply
Module
PSM 3         REV 01    740-050037   1EDB32101JW   DC 52V Power Supply
Module
PSM 4         REV 01    740-050037   1EDB321015G   DC 52V Power Supply
Module
PSM 5         REV 01    740-050037   1EDB32101HH   DC 52V Power Supply
Module
PSM 6         REV 01    740-050037   1EDB32101HD   DC 52V Power Supply
Module
PSM 7         REV 01    740-050037   1EDB321015F   DC 52V Power Supply
Module
PSM 8         REV 01    740-050037   1EDB321015B   DC 52V Power Supply
Module
PDM 0         REV 03    740-045234   1EFA3220433   DC Power Dist Module
PDM 1         REV 03    740-045234   1EFA3220425   DC Power Dist Module
Routing Engine 0
  ad0  3998 MB  Virtium - TuffDrive VCF P1T0200274310822 191 Compact Flash
  ad1  30533 MB UGB94BPH32H0S1-KCI 11000043190 Disk 1
  usb0 (addr 1) EHCI root hub 0 Intel uhub0
  usb0 (addr 2) product 0x0020 32 vendor 0x8087 uhub1
  DIMM 0        VL31B5263F-F8SD DIE REV-0 PCB REV-0 MFR ID-ce80
  DIMM 1        VL31B5263F-F8SD DIE REV-0 PCB REV-0 MFR ID-ce80
  DIMM 2        VL31B5263F-F8SD DIE REV-0 PCB REV-0 MFR ID-ce80
  DIMM 3        VL31B5263F-F8SD DIE REV-0 PCB REV-0 MFR ID-ce80
Routing Engine 1
  ad0  3998 MB  Virtium - TuffDrive VCF P1T0200262860208 30 Compact Flash
  ad1  30533 MB UGB94ARF32H0S3-KC UNIGEN-499551-000146 Disk 1
CB 0          REV 23    750-040257   CABE8395      Control Board
CB 1          REV 12    750-040257   CAAD9499      Control Board
SPMB 0        REV 02    711-041855   ABCG8426      PMB Board
SPMB 1        REV 02    711-041855   ABBS1481      PMB Board
SFB 0         REV 06    711-044466   ABCD5013      Switch Fabric Board
SFB 1         REV 06    711-044466   ABCD5160      Switch Fabric Board
SFB 2         REV 06    711-044466   ABCD5175      Switch Fabric Board
SFB 3         REV 06    711-044466   ABCD4938      Switch Fabric Board
SFB 4         REV 06    711-044466   ABCD4944      Switch Fabric Board
SFB 5         REV 06    711-044466   ABCD4968      Switch Fabric Board
SFB 6         REV 06    711-044466   ABCD5267      Switch Fabric Board
SFB 7         REV 06    711-044466   ABCD4997      Switch Fabric Board

```

FPC 0	REV 59	750-044130	ABCT7676	MPC6E 3D
CPU	REV 10	711-045719	ABCK8527	RMPD PMB
XLM 0	REV 13	711-046638	ABCT7810	MPC6E XL
XLM 1	REV 13	711-046638	ABCT7811	MPC6E XL
FPC 2	REV 27	750-033205	ZL6014	MPCE Type 3 3D
CPU	REV 07	711-035209	ZK9068	HMPD PMB 2G
MIC 0	REV 14	750-033196	CAAW9214	1X100GE CXP
PIC 0		BUILTIN	BUILTIN	1X100GE CXP
Xcvt 0	REV 01	740-046563	XC49FC030	CFP2-100G-SR10
MIC 1	REV 18	750-033199	CAAC3231	1X100GE CFP
PIC 2		BUILTIN	BUILTIN	1X100GE CFP
FPC 3	REV 59	750-044130	ABCT7682	MPC6E 3D
CPU	REV 10	711-045719	ABCK8531	RMPD PMB
XLM 0	REV 13	711-046638	ABCT7818	MPC6E XL
XLM 1	REV 13	711-046638	ABCT7819	MPC6E XL
FPC 4	REV 33	750-044130	ABBY9278	MPC6E 3D
CPU	REV 09	711-045719	ABBY8677	RMPD PMB
XLM 0	REV 06.2.00	711-046638	ABBY8844	MPC6E XL
XLM 1	REV 06.2.00	711-046638	ABBY8830	MPC6E XL
FPC 5	REV 59	750-044130	ABCT7675	MPC6E 3D
CPU	REV 10	711-045719	ABCK8526	RMPD PMB
XLM 0	REV 13	711-046638	ABCT7808	MPC6E XL
XLM 1	REV 13	711-046638	ABCT7809	MPC6E XL
FPC 6	REV 30	750-028467	ZM4986	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ZP6541	AMPD PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvt 0	REV 01	740-021308	AQ43GAC	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvt 0	REV 01	740-031980	ALM0A6D	SFP+-10G-SR
Xcvt 1	REV 01	740-031980	AQFORB3	SFP+-10G-SR
Xcvt 2	REV 01	740-031980	153363A00333	SFP+-10G-SR
Xcvt 3	REV 01	740-021308	AN10KYE	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvt 0	REV 01	740-021308	APK04YM	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvt 0	REV 01	740-031980	AQFOH44	SFP+-10G-SR
FPC 8	REV 38	750-031090	CABF7313	MPC Type 2 3D EQ
CPU	REV 08	711-030884	CABE6727	MPC PMB 2G
MIC 0	REV 18	750-028380	YK8253	3D 2x 10GE XFP
PIC 0		BUILTIN	BUILTIN	1x 10GE XFP
Xcvt 0	REV 03	740-014289	AD1148M00TP	XFP-10G-SR
PIC 1		BUILTIN	BUILTIN	1x 10GE XFP
QXM 0	REV 06	711-028408	CABC5614	MPC QXM
QXM 1	REV 06	711-028408	CABC5550	MPC QXM
FPC 9	REV 39	750-044130	ABCK1652	MPC6E 3D
CPU	REV 09	711-045719	ABCK1655	RMPD PMB
MIC 0	REV 09	750-049457	ABCP1230	2X100GE CFP2 OTN
PIC 0		BUILTIN	BUILTIN	2X100GE CFP2 OTN
Xcvt 0		NON-JNPR	37300222WP0002	CFP2-100G-LR4-D
Xcvt 1		NON-JNPR	FD46F001Y	CFP2-100G-SR10
MIC 1	REV 07	750-049457	ABCV6662	2X100GE CFP2 OTN
PIC 1		BUILTIN	BUILTIN	2X100GE CFP2 OTN
Xcvt 0		NON-JNPR	UQD0014	CFP2-100G-LR4-D
Xcvt 1		NON-JNPR	J13J68335	CFP2-100G-LR4-D
XLM 0	REV 07.2.00	711-046638	ABCK5491	MPC6E XL
XLM 1	REV 07.2.00	711-046638	ABCK5475	MPC6E XL
ADC 1	REV 17	750-043596	ABCG9023	Adapter Card
ADC 2	REV 01	750-043596	ZV4079	Adapter Card
ADC 6	REV 17	750-043596	ABCG8866	Adapter Card
ADC 8	REV 17	750-043596	ABCA8993	Adapter Card
Fan Tray 0	REV 06	760-046960	ACAY0354	172mm FanTray - 6 Fans

Fan Tray 1	REV 06	760-046960	ACAY0831	172mm FanTray - 6 Fans
Fan Tray 2	REV 06	760-046960	ACAY0892	172mm FanTray - 6 Fans
Fan Tray 3	REV 06	760-046960	ACAY0839	172mm FanTray - 6 Fans

### show chassis hardware extensive (MX2010 Routers with MPC6E and OTN MIC)

```

user@host> show chassis hardware extensive
Hardware inventory:
Item              Version  Part number  Serial number  Description
Chassis
Jedec Code:       0x7fb0          EEPROM Version: 0x02
S/N:              JN11C9AFEAFK
Assembly ID:      0x0557          Assembly Version: 00.00
Date:             00-00-0000      Assembly Flags:  0x00
ID: MX2010
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 7f b0 02 ff 05 57 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x20: 4a 4e 31 31 43 39 41 46 45 41 46 4b 00 00 00 00
Address 0x30: 00 00 00 ff 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane          REV 35    750-044636  ABAB9188      Lower Backplane
Jedec Code:       0x7fb0          EEPROM Version: 0x02
P/N:              750-044636      S/N:           ABAB9188
Assembly ID:      0x0b66          Assembly Version: 01.35
Date:             06-21-2013      Assembly Flags: 0x00
Version:          REV 35          CLEI Code:     IPMU810ARA
ID: Lower Backplane              FRU Model Number: CHAS-BP-MX2010-S
Board Information Record:
Address 0x00: ad 01 08 00 3c 8a b0 38 68 00 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 66 01 23 52 45 56 20 33 35 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 36 33 36 00 00
Address 0x20: 53 2f 4e 20 41 42 41 42 39 31 38 38 00 15 06 07
Address 0x30: dd ff ff ff ad 01 08 00 3c 8a b0 38 68 00 ff ff
Address 0x40: ff ff ff ff 01 49 50 4d 55 38 31 30 41 52 41 43
Address 0x50: 48 41 53 2d 42 50 2d 4d 58 32 30 31 30 2d 53 00
Address 0x60: 00 00 00 00 00 00 30 36 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f8 ff ff ff ff ff ff ff ff ff ff ff ff
Midplane 1        REV 02    711-044557  ABAB8729      Upper Backplane
Jedec Code:       0x7fb0          EEPROM Version: 0x01
P/N:              711-044557      S/N:           ABAB8729
Assembly ID:      0x0b65          Assembly Version: 01.02
Date:             03-21-2013      Assembly Flags: 0x00
Version:          REV 02
ID: Upper Backplane
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 0b 65 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 34 34 35 35 37 00 00
Address 0x20: 53 2f 4e 20 41 42 41 42 38 37 32 39 00 15 03 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff

```

```

Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
PMP          REV 04   711-032426   ACAJ2432   Power Midplane
Jedec Code:  0x7fb0           EEPROM Version:  0x01
P/N:         711-032426       S/N:           ACAJ2432
Assembly ID: 0x045d           Assembly Version: 01.04
Date:        03-28-2013       Assembly Flags: 0x00
Version:     REV 04
ID: Power Midplane
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 04 5d 01 04 52 45 56 20 30 34 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 33 32 34 32 36 00 00
Address 0x20: 53 2f 4e 20 41 43 41 4a 32 34 33 32 00 1c 03 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
FPM Board    REV 09   760-044634   ABCA4314   Front Panel Display
Jedec Code:  0x7fb0           EEPROM Version:  0x02
P/N:         760-044634       S/N:           ABCA4314
Assembly ID: 0x0b64           Assembly Version: 01.09
Date:        03-28-2013       Assembly Flags: 0x00
Version:     REV 09           CLEI Code:      IPMYA4EJRA
ID: Front Panel Display       FRU Model Number: MX2010-CRAFT-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 64 01 09 52 45 56 20 30 39 00 00
Address 0x10: 00 00 00 00 37 36 30 2d 30 34 34 36 33 34 00 00
Address 0x20: 53 2f 4e 20 41 42 43 41 34 33 31 34 00 1c 03 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 4d 59 41 34 45 4a 52 41 4d
Address 0x50: 58 32 30 31 30 2d 43 52 41 46 54 2d 53 00 00 00
Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 93 ff ff ff ff ff ff ff ff ff ff ff ff
PSM 0        REV 01   740-050037   1EDB321015C   DC 52V Power Supply
Module
Jedec Code:  0x7fb0           EEPROM Version:  0x02
P/N:         740-050037       S/N:           1EDB321015C
Assembly ID: 0x0478           Assembly Version: 01.01
Date:        05-28-2013       Assembly Flags: 0x00
Version:     REV 01           CLEI Code:      IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 32 31 30 31 35 43 00 00 1c 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 1        REV 01   740-050037   1EDB321015J   DC 52V Power Supply
Module
Jedec Code:  0x7fb0           EEPROM Version:  0x02
P/N:         740-050037       S/N:           1EDB321015J
Assembly ID: 0x0478           Assembly Version: 01.01

```

```

Date:          05-28-2013      Assembly Flags:  0x00
Version:       REV 01         CLEI Code:       IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number:  MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 32 31 30 31 35 4a 00 00 1c 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 2          REV 01    740-050037    1EDB32000K8    DC 52V Power Supply
Module
Jedec Code:    0x7fb0      EEPROM Version: 0x02
P/N:          740-050037   S/N:           1EDB32000K8
Assembly ID:   0x0478      Assembly Version: 01.01
Date:         05-23-2013   Assembly Flags: 0x00
Version:      REV 01      CLEI Code:     IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number:  MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 32 30 30 30 4b 38 00 00 17 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 3          REV 01    740-050037    1EDB32101JW    DC 52V Power Supply
Module
Jedec Code:    0x7fb0      EEPROM Version: 0x02
P/N:          740-050037   S/N:           1EDB32101JW
Assembly ID:   0x0478      Assembly Version: 01.01
Date:         05-30-2013   Assembly Flags: 0x00
Version:      REV 01      CLEI Code:     IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number:  MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 32 31 30 31 4a 57 00 00 1e 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 4          REV 01    740-050037    1EDB321015G    DC 52V Power Supply
Module
Jedec Code:    0x7fb0      EEPROM Version: 0x02
P/N:          740-050037   S/N:           1EDB321015G
Assembly ID:   0x0478      Assembly Version: 01.01
Date:         05-28-2013   Assembly Flags: 0x00
Version:      REV 01      CLEI Code:     IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number:  MX2000-PSM-DC-S
Board Information Record:

```

```

Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 32 31 30 31 35 47 00 00 1c 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 5          REV 01   740-050037   1EDB32101HH   DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:          740-050037      S/N:              1EDB32101HH
Assembly ID:   0x0478        Assembly Version:  01.01
Date:         05-30-2013     Assembly Flags:    0x00
Version:      REV 01        CLEI Code:        IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 32 31 30 31 48 48 00 00 1e 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 6          REV 01   740-050037   1EDB32101HD   DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:          740-050037      S/N:              1EDB32101HD
Assembly ID:   0x0478        Assembly Version:  01.01
Date:         05-30-2013     Assembly Flags:    0x00
Version:      REV 01        CLEI Code:        IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 32 31 30 31 48 44 00 00 1e 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 7          REV 01   740-050037   1EDB321015F   DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:          740-050037      S/N:              1EDB321015F
Assembly ID:   0x0478        Assembly Version:  01.01
Date:         05-28-2013     Assembly Flags:    0x00
Version:      REV 01        CLEI Code:        IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00

```



```

Address 0x20: 31 45 44 42 33 32 31 30 31 35 46 00 00 1c 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 8          REV 01   740-050037   1EDB321015B       DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           740-050037      S/N:              1EDB321015B
Assembly ID:   0x0478          Assembly Version:  01.01
Date:          05-28-2013      Assembly Flags:    0x00
Version:       REV 01          CLEI Code:         IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 32 31 30 31 35 42 00 00 1c 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PDM 0          REV 03   740-045234   1EFA3220433       DC Power Dist Module
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           740-045234      S/N:              1EFA3220433
Assembly ID:   0x047b          Assembly Version:  01.03
Date:          05-30-2013      Assembly Flags:    0x00
Version:       REV 03          CLEI Code:         IPUPAJSKAA
ID: DC Power Dist Module      FRU Model Number: MX2000-PDM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 7b 01 03 52 45 56 20 30 33 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 35 32 33 34 00 00
Address 0x20: 31 45 46 41 33 32 32 30 34 33 33 00 00 1e 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4a 53 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 44 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 33 ff ff ff ff ff ff
Address 0x70: ff ff ff 1d 00 00 00 00 00 00 00 00 00 00 00 00
PDM 1          REV 03   740-045234   1EFA3220425       DC Power Dist Module
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           740-045234      S/N:              1EFA3220425
Assembly ID:   0x047b          Assembly Version:  01.03
Date:          05-30-2013      Assembly Flags:    0x00
Version:       REV 03          CLEI Code:         IPUPAJSKAA
ID: DC Power Dist Module      FRU Model Number: MX2000-PDM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
..

```

### show chassis hardware (MX2020 Router)

```

user@host > show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis
Midplane      REV 27   750-040240   ABAB9384      Lower Power Midplane

```

Midplane 1	REV 04	711-032386	ABAB9386	Upper Backplane
PMP 1	REV 05	711-032428	ACAJ1579	Upper Power Midplane
PMP 0	REV 04	711-032426	ACAJ1524	Lower Power Midplane
FPM Board	REV 06	760-040242	ABBT8837	Front Panel Display
PSM 0	REV 01	740-045050	1E022240056	DC 52V Power Supply
Module				
PSM 1	REV 01	740-045050	1E022240054	DC 52V Power Supply
Module				
PSM 2	REV 01	740-045050	1E02224005H	DC 52V Power Supply
Module				
PSM 3	REV 01	740-045050	1E022240053	DC 52V Power Supply
Module				
PSM 4	REV 01	740-045050	1E02224004K	DC 52V Power Supply
Module				
PSM 7	REV 01	740-045050	1E02224006W	DC 52V Power Supply
Module				
PSM 8	REV 01	740-045050	1E022240062	DC 52V Power Supply
Module				
PSM 9	REV 01	740-045050	1E02224005B	DC 52V Power Supply
Module				
PSM 10	REV 01	740-045050	1E02224005A	DC 52V Power Supply
Module				
PSM 11	REV 01	740-045050	1E022240052	DC 52V Power Supply
Module				
PSM 12	REV 01	740-045050	1E022240051	DC 52V Power Supply
Module				
PSM 13	REV 01	740-045050	1E022240058	DC 52V Power Supply
Module				
PSM 14	REV 01	740-045050	1E02224004L	DC 52V Power Supply
Module				
PSM 15	REV 01	740-045050	1E02224005M	DC 52V Power Supply
Module				
PSM 16	REV 01	740-045050	1E02224006S	DC 52V Power Supply
Module				
PSM 17	REV 01	740-045050	1E02224005Z	DC 52V Power Supply
Module				
PDM 0	REV 01	740-045234	1E012150033	DC Power Dist Module
PDM 1	REV 01	740-045234	1E012150027	DC Power Dist Module
PDM 2	REV 01	740-045234	1E012150028	DC Power Dist Module
PDM 3	REV 01	740-045234	1E012150045	DC Power Dist Module
Routing Engine 0	REV 02	740-041821	9009089704	RE-S-1800x4
Routing Engine 1	REV 02	740-041821	9009094138	RE-S-1800x4
CB 0	REV 14	750-040257	CAAF8430	Control Board
CB 1	REV 08	750-040257	CAAB3482	Control Board
SPMB 0	REV 01	711-041855	ZS2290	PMB Board
SPMB 1	REV 02	711-041855	CAAA6141	PMB Board
SFB 0	REV 03	711-044466	ABBV6789	Switch Fabric Board
SFB 1	REV 05	711-044466	ABBX5666	Switch Fabric Board
SFB 2	REV 05	711-044466	ABBX5678	Switch Fabric Board
SFB 3	REV 05	711-044466	ABBX5687	Switch Fabric Board
SFB 4	REV 05	711-044466	ABBX5609	Switch Fabric Board
SFB 5	REV 05	711-044466	ABBX5675	Switch Fabric Board
SFB 6	REV 03	711-044466	ABBV6805	Switch Fabric Board
SFB 7	REV 05	711-044466	ABBX5701	Switch Fabric Board
FPC 0	REV 30	750-028467	ABBN0284	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN0507	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E00990	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E04357	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01327	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E04375	SFP+-10G-USR

PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E02760	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E02904	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E03963	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E00756	SFP+-10G-USR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E04418	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E01077	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E01128	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11F01253	SFP+-10G-USR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E01140	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11F01626	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E01075	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E01177	SFP+-10G-USR
FPC 1	REV 30	750-028467	ABBN0208	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBJ1084	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E04745	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11F01570	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E04388	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11F01439	SFP+-10G-USR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E04739	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11F01869	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01675	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11F01901	SFP+-10G-USR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01346	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11F01288	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01824	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E04312	SFP+-10G-USR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E02811	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E03847	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01495	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11F01265	SFP+-10G-USR
FPC 2	REV 30	750-028467	ZM5111	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ZP6607	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LJA	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MFZ	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NKL	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80KF4	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80FBJ	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MM2	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80LJV	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NXV	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80N1H	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80NLS	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80FL5	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NL9	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80NG2	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80KDU	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80MG1	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80MM0	SFP+-10G-SR
FPC 3	REV 30	750-028467	ABBN0302	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN0495	AMPC PMB

PIC 0			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01581	SFP+-10G-USR	
Xcvr 1	REV 01	740-030658	B11E01176	SFP+-10G-USR	
Xcvr 2	REV 01	740-030658	B11F01251	SFP+-10G-USR	
Xcvr 3	REV 01	740-030658	B11E02752	SFP+-10G-USR	
PIC 1			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E00786	SFP+-10G-USR	
Xcvr 1	REV 01	740-030658	B11E01020	SFP+-10G-USR	
Xcvr 2	REV 01	740-030658	B11E01023	SFP+-10G-USR	
Xcvr 3	REV 01	740-030658	B11E02819	SFP+-10G-USR	
PIC 2			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E02812	SFP+-10G-USR	
Xcvr 1	REV 01	740-030658	B11D04437	SFP+-10G-USR	
Xcvr 2	REV 01	740-030658	B11F01279	SFP+-10G-USR	
Xcvr 3	REV 01	740-030658	B11F01333	SFP+-10G-USR	
PIC 3			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E00978	SFP+-10G-USR	
Xcvr 1	REV 01	740-030658	B11E01018	SFP+-10G-USR	
Xcvr 2	REV 01	740-030658	B11F01784	SFP+-10G-USR	
Xcvr 3	REV 01	740-031980	AK80NKP	SFP+-10G-SR	
FPC 4	REV 30	750-028467	ABBN0308	MPC 3D 16x 10GE	
CPU	REV 10	711-029089	ABBJ1095	AMPC PMB	
PIC 0			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E04305	SFP+-10G-USR	
Xcvr 1	REV 01	740-030658	B11E01147	SFP+-10G-USR	
Xcvr 2	REV 01	740-030658	B11E01195	SFP+-10G-USR	
Xcvr 3	REV 01	740-030658	B11F01743	SFP+-10G-USR	
PIC 1			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01892	SFP+-10G-USR	
Xcvr 1	REV 01	740-030658	B11E02880	SFP+-10G-USR	
Xcvr 2	REV 01	740-030658	B11E00725	SFP+-10G-USR	
Xcvr 3	REV 01	740-030658	B11E01057	SFP+-10G-USR	
PIC 2			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E02816	SFP+-10G-USR	
Xcvr 1	REV 01	740-030658	B11C04501	SFP+-10G-USR	
Xcvr 2	REV 01	740-030658	B11E02764	SFP+-10G-USR	
Xcvr 3	REV 01	740-030658	B11E00789	SFP+-10G-USR	
PIC 3			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01250	SFP+-10G-USR	
Xcvr 1	REV 01	740-030658	B11E02847	SFP+-10G-USR	
Xcvr 2	REV 01	740-030658	B11E00787	SFP+-10G-USR	
Xcvr 3	REV 01	740-030658	B11E03803	SFP+-10G-USR	
FPC 5	REV 30	750-028467	ABBN0316	MPC 3D 16x 10GE	
CPU	REV 10	711-029089	ABBJ1082	AMPC PMB	
PIC 0			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K00523	SFP+-10G-SR	
Xcvr 1	REV 01	740-031980	B11K01848	SFP+-10G-SR	
Xcvr 2	REV 01	740-031980	B11K01865	SFP+-10G-SR	
Xcvr 3	REV 01	740-031980	B11K00540	SFP+-10G-SR	
PIC 1			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K00422	SFP+-10G-SR	
Xcvr 1	REV 01	740-031980	B11K00428	SFP+-10G-SR	
Xcvr 2	REV 01	740-031980	B11K00423	SFP+-10G-SR	
Xcvr 3	REV 01	740-031980	B11K01855	SFP+-10G-SR	
PIC 2			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K01847	SFP+-10G-SR	
Xcvr 1	REV 01	740-031980	B11K00526	SFP+-10G-SR	
Xcvr 2	REV 01	740-031980	B11K00529	SFP+-10G-SR	
Xcvr 3	REV 01	740-031980	B11K00525	SFP+-10G-SR	
PIC 3			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K00425	SFP+-10G-SR	

Xcvr 1	REV 01	740-031980	B11K00530	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K01851	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K00528	SFP+-10G-SR
FPC 6	REV 32	750-028467	ABBN6832	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBK6534	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80MB4	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80FQ6	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80N1F	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NLQ	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80KDR	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80FGJ	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80N5G	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80KD8	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LET	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80N1X	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NRF	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NL2	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80N3D	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MRB	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80LEQ	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80LER	SFP+-10G-SR
FPC 7	REV 32	750-028467	ABBN6811	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN7288	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80NK8	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80LJG	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80LBU	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80N21	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LEU	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80NLM	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NL6	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80LES	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LEN	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80ME0	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80LMG	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80MM1	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80MG7	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80KF9	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NRQ	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NLE	SFP+-10G-SR
FPC 8	REV 23	750-028467	YN2977	MPC 3D 16x 10GE
CPU	REV 10	711-029089	YP1856	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	183363A00875	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	183363A00851	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	183363A00772	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	183363A00882	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	183363A00735	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	183363A00169	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	183363A00726	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	183363A00077	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	183363A00168	SFP+-10G-SR

Xcvr 1	REV 01	740-031980	183363A00676	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	183363A00732	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	183363A00091	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	183363A00725	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	183363A00642	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	183363A00871	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	183363A00853	SFP+-10G-SR
FPC 9	REV 32	750-028467	ABBN6798	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBK6556	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	9ZDZ06A00055	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	183363A00239	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AD0915E003K	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AD0915E003A	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80MRC	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80NL5	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NKN	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80N3U	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80N1T	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AJ808DJ	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NG4	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80FND	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80FKQ	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80NLT	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NKR	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80LKM	SFP+-10G-SR
FPC 10	REV 32	750-028467	ABBN6813	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBK6542	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80NA3	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80NLF	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80MRH	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80KE4	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	973152A00030	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80L9H	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80ME8	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NLR	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80NG1	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MCA	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80LFC	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80LEM	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80N9X	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80LAC	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80LF2	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80N8T	SFP+-10G-SR
FPC 11	REV 30	750-028467	ABBN0281	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN0526	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01326	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E03973	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E00950	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E00674	SFP+-10G-USR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E00775	SFP+-10G-USR

Xcvr 1	REV 01	740-030658	B11E04461	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E01074	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E02821	SFP+-10G-USR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E04501	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E00757	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01623	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E01022	SFP+-10G-USR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E04359	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E02751	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E02736	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E01178	SFP+-10G-USR
FPC 12	REV 32	750-028467	ABBN6796	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN7259	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K01856	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K01853	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K01863	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02863	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02668	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02881	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A01671	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02627	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02725	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02692	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02730	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A03081	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02736	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02568	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02747	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02579	SFP+-10G-SR
FPC 13	REV 30	750-028467	ABBN0270	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN0966	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80NL1	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80NXW	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80KD2	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80FMD	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80NKQ	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MGH	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80N38	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NL7	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LEL	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80NKD	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80KCY	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80LHK	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80M5J	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MBE	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NLG	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80LFH	SFP+-10G-SR
FPC 14	REV 32	750-028467	ABBN6790	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN6515	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LZM	SFP+-10G-SR

Xcvr 1	REV 01	740-031980	AK80MCC	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80KCM	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80KE0	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021310	C10F99155	SFP+-10G-LRM
Xcvr 1	REV 01	740-021310	C10F99049	SFP+-10G-LRM
Xcvr 2	REV 01	740-021310	C10F99128	SFP+-10G-LRM
Xcvr 3	REV 01	740-021310	C10F99169	SFP+-10G-LRM
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LF3	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02597	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A03060	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A03057	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LEX	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80FEU	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80FNM	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AJQQQ5G	SFP+-10G-SR
FPC 15	REV 32	750-028467	ABBN6791	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN7289	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K00424	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K01849	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K01862	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K01852	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K00427	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K00430	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K01854	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K00426	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K00429	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K01864	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K01850	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K00522	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E01144	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E00985	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E00796	SFP+-10G-USR
Xcvr 3	REV 01	740-031980	B11K01866	SFP+-10G-SR
FPC 16	REV 30	750-028467	ABBM4592	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN0465	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01435	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E01052	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01328	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11F01254	SFP+-10G-USR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E02738	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E02881	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01624	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E00889	SFP+-10G-USR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E02883	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E00681	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E04306	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E02813	SFP+-10G-USR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01801	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E02753	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E01156	SFP+-10G-USR



Xcvr 3	REV 01	740-030658	B11E04324	SFP+-10G-USR
FPC 17	REV 32	750-028467	ABBN6810	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN7237	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02638	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02082	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A01674	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A03058	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A03048	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02729	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02566	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02567	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02878	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02739	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A01959	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02660	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02731	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02588	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02673	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02654	SFP+-10G-SR
FPC 18	REV 30	750-028467	ABBM4739	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN0487	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02569	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02886	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A03082	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	133363A00297	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02726	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A03050	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02884	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A03076	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02581	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02873	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02582	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A03083	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031981	UL70BU6	SFP+-10G-LR
Xcvr 1	REV 01	740-031981	UL50QC6	SFP+-10G-LR
Xcvr 2	REV 01	740-031981	UL708N6	SFP+-10G-LR
Xcvr 3	REV 01	740-031981	UL603KK	SFP+-10G-LR
FPC 19	REV 32	750-028467	ABBN6827	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBK6508	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A01688	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A01724	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A01773	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02593	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A03061	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A03056	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02669	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A03070	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02572	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02697	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02585	SFP+-10G-SR

Xcvr 3	REV 01	740-031980	163363A03052	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02591	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02649	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02577	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02698	SFP+-10G-SR
ADC 0	REV 13	750-043596	ABBX5561	Adapter Card
ADC 1	REV 13	750-043596	ABBX5546	Adapter Card
ADC 2	REV 13	750-043596	ABBX5535	Adapter Card
ADC 3	REV 13	750-043596	ABBX5552	Adapter Card
ADC 4	REV 13	750-043596	ABBX5581	Adapter Card
ADC 5	REV 13	750-043596	ABBX5545	Adapter Card
ADC 6	REV 13	750-043596	ABBX5554	Adapter Card
ADC 7	REV 07	750-043596	ABBV7194	Adapter Card
ADC 8	REV 07	750-043596	ABBV7251	Adapter Card
ADC 9	REV 07	750-043596	ABBV7202	Adapter Card
ADC 10	REV 13	750-043596	ABBX5538	Adapter Card
ADC 11	REV 13	750-043596	ABBX5566	Adapter Card
ADC 12	REV 13	750-043596	ABBX5542	Adapter Card
ADC 13	REV 13	750-043596	ABBX5539	Adapter Card
ADC 14	REV 13	750-043596	ABBX5555	Adapter Card
ADC 15	REV 13	750-043596	ABBX5557	Adapter Card
ADC 16	REV 13	750-043596	ABBX5536	Adapter Card
ADC 17	REV 13	750-043596	ABBX5559	Adapter Card
ADC 18	REV 13	750-043596	ABBX5537	Adapter Card
ADC 19	REV 11	750-043596	ABBW5685	Adapter Card
Fan Tray 0	REV 2A	760-046960	ACAY0030	172mm FanTray - 6 Fans
Fan Tray 1	REV 2A	760-046960	ACAY0039	172mm FanTray - 6 Fans
Fan Tray 2	REV 2A	760-046960	ACAY0033	172mm FanTray - 6 Fans
Fan Tray 3	REV 2A	760-046960	ACAY0062	172mm FanTray - 6 Fans

### show chassis hardware detail (MX2020 Router)

```
user@host> show chassis hardware detail
```

Hardware inventory:				
Item	Version	Part number	Serial number	Description
Chassis			JN11E2227AFJ	MX2020
Midplane	REV 27	750-040240	ABAB9384	Lower Power Midplane
Midplane 1	REV 04	711-032386	ABAB9386	Upper Backplane
PMP 1	REV 05	711-032428	ACAJ1821	Upper Power Midplane
PMP 0	REV 04	711-032426	ACAJ1524	Lower Power Midplane
FPM Board	REV 06	760-040242	ABBT8837	Front Panel Display
PSM 0	REV 01	740-045050	1E02224006G	DC 52V Power Supply
Module				
PSM 1	REV 01	740-045050	1E022240053	DC 52V Power Supply
Module				
PSM 2	REV 01	740-045050	1E02224004K	DC 52V Power Supply
Module				
PSM 3	REV 01	740-045050	1E022240056	DC 52V Power Supply
Module				
PSM 4	REV 01	740-045050	1E022240054	DC 52V Power Supply
Module				
PSM 5	REV 01	740-045050	1E02224005H	DC 52V Power Supply
Module				
PSM 6	REV 01	740-045050	1E02224006S	DC 52V Power Supply
Module				
PSM 7	REV 01	740-045050	1E02224005M	DC 52V Power Supply
Module				
PSM 8	REV 01	740-045050	1E022240062	DC 52V Power Supply
Module				
PSM 9	REV 03	740-045050	1EDB2350095	DC 52V Power Supply

Module				
PSM 10	REV 03	740-045050	1EDB235009L	DC 52V Power Supply
Module				
PSM 11	REV 03	740-045050	1EDB2350092	DC 52V Power Supply
Module				
PSM 12	REV 03	740-045050	1EDB23500AT	DC 52V Power Supply
Module				
PSM 13	REV 03	740-045050	1EDB2350094	DC 52V Power Supply
Module				
PSM 15	REV 03	740-045050	1EDB235008X	DC 52V Power Supply
Module				
PDM 0	REV 01	740-045234	1E012150033	DC Power Dist Module
PDM 1	REV 01	740-045234	1E012150027	DC Power Dist Module
PDM 2	REV 01	740-045234	1E262250072	DC Power Dist Module
Routing Engine 0	REV 02	740-041821	9009094138	RE-S-1800x4
ad0	3998 MB	Virtium - TuffDisk	VCF3 20110825A021D0000064	Compact Flash
ad1	30533 MB	UGB94ARF32H0S3-KC	UNIGEN-499551-000347	Disk 1
usb0 (addr 1)		EHCI root hub 0	Intel	uhub0
usb0 (addr 2)		product 0x0020 32	vendor 0x8087	uhub1
DIMM 0		SGU04G72H1BD2SA-BB DIE	REV-52 PCB REV-54	MFR ID-ce80
DIMM 1		SGU04G72H1BD2SA-BB DIE	REV-52 PCB REV-54	MFR ID-ce80
DIMM 2		SGU04G72H1BD2SA-BB DIE	REV-52 PCB REV-54	MFR ID-ce80
DIMM 3		SGU04G72H1BD2SA-BB DIE	REV-52 PCB REV-54	MFR ID-ce80
Routing Engine 1	REV 02	740-041821	9009089709	RE-S-1800x4
ad0	3831 MB	UGB30SFA4000T1	SFA4000T1 00000113	Compact Flash
ad1	30533 MB	UGB94ARF32H0S3-KC	UNIGEN-478612-001044	Disk 1
CB 0	REV 08	750-040257	CAAB3482	Control Board
CB 1	REV 04	750-040257	ZT2864	Control Board
SPMB 0	REV 02	711-041855	CAA6141	PMB Board
SPMB 1	REV 01	711-041855	ZS2275	PMB Board
SFB 0	REV 05	711-044466	ABBT2161	Switch Fabric Board
SFB 1	REV 05	711-044466	ABBT2159	Switch Fabric Board
SFB 2	REV 05	711-044466	ABBX3718	Switch Fabric Board
SFB 3	REV 05	711-044466	ABBT2152	Switch Fabric Board
SFB 4	REV 05	711-044466	ABBT2160	Switch Fabric Board
SFB 5	REV 05	711-044466	ABBT2145	Switch Fabric Board
SFB 6	REV 05	711-044466	ABBT2150	Switch Fabric Board
SFB 7	REV 05	711-044466	ABBT2163	Switch Fabric Board
FPC 0	REV 30	750-028467	ABBN0284	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN0507	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E00990	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E04357	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01327	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E04375	SFP+-10G-USR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E02760	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E02904	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E03963	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E00756	SFP+-10G-USR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E04418	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E01077	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E01128	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11F01253	SFP+-10G-USR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E01140	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11F01626	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E01075	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E01177	SFP+-10G-USR
FPC 1	REV 30	750-028467	ABBN0308	MPC 3D 16x 10GE

CPU	REV 10	711-029089	ABBJ1095	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E04305	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E01147	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E01195	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11F01743	SFP+-10G-USR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01892	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E02880	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E00725	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E01057	SFP+-10G-USR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E02816	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11C04501	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E02764	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E00789	SFP+-10G-USR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01250	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E02847	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E00787	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E03803	SFP+-10G-USR
FPC 2	REV 30	750-028467	ABBN0316	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBJ1082	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K00523	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K01848	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K01865	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K00540	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K00422	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K00428	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K00423	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K01855	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K01847	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K00526	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K00529	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K00525	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K00425	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K00530	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K01851	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K00528	SFP+-10G-SR
FPC 3	REV 32	750-028467	ABBN6832	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBK6534	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80MB4	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80FQ6	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80N1F	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NLQ	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80KDR	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80FGJ	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80N5G	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80KD8	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LET	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80N1X	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NRF	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NL2	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+

Xcvr 0	REV 01	740-031980	AK80N3D	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MRB	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80LEQ	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80LER	SFP+-10G-SR
FPC 4	REV 32	750-028467	ABBN6811	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN7288	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80NK8	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80LJG	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80LBU	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80N21	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LEU	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80NLM	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NL6	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80LES	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LEN	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80ME0	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80LMG	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80MM1	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80MG7	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80KF9	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NRQ	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NLE	SFP+-10G-SR
FPC 5	REV 32	750-028467	ABBN6791	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN7289	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K00424	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K01849	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K01862	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K01852	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP
Xcvr 0	REV 01	740-031980	B11K00427	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K00430	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K01854	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K00426	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K00429	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K01864	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K01850	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K00522	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E01144	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E00985	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E00796	SFP+-10G-USR
Xcvr 3	REV 01	740-031980	B11K01866	SFP+-10G-SR
FPC 6	REV 30	750-028467	ABBM4592	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN0465	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01435	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E01052	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01328	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11F01254	SFP+-10G-USR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E02738	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E02881	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01624	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E00889	SFP+-10G-USR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+

Xcvr 0	REV 01	740-030658	B11E02883	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E00681	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E04306	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E02813	SFP+-10G-USR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01801	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E02753	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E01156	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E04324	SFP+-10G-USR
FPC 7	REV 32	750-028467	ABBN6810	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN7237	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A03058	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02082	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A01674	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02638	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A03048	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02729	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02566	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02567	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02878	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02739	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A01959	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02660	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02731	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02588	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02673	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02654	SFP+-10G-SR
FPC 8	REV 30	750-028467	ABBM4739	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN0487	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02569	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02886	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A03082	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	133363A00297	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02726	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A03050	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02884	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A03076	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02581	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02873	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02582	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A03083	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031981	UL70BU6	SFP+-10G-LR
Xcvr 1	REV 01	740-031981	UL50QC6	SFP+-10G-LR
Xcvr 2	REV 01	740-031981	UL708N6	SFP+-10G-LR
Xcvr 3	REV 01	740-031981	UL603KK	SFP+-10G-LR
FPC 9	REV 32	750-028467	ABBN6827	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBK6508	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A01688	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A01724	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A01773	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02593	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+

Xcvr 0	REV 01	740-031980	163363A03061	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A03056	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02669	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A03070	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02572	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02697	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02585	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A03052	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02591	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02649	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02577	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02698	SFP+-10G-SR
FPC 10	REV 30	750-028467	ABBN0302	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN0495	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01581	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E01176	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01251	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E02752	SFP+-10G-USR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E00786	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E01020	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E01023	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E02819	SFP+-10G-USR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E02812	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11D04437	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01279	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11F01333	SFP+-10G-USR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E00978	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E01018	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01784	SFP+-10G-USR
Xcvr 3	REV 01	740-031980	AK80NKP	SFP+-10G-SR
FPC 11	REV 32	750-028467	ABBN6790	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBK6515	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LZM	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MCC	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80KCM	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80KE0	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021310	C10F99155	SFP+-10G-LRM
Xcvr 1	REV 01	740-021310	C10F99049	SFP+-10G-LRM
Xcvr 2	REV 01	740-021310	C10F99128	SFP+-10G-LRM
Xcvr 3	REV 01	740-021310	C10F99169	SFP+-10G-LRM
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LF3	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02597	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A03060	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A03057	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LEX	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80FEU	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80FNM	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AJQ0Q5G	SFP+-10G-SR
FPC 12	REV 30	750-028467	ZM5111	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ZP6607	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+

Xcvr 0	REV 01	740-031980	AK80LJA	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MFZ	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NKL	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80KF4	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80FBJ	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MM2	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80LJV	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NXV	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80N1H	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80NLS	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80FL5	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NL9	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80NG2	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80KDU	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80MG1	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80MM0	SFP+-10G-SR
FPC 13	REV 30	750-028467	ABBN0208	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABB11084	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E04745	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11F01570	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E04388	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11F01439	SFP+-10G-USR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E04739	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11F01869	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01675	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11F01901	SFP+-10G-USR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01346	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11F01288	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01824	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E04312	SFP+-10G-USR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E02811	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E03847	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01495	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11F01265	SFP+-10G-USR
FPC 14	REV 23	750-028467	YN2977	MPC 3D 16x 10GE
CPU	REV 10	711-029089	YP1856	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	183363A00875	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	183363A00851	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	183363A00772	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	183363A00882	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	183363A00735	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	183363A00169	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	183363A00726	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	183363A00077	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	183363A00168	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	183363A00676	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	183363A00732	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	183363A00091	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	183363A00725	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	183363A00642	SFP+-10G-SR



Xcvr 2	REV 01	740-031980	183363A00871	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	183363A00853	SFP+-10G-SR
FPC 15	REV 32	750-028467	ABBN6798	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBK6556	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	9ZDZ06A00055	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	183363A00239	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AD0915E003K	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AD0915E003A	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80MRC	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80NL5	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NKN	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80N3U	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80N1T	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AJ808DJ	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NG4	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80FND	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80FKQ	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80NLT	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NKR	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80LKM	SFP+-10G-SR
FPC 16	REV 30	750-028467	ABBN0270	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBJ0966	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80NL1	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80NXW	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80KD2	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80FMD	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80NKQ	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MGH	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80N38	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NL7	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80M5J	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80NKD	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80KCY	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80LHK	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LEL	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MBE	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NLG	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80LFH	SFP+-10G-SR
FPC 17	REV 32	750-028467	ABBN6796	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN7259	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K01856	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K01853	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K01863	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02863	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02668	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02881	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A01671	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02627	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02725	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02692	SFP+-10G-SR

Xcvr 2	REV 01	740-031980	163363A02730	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A03081	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02736	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02568	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02747	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02579	SFP+-10G-SR
FPC 18	REV 30	750-028467	ABBN0281	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN0526	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01326	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E03973	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E00950	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E00674	SFP+-10G-USR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E00775	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E04461	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E01074	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E02821	SFP+-10G-USR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E04501	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E00757	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01623	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E01022	SFP+-10G-USR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E04359	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E02751	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E02736	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E01178	SFP+-10G-USR
FPC 19	REV 32	750-028467	ABBN6813	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBK6542	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80NA3	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80NLF	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80MRH	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80KE4	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	973152A00030	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80L9H	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80ME8	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NLR	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80NG1	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MCA	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80LFC	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80LEM	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80N9X	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80LAC	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80LF2	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80N8T	SFP+-10G-SR
ADC 0	REV 13	750-043596	ABBX5561	Adapter Card
ADC 1	REV 13	750-043596	ABBX5546	Adapter Card
ADC 2	REV 13	750-043596	ABBX5535	Adapter Card
ADC 3	REV 13	750-043596	ABBX5552	Adapter Card
ADC 4	REV 13	750-043596	ABBX5581	Adapter Card
ADC 5	REV 13	750-043596	ABBX5545	Adapter Card
ADC 6	REV 13	750-043596	ABBX5554	Adapter Card
ADC 7	REV 07	750-043596	ABBV7194	Adapter Card
ADC 8	REV 07	750-043596	ABBV7251	Adapter Card
ADC 9	REV 07	750-043596	ABBV7202	Adapter Card

ADC 10	REV 13	750-043596	ABBX5579	Adapter Card
ADC 11	REV 13	750-043596	ABBX5548	Adapter Card
ADC 12	REV 13	750-043596	ABBX5575	Adapter Card
ADC 13	REV 13	750-043596	ABBX5539	Adapter Card
ADC 14	REV 13	750-043596	ABBX5555	Adapter Card
ADC 15	REV 13	750-043596	ABBX5557	Adapter Card
ADC 16	REV 13	750-043596	ABBX5536	Adapter Card
ADC 17	REV 13	750-043596	ABBX5559	Adapter Card
ADC 18	REV 13	750-043596	ABBX5537	Adapter Card
ADC 19	REV 11	750-043596	ABBW5685	Adapter Card
Fan Tray 0	REV 04	760-046960	ACAY0090	172mm FanTray - 6 Fans
Fan Tray 1	REV 04	760-046960	ACAY0088	172mm FanTray - 6 Fans
Fan Tray 2	REV 04	760-046960	ACAY0089	172mm FanTray - 6 Fans
Fan Tray 3	REV 04	760-046960	ACAY0108	172mm FanTray - 6 Fans

### show chassis hardware (MX2020 Router with 240-V high-voltage DC PSMs and PDMs)

```
user@host > show chassis hardware
```

#### Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN1248551AFJ	MX2020
Midplane			ABAD0719	Lower Backplane
Midplane 1	REV 06	711-032386	ABAD1385	Upper Backplane
PMP 1	REV 05	711-032428	ACAJ3828	Upper Power Midplane
PMP 0	REV 04	711-032426	ACAJ3642	Lower Power Midplane
FPM Board	REV 13	760-040242	ABCX9082	Front Panel Display
PSM 0	Rev 02	740-078881	1EDX813007L	MX2K 240V HVDC PSM
PSM 1	Rev 02	740-078881	1EDX81300BB	MX2K 240V HVDC PSM
PSM 2	Rev 02	740-078881	1EDX81300AD	MX2K 240V HVDC PSM
PSM 3	Rev 02	740-078881	1EDX813007D	MX2K 240V HVDC PSM
PSM 4	Rev 02	740-078881	1EDX81300AY	MX2K 240V HVDC PSM
PSM 5	Rev 02	740-078881	1EDX813009B	MX2K 240V HVDC PSM
PSM 6	Rev 02	740-078881	1EDX81300AB	MX2K 240V HVDC PSM
PSM 7	Rev 02	740-078881	1EDX81300A4	MX2K 240V HVDC PSM
PSM 8	Rev 02	740-078881	1EDX81300A6	MX2K 240V HVDC PSM
PSM 9	Rev 02	740-078881	1EDX81300AE	MX2K 240V HVDC PSM
PSM 10	Rev 02	740-078881	1EDX813007N	MX2K 240V HVDC PSM
PSM 11	Rev 02	740-078881	1EDX813009F	MX2K 240V HVDC PSM
PSM 12	Rev 02	740-078881	1EDX81300B3	MX2K 240V HVDC PSM
PSM 13	Rev 02	740-078881	1EDX813008W	MX2K 240V HVDC PSM
PSM 14	Rev 02	740-078881	1EDX813007M	MX2K 240V HVDC PSM
PSM 15	Rev 02	740-078881	1EDX81300AL	MX2K 240V HVDC PSM
PSM 16	Rev 02	740-078881	1EDX813009E	MX2K 240V HVDC PSM
PSM 17	Rev 02	740-078881	1EDX81300A7	MX2K 240V HVDC PSM
PDM 0	REV 01	740-079470	1EFH8130057	MX2K 240V HVDC PDM
PDM 1	REV 01	740-079470	1EFH8130051	MX2K 240V HVDC PDM
PDM 2	REV 01	740-079470	1EFH8130039	MX2K 240V HVDC PDM
PDM 3	REV 01	740-079470	1EFH8130036	MX2K 240V HVDC PDM
Routing Engine 0	REV 03	740-031114	9009053584	RE-S-1800x2
Routing Engine 1	REV 02	740-041821	9009099699	RE-S-1800x4
CB 0	REV 20	750-040257	CAAJ5213	Control Board
CB 1	REV 12	750-040257	CAAD9490	Control Board
SPMB 0	REV 02	711-041855	ABBX5197	PMB Board
SPMB 1	REV 02	711-041855	ABBS1487	PMB Board
SFB 0	REV 05	711-044466	ABBX5586	Switch Fabric Board
SFB 1	REV 06	711-044466	ABCD9861	Switch Fabric Board
SFB 2	REV 06	711-044466	ABCG3642	Switch Fabric Board
SFB 3	REV 06	711-044466	ABCG3670	Switch Fabric Board
SFB 4	REV 06	711-044466	ABCG3676	Switch Fabric Board
SFB 5	REV 06	711-044466	ABCY1288	Switch Fabric Board

SFB 6	REV 06	711-044466	ABCG3657	Switch Fabric Board
SFB 7	REV 06	711-044466	ABCG3704	Switch Fabric Board
FPC 0	REV 02	750-038060	CAAD2115	Load DPC
FPC 1	REV 02	750-038060	CAAD2121	Load DPC
FPC 2	REV 01	750-038060	ZS4429	Load DPC
FPC 3	REV 02	750-038060	CAAE6456	Load DPC
FPC 4	REV 02	750-038060	CAAD2111	Load DPC
FPC 5	REV 07	750-038060	CAJW7933	Load DPC
FPC 6	REV 07	750-038060	CAJW7983	Load DPC
FPC 7	REV 02	750-038060	CAAD2124	Load DPC
FPC 8	REV 01	750-038060	ZS4443	Load DPC
FPC 9	REV 02	750-038060	CAAD2120	Load DPC
FPC 13	REV 02	750-038060	CAAD2133	Load DPC
FPC 14	REV 02	750-038060	CAAD2116	Load DPC
FPC 15	REV 02	750-038060	CAAE6464	Load DPC
FPC 16	REV 02	750-038060	CAAD2126	Load DPC
FPC 17	REV 02	750-038060	CAAC0099	Load DPC
ADC 0	REV 17	750-043596	ABCA8963	Adapter Card
ADC 1	REV 15	750-043596	ABCA8119	Adapter Card
ADC 2	REV 17	750-043596	ABCG8929	Adapter Card
ADC 3	REV 15	750-043596	ABCA8113	Adapter Card
ADC 4	REV 15	750-043596	ABCA8099	Adapter Card
ADC 5	REV 19	750-043596	ABCG5703	Adapter Card
ADC 6	REV 17	750-043596	ABCG8960	Adapter Card
ADC 7	REV 19	750-043596	ABCD1988	Adapter Card
ADC 8	REV 07	750-043596	ABBV7184	Adapter Card
ADC 9	REV 15	750-043596	ABCA8107	Adapter Card
ADC 12	REV 17	750-043596	ABBZ2297	Adapter Card
ADC 13	REV 17	750-043596	ABCD5500	Adapter Card
ADC 14	REV 17	750-043596	ABCA8981	Adapter Card
ADC 15	REV 19	750-043596	ABBZ4170	Adapter Card
ADC 16	REV 07	750-043596	ABBV7215	Adapter Card
ADC 17	REV 15	750-043596	ABCA8086	Adapter Card
Fan Tray 0	REV 06	760-046960	ACAY0860	172mm FanTray - 6 Fans
Fan Tray 1	REV 06	760-046960	ACAY2638	172mm FanTray - 6 Fans
Fan Tray 2	REV 06	760-046960	ACAY1206	172mm FanTray - 6 Fans
Fan Tray 3	REV 06	760-046960	ACAY2693	172mm FanTray - 6 Fans

### show chassis hardware models (MX2020 Router)

```
user@host > show chassis hardware models
```

```
Hardware inventory:
```

Item	Version	Part number	Serial number	FRU model number
Midplane	REV 27	750-040240	ABAB9384	750-040240
FPM Board	REV 06	760-040242	ABBT8837	760-040242
PSM 0	REV 01	740-045050	1E02224006G	MX2000-PSM-HC-DC-S-A
PSM 1	REV 01	740-045050	1E022240053	MX2000-PSM-HC-DC-S-A
PSM 2	REV 01	740-045050	1E02224004K	MX2000-PSM-HC-DC-S-A
PSM 3	REV 01	740-045050	1E022240056	MX2000-PSM-HC-DC-S-A
PSM 4	REV 01	740-045050	1E022240054	MX2000-PSM-HC-DC-S-A
PSM 5	REV 01	740-045050	1E02224005H	MX2000-PSM-HC-DC-S-A
PSM 6	REV 01	740-045050	1E02224006S	MX2000-PSM-HC-DC-S-A
PSM 7	REV 01	740-045050	1E02224005M	MX2000-PSM-HC-DC-S-A
PSM 8	REV 01	740-045050	1E022240062	MX2000-PSM-HC-DC-S-A
PSM 9	REV 03	740-045050	1EDB2350095	MX2000-PSM-DC-S-A
PSM 10	REV 03	740-045050	1EDB235009L	MX2000-PSM-DC-S-A
PSM 11	REV 03	740-045050	1EDB2350092	MX2000-PSM-DC-S-A
PSM 12	REV 03	740-045050	1EDB23500AT	MX2000-PSM-DC-S-A
PSM 13	REV 03	740-045050	1EDB2350094	MX2000-PSM-DC-S-A
PSM 15	REV 03	740-045050	1EDB235008X	MX2000-PSM-DC-S-A
PDM 0	REV 01	740-045234	1E012150033	

PDM 1	REV 01	740-045234	1E012150027	
PDM 2	REV 01	740-045234	1E262250072	MX2000-PDM-DC-S-A
Routing Engine 0	REV 02	740-041821	9009094138	RE-S-1800X4-16G-S
Routing Engine 1	REV 02	740-041821	9009089709	RE-S-1800X4-16G-S
CB 0	REV 08	750-040257	CAAB3482	750-040257
CB 1	REV 04	750-040257	ZT2864	750-040257
SFB 0	REV 05	711-044466	ABBT2161	MX2000-SFB-S
SFB 1	REV 05	711-044466	ABBT2159	MX2000-SFB-S
SFB 2	REV 05	711-044466	ABBX3718	MX2000-SFB-S
SFB 4	REV 05	711-044466	ABBT2160	MX2000-SFB-S
SFB 5	REV 05	711-044466	ABBT2145	MX2000-SFB-S
SFB 7	REV 05	711-044466	ABBT2163	MX2000-SFB-S
FPC 0	REV 30	750-028467	ABBN0284	MPC-3D-16XGE-SFPP
FPC 1	REV 30	750-028467	ABBN0308	MPC-3D-16XGE-SFPP
FPC 2	REV 30	750-028467	ABBN0316	MPC-3D-16XGE-SFPP
FPC 3	REV 32	750-028467	ABBN6832	MPC-3D-16XGE-SFPP
FPC 4	REV 32	750-028467	ABBN6811	MPC-3D-16XGE-SFPP
FPC 5	REV 32	750-028467	ABBN6791	MPC-3D-16XGE-SFPP
FPC 6	REV 30	750-028467	ABBM4592	MPC-3D-16XGE-SFPP
FPC 7	REV 32	750-028467	ABBN6810	MPC-3D-16XGE-SFPP
FPC 8	REV 30	750-028467	ABBM4739	MPC-3D-16XGE-SFPP
FPC 9	REV 32	750-028467	ABBN6827	MPC-3D-16XGE-SFPP
FPC 10	REV 30	750-028467	ABBN0302	MPC-3D-16XGE-SFPP
FPC 11	REV 32	750-028467	ABBN6790	MPC-3D-16XGE-SFPP
FPC 12	REV 30	750-028467	ZM5111	MPC-3D-16XGE-SFPP
FPC 13	REV 30	750-028467	ABBN0208	MPC-3D-16XGE-SFPP
FPC 14	REV 23	750-028467	YN2977	MPC-3D-16XGE-SFPP
FPC 15	REV 32	750-028467	ABBN6798	MPC-3D-16XGE-SFPP
FPC 16	REV 30	750-028467	ABBN0270	MPC-3D-16XGE-SFPP
FPC 17	REV 32	750-028467	ABBN6796	MPC-3D-16XGE-SFPP
FPC 18	REV 30	750-028467	ABBN0281	MPC-3D-16XGE-SFPP
FPC 19	REV 32	750-028467	ABBN6813	MPC-3D-16XGE-SFPP
ADC 0	REV 13	750-043596	ABBX5561	PROTO-ASSEMBLY
ADC 1	REV 13	750-043596	ABBX5546	PROTO-ASSEMBLY
ADC 2	REV 13	750-043596	ABBX5535	MX2000-LC-ADAPTER
ADC 3	REV 13	750-043596	ABBX5552	MX2000-LC-ADAPTER
ADC 4	REV 13	750-043596	ABBX5581	MX2000-LC-ADAPTER
ADC 5	REV 13	750-043596	ABBX5545	PROTO-ASSEMBLY
ADC 6	REV 13	750-043596	ABBX5554	PROTO-ASSEMBLY
ADC 7	REV 07	750-043596	ABBV7194	MX2000-LC-ADAPTER
ADC 8	REV 07	750-043596	ABBV7251	MX2000-LC-ADAPTER
ADC 9	REV 07	750-043596	ABBV7202	MX2000-LC-ADAPTER
ADC 10	REV 13	750-043596	ABBX5579	MX2000-LC-ADAPTER
ADC 12	REV 13	750-043596	ABBX5575	MX2000-LC-ADAPTER
ADC 13	REV 13	750-043596	ABBX5539	PROTO-ASSEMBLY
ADC 14	REV 13	750-043596	ABBX5555	PROTO-ASSEMBLY
ADC 15	REV 13	750-043596	ABBX5557	MX2000-LC-ADAPTER
ADC 16	REV 13	750-043596	ABBX5536	PROTO-ASSEMBLY
ADC 17	REV 13	750-043596	ABBX5559	PROTO-ASSEMBLY
ADC 18	REV 13	750-043596	ABBX5537	PROTO-ASSEMBLY
ADC 19	REV 11	750-043596	ABBW5685	PROTO-ASSEMBLY
Fan Tray 0	REV 04	760-046960	ACAY0090	
Fan Tray 1	REV 04	760-046960	ACAY0088	
Fan Tray 2	REV 04	760-046960	ACAY0089	
Fan Tray 3	REV 04	760-046960	ACAY0108	

### show chassis hardware clei-models (MX2020 Router)

```

user@ host > show chassis hardware clei-models
Hardware inventory:
Item                Version  Part number  CLEI code          FRU model number

```

Midplane	REV 27	750-040240	PROTOXCLEI	750-040240
FPM Board	REV 06	760-040242	PROTOXCLEI	760-040242
PSM 0	REV 01	740-045050	IPUPAJMKAA	MX2000-PSM-HC-DC-S-A
PSM 1	REV 01	740-045050	IPUPAJMKAA	MX2000-PSM-HC-DC-S-A
PSM 2	REV 01	740-045050	IPUPAJMKAA	MX2000-PSM-HC-DC-S-A
PSM 3	REV 01	740-045050	IPUPAJMKAA	MX2000-PSM-HC-DC-S-A
PSM 4	REV 01	740-045050	IPUPAJMKAA	MX2000-PSM-HC-DC-S-A
PSM 5	REV 01	740-045050	IPUPAJMKAA	MX2000-PSM-HC-DC-S-A
PSM 6	REV 01	740-045050	IPUPAJMKAA	MX2000-PSM-HC-DC-S-A
PSM 7	REV 01	740-045050	IPUPAJMKAA	MX2000-PSM-HC-DC-S-A
PSM 8	REV 01	740-045050	IPUPAJMKAA	MX2000-PSM-HC-DC-S-A
PSM 9	REV 03	740-045050	IPUPAJMKAA	MX2000-PSM-DC-S-A
PSM 10	REV 03	740-045050	IPUPAJMKAA	MX2000-PSM-DC-S-A
PSM 11	REV 03	740-045050	IPUPAJMKAA	MX2000-PSM-DC-S-A
PSM 12	REV 03	740-045050	IPUPAJMKAA	MX2000-PSM-DC-S-A
PSM 13	REV 03	740-045050	IPUPAJMKAA	MX2000-PSM-DC-S-A
PSM 15	REV 03	740-045050	IPUPAJMKAA	MX2000-PSM-DC-S-A
PDM 0	REV 01	740-045234		
PDM 1	REV 01	740-045234		
PDM 2	REV 01	740-045234	IPUPAJSKAA	MX2000-PDM-DC-S-A
Routing Engine 0	REV 02	740-041821		RE-S-1800X4-16G-S
Routing Engine 1	REV 02	740-041821		RE-S-1800X4-16G-S
CB 0	REV 08	750-040257	PROTOXCLEI	750-040257
CB 1	REV 04	750-040257	PROTOXCLEI	750-040257
SFB 0	REV 05	711-044466	IPUCBA6CAA	MX2000-SFB-S
SFB 1	REV 05	711-044466	IPUCBA6CAA	MX2000-SFB-S
SFB 2	REV 05	711-044466	IPUCBA6CAA	MX2000-SFB-S
SFB 4	REV 05	711-044466	IPUCBA6CAA	MX2000-SFB-S
SFB 5	REV 05	711-044466	IPUCBA6CAA	MX2000-SFB-S
SFB 7	REV 05	711-044466	IPUCBA6CAA	MX2000-SFB-S
FPC 0	REV 30	750-028467		MPC-3D-16XGE-SFPP
FPC 1	REV 30	750-028467		MPC-3D-16XGE-SFPP
FPC 2	REV 30	750-028467		MPC-3D-16XGE-SFPP
FPC 3	REV 32	750-028467		MPC-3D-16XGE-SFPP
FPC 4	REV 32	750-028467		MPC-3D-16XGE-SFPP
FPC 5	REV 32	750-028467		MPC-3D-16XGE-SFPP
FPC 6	REV 30	750-028467		MPC-3D-16XGE-SFPP
FPC 7	REV 32	750-028467		MPC-3D-16XGE-SFPP
FPC 8	REV 30	750-028467		MPC-3D-16XGE-SFPP
FPC 9	REV 32	750-028467		MPC-3D-16XGE-SFPP
FPC 10	REV 30	750-028467		MPC-3D-16XGE-SFPP
FPC 11	REV 32	750-028467		MPC-3D-16XGE-SFPP
FPC 12	REV 30	750-028467		MPC-3D-16XGE-SFPP
FPC 13	REV 30	750-028467		MPC-3D-16XGE-SFPP
FPC 14	REV 23	750-028467		MPC-3D-16XGE-SFPP
FPC 15	REV 32	750-028467		MPC-3D-16XGE-SFPP
FPC 16	REV 30	750-028467		MPC-3D-16XGE-SFPP
FPC 17	REV 32	750-028467		MPC-3D-16XGE-SFPP
FPC 18	REV 30	750-028467		MPC-3D-16XGE-SFPP
FPC 19	REV 32	750-028467		MPC-3D-16XGE-SFPP
ADC 0	REV 13	750-043596	PROTOXCLEI	PROTO-ASSEMBLY
ADC 1	REV 13	750-043596	PROTOXCLEI	PROTO-ASSEMBLY
ADC 2	REV 13	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER
ADC 3	REV 13	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER
ADC 4	REV 13	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER
ADC 5	REV 13	750-043596	PROTOXCLEI	PROTO-ASSEMBLY
ADC 6	REV 13	750-043596	PROTOXCLEI	PROTO-ASSEMBLY
ADC 7	REV 07	750-043596	PROTOXCLEI	MX2000-LC-ADAPTER
ADC 8	REV 07	750-043596	PROTOXCLEI	MX2000-LC-ADAPTER
ADC 9	REV 07	750-043596	PROTOXCLEI	MX2000-LC-ADAPTER
ADC 10	REV 13	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER

ADC 12	REV 13	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER
ADC 13	REV 13	750-043596	PROTOXCLEI	PROTO-ASSEMBLY
ADC 14	REV 13	750-043596	PROTOXCLEI	PROTO-ASSEMBLY
ADC 15	REV 13	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER
ADC 16	REV 13	750-043596	PROTOXCLEI	PROTO-ASSEMBLY
ADC 17	REV 13	750-043596	PROTOXCLEI	PROTO-ASSEMBLY
ADC 18	REV 13	750-043596	PROTOXCLEI	PROTO-ASSEMBLY
ADC 19	REV 11	750-043596	PROTOXCLEI	PROTO-ASSEMBLY
Fan Tray 0	REV 04	760-046960		
Fan Tray 1	REV 04	760-046960		
Fan Tray 2	REV 04	760-046960		
Fan Tray 3	REV 04	760-046960		

### show chassis hardware (MX2020 Router with MPC5EQ and MPC6E)

```
user@host> show chassis hardware
```

```
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			JN120BADBAFJ	MX2020
Midplane	REV 51	750-040240	ABAB9243	Lower Backplane
Midplane 1	REV 04	711-032386	ABAB9399	Upper Backplane
PMP 1	REV 05	711-032428	ACAJ2541	Upper Power Midplane
PMP 0	REV 04	711-032426	ACAJ2194	Lower Power Midplane
FPM Board	REV 13	760-040242	ABCA8835	Front Panel Display
PSM 0	REV 01	740-050037	1EDB32403L5	DC 52V Power Supply
Module				
PSM 1	REV 01	740-050037	1EDB32403L3	DC 52V Power Supply
Module				
PSM 2	REV 01	740-050037	1EDB32403KM	DC 52V Power Supply
Module				
PSM 3	REV 01	740-050037	1EDB3130079	DC 52V Power Supply
Module				
PSM 4	REV 01	740-050037	1EDB3130077	DC 52V Power Supply
Module				
PSM 5	REV 01	740-050037	1EDB3130020	DC 52V Power Supply
Module				
PSM 6	REV 01	740-050037	1EDB313009S	DC 52V Power Supply
Module				
PSM 7	REV 01	740-050037	1EDB313008E	DC 52V Power Supply
Module				
PSM 8	REV 01	740-050037	1EDB3130063	DC 52V Power Supply
Module				
PSM 12	REV 01	740-050037	1EDB3130026	DC 52V Power Supply
Module				
PSM 13	REV 01	740-050037	1EDB3130074	DC 52V Power Supply
Module				
PSM 14	REV 01	740-050037	1EDB313009D	DC 52V Power Supply
Module				
PSM 15	REV 01	740-050037	1EDB3130024	DC 52V Power Supply
Module				
PSM 16	REV 01	740-050037	1EDB3130054	DC 52V Power Supply
Module				
PSM 17	REV 01	740-050037	1EDB3130080	DC 52V Power Supply
Module				
PDM 0	REV 03	740-045234	1EGA3170144	DC Power Dist Module
PDM 1	REV 03	740-045234	1EGA3170158	DC Power Dist Module
PDM 2	REV 03	740-045234	1EGA3170182	DC Power Dist Module
PDM 3	REV 03	740-045234	1EGA3170207	DC Power Dist Module
Routing Engine 0	REV 02	740-041821	9009112112	RE-S-1800x4
Routing Engine 1	REV 02	740-041821	9009112087	RE-S-1800x4
CB 0	REV 23	750-040257	CABA2295	Control Board

CB 1	REV 23	750-040257	CABE8379	Control Board
SPMB 0	REV 02	711-041855	ABCE8851	PMB Board
SPMB 1	REV 02	711-041855	ABCE8839	PMB Board
SFB 0	REV 06	711-044466	ABCD5001	Switch Fabric Board
SFB 1	REV 06	711-044466	ABCD5034	Switch Fabric Board
SFB 2	REV 06	711-044466	ABCH3899	Switch Fabric Board
SFB 3	REV 06	711-044466	ABCD5020	Switch Fabric Board
SFB 4	REV 06	711-044466	ABCD4975	Switch Fabric Board
SFB 5	REV 06	711-044466	ABCH3881	Switch Fabric Board
SFB 6	REV 06	711-044466	ABCD5026	Switch Fabric Board
SFB 7	REV 06	711-044466	ABCD5032	Switch Fabric Board
FPC 0	REV 39	750-045715	CACD1902	MPC5E 3D Q 24XGE+6XLGE
CPU	REV 09	711-045719	CACB1933	RMPC PMB
PIC 0		BUILTIN	BUILTIN	12X10GE SFPP OTN
Xcvr 0	REV 01	740-031980	B11F00361	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	19T511101854	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	19T511100377	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	ANT0878	SFP+-10G-SR
Xcvr 5	REV 01	740-021308	19T511100398	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	AQ4363J	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	19T511101377	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	ANT072M	SFP+-10G-SR
Xcvr 9	REV 01	740-021308	AG90C7N	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	AM30M09	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	B10E01016	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	12X10GE SFPP OTN
Xcvr 0	REV 01	740-031980	B10L04151	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	19T511101379	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQ5036J	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AG90C4M	SFP+-10G-SR
Xcvr 4	REV 01	740-021308	19T511101104	SFP+-10G-SR
Xcvr 5	REV 01	740-021308	AQ502ZM	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	AN10KY2	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	AQ43G41	SFP+-10G-SR
Xcvr 8	REV 01	740-021308	AQ41F04	SFP+-10G-SR
Xcvr 9	REV 01	740-031980	AMS16N3	SFP+-10G-SR
Xcvr 10	REV 01	740-021308	AMH04Y3	SFP+-10G-SR
Xcvr 11	REV 01	740-021308	ANA093E	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	3X40GE QSFP
PIC 3		BUILTIN	BUILTIN	3X40GE QSFP
WAN MEZZ	REV 09	750-049136	CABN0410	MPC5E 24XGE OTN Mezz
FPC 1	REV 11	750-045372	CABK8112	MPCE Type 3 3D
CPU	REV 08	711-035209	CABJ6621	HMPC PMB 2G
MIC 0	REV 07	750-033307	CAAZ2897	10X10GE SFPP
PIC 0		BUILTIN	BUILTIN	10X10GE SFPP
Xcvr 0	REV 01	740-021308	AQ501VK	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ501YC	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQ43HJF	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ43H8D	SFP+-10G-SR
Xcvr 4	REV 01	740-021308	19T511100370	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	153363A00763	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	APH2LXB	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	AMC0LVV	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	B11F00230	SFP+-10G-SR
MIC 1	REV 14	750-033196	CAAP1390	1X100GE CXP
PIC 2		BUILTIN	BUILTIN	1X100GE CXP
Xcvr 0	REV 01	740-032166	XB11F000M	CFP2-100G-SR10
FPC 2	REV 17	750-037355	CAAS5826	MPC4E 3D 2CGE+8XGE
CPU	REV 08	711-035209	CAAR3986	HMPC PMB 2G
PIC 0		BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-021308	T09F43722	SFP+-10G-SR



Xcvr 1	REV 01	740-031980	ALP0KXF	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQ502FG	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ502T7	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-035329	X12J00571	CFP-100G-SR10
PIC 2		BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-031980	AJ71KEH	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11E01355	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11F00249	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP
FPC 3	REV 05	750-044444	CAAY9920	MPCE Type 2 3D P
CPU	REV 04	711-038484	CAAW3639	MPCE PMB 2G
MIC 0	REV 28	750-028387	CAAX1083	3D 4x 10GE XFP
PIC 0		BUILTIN	BUILTIN	2x 10GE XFP
Xcvr 0		NON-JNPR	CC07BK05B	XFP-10G-SR
Xcvr 1	REV 01	740-011571	C728XJ00U	XFP-10G-SR
PIC 1		BUILTIN	BUILTIN	2x 10GE XFP
Xcvr 0		NON-JNPR	T12L92339	XFP-10G-SR
QXM 0	REV 06	711-028408	CAAW4915	MPC QXM
QXM 1	REV 06	711-028408	CAAW4894	MPC QXM
FPC 4	REV 18	750-046005	CACH5661	MPC5E 3D Q 2CGE+4XGE
CPU	REV 09	711-045719	CACF2880	RMPC PMB
PIC 0		BUILTIN	BUILTIN	2X10GE SFPP OTN
PIC 1		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0	REV 01	740-046563	XD16FC03Y	CFP2-100G-SR10
PIC 2		BUILTIN	BUILTIN	2X10GE SFPP OTN
PIC 3		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0	REV 01	740-049775	J13K72997	CFP2-100G-LR4-D
FPC 5	REV 35	750-028467	CAAR2623	MPC 3D 16x 10GE
CPU	REV 11	711-029089	CAAR0491	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQ5027T	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ502J0	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQ5027S	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ501Y7	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQ501YB	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ503EB	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQ43HJH	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ43J0Y	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQ50352	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ501X6	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQ502NV	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ502ZJ	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQ502H4	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ43HJK	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AJ30CU7	SFP+-10G-SR
FPC 9	REV 30	750-044130	ABCF5773	MPC6E 3D
CPU	REV 09	711-045719	ABCF1270	RMPC PMB
MIC 0	REV 05	750-049457	ABCD7829	2X100GE CFP2 OTN
PIC 0		BUILTIN	BUILTIN	2X100GE CFP2 OTN
Xcvr 0		NON-JNPR	FE13F000K	CFP2-100G-SR10
Xcvr 1	REV 01	740-048813	XD32FE017	CFP2-100G-LR-D
MIC 1	REV 07	750-049457	ABCK2812	2X100GE CFP2 OTN
PIC 1		BUILTIN	BUILTIN	2X100GE CFP2 OTN
Xcvr 0	REV 01	740-048813	XD32FE018	CFP2-100G-SR10
Xcvr 1		NON-JNPR	FE13F000E	CFP2-100G-LR4-D
XML 0	REV 05.2.00	711-046638	ABCF5915	MPC6E XL
XML 1	REV 05.2.00	711-046638	ABCF5916	MPC6E XL

FPC 10	REV 36	750-044130	ABCS8602	MPC6E 3D
CPU	REV 09	711-045719	ABCS8779	RMPC PMB
MIC 0	REV 06	750-049979	ABCK2656	24X10GE SFPP OTN
PIC 0		BUILTIN	BUILTIN	24X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	AQ43J08	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQE1Y2E	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQE1UW4	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQE1MQF	SFP+-10G-SR
Xcvr 4	REV 01	740-021308	AQGOMN1	SFP+-10G-SR
Xcvr 5	REV 01	740-021308	AQE1L9M	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	AQGOMPD	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	AQE1Y2B	SFP+-10G-SR
Xcvr 8	REV 01	740-021308	AQGOLT5	SFP+-10G-SR
Xcvr 9	REV 01	740-021308	AQD2ET4	SFP+-10G-SR
Xcvr 10	REV 01	740-021308	AQGOMPC	SFP+-10G-SR
Xcvr 11	REV 01	740-021308	AQGOM63	SFP+-10G-SR
Xcvr 12	REV 01	740-021308	AQGOLT1	SFP+-10G-SR
Xcvr 13	REV 01	740-021308	AQGOM4L	SFP+-10G-SR
Xcvr 14	REV 01	740-021308	AQGOLS7	SFP+-10G-SR
Xcvr 15	REV 01	740-021308	AQE1MQB	SFP+-10G-SR
Xcvr 16	REV 01	740-021308	AQGOLZP	SFP+-10G-SR
Xcvr 17	REV 01	740-021308	AQE1LU9	SFP+-10G-SR
Xcvr 18	REV 01	740-021308	AQGOMRZ	SFP+-10G-SR
Xcvr 19	REV 01	740-021308	AQE1MQ9	SFP+-10G-SR
Xcvr 20	REV 01	740-021308	AQGOLRX	SFP+-10G-SR
Xcvr 21	REV 01	740-021308	AQE1UWD	SFP+-10G-SR
Xcvr 22	REV 01	740-021308	AQGOLT4	SFP+-10G-SR
Xcvr 23	REV 01	740-021308	AQE1MQL	SFP+-10G-SR
MIC 1	REV 12	750-050008	ABCK5372	4X100GE CXP
PIC 1		BUILTIN	BUILTIN	4X100GE CXP
Xcvr 3	REV 01	740-046563	XD16FC02Z	CFP2-100G-SR10
XLM 0	REV 07.2.00	711-046638	ABCK3481	MPC6E XL
XLM 1	REV 07.2.00	711-046638	ABCK4725	MPC6E XL
FPC 17	REV 28	750-044130	ABBZ3873	MPC6E 3D
CPU	REV 08	711-045719	ABBZ3770	RMPC PMB
MIC 0	REV 11	750-046535	ABCC7731	24X10GE SFPP
PIC 0		BUILTIN	BUILTIN	24X10GE SFPP
Xcvr 1	REV 01	740-021308	APK0543	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B10G01119	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ502SX	SFP+-10G-SR
Xcvr 4	REV 01	740-021308	AQ43H84	SFP+-10G-SR
Xcvr 5	REV 01	740-021308	AQ501TB	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	AQ502JZ	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	AQ502SC	SFP+-10G-SR
Xcvr 8	REV 01	740-021308	AQ502JW	SFP+-10G-SR
Xcvr 9	REV 01	740-021308	AQ502RM	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	AHK013B	SFP+-10G-SR
Xcvr 11	REV 01	740-021308	AQGOMRT	SFP+-10G-SR
Xcvr 13	REV 01	740-031980	AMCOJTC	SFP+-10G-SR
Xcvr 14	REV 01	740-021308	ANAOMQ0	SFP+-10G-SR
Xcvr 15	REV 01	740-021308	AQ502GS	SFP+-10G-SR
Xcvr 16	REV 01	740-021308	AQGOM0J	SFP+-10G-SR
Xcvr 17	REV 01	740-021308	AQGOMUR	SFP+-10G-SR
Xcvr 18	REV 01	740-021308	AQGOMRR	SFP+-10G-SR
Xcvr 19	REV 01	740-021308	AQGOM0F	SFP+-10G-SR
Xcvr 20	REV 01	740-021308	AQ50312	SFP+-10G-SR
Xcvr 21	REV 01	740-021308	AQ5032U	SFP+-10G-SR
Xcvr 22	REV 01	740-021308	APE17B5	SFP+-10G-SR
Xcvr 23	REV 01	740-021309	91D104A00011	SFP+-10G-LR
MIC 1	REV 03	750-050008	ABCC4522	4X100GE CXP
PIC 1		BUILTIN	BUILTIN	4X100GE CXP

Xcvr 0	REV 01	740-046563	XD16FC02U	CFP2-100G-SR10
Xcvr 1	REV 01	740-046563	XC42FC03K	CFP2-100G-SR10
Xcvr 2	REV 01	740-046563	XC42FC01Z	CFP2-100G-SR10
Xcvr 3	REV 01	740-046563	XC42FC02U	CFP2-100G-SR10
XLM 0	REV 04.2.00	711-046638	ABBZ3779	MPC6E XL
XLM 1	REV 04.2.00	711-046638	ABBZ3780	MPC6E XL
FPC 18	REV 39	750-045715	CACD1910	MPC5E 3D Q 24XGE+6XLGE
CPU	REV 09	711-045719	CACD1817	RMPD PMB
PIC 0		BUILTIN	BUILTIN	12X10GE SFPP OTN
PIC 1		BUILTIN	BUILTIN	12X10GE SFPP OTN
PIC 2		BUILTIN	BUILTIN	3X40GE QSFPP
Xcvr 0	REV 01	740-046565	QD130194	QSFPP+-40G-SR4
Xcvr 1	REV 01	740-046565	QD130193	QSFPP+-40G-SR4
Xcvr 2	REV 01	740-046565	QD130196	QSFPP+-40G-SR4
PIC 3		BUILTIN	BUILTIN	3X40GE QSFPP
Xcvr 0	REV 01	740-046565	QD130191	QSFPP+-40G-SR4
Xcvr 1	REV 01	740-046565	QD130198	QSFPP+-40G-SR4
Xcvr 2	REV 01	740-046565	QD130192	QSFPP+-40G-SR4
WAN MEZZ	REV 09	750-049136	CABN0411	MPC5E 24XGE OTN Mezz
FPC 19	REV 39	750-045715	CACD1908	MPC5E 3D Q 24XGE+6XLGE
CPU	REV 09	711-045719	CACD1820	RMPD PMB
PIC 0		BUILTIN	BUILTIN	12X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	AQA0EXJ	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQGOM6D	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQGOLW7	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQA0JKB	SFP+-10G-SR
Xcvr 4	REV 01	740-021308	AQGOMTM	SFP+-10G-SR
Xcvr 5	REV 01	740-021308	AQA07NE	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	AQGOM41	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	AQGOMU7	SFP+-10G-SR
Xcvr 8	REV 01	740-021308	AQGOMUG	SFP+-10G-SR
Xcvr 9	REV 01	740-021308	AQGOMMX	SFP+-10G-SR
Xcvr 10	REV 01	740-021308	AQGOM5K	SFP+-10G-SR
Xcvr 11	REV 01	740-021308	AQGOLVZ	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	12X10GE SFPP OTN
PIC 2		BUILTIN	BUILTIN	3X40GE QSFPP
PIC 3		BUILTIN	BUILTIN	3X40GE QSFPP
Xcvr 0	REV 01	740-046565	QD130242	QSFPP+-40G-SR4
Xcvr 1	REV 01	740-046565	QD130245	QSFPP+-40G-SR4
Xcvr 2	REV 01	740-046565	QD130613	QSFPP+-40G-SR4
WAN MEZZ	REV 09	750-049136	CABN0418	MPC5E 24XGE OTN Mezz
ADC 0	REV 17	750-043596	ABCD5378	Adapter Card
ADC 1	REV 17	750-043596	ABCD5465	Adapter Card
ADC 2	REV 17	750-043596	ABCD5431	Adapter Card
ADC 3	REV 17	750-043596	ABCD5356	Adapter Card
ADC 4	REV 02	750-043596	ZW1545	Adapter Card
ADC 5	REV 17	750-043596	ABCD5517	Adapter Card
ADC 18	REV 17	750-043596	ABCD5535	Adapter Card
ADC 19	REV 01	750-043596	ZV4127	Adapter Card
Fan Tray 0	REV 06	760-046960	ACAY0791	172mm FanTray - 6 Fans
Fan Tray 1	REV 06	760-046960	ACAY0788	172mm FanTray - 6 Fans
Fan Tray 2	REV 06	760-046960	ACAY0755	172mm FanTray - 6 Fans
Fan Tray 3	REV 06	760-046960	ACAY0441	172mm FanTray - 6 Fans

#### show chassis hardware detail (MX2020 Router with MPC5EQ and MPC6E)

```
user@host>show chassis hardware detail
```

```
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			JN120BADBAFJ	MX2020
Midplane	REV 51	750-040240	ABAB9243	Lower Backplane

Midplane 1	REV 04	711-032386	ABAB9399	Upper Backplane
PMP 1	REV 05	711-032428	ACAJ2541	Upper Power Midplane
PMP 0	REV 04	711-032426	ACAJ2194	Lower Power Midplane
FPM Board	REV 13	760-040242	ABCA8835	Front Panel Display
PSM 0	REV 01	740-050037	1EDB32403L5	DC 52V Power Supply
Module				
PSM 1	REV 01	740-050037	1EDB32403L3	DC 52V Power Supply
Module				
PSM 2	REV 01	740-050037	1EDB32403KM	DC 52V Power Supply
Module				
PSM 3	REV 01	740-050037	1EDB3130079	DC 52V Power Supply
Module				
PSM 4	REV 01	740-050037	1EDB3130077	DC 52V Power Supply
Module				
PSM 5	REV 01	740-050037	1EDB3130020	DC 52V Power Supply
Module				
PSM 6	REV 01	740-050037	1EDB313009S	DC 52V Power Supply
Module				
PSM 7	REV 01	740-050037	1EDB313008E	DC 52V Power Supply
Module				
PSM 8	REV 01	740-050037	1EDB3130063	DC 52V Power Supply
Module				
PSM 12	REV 01	740-050037	1EDB3130026	DC 52V Power Supply
Module				
PSM 13	REV 01	740-050037	1EDB3130074	DC 52V Power Supply
Module				
PSM 14	REV 01	740-050037	1EDB313009D	DC 52V Power Supply
Module				
PSM 15	REV 01	740-050037	1EDB3130024	DC 52V Power Supply
Module				
PSM 16	REV 01	740-050037	1EDB3130054	DC 52V Power Supply
Module				
PSM 17	REV 01	740-050037	1EDB3130080	DC 52V Power Supply
Module				
PDM 0	REV 03	740-045234	1EGA3170144	DC Power Dist Module
PDM 1	REV 03	740-045234	1EGA3170158	DC Power Dist Module
PDM 2	REV 03	740-045234	1EGA3170182	DC Power Dist Module
PDM 3	REV 03	740-045234	1EGA3170207	DC Power Dist Module
Routing Engine 0	REV 02	740-041821	9009112112	RE-S-1800x4
ad0 3998 MB	Virtium - TuffDrive		VCF P1T0200274310822	113 Compact Flash
ad1 30533 MB	UGB94BPH32H0S1-KCI		11000031656	Disk 1
usb0 (addr 1)	EHCI root hub 0		Intel	uhub0
usb0 (addr 2)	product 0x0020 32		vendor 0x8087	uhub1
DIMM 0	SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80			
DIMM 1	SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80			
DIMM 2	SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80			
DIMM 3	SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80			
Routing Engine 1	REV 02	740-041821	9009112087	RE-S-1800x4
ad0 3998 MB	Virtium - TuffDrive		VCF P1T0200274310822	366 Compact Flash
ad1 30533 MB	UGB94BPH32H0S1-KCI		11000039979	Disk 1
CB 0	REV 23	750-040257	CABA2295	Control Board
CB 1	REV 23	750-040257	CABE8379	Control Board
SPMB 0				
SPMB 1				
FPC 0	REV 39	750-045715	CACD1902	MPC5E 3D Q 24XGE+6XLGE
CPU				
FPC 1	REV 11	750-045372	CABK8112	MPCE Type 3 3D
CPU				
FPC 2	REV 17	750-037355	CAAS5826	MPC4E 3D 2CGE+8XGE
CPU				
FPC 3	REV 05	750-044444	CAAY9920	MPCE Type 2 3D P

CPU				
FPC 4	REV 18	750-046005	CACH5661	MPC5E 3D Q 2CGE+4XGE
CPU				
FPC 5	REV 35	750-028467	CAAR2623	MPC 3D 16x 10GE
CPU				
FPC 9	REV 30	750-044130	ABCF5773	MPC6E 3D
CPU				
FPC 10	REV 36	750-044130	ABCS8602	MPC6E 3D
CPU				
FPC 17	REV 28	750-044130	ABBZ3873	MPC6E 3D
CPU				
FPC 18	REV 39	750-045715	CACD1910	MPC5E 3D Q 24XGE+6XLGE
CPU				
FPC 19	REV 39	750-045715	CACD1908	MPC5E 3D Q 24XGE+6XLGE
CPU				
Fan Tray 0	REV 06	760-046960	ACAY0791	172mm FanTray - 6 Fans
Fan Tray 1	REV 06	760-046960	ACAY0788	172mm FanTray - 6 Fans
Fan Tray 2	REV 06	760-046960	ACAY0755	172mm FanTray - 6 Fans
Fan Tray 3	REV 06	760-046960	ACAY0441	172mm FanTray - 6 Fans

#### show chassis hardware extensive (MX2020 Router with MPC5EQ and MPC6E)

```

user@host> show chassis hardware extensive
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis
Jedec Code:   0x7fb0          EEPROM Version: 0x02
S/N:          JN120BADBAFJ
Assembly ID:  0x0557          Assembly Version: 00.00
Date:         00-00-0000      Assembly Flags:  0x00
ID: MX2020
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 7f b0 02 ff 05 57 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x20: 4a 4e 31 32 30 42 41 44 42 41 46 4a 00 00 00 00
Address 0x30: 00 00 00 ff 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane     REV 51    750-040240  ABAB9243      Lower Backplane
Jedec Code:   0x7fb0          EEPROM Version: 0x02
P/N:         750-040240      S/N:          ABAB9243
Assembly ID:  0x0b22          Assembly Version: 01.51
Date:         05-30-2013     Assembly Flags: 0x00
Version:      REV 51         CLEI Code:     IPMU710ARA
ID: Lower Backplane          FRU Model Number: CHAS-BP-MX2020-S
Board Information Record:
Address 0x00: ad 01 10 00 4c 96 14 72 30 08 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 22 01 33 52 45 56 20 35 31 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 34 30 32 34 30 00 00
Address 0x20: 53 2f 4e 20 41 42 41 42 39 32 34 33 00 1e 05 07
Address 0x30: dd ff ff ff ad 01 10 00 4c 96 14 72 30 08 ff ff
Address 0x40: ff ff ff ff 01 49 50 4d 55 37 31 30 41 52 41 43
Address 0x50: 48 41 53 2d 42 50 2d 4d 58 32 30 32 30 2d 53 00
Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff d3 ff ff ff ff ff ff ff ff ff ff ff ff
Midplane 1    REV 04    711-032386  ABAB9399      Upper Backplane

```

```

Jedec Code: 0x7fb0      EEPROM Version: 0x01
P/N: 711-032386        S/N: ABAB9399
Assembly ID: 0x0b23     Assembly Version: 01.04
Date: 10-22-2012       Assembly Flags: 0x00
Version: REV 04
ID: Upper Backplane
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 01 fe 0b 23 01 04 52 45 56 20 30 34 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 33 32 33 38 36 00 00
  Address 0x20: 53 2f 4e 20 41 42 41 42 39 33 39 00 16 0a 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
PMP 1      REV 05      711-032428      ACAJ2541      Upper Power Midplane
Jedec Code: 0x7fb0      EEPROM Version: 0x01
P/N: 711-032428        S/N: ACAJ2541
Assembly ID: 0x045c     Assembly Version: 01.05
Date: 04-26-2013       Assembly Flags: 0x00
Version: REV 05
ID: Upper Power Midplane
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 01 ff 04 5c 01 05 52 45 56 20 30 35 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 33 32 34 32 38 00 00
  Address 0x20: 53 2f 4e 20 41 43 41 4a 32 35 34 31 00 1a 04 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
PMP 0      REV 04      711-032426      ACAJ2194      Lower Power Midplane
Jedec Code: 0x7fb0      EEPROM Version: 0x01
P/N: 711-032426        S/N: ACAJ2194
Assembly ID: 0x045d     Assembly Version: 01.04
Date: 01-29-2013       Assembly Flags: 0x00
Version: REV 04
ID: Lower Power Midplane
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 01 ff 04 5d 01 04 52 45 56 20 30 34 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 33 32 34 32 36 00 00
  Address 0x20: 53 2f 4e 20 41 43 41 4a 32 31 39 34 00 1d 01 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
FPM Board  REV 13      760-040242      ABCA8835      Front Panel Display
Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N: 760-040242        S/N: ABCA8835
Assembly ID: 0x0b24     Assembly Version: 01.13
Date: 04-13-2013       Assembly Flags: 0x00
Version: REV 13        CLEI Code: IPMYAE5JRA
ID: Front Panel Display FRU Model Number: MX2020-CRAFT-S
Board Information Record:

```

```

Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 24 01 0d 52 45 56 20 31 33 00 00
Address 0x10: 00 00 00 00 37 36 30 2d 30 34 30 32 34 32 00 00
Address 0x20: 53 2f 4e 20 41 42 43 41 38 38 33 35 00 0d 04 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 4d 59 41 45 35 4a 52 41 4d
Address 0x50: 58 32 30 32 30 2d 43 52 41 46 54 2d 53 00 00 00
Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 95 ff ff ff ff ff ff ff ff ff ff ff ff
PSM 0          REV 01   740-050037   1EDB32403L5       DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           740-050037      S/N:              1EDB32403L5
Assembly ID:   0x0478          Assembly Version:  01.01
Date:          06-21-2013      Assembly Flags:    0x00
Version:       REV 01          CLEI Code:         IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 32 34 30 33 4c 35 00 00 15 06 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 1          REV 01   740-050037   1EDB32403L3       DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           740-050037      S/N:              1EDB32403L3
Assembly ID:   0x0478          Assembly Version:  01.01
Date:          06-21-2013      Assembly Flags:    0x00
Version:       REV 01          CLEI Code:         IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 32 34 30 33 4c 33 00 00 15 06 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 2          REV 01   740-050037   1EDB32403KM       DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           740-050037      S/N:              1EDB32403KM
Assembly ID:   0x0478          Assembly Version:  01.01
Date:          06-21-2013      Assembly Flags:    0x00
Version:       REV 01          CLEI Code:         IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00

```

```

Address 0x20: 31 45 44 42 33 32 34 30 33 4b 4d 00 00 15 06 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 3          REV 01   740-050037   1EDB3130079   DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version: 0x02
P/N:          740-050037      S/N:           1EDB3130079
Assembly ID:   0x0478         Assembly Version: 01.01
Date:         05-16-2013      Assembly Flags: 0x00
Version:       REV 01         CLEI Code:     IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 31 33 30 30 37 39 00 00 10 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 4          REV 01   740-050037   1EDB3130077   DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version: 0x02
P/N:          740-050037      S/N:           1EDB3130077
Assembly ID:   0x0478         Assembly Version: 01.01
Date:         05-17-2013      Assembly Flags: 0x00
Version:       REV 01         CLEI Code:     IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 31 33 30 30 37 37 00 00 11 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 5          REV 01   740-050037   1EDB3130020   DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version: 0x02
P/N:          740-050037      S/N:           1EDB3130020
Assembly ID:   0x0478         Assembly Version: 01.01
Date:         05-16-2013      Assembly Flags: 0x00
Version:       REV 01         CLEI Code:     IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 31 33 30 30 32 30 00 00 10 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00

```



```

Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00
PSM 6          REV 01  740-050037  1EDB313009S      DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version:  0x02
P/N:           740-050037      S/N:            1EDB313009S
Assembly ID:   0x0478          Assembly Version: 01.01
Date:          05-17-2013      Assembly Flags:  0x00
Version:       REV 01          CLEI Code:       IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 31 33 30 30 39 53 00 00 11 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 7          REV 01  740-050037  1EDB313008E      DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version:  0x02
P/N:           740-050037      S/N:            1EDB313008E
Assembly ID:   0x0478          Assembly Version: 01.01
Date:          05-17-2013      Assembly Flags:  0x00
Version:       REV 01          CLEI Code:       IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 31 33 30 30 38 45 00 00 11 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 8          REV 01  740-050037  1EDB3130063      DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version:  0x02
P/N:           740-050037      S/N:            1EDB3130063
Assembly ID:   0x0478          Assembly Version: 01.01
Date:          05-17-2013      Assembly Flags:  0x00
Version:       REV 01          CLEI Code:       IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 31 33 30 30 36 33 00 00 11 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 12         REV 01  740-050037  1EDB3130026      DC 52V Power Supply
Module

```

```

Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N: 740-050037          S/N: 1EDB3130026
Assembly ID: 0x0478        Assembly Version: 01.01
Date: 05-16-2013          Assembly Flags: 0x00
Version: REV 01           CLEI Code: IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 31 33 30 30 32 36 00 00 10 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 13          REV 01 740-050037 1EDB3130074          DC 52V Power Supply
Module
Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N: 740-050037          S/N: 1EDB3130074
Assembly ID: 0x0478        Assembly Version: 01.01
Date: 05-17-2013          Assembly Flags: 0x00
Version: REV 01           CLEI Code: IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 31 33 30 30 37 34 00 00 11 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 14          REV 01 740-050037 1EDB313009D          DC 52V Power Supply
Module
Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N: 740-050037          S/N: 1EDB313009D
Assembly ID: 0x0478        Assembly Version: 01.01
Date: 05-17-2013          Assembly Flags: 0x00
Version: REV 01           CLEI Code: IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 31 33 30 30 39 44 00 00 11 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 15          REV 01 740-050037 1EDB3130024          DC 52V Power Supply
Module
Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N: 740-050037          S/N: 1EDB3130024
Assembly ID: 0x0478        Assembly Version: 01.01
Date: 05-16-2013          Assembly Flags: 0x00

```

```

Version:      REV 01          CLEI Code:      IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
...

```

### show chassis hardware models (MX2020 Routers with MPC5EQ and MPC6E)

```

user@host> show chassis hardware models
Hardware inventory:

```

Item	Version	Part number	Serial number	FRU model number
Midplane	REV 51	750-040240	ABAB9243	CHAS-BP-MX2020-S
FPM Board	REV 13	760-040242	ABCA8835	MX2020-CRAFT-S
PSM 0	REV 01	740-050037	1EDB32403L5	MX2000-PSM-DC-S
PSM 1	REV 01	740-050037	1EDB32403L3	MX2000-PSM-DC-S
PSM 2	REV 01	740-050037	1EDB32403KM	MX2000-PSM-DC-S
PSM 3	REV 01	740-050037	1EDB3130079	MX2000-PSM-DC-S
PSM 4	REV 01	740-050037	1EDB3130077	MX2000-PSM-DC-S
PSM 5	REV 01	740-050037	1EDB3130020	MX2000-PSM-DC-S
PSM 6	REV 01	740-050037	1EDB313009S	MX2000-PSM-DC-S
PSM 7	REV 01	740-050037	1EDB313008E	MX2000-PSM-DC-S
PSM 8	REV 01	740-050037	1EDB3130063	MX2000-PSM-DC-S
PSM 12	REV 01	740-050037	1EDB3130026	MX2000-PSM-DC-S
PSM 13	REV 01	740-050037	1EDB3130074	MX2000-PSM-DC-S
PSM 14	REV 01	740-050037	1EDB313009D	MX2000-PSM-DC-S
PSM 15	REV 01	740-050037	1EDB3130024	MX2000-PSM-DC-S
PSM 16	REV 01	740-050037	1EDB3130054	MX2000-PSM-DC-S
PSM 17	REV 01	740-050037	1EDB3130080	MX2000-PSM-DC-S
PDM 0	REV 03	740-045234	1EGA3170144	MX2000-PDM-DC-S
PDM 1	REV 03	740-045234	1EGA3170158	MX2000-PDM-DC-S
PDM 2	REV 03	740-045234	1EGA3170182	MX2000-PDM-DC-S
PDM 3	REV 03	740-045234	1EGA3170207	MX2000-PDM-DC-S
Routing Engine 0	REV 02	740-041821	9009112112	RE-MX2000-1800X4-S
Routing Engine 1	REV 02	740-041821	9009112087	RE-MX2000-1800X4-S
CB 0	REV 23	750-040257	CABA2295	RE-MX2000-1800X4-S
CB 1	REV 23	750-040257	CABE8379	RE-MX2000-1800X4-S
SFB 0	REV 06	711-044466	ABCD5001	MX2000-SFB-S
SFB 1	REV 06	711-044466	ABCD5034	MX2000-SFB-S
SFB 2	REV 06	711-044466	ABCH3899	MX2000-SFB-S
SFB 3	REV 06	711-044466	ABCD5020	MX2000-SFB-S
SFB 4	REV 06	711-044466	ABCD4975	MX2000-SFB-S
SFB 5	REV 06	711-044466	ABCH3881	MX2000-SFB-S
SFB 6	REV 06	711-044466	ABCD5026	MX2000-SFB-S
SFB 7	REV 06	711-044466	ABCD5032	MX2000-SFB-S
FPC 0	REV 39	750-045715	CACD1902	PROTO-ASSEMBLY
FPC 1	REV 11	750-045372	CABK8112	MX-MPC3E-3D
FPC 2	REV 17	750-037355	CAAS5826	MPC4E-3D-2CGE-8XGE
FPC 3	REV 05	750-044444	CAAY9920	MX-MPC2E-3D-P
FPC 4	REV 18	750-046005	CACH5661	PROTO-ASSEMBLY
FPC 5	REV 35	750-028467	CAAR2623	MPC-3D-16XGE-SFPP
FPC 9	REV 30	750-044130	ABCF5773	PROTO-ASSEMBLY
FPC 10	REV 36	750-044130	ABCS8602	PROTO-ASSEMBLY
FPC 17	REV 28	750-044130	ABBZ3873	PROTO-ASSEMBLY
FPC 18	REV 39	750-045715	CACD1910	PROTO-ASSEMBLY
FPC 19	REV 39	750-045715	CACD1908	PROTO-ASSEMBLY
ADC 0	REV 17	750-043596	ABCD5378	MX2000-LC-ADAPTER
ADC 1	REV 17	750-043596	ABCD5465	MX2000-LC-ADAPTER
ADC 2	REV 17	750-043596	ABCD5431	MX2000-LC-ADAPTER
ADC 3	REV 17	750-043596	ABCD5356	MX2000-LC-ADAPTER

ADC 4	REV 02	750-043596	ZW1545	750-043596
ADC 5	REV 17	750-043596	ABCD5517	MX2000-LC-ADAPTER
ADC 18	REV 17	750-043596	ABCD5535	MX2000-LC-ADAPTER
ADC 19	REV 01	750-043596	ZV4127	750-043596
Fan Tray 0	REV 06	760-046960	ACAY0791	MX2000-FANTRAY-S
Fan Tray 1	REV 06	760-046960	ACAY0788	MX2000-FANTRAY-S
Fan Tray 2	REV 06	760-046960	ACAY0755	MX2000-FANTRAY-S
Fan Tray 3	REV 06	760-046960	ACAY0441	MX2000-FANTRAY-S

### show chassis hardware clei-models (MX2020 Router with MPC5EQ and MPC6E)

user@host> show chassis hardware clei-models

Hardware inventory:

Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 51	750-040240	IPMU710ARA	CHAS-BP-MX2020-S
FPM Board	REV 13	760-040242	IPMYAE5JRA	MX2020-CRAFT-S
PSM 0	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 1	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 2	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 3	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 4	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 5	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 6	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 7	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 8	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 12	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 13	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 14	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 15	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 16	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 17	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PDM 0	REV 03	740-045234	IPUPAJSKAA	MX2000-PDM-DC-S
PDM 1	REV 03	740-045234	IPUPAJSKAA	MX2000-PDM-DC-S
PDM 2	REV 03	740-045234	IPUPAJSKAA	MX2000-PDM-DC-S
PDM 3	REV 03	740-045234	IPUPAJSKAA	MX2000-PDM-DC-S
CB 0	REV 23	750-040257	IPUCBA7CTA	RE-MX2000-1800X4-S
CB 1	REV 23	750-040257	IPUCBA7CTA	RE-MX2000-1800X4-S
SFB 0	REV 06	711-044466	IPUCBA6CAA	MX2000-SFB-S
SFB 1	REV 06	711-044466	IPUCBA6CAA	MX2000-SFB-S
SFB 2	REV 06	711-044466	IPUCBA6CAA	MX2000-SFB-S
SFB 3	REV 06	711-044466	IPUCBA6CAA	MX2000-SFB-S
SFB 4	REV 06	711-044466	IPUCBA6CAA	MX2000-SFB-S
SFB 5	REV 06	711-044466	IPUCBA6CAA	MX2000-SFB-S
SFB 6	REV 06	711-044466	IPUCBA6CAA	MX2000-SFB-S
SFB 7	REV 06	711-044466	IPUCBA6CAA	MX2000-SFB-S
FPC 0	REV 39	750-045715	PROTOXCLEI	PROTO-ASSEMBLY
FPC 1	REV 11	750-045372	COUIBBNBAA	MX-MPC3E-3D
FPC 2	REV 17	750-037355	IPU3A4DHAA	MPC4E-3D-2CGE-8XGE
FPC 3	REV 05	750-044444	COUIBBGBAA	MX-MPC2E-3D-P
MIC 0	REV 28	750-028387	COUIA16BAA	MIC-3D-4XGE-XFP
FPC 4	REV 18	750-046005	PROTOXCLEI	PROTO-ASSEMBLY
FPC 5	REV 35	750-028467		MPC-3D-16XGE-SFPP
FPC 9	REV 30	750-044130	PROTOXCLEI	PROTO-ASSEMBLY
MIC 0	REV 05	750-049457	PROTOXCLEI	PROTO-ASSEMBLY
FPC 10	REV 36	750-044130	PROTOXCLEI	PROTO-ASSEMBLY
MIC 0	REV 06	750-049979	PROTOXCLEI	PROTO-ASSEMBLY
MIC 1	REV 12	750-050008	PROTOXCLEI	PROTO-ASSEMBLY
FPC 17	REV 28	750-044130	PROTOXCLEI	PROTO-ASSEMBLY
MIC 1	REV 03	750-050008	PROTOXCLEI	PROTO-ASSEMBLY
FPC 18	REV 39	750-045715	PROTOXCLEI	PROTO-ASSEMBLY
FPC 19	REV 39	750-045715	PROTOXCLEI	PROTO-ASSEMBLY

ADC 0	REV 17	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER
ADC 1	REV 17	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER
ADC 2	REV 17	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER
ADC 3	REV 17	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER
ADC 4	REV 02	750-043596	PROTOXCLEI	750-043596
ADC 5	REV 17	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER
ADC 18	REV 17	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER
ADC 19	REV 01	750-043596	PROTOXCLEI	750-043596
Fan Tray 0	REV 06	760-046960	IPUCBA5CAA	MX2000-FANTRAY-S
Fan Tray 1	REV 06	760-046960	IPUCBA5CAA	MX2000-FANTRAY-S
Fan Tray 2	REV 06	760-046960	IPUCBA5CAA	MX2000-FANTRAY-S
Fan Tray 3	REV 06	760-046960	IPUCBA5CAA	MX2000-FANTRAY-S

### show chassis hardware (MX Series routers with ATM MIC)

```

user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               JN115736EAFc  MX240
Midplane      REV 07   760-021404   ABAA5038      MX240 Backplane
FPM Board     REV 03   760-021392   ABBA2758      Front Panel Display
PEM 0         Rev 01   740-022697   QCS0937C07K   PS 1.2-1.7kW; 100-240V
AC in
PEM 1         Rev 01   740-022697   QCS0939C04X   PS 1.2-1.7kW; 100-240V
AC in
PEM 2         Rev 01   740-022697   QCS0937C06B   PS 1.2-1.7kW; 100-240V
AC in
PEM 3         Rev 01   740-022697   QCS0937C07U   PS 1.2-1.7kW; 100-240V
AC in
Routing Engine 0 REV 12   740-013063   9009042291     RE-S-2000
Routing Engine 1 REV 12   740-013063   9009042266     RE-S-2000
CB 0          REV 06   710-021523   ABBC1435      MX SCB
CB 1          REV 06   710-021523   ABBC1497      MX SCB
FPC 2         REV 14   750-031088   YH8446        MPC Type 2 3D Q
CPU           REV 06   711-030884   YH9612        MPC PMB 2G
MIC 0
MIC 1         REV 10   750-036132   ZP7062        2x0C12/8x0C3 CC-CE
PIC 2         BUILtIN BUILtIN      2x0C12/8x0C3 CC-CE

Xcvr 0        NON-JNPR   23393-00492   UNKNOWN
Xcvr 1        NON-JNPR   23393-00500   UNKNOWN
Xcvr 2        NON-JNPR   23393-00912   UNKNOWN
Xcvr 3        REV 01   740-015638   22216-00575   Load SFP
Xcvr 4        REV 01   740-015638   24145-00110   Load SFP
Xcvr 5        REV 01   740-015638   24145-00016   Load SFP
Xcvr 6        REV 01   740-015638   24145-00175   Load SFP
Xcvr 7        NON-JNPR   23393-00627   UNKNOWN
QXM 0         REV 05   711-028408   YF4681        MPC QXM
QXM 1         REV 05   711-028408   YF4817        MPC QXM
Fan Tray 0    REV 01   710-021113   XL3645        MX240 Fan Tray

```

### show chassis hardware (MX240, MX480, MX960 routers with Application Services Modular Line Card)

```

user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               JN11D969BAFA  MX960
Midplane      REV 03   710-013698   ACAA2362      MX960 Backplane

```

FPM Board	REV 03	710-014974	ZR0639	Front Panel Display
PDM	Rev 03	740-013110	QCS152250SX	Power Distribution Module
PEM 0	Rev 10	740-013683	QCS1512718W	DC Power Entry Module
PEM 1	Rev 10	740-013683	QCS1512702Y	DC Power Entry Module
Routing Engine 0	REV 15	740-013063	9012024667	RE-S-2000
Routing Engine 1	REV 15	740-013063	9012024649	RE-S-2000
CB 0	REV 14	750-031391	ZJ7749	Enhanced MX SCB
CB 1	REV 14	750-031391	ZJ7750	Enhanced MX SCB
CB 2	REV 14	750-031391	ZY9233	Enhanced MX SCB
FPC 0	REV 17	750-031089	YR7434	MPC Type 2 3D
CPU				
FPC 1	REV 11	750-037207	ZW9727	AS-MCC
CPU	REV 04	711-038173	ZW4817	AS-MCC-PMB
MIC 0	REV 01	750-037214	ZH3764	AS-MSC
PIC 0		BUILTIN	BUILTIN	AS-MSC
MIC 1	REV 01	711-028408	JZ9200	AS-MXC
PIC 2		BUILTIN	BUILTIN	AS-MXC
FPC 4	REV 30	750-028467	ABBN0232	MPC 3D 16x 10GE
CPU				
FPC 5	REV 04	750-037207	ZK9074	AS-MCC
CPU				
Fan Tray 0	REV 05	740-014971	VT5683	Fan Tray
Fan Tray 1	REV 05	740-014971	VT5684	Fan Tray

### show chassis hardware extensive (MX240, MX480, MX960 Routers with Application Services Modular Line Card)

user@host> show chassis hardware extensive

```
ID: AS-MCC                                FRU Model Number: 750-037207
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 37 01 0b 52 45 56 20 31 31 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 32 30 37 00 00
Address 0x20: 53 2f 4e 20 5a 57 39 37 32 37 00 00 00 11 02 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 37
Address 0x50: 35 30 2d 30 33 37 32 30 37 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 31 31 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 5e ff ff ff ff ff ff ff ff ff ff ff ff
CPU                                REV 04    711-038173    ZW4817    AS-MCC-PMB
Jedec Code: 0x7fb0                EEPROM Version: 0x02
P/N: 711-038173                  S/N: ZW4817
Assembly ID: 0x0b38              Assembly Version: 01.04
Date: 12-30-2011                 Assembly Flags: 0x00
Version: REV 04
ID: AS-MCC-PMB
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 38 01 04 52 45 56 20 30 34 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 33 38 31 37 33 00 00
Address 0x20: 53 2f 4e 20 5a 57 34 38 31 37 00 00 00 1e 0c 07
Address 0x30: db ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 00 50 52 4f 54 4f 58 43 4c 45 49 37
Address 0x50: 31 31 2d 30 33 38 31 37 33 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 30 34 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 60 00 00 00 00 00 00 00 00 00 00 00 00
MIC 0                                REV 01    750-037214    ZH3764    AS-MSC
Jedec Code: 0x7fb0                EEPROM Version: 0x02
P/N: 750-037214                  S/N: ZH3764
```

```

Assembly ID: 0x0a44          Assembly Version: 01.01
Date: 07-04-2011           Assembly Flags: 0x00
Version: REV 01
ID: AS-MS
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff I2C Hex Data:
Address 0x00: 7f b0 02 ff 0a 44 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 32 31 34 00 00
Address 0x20: 53 2f 4e 20 5a 48 33 37 36 34 00 00 00 04 07 07
Address 0x30: db ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 ff ff ff ff ff
Address 0x70: ff ff ff f6 c0 03 e1 bc 00 00 00 00 00 00 00 00
PIC 0          BUILTIN          BUILTIN          AS-MS
FPC 4          REV 30          750-028467          ABBN0232          MPC 3D 16x 10GE
Jedec Code: 0x7fb0          EEPROM Version: 0x01

```

#### show chassis hardware (MX480 Router with MPC4E)

```

user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               JN10FF57BAFB  MX480
Midplane      REV 05   750-047849   Good          MX480 Midplane
FPM Board     REV 02   710-017254   KG2066        Front Panel Display
PEM 0         Rev 03   740-017330   QCS081590BJ   PS 1.2-1.7kW; 100-240V
AC in
PEM 1         Rev 03   740-017330   QCS0815908Z   PS 1.2-1.7kW; 100-240V
AC in
PEM 2         Rev 03   740-029970   QCS1001U001   PS 1.4-2.52kW; 90-264V
AC in
Routing Engine 0 REV 05   740-031116   9009089502    RE-S-1800x4
Routing Engine 1 REV 05   740-031116   9009089624    RE-S-1800x4
CB 0          REV 02   750-031391   YE8506        Enhanced MX SCB
CB 1          REV 14   750-031391   ZK8265        Enhanced MX SCB
FPC 2         REV 05   750-037358   ZT0638        MPC4E 3D 32XGE
CPU           REV 07   711-035209   ZK3187        HMPD PMB 2G
PIC 0         BUILTIN          BUILTIN          8X10GE SFPP
PIC 1         BUILTIN          BUILTIN          8X10GE SFPP
PIC 2         BUILTIN          BUILTIN          8X10GE SFPP
PIC 3         BUILTIN          BUILTIN          8X10GE SFPP
FPC 3         REV 06   750-037355   CAAB1144      MPC4E 3D 2CGE+8XGE
CPU           REV 08   711-035209   CAAB1278      HMPD PMB 2G
PIC 0         BUILTIN          BUILTIN          4x10GE SFPP
Xcvr 0        REV 01   740-031980   B11E01439     SFP+-10G-SR
Xcvr 1        REV 01   740-031980   B11D05809     SFP+-10G-SR
PIC 1         BUILTIN          BUILTIN          1X100GE CFP
Xcvr 0        NON-JNPR        D5418           UNKNOWN
PIC 2         BUILTIN          BUILTIN          4x10GE SFPP
PIC 3         BUILTIN          BUILTIN          1X100GE CFP
Xcvr 0        NON-JNPR        X12J00362       CFP-100G-SR10
FPC 4         REV 12.3.10 750-033205   YR9445        MPCE Type 3 3D
CPU
Fan Tray                               Enhanced Left Fan Tray

```

#### show chassis hardware (MX2020 Router with MPC4E)

```

user@host> show chassis hardware

```

## Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN11E188CAFJ	MX2020
Midplane	REV 04	711-032387	ABAC7474	Lower Backplane
Midplane 1	REV 04	711-032386	ABAC7408	Upper Backplane
PMP 1	REV 03	711-032428	ACAJ1137	Upper Power Midplane
PMP 0	REV 03	711-032426	ACAJ1016	Lower Power Midplane
FPM Board	REV 06	760-040242	ABBT8832	Front Panel Display
PSM 3	REV 0C	740-033727	VK00255	DC 52V Power Supply
Module				
PSM 4	REV 0C	740-033727	VJ00148	DC 52V Power Supply
Module				
PSM 5	REV 0C	740-033727	VK00207	DC 52V Power Supply
Module				
PSM 6	REV 0C	740-033727	VK00319	DC 52V Power Supply
Module				
PSM 7	REV 0C	740-033727	VK00264	DC 52V Power Supply
Module				
PSM 8	REV 0B	740-033727	VG00025	DC 52V Power Supply
Module				
PSM 13	REV 0C	740-033727	VK00274	DC 52V Power Supply
Module				
PSM 14	REV 0C	740-033727	VJ00167	DC 52V Power Supply
Module				
PSM 15	REV 0C	740-033727	VK00299	DC 52V Power Supply
Module				
PSM 16	REV 0C	740-033727	VK00213	DC 52V Power Supply
Module				
PSM 17	REV 0C	740-033727	VK00253	DC 52V Power Supply
Module				
PDM 0	REV 0B	740-038109	VJ00040	DC Power Dist Module
PDM 2	REV 0B	740-038109	VJ00025	DC Power Dist Module
Routing Engine 0	REV 02	740-041821	9009089735	RE-S-1800x4
Routing Engine 1	REV 02	740-041821	9009089731	RE-S-1800x4
CB 0	REV 04	750-040257	ZT2846	Control Board
CB 1	REV 04	750-040257	ZT2877	Control Board
SPMB 0	REV 01	711-041855	ZS2282	PMB Board
SPMB 1	REV 01	711-041855	ZS2261	PMB Board
SFB 0	REV 07	711-032385	ZZ2582	Switch Fabric Board
SFB 1	REV 04	711-032385	ZV4229	Switch Fabric Board
SFB 2	REV 07	711-032385	CAAB4902	Switch Fabric Board
SFB 3	REV 07	711-032385	CAAB4891	Switch Fabric Board
SFB 4	REV 07	711-032385	CAAB4883	Switch Fabric Board
SFB 5	REV 07	711-032385	CAAB4889	Switch Fabric Board
SFB 6	REV 06	711-032385	ZV1818	Switch Fabric Board
SFB 7	REV 07	711-032385	CAAB4897	Switch Fabric Board
FPC 0	REV 34	750-031090	ZT9799	MPC Type 2 3D EQ
CPU	REV 06	711-030884	ZS1122	MPC PMB 2G
MIC 0	REV 11	750-033535	CAAD7674	MIC-3D-10C192-XFP
PIC 0		BUILTIN	BUILTIN	MIC-3D-10C192-XFP
Xcvr 0	REV 01	740-014279	753019A00404	XFP-OC192-SR
MIC 1	REV 14	750-031967	ZM6103	MIC-3D-80C30C12-40C48
PIC 2		BUILTIN	BUILTIN	MIC-3D-80C30C12-40C48
Xcvr 0	REV 01	740-011615	PEF1AZP	SFP-IR
Xcvr 1	REV 01	740-011615	PEF1AZN	SFP-IR
Xcvr 2	REV 01	740-021308	ANA0N8S	SFP+-10G-SR
QXM 0	REV 06	711-028408	ZT9339	MPC QXM
QXM 1	REV 06	711-028408	ZT9237	MPC QXM
FPC 9	REV 34	750-031090	ZT9770	MPC Type 2 3D EQ
CPU	REV 06	711-030884	ZS1302	MPC PMB 2G
MIC 0	REV 24	750-028387	YJ3950	3D 4x 10GE XFP



PIC 0		BUILTIN	BUILTIN	2x 10GE XFP
Xcvr 0		NON-JNPR	T09M52516	XFP-10G-SR
Xcvr 1		NON-JNPR	CA49BK095	XFP-10G-SR
PIC 1		BUILTIN	BUILTIN	2x 10GE XFP
Xcvr 0	REV 02	740-014289	C834XU01T	XFP-10G-SR
Xcvr 1		NON-JNPR	T09M52515	XFP-10G-SR
MIC 1	REV 11	750-033535	CAAD7681	MIC-3D-10C192-XFP
PIC 2		BUILTIN	BUILTIN	MIC-3D-10C192-XFP
Xcvr 0	REV 01	740-014279	KBQ02BE	XFP-OC192-SR
QXM 0	REV 06	711-028408	ZT9151	MPC QXM
QXM 1	REV 06	711-028408	ZT9116	MPC QXM
FPC 10	REV 27	750-033205	ZL6215	MPCE Type 3 3D
CPU	REV 07	711-035209	ZK9038	HMPC PMB 2G
MIC 0	REV 18	750-028380	YG6885	3D 2x 10GE XFP
PIC 0		BUILTIN	BUILTIN	1x 10GE XFP
Xcvr 0	REV 01	740-014289	C706XU0AG	XFP-10G-SR
PIC 1		BUILTIN	BUILTIN	1x 10GE XFP
Xcvr 0	REV 02	740-014289	T08L84366	XFP-10G-SR
FPC 14	REV 09	750-037355	CAAF1534	MPC4E 3D 2CGE+8XGE
CPU	REV 08	711-035209	CAAB9879	HMPC PMB 2G
PIC 0		BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-021308	21T511100436	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AHPOGPM	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	123363A00032	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	19T511100477	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0		NON-JNPR	X12J00260	CFP-100G-SR10
PIC 2		BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-021308	21T511104086	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	21T511104627	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	21T511104644	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP
FPC 19	REV 32	750-028467	ZR2008	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ZT6933	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	19T511100291	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AMH02VE	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	23T511102128	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AMS15PP	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	123363A00716	SFP+-10G-SR
ADC 0	REV 05	750-043596	CAAC2072	Adapter Card
ADC 9	REV 01	750-043596	ZV4111	Adapter Card
ADC 10	REV 05	750-043596	CAAC2058	Adapter Card
ADC 14	REV 02	750-043596	ZW1561	Adapter Card
ADC 19	REV 01	750-043596	ZV4127	Adapter Card
Fan Tray 0	REV 03	760-046960	ACAY0124	172mm FanTray - 6 Fans
Fan Tray 1	REV 2A	760-046960	ACAY0022	172mm FanTray - 6 Fans
Fan Tray 2	REV 2A	760-046960	ACAY0023	172mm FanTray - 6 Fans
Fan Tray 3	REV 2A	760-046960	ACAY0025	172mm FanTray - 6 Fans

**show chassis hardware (MX5, MX10, MX40, MX80, MX240, MX480, and MX960 Routers with Enhanced 20-Port Gigabit Ethernet MIC)**

```
user@host> show chassis hardware
```

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			F3434	MX80-P
Midplane	REV 01	711-044315	ZK2681	MX80-P

PEM 0	Rev 04	740-028288	VE05267	AC Power Entry Module
PEM 1	Rev 04	740-028288	VE05270	AC Power Entry Module
Routing Engine		BUILTIN	BUILTIN	Routing Engine
TFEB 0		BUILTIN	BUILTIN	Forwarding Engine
Processor				
QXM 0	REV 05	711-028408	ZK0952	MPC QXM
FPC 0		BUILTIN	BUILTIN	MPC BUILTIN
MIC 0		BUILTIN	BUILTIN	4x 10GE XFP
PIC 0		BUILTIN	BUILTIN	4x 10GE XFP
FPC 1		BUILTIN	BUILTIN	MPC BUILTIN
MIC 0	REV 02	750-049846	CAAV2153	3D 20x 1GE(LAN)-E,SFP
PIC 0		BUILTIN	BUILTIN	10x 1GE(LAN) -E SFP
Xcvr 0	REV 01	740-011613	AM0816S9B81	SFP-SX
Xcvr 1	REV 02	740-011613	AM0925SBLK7	SFP-SX
Xcvr 2	REV 01	740-011613	UAQ0005	SFP-SX
Xcvr 3	REV 01	740-011613	UAQ000C	SFP-SX
Xcvr 4	REV 01	740-011613	P9F195E	SFP-SX
Xcvr 5	REV 01	740-011613	UAQ0003	SFP-SX
Xcvr 6	REV 01	740-031851	AM1041SU1LD	SFP-SX
Xcvr 8	REV 02	740-013111	B101501	SFP-T
PIC 1		BUILTIN	BUILTIN	10x 1GE(LAN) -E SFP
Xcvr 0	REV 01	740-011613	PFM1ML7	SFP-SX
Xcvr 4	REV 01	740-011613	PE729P6	SFP-SX
Xcvr 6	REV 02	740-011613	AM1014SGC84	SFP-SX
Xcvr 9	REV 01	740-011613	AM0812S8UK3	SFP-SX
MIC 1	REV 26	750-028392	ZY0187	3D 20x 1GE(LAN) SFP
PIC 2		BUILTIN	BUILTIN	10x 1GE(LAN) SFP
Xcvr 0	REV 01	740-011613	P9F1AN9	SFP-SX
Xcvr 5	REV 02	740-011613	AM1003SFUF4	SFP-SX
Xcvr 9	REV 01	740-031851	AM1041SU1LM	SFP-SX
PIC 3		BUILTIN	BUILTIN	10x 1GE(LAN) SFP
Xcvr 4	REV 01	740-011613	PAJ4MYT	SFP-SX
Xcvr 7	+	NON-JNPR	XG32A024	SFP-SX
Xcvr 8		NON-JNPR	PFROV6J	SFP-SX
Xcvr 9	REV 01	740-031851	AM1041SU02U	SFP-SX
Fan Tray				

### show chassis hardware models (MX5, MX10, MX40, MX80, MX240, MX480, and MX960 Routers with Enhanced 20-Port Gigabit Ethernet MIC)

```
user@host> show chassis hardware models
```

Hardware inventory:				
Item	Version	Part number	Serial number	FRU model number
PEM 0	Rev 04	740-028288	VE05267	PWR-MX80-AC-S
PEM 1	Rev 04	740-028288	VE05270	PWR-MX80-AC-S
Routing Engine		BUILTIN	BUILTIN	
TFEB 0		BUILTIN	BUILTIN	
FPC 0		BUILTIN	BUILTIN	
FPC 1		BUILTIN	BUILTIN	
MIC 0	REV 02	750-049846	CAAV2153	MIC-3D-20GE-SFP-E
MIC 1	REV 26	750-028392	ZY0187	MIC-3D-20GE-SFP
Fan Tray				FANTRAY-MX80-S

### show chassis hardware (MX2008 Router)

```
user@host>show chassis hardware
```

Hardware inventory:				
Item	Version	Part number	Serial number	Description
Chassis			JN1259E1CAFL	MX2008
Midplane	REV 47	750-044636	ABAD1739	Lower Backplane

PMP	REV 01	711-051406	ACVD0738	Power Midplane
FPM Board	REV 02	760-068193	ABDG7408	Front Panel Display
PSM 1	REV 06	740-050037	1EDB61200R8	DC 52V Power Supply
Module				
PSM 2	REV 06	740-050037	1EDB61200WA	DC 52V Power Supply
Module				
PSM 3	REV 06	740-050037	1EDB61200NY	DC 52V Power Supply
Module				
PSM 4	REV 06	740-050037	1EDB61200N2	DC 52V Power Supply
Module				
PSM 5	REV 06	740-050037	1EDB61200RN	DC 52V Power Supply
Module				
PSM 6	REV 06	740-050037	1EDB61200RF	DC 52V Power Supply
Module				
PSM 7	REV 06	740-050037	1EDB61200R7	DC 52V Power Supply
Module				
PDM 0	REV 01	740-060189	1EFF5250143	DC PDM Optimized
PDM 1	REV 01	740-060189	1EFF5250074	DC PDM Optimized
Routing Engine 0		BUILTIN	BUILTIN	RE-S-2X00x8
Routing Engine 1		BUILTIN	BUILTIN	RE-S-2X00x8
CB 0	REV 01	750-067373	ABDJ0047	Control Board
CB 1	REV 03	750-067373	ABDH3016	Control Board
SFB 0	REV 08	750-067371	ABDK7180	Switch Fabric Board
SFB 1	REV 08	750-067371	ABDK7024	Switch Fabric Board
SFB 2	REV 08	750-067371	ABDK7188	Switch Fabric Board
SFB 3	REV 08	750-067371	ABDK7143	Switch Fabric Board
SFB 4	REV 08	750-067371	ABDK7030	Switch Fabric Board
SFB 5	REV 08	750-067371	ABDK7146	Switch Fabric Board
SFB 6	REV 08	750-067371	ABDK7203	Switch Fabric Board
SFB 7	REV 08	750-067371	ABDK7238	Switch Fabric Board
FPC 0	REV 36	750-044130	ABCS8607	MPC6E 3D
CPU	REV 09	711-045719	ABCS8776	RMPCE PMB
MIC 0	REV 21	750-050008	ABCT5920	4X100GE CXP
PIC 0		BUILTIN	BUILTIN	4X100GE CXP
XLM 0	REV 07.2.00	711-046638	ABCK3488	MPC6E XL
XLM 1	REV 07.2.00	711-046638	ABCK5482	MPC6E XL
FPC 1	REV 22	750-063414	CAFJ3026	MPC9E 3D
CPU	REV 16	750-057177	CAFF9332	SMPC PMB
FPC 7	REV 08	750-038492	ZX4080	MPCE Type 2 3D EQ
CPU	REV 03	711-038484	ZX3665	MPCE PMB 2G
MIC 0	REV 05	750-037128	ZR4031	1xCOC12/4xCOC3 CH-CE
PIC 0		BUILTIN	BUILTIN	1xCOC12/4xCOC3 CH-CE
MIC 1	REV 23	750-032479	CADE8614	MIC-3D-8DS3-E3
PIC 2		BUILTIN	BUILTIN	MIC-3D-8DS3-E3
QXM 0	REV 06	711-028408	ZW8299	MPC QXM
QXM 1	REV 06	711-028408	ZY0609	MPC QXM
ADC 7	REV 17	750-043596	ABCA0990	Adapter Card
Fan Tray 0	REV 01	760-052467	ACAY6190	172mm FanTray - 6 Fans
Fan Tray 1	REV 01	760-052467	ACAY6414	172mm FanTray - 6 Fans

### show chassis hardware detail (MX2008 Router)

```
user@host>show chassis hardware detail
```

```
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			JN1259E1CAFL	MX2008
Midplane	REV 47	750-044636	ABAD1739	Lower Backplane
PMP	REV 01	711-051406	ACVD0738	Power Midplane
FPM Board	REV 02	760-068193	ABDG7408	Front Panel Display
PSM 1	REV 06	740-050037	1EDB61200R8	DC 52V Power Supply
Module				

PSM 2 Module	REV 06	740-050037	1EDB61200WA	DC 52V Power Supply
PSM 3 Module	REV 06	740-050037	1EDB61200NY	DC 52V Power Supply
PSM 4 Module	REV 06	740-050037	1EDB61200N2	DC 52V Power Supply
PSM 5 Module	REV 06	740-050037	1EDB61200RN	DC 52V Power Supply
PSM 6 Module	REV 06	740-050037	1EDB61200RF	DC 52V Power Supply
PSM 7 Module	REV 06	740-050037	1EDB61200R7	DC 52V Power Supply
PDM 0	REV 01	740-060189	1EFF5250143	DC PDM Optimized
PDM 1	REV 01	740-060189	1EFF5250074	DC PDM Optimized
Routing Engine 0		BUILTIN	BUILTIN	RE-S-2X00x8
vtbd0 15361 MB				Virtio Block Disk
vtbd1 15360 MB				Virtio Block Disk
ada0 511 MB		QEMU HARDDISK	QM00002	Emulated IDE Disk
usb0 (addr 1)		XHCI root HUB 0	0x8086	uhub0
Routing Engine 1		BUILTIN	BUILTIN	RE-S-2X00x8
vtbd0 15361 MB				Virtio Block Disk
vtbd1 15360 MB				Virtio Block Disk
ada0 511 MB		QEMU HARDDISK	QM00002	Emulated IDE Disk
usb0 (addr 1)		XHCI root HUB 0	0x8086	uhub0
CB 0	REV 01	750-067373	ABDJ0047	Control Board
CB 1	REV 03	750-067373	ABDH3016	Control Board
SFB 0	REV 08	750-067371	ABDK7180	Switch Fabric Board
SFB 1	REV 08	750-067371	ABDK7024	Switch Fabric Board
SFB 2	REV 08	750-067371	ABDK7188	Switch Fabric Board
SFB 3	REV 08	750-067371	ABDK7143	Switch Fabric Board
SFB 4	REV 08	750-067371	ABDK7030	Switch Fabric Board
SFB 5	REV 08	750-067371	ABDK7146	Switch Fabric Board
SFB 6	REV 08	750-067371	ABDK7203	Switch Fabric Board
SFB 7	REV 08	750-067371	ABDK7238	Switch Fabric Board
FPC 0	REV 36	750-044130	ABCS8607	MPC6E 3D
CPU	REV 09	711-045719	ABCS8776	RMPD PMB
MIC 0	REV 21	750-050008	ABCT5920	4X100GE CXP
PIC 0		BUILTIN	BUILTIN	4X100GE CXP
XLM 0	REV 07.2.00	711-046638	ABCK3488	MPC6E XL
XLM 1	REV 07.2.00	711-046638	ABCK5482	MPC6E XL
FPC 1	REV 22	750-063414	CAFJ3026	MPC9E 3D
CPU	REV 16	750-057177	CAFF9332	SMPC PMB
FPC 7	REV 08	750-038492	ZX4080	MPCE Type 2 3D EQ
CPU	REV 03	711-038484	ZX3665	MPCE PMB 2G
MIC 0	REV 05	750-037128	ZR4031	1xCOC12/4xCOC3 CH-CE
PIC 0		BUILTIN	BUILTIN	1xCOC12/4xCOC3 CH-CE
MIC 1	REV 23	750-032479	CADE8614	MIC-3D-8DS3-E3
PIC 2		BUILTIN	BUILTIN	MIC-3D-8DS3-E3
QXM 0	REV 06	711-028408	ZW8299	MPC QXM
QXM 1	REV 06	711-028408	ZY0609	MPC QXM
ADC 7	REV 17	750-043596	ABCA0990	Adapter Card
Fan Tray 0	REV 01	760-052467	ACAY6190	172mm FanTray - 6 Fans
Fan Tray 1	REV 01	760-052467	ACAY6414	172mm FanTray - 6 Fans

### show chassis hardware extensive (MX2008 Router)

```
user@host>show chassis hardware extensive
```

```
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			JN1259E1CAFL	MX2008
Jedec Code:	0x7fb0		EEPROM Version:	0x02

```

Assembly ID: 0x0557          S/N: JN1259E1CAFL
Date: 00-00-0000          Assembly Version: 00.00
ID: MX2008                Assembly Flags: 0x00

Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 7f b0 02 ff 05 57 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x20: 4a 4e 31 32 35 39 45 31 43 41 46 4c 00 00 00 00
Address 0x30: 00 00 00 ff 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane          REV 47    750-044636    ABAD1739          Lower Backplane
Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N: 750-044636            S/N: ABAD1739
Assembly ID: 0x0b66          Assembly Version: 01.47
Date: 06-08-2016            Assembly Flags: 0x00
Version: REV 47              CLEI Code: IPMU810ARB
ID: Lower Backplane          FRU Model Number: CHAS-BP-MX2010-S

Board Information Record:
Address 0x00: ad 01 08 00 f4 cc 55 3e 35 00 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 66 01 2f 52 45 56 20 34 37 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 36 33 36 00 00
Address 0x20: 53 2f 4e 20 41 42 41 44 31 37 33 39 00 08 06 07
Address 0x30: e0 ff ff ff ad 01 08 00 f4 cc 55 3e 35 00 ff ff
Address 0x40: ff ff ff ff 01 49 50 4d 55 38 31 30 41 52 42 43
Address 0x50: 48 41 53 2d 42 50 2d 4d 58 32 30 31 30 2d 53 00
Address 0x60: 00 00 00 00 00 00 42 43 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 18 ff ff ff ff ff ff ff ff ff ff ff ff
PMP                REV 01    711-051406    ACVD0738          Power Midplane
Jedec Code: 0x7fb0          EEPROM Version: 0x01
P/N: 711-051406            S/N: ACVD0738
Assembly ID: 0x045d          Assembly Version: 01.01
Date: 06-06-2016            Assembly Flags: 0x00
Version: REV 01
ID: Power Midplane

Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 04 5d 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 35 31 34 30 36 00 00
Address 0x20: 53 2f 4e 20 41 43 56 44 30 37 33 38 00 06 06 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
FPM Board          REV 02    760-068193    ABDG7408          Front Panel Display
Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N: 760-068193            S/N: ABDG7408
Assembly ID: 0x0cac          Assembly Version: 01.02
Date: 06-06-2016            Assembly Flags: 0x00
Version: REV 02              CLEI Code: PROTOXCLEI
ID: Front Panel Display      FRU Model Number: PROTO-ASSEMBLY

Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:

```

```

Address 0x00: 7f b0 02 fe 0c ac 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 36 30 2d 30 36 38 31 39 33 00 00
Address 0x20: 53 2f 4e 20 41 42 44 47 37 34 30 38 00 06 06 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
PSM 1          REV 06   740-050037   1EDB61200R8       DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version: 0x02
P/N:           740-050037      S/N:            1EDB61200R8
Assembly ID:   0x0478          Assembly Version: 01.06
Date:          03-16-2016      Assembly Flags:  0x00
Version:       REV 06          CLEI Code:       IPUPAPDKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 06 52 45 56 20 30 36 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 36 31 32 30 30 52 38 00 00 10 03 07
Address 0x30: e0 72 75 ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 50 44 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 36 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 26 00 00 00 00 00 00 00 00 00 00 00 00
PSM 2          REV 06   740-050037   1EDB61200WA       DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version: 0x02
P/N:           740-050037      S/N:            1EDB61200WA
Assembly ID:   0x0478          Assembly Version: 01.06
Date:          03-16-2016      Assembly Flags:  0x00
Version:       REV 06          CLEI Code:       IPUPAPDKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 06 52 45 56 20 30 36 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 36 31 32 30 30 57 41 00 00 10 03 07
Address 0x30: e0 72 75 ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 50 44 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 36 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 26 00 00 00 00 00 00 00 00 00 00 00 00
PSM 3          REV 06   740-050037   1EDB61200NY       DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version: 0x02
P/N:           740-050037      S/N:            1EDB61200NY
Assembly ID:   0x0478          Assembly Version: 01.06
Date:          03-16-2016      Assembly Flags:  0x00
Version:       REV 06          CLEI Code:       IPUPAPDKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 06 52 45 56 20 30 36 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 36 31 32 30 30 4e 59 00 00 10 03 07
Address 0x30: e0 72 75 ff ff ff ff ff ff ff ff ff ff ff ff ff

```

```

Address 0x40: ff ff ff ff 01 49 50 55 50 41 50 44 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 36 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 26 00 00 00 00 00 00 00 00 00 00 00 00
PSM 4          REV 06   740-050037   1EDB61200N2       DC 52V Power Supply
Module
Jedec Code:   0x7fb0           EEPROM Version:   0x02
P/N:          740-050037       S/N:              1EDB61200N2
Assembly ID:  0x0478           Assembly Version: 01.06
Date:         03-16-2016       Assembly Flags:   0x00
Version:      REV 06           CLEI Code:        IPUPAPDKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 06 52 45 56 20 30 36 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 36 31 32 30 30 30 4e 32 00 00 10 03 07
Address 0x30: e0 72 75 ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 50 44 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 36 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 26 00 00 00 00 00 00 00 00 00 00 00 00
PSM 5          REV 06   740-050037   1EDB61200RN       DC 52V Power Supply
Module
Jedec Code:   0x7fb0           EEPROM Version:   0x02
P/N:          740-050037       S/N:              1EDB61200RN
Assembly ID:  0x0478           Assembly Version: 01.06
Date:         03-16-2016       Assembly Flags:   0x00
Version:      REV 06           CLEI Code:        IPUPAPDKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 06 52 45 56 20 30 36 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 36 31 32 30 30 30 52 4e 00 00 10 03 07
Address 0x30: e0 72 75 ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 50 44 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 36 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 26 00 00 00 00 00 00 00 00 00 00 00 00
PSM 6          REV 06   740-050037   1EDB61200RF       DC 52V Power Supply
Module
Jedec Code:   0x7fb0           EEPROM Version:   0x02
P/N:          740-050037       S/N:              1EDB61200RF
Assembly ID:  0x0478           Assembly Version: 01.06
Date:         03-16-2016       Assembly Flags:   0x00
Version:      REV 06           CLEI Code:        IPUPAPDKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 06 52 45 56 20 30 36 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 36 31 32 30 30 30 52 46 00 00 10 03 07
Address 0x30: e0 72 75 ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 50 44 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 36 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 26 00 00 00 00 00 00 00 00 00 00 00 00

```

```

PSM 7          REV 06   740-050037   1EDB61200R7          DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           740-050037      S/N:              1EDB61200R7
Assembly ID:   0x0478          Assembly Version:  01.06
Date:          03-16-2016      Assembly Flags:    0x00
Version:       REV 06          CLEI Code:         IPUPAPDKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 06 52 45 56 20 30 36 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 36 31 32 30 30 52 37 00 00 10 03 07
Address 0x30: e0 72 75 ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 50 44 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 36 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 26 00 00 00 00 00 00 00 00 00 00 00 00

PDM 0          REV 01   740-060189   1EFF5250143          DC PDM Optimized
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           740-060189      S/N:              1EFF5250143
Assembly ID:   0x0495          Assembly Version:  01.01
Date:          07-21-2015      Assembly Flags:    0x00
Version:       REV 01          CLEI Code:         IPUPAN1KAA
ID: DC PDM Optimized          FRU Model Number:  MX2K-PDM-OP-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 95 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 36 30 31 38 39 00 00
Address 0x20: 31 45 46 46 35 32 35 30 31 34 33 00 00 15 07 07
Address 0x30: df ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4e 31 4b 41 41 4d
Address 0x50: 58 32 4b 2d 50 44 4d 2d 4f 50 2d 44 43 2d 53 00
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 84 00 00 00 00 00 00 00 00 00 00 00 00

PDM 1          REV 01   740-060189   1EFF5250074          DC PDM Optimized
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           740-060189      S/N:              1EFF5250074
Assembly ID:   0x0495          Assembly Version:  01.01
Date:          07-21-2015      Assembly Flags:    0x00
Version:       REV 01          CLEI Code:         IPUPAN1KAA
ID: DC PDM Optimized          FRU Model Number:  MX2K-PDM-OP-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 95 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 36 30 31 38 39 00 00
Address 0x20: 31 45 46 46 35 32 35 30 30 37 34 00 00 15 07 07
Address 0x30: df ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4e 31 4b 41 41 4d
Address 0x50: 58 32 4b 2d 50 44 4d 2d 4f 50 2d 44 43 2d 53 00
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 84 00 00 00 00 00 00 00 00 00 00 00 00

Routing Engine 0      BUILTIN      BUILTIN      RE-S-2X00x8
Jedec Code:    0x0000          EEPROM Version:    0x00
P/N:           BUILTIN          S/N:              BUILTIN
Assembly ID:   0x0c10          Assembly Version:  00.00
Date:          00-00-0000      Assembly Flags:    0x00
ID: RE-S-2X00x8

```



```

Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 0c 10 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 00 00 00 00
Address 0x20: 42 55 49 4c 54 49 4e 00 00 00 00 00 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
vtbd0 15361 MB                               Virtio Block Disk
vtbd1 15360 MB                               Virtio Block Disk
ada0    511 MB   QEMU HARDDISK                QM00002      Emulated IDE Disk
usb0 (addr 1) XHCI root HUB 0                0x8086      uhub0
Routing Engine 1          BUILTIN          BUILTIN          RE-S-2X00x8
Jedec Code: 0x0000          EEPROM Version: 0x00
P/N:          BUILTIN          S/N:          BUILTIN
Assembly ID: 0x0c10          Assembly Version: 00.00
Date:         00-00-0000      Assembly Flags: 0x00
ID: RE-S-2X00x8
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 0c 10 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 00 00 00 00
Address 0x20: 42 55 49 4c 54 49 4e 00 00 00 00 00 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
vtbd0 15361 MB                               Virtio Block Disk
vtbd1 15360 MB                               Virtio Block Disk
ada0    511 MB   QEMU HARDDISK                QM00002      Emulated IDE Disk
usb0 (addr 1) XHCI root HUB 0                0x8086      uhub0
CB 0          REV 01    750-067373    ABDJ0047      Control Board
Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N:          750-067373    S/N:          ABDJ0047
Assembly ID: 0x0c96          Assembly Version: 01.01
Date:         06-21-2016    Assembly Flags: 0x00
Version:      REV 01        CLEI Code:    PROTOXCLEI
ID: Control Board          FRU Model Number: PROTO-ASSEMBLY
Board Information Record:
Address 0x00: ad 01 00 20 28 8a 1c 6d c4 7e ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 fe 0c 96 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 33 00 00
Address 0x20: 53 2f 4e 20 41 42 44 4a 30 30 34 37 00 15 06 07
Address 0x30: e0 ff ff ff ad 01 00 20 28 8a 1c 6d c4 7e ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
CB 1          REV 03    750-067373    ABDH3016      Control Board
Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N:          750-067373    S/N:          ABDH3016
Assembly ID: 0x0c96          Assembly Version: 01.03
Date:         05-07-2016    Assembly Flags: 0x00
Version:      REV 03        CLEI Code:    PROTOXCLEI
ID: Control Board          FRU Model Number: PROTO-ASSEMBLY

```

```

Board Information Record:
Address 0x00: ad 01 00 20 f4 cc 55 35 71 a0 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 fe 0c 96 01 03 52 45 56 20 30 33 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 33 00 00
Address 0x20: 53 2f 4e 20 41 42 44 48 33 30 31 36 00 07 05 07
Address 0x30: e0 ff ff ff ad 01 00 20 f4 cc 55 35 71 a0 ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
SFB 0          REV 08    750-067371    ABDK7180          Switch Fabric Board
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-067371      S/N:              ABDK7180
Assembly ID:   0x0c97          Assembly Version:  01.08
Date:          09-27-2016      Assembly Flags:    0x00
Version:       REV 08          CLEI Code:         PROTOXCLEI
ID: Switch Fabric Board        FRU Model Number:  PROTO-ASSEMBLY
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 fe 0c 97 01 08 52 45 56 20 30 38 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 31 00 00
Address 0x20: 53 2f 4e 20 41 42 44 4b 37 31 38 30 00 1b 09 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 07 00 00 00 00 00 00 00 00 00 48 00
SFB 1          REV 08    750-067371    ABDK7024          Switch Fabric Board
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-067371      S/N:              ABDK7024
Assembly ID:   0x0c97          Assembly Version:  01.08
Date:          09-27-2016      Assembly Flags:    0x00
Version:       REV 08          CLEI Code:         PROTOXCLEI
ID: Switch Fabric Board        FRU Model Number:  PROTO-ASSEMBLY
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 fe 0c 97 01 08 52 45 56 20 30 38 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 31 00 00
Address 0x20: 53 2f 4e 20 41 42 44 4b 37 30 32 34 00 1b 09 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 07 00 00 00 00 00 00 00 01 00 48 00
SFB 2          REV 08    750-067371    ABDK7188          Switch Fabric Board
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-067371      S/N:              ABDK7188
Assembly ID:   0x0c97          Assembly Version:  01.08
Date:          09-28-2016      Assembly Flags:    0x00
Version:       REV 08          CLEI Code:         PROTOXCLEI
ID: Switch Fabric Board        FRU Model Number:  PROTO-ASSEMBLY
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 fe 0c 97 01 08 52 45 56 20 30 38 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 31 00 00
Address 0x20: 53 2f 4e 20 41 42 44 4b 37 31 38 38 00 1c 09 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

```

```

Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 07 00 00 00 00 00 00 00 02 00 48 00

SFB 3          REV 08    750-067371    ABDK7143          Switch Fabric Board
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-067371      S/N:           ABDK7143
Assembly ID:   0x0c97          Assembly Version: 01.08
Date:          09-27-2016      Assembly Flags: 0x00
Version:       REV 08          CLEI Code:     PROTOXCLEI
ID: Switch Fabric Board      FRU Model Number: PROTO-ASSEMBLY
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 fe 0c 97 01 08 52 45 56 20 30 38 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 31 00 00
Address 0x20: 53 2f 4e 20 41 42 44 4b 37 31 34 33 00 1b 09 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 07 00 00 00 00 00 00 00 03 00 48 00

SFB 4          REV 08    750-067371    ABDK7030          Switch Fabric Board
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-067371      S/N:           ABDK7030
Assembly ID:   0x0c97          Assembly Version: 01.08
Date:          09-24-2016      Assembly Flags: 0x00
Version:       REV 08          CLEI Code:     PROTOXCLEI
ID: Switch Fabric Board      FRU Model Number: PROTO-ASSEMBLY
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 fe 0c 97 01 08 52 45 56 20 30 38 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 31 00 00
Address 0x20: 53 2f 4e 20 41 42 44 4b 37 30 33 30 00 18 09 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 07 00 00 00 00 00 00 00 04 00 48 00

SFB 5          REV 08    750-067371    ABDK7146          Switch Fabric Board
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-067371      S/N:           ABDK7146
Assembly ID:   0x0c97          Assembly Version: 01.08
Date:          09-27-2016      Assembly Flags: 0x00
Version:       REV 08          CLEI Code:     PROTOXCLEI
ID: Switch Fabric Board      FRU Model Number: PROTO-ASSEMBLY
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 fe 0c 97 01 08 52 45 56 20 30 38 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 31 00 00
Address 0x20: 53 2f 4e 20 41 42 44 4b 37 31 34 36 00 1b 09 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 07 00 00 00 00 00 00 00 05 00 48 00

SFB 6          REV 08    750-067371    ABDK7203          Switch Fabric Board
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-067371      S/N:           ABDK7203

```

```

Assembly ID: 0x0c97      Assembly Version: 01.08
Date:          09-28-2016    Assembly Flags: 0x00
Version:       REV 08        CLEI Code:      PROTOXCLEI
ID: Switch Fabric Board     FRU Model Number:  PROTO-ASSEMBLY
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 fe 0c 97 01 08 52 45 56 20 30 38 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 31 00 00
Address 0x20: 53 2f 4e 20 41 42 44 4b 37 32 30 33 00 1c 09 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 07 00 00 00 00 00 00 00 06 00 48 00
SFB 7          REV 08      750-067371  ABDK7238          Switch Fabric Board
Jedec Code:    0x7fb0      EEPROM Version: 0x02
P/N:          750-067371   S/N:          ABDK7238
Assembly ID:   0x0c97      Assembly Version: 01.08
Date:         09-27-2016   Assembly Flags: 0x00
Version:      REV 08        CLEI Code:      PROTOXCLEI
ID: Switch Fabric Board     FRU Model Number:  PROTO-ASSEMBLY
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 fe 0c 97 01 08 52 45 56 20 30 38 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 31 00 00
Address 0x20: 53 2f 4e 20 41 42 44 4b 37 32 33 38 00 1b 09 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 07 00 00 00 00 00 00 00 07 00 48 00
FPC 0          REV 36      750-044130  ABCS8607          MPC6E 3D
Jedec Code:    0x7fb0      EEPROM Version: 0x02
P/N:          750-044130   S/N:          ABCS8607
Assembly ID:   0x0b86      Assembly Version: 01.36
Date:         10-29-2013   Assembly Flags: 0x00
Version:      REV 36        CLEI Code:      PROTOXCLEI
ID: MPC6E 3D      FRU Model Number:  PROTO-ASSEMBLY
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 fe 0b 86 01 24 52 45 56 20 33 36 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 31 33 30 00 00
Address 0x20: 53 2f 4e 20 41 42 43 53 38 36 30 37 00 1d 0a 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
CPU          REV 09      711-045719  ABCS8776          RMPC PMB
Jedec Code:    0x7fb0      EEPROM Version: 0x02
P/N:          711-045719   S/N:          ABCS8776
Assembly ID:   0x0b85      Assembly Version: 01.09
Date:         10-24-2013   Assembly Flags: 0x00
Version:      REV 09
ID: RMPC PMB
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:

```

```

Address 0x00: 7f b0 02 ff 0b 85 01 09 52 45 56 20 30 39 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 34 35 37 31 39 00 00
Address 0x20: 53 2f 4e 20 41 42 43 53 38 37 37 36 00 18 0a 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 00 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff
Address 0x70: ff ff ff c2 00 00 00 00 16 47 1f b0 00 00 00 00
MIC 0          REV 21    750-050008  ABCT5920          4X100GE CXP
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:          750-050008      S/N:          ABCT5920
Assembly ID:   0x0a83        Assembly Version: 01.21
Date:         09-29-2014     Assembly Flags:  0x00
Version:      REV 21        CLEI Code:     IP9IATYDAA
ID: 4X100GE CXP          FRU Model Number: MIC6-100G-CXP
Board Information Record:
Address 0x00: 12 01 07 02 03 ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0a 83 01 15 52 45 56 20 32 31 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 30 38 00 00
Address 0x20: 53 2f 4e 20 41 42 43 54 35 39 32 30 00 1d 09 07
Address 0x30: de ff ff ff 12 01 07 02 03 ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 39 49 41 54 59 44 41 41 4d
Address 0x50: 49 43 36 2d 31 30 30 47 2d 43 58 50 00 00 00 00
Address 0x60: 00 00 00 00 00 00 41 41 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 74 00 00 00 00 10 09 73 3c c0 02 70 3c
PIC 0          BUILTIN      BUILTIN          4X100GE CXP
XLM 0          REV 07.2.00 711-046638 ABCK3488      MPC6E XL
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:          711-046638      S/N:          ABCK3488
Assembly ID:   0x0b88        Assembly Version: 01.07
Date:         11-11-2013     Assembly Flags:  0x00
Version:      REV 07.2.00
ID: MPC6E XL
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 88 01 07 52 45 56 20 30 37 2e 32
Address 0x10: 2e 30 30 00 37 31 31 2d 30 34 36 36 33 38 00 00
Address 0x20: 53 2f 4e 20 41 42 43 4b 33 34 38 38 00 0b 0b 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 00 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 00 00 00 00 00 00 00 00 00 00 00 00
XLM 1          REV 07.2.00 711-046638 ABCK5482      MPC6E XL
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:          711-046638      S/N:          ABCK5482
Assembly ID:   0x0b88        Assembly Version: 01.07
Date:         10-21-2013     Assembly Flags:  0x00
Version:      REV 07.2.00
ID: MPC6E XL
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 88 01 07 52 45 56 20 30 37 2e 32
Address 0x10: 2e 30 30 00 37 31 31 2d 30 34 36 36 33 38 00 00
Address 0x20: 53 2f 4e 20 41 42 43 4b 35 34 38 32 00 15 0a 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 00 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00

```

```

Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 00 00 00 00 00 00 00 00 00 00 00 00
FPC 1          REV 22    750-063414    CAFJ3026          MPC9E 3D
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-063414      S/N:           CAFJ3026
Assembly ID:   0x0c43          Assembly Version: 01.22
Date:          03-28-2016      Assembly Flags: 0x00
Version:       REV 22          CLEI Code:     IPUCBMUCAA
ID: MPC9E 3D          FRU Model Number: MX2K-MPC9E
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0c 43 01 16 52 45 56 20 32 32 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 36 33 34 31 34 00 00
Address 0x20: 53 2f 4e 20 43 41 46 4a 33 30 32 36 00 1c 03 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 43 42 4d 55 43 41 41 4d
Address 0x50: 58 32 4b 2d 4d 50 43 39 45 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 41 41 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff ff
CPU          REV 16    750-057177    CAFF9332          SMPC PMB
Jedec Code:    0x7fb0          EEPROM Version:    0x01
P/N:           750-057177      S/N:           CAFF9332
Assembly ID:   0x0c22          Assembly Version: 01.16
Date:          03-20-2016      Assembly Flags: 0x00
Version:       REV 16
ID: SMPC PMB
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 0c 22 01 10 52 45 56 20 31 36 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 35 37 31 37 37 00 00
Address 0x20: 53 2f 4e 20 43 41 46 46 39 33 33 32 00 14 03 07
Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff 00 00 00 00 38 f9 0d e0 4f d1 4b 08
FPC 7          REV 08    750-038492    ZX4080          MPCE Type 2 3D EQ
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-038492      S/N:           ZX4080
Assembly ID:   0x0b35          Assembly Version: 01.08
Date:          02-03-2012      Assembly Flags: 0x00
Version:       REV 08          CLEI Code:     COUIBA5BAA
ID: MPCE Type 2 3D EQ          FRU Model Number: MX-MPC2E-3D-EQ
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 35 01 08 52 45 56 20 30 38 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 33 38 34 39 32 00 00
Address 0x20: 53 2f 4e 20 5a 58 34 30 38 30 00 00 00 03 02 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4f 55 49 42 41 35 42 41 41 4d
Address 0x50: 58 2d 4d 50 43 32 45 2d 33 44 2d 45 51 00 00 00
Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 74 ff ff ff ff ff ff ff ff ff ff ff ff
CPU          REV 03    711-038484    ZX3665          MPCE PMB 2G
Jedec Code:    0x7fb0          EEPROM Version:    0x01
P/N:           711-038484      S/N:           ZX3665
Assembly ID:   0x0b36          Assembly Version: 01.03
Date:          02-01-2012      Assembly Flags: 0x00

```

```

Version:      REV 03
ID: MPCE PMB 2G
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 01 ff 0b 36 01 03 52 45 56 20 30 33 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 33 38 34 38 34 00 00
  Address 0x20: 53 2f 4e 20 5a 58 33 36 36 35 00 00 01 02 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff 00 00 00 02 00 00 0c 00 42 5f c0 a4
MIC 0          REV 05    750-037128    ZR4031          1xCOC12/4xCOC3 CH-CE
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:          750-037128      S/N:          ZR4031
Assembly ID:   0x0a1b          Assembly Version: 01.05
Date:         12-04-2011      Assembly Flags: 0x00
Version:      REV 05          CLEI Code:     PROTOXCLEI
ID: 1xCOC12/4xCOC3 CH-CE      FRU Model Number: MIC-3D-4CHOC3-10C12-CE
Board Information Record:
  Address 0x00: 12 01 05 03 05 ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0a 1b 01 05 52 45 56 20 30 35 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 31 32 38 00 00
  Address 0x20: 53 2f 4e 20 5a 52 34 30 33 31 00 00 04 0c 07
  Address 0x30: db ff ff ff 12 01 05 03 05 ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 4d
  Address 0x50: 49 43 2d 33 44 2d 34 43 48 4f 43 33 2d 31 4f 43
  Address 0x60: 31 32 2d 43 45 00 30 32 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 98 c0 02 61 bc 7f b0 02 ff 0a 11 01 17
PIC 0          BUILTIN      BUILTIN          1xCOC12/4xCOC3 CH-CE
MIC 1          REV 23    750-032479    CADE8614          MIC-3D-8DS3-E3
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:          750-032479      S/N:          CADE8614
Assembly ID:   0x0a11          Assembly Version: 01.23
Date:         07-24-2014      Assembly Flags: 0x00
Version:      REV 23          CLEI Code:     COUIA8DBAA
ID: MIC-3D-8DS3-E3          FRU Model Number: MIC-3D-8DS3-E3
Board Information Record:
  Address 0x00: 56 01 ff ff 03 ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0a 11 01 17 52 45 56 20 32 33 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 33 32 34 37 39 00 00
  Address 0x20: 53 2f 4e 20 43 41 44 45 38 36 31 34 00 18 07 07
  Address 0x30: de ff ff ff 56 01 ff ff 03 ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4f 55 49 41 38 44 42 41 41 4d
  Address 0x50: 49 43 2d 33 44 2d 38 44 53 33 2d 45 33 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 41 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 7b c0 03 e5 7c 4f 8a 9e 10 00 00 00 02
PIC 2          BUILTIN      BUILTIN          MIC-3D-8DS3-E3
QXM 0          REV 06    711-028408    ZW8299          MPC QXM
Jedec Code:    0x7fb0          EEPROM Version:    0x01
P/N:          711-028408      S/N:          ZW8299
Assembly ID:   0x097a          Assembly Version: 02.06
Date:         01-19-2012      Assembly Flags: 0x00
Version:      REV 06
ID: MPC QXM
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:

```

```

Address 0x00: 7f b0 01 ff 09 7a 02 06 52 45 56 20 30 36 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 32 38 34 30 38 00 00
Address 0x20: 53 2f 4e 20 5a 57 38 32 39 39 00 00 00 13 01 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff
Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
QXM 1          REV 06    711-028408    ZY0609          MPC QXM
Jedec Code:    0x7fb0          EEPROM Version:    0x01
P/N:           711-028408      S/N:           ZY0609
Assembly ID:   0x097a         Assembly Version: 02.06
Date:          01-19-2012     Assembly Flags: 0x00
Version:       REV 06
ID: MPC QXM
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 09 7a 02 06 52 45 56 20 30 36 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 32 38 34 30 38 00 00
Address 0x20: 53 2f 4e 20 5a 59 30 36 30 39 00 00 00 13 01 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff
Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
ADC 7          REV 17    750-043596    ABCA0990          Adapter Card
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-043596      S/N:           ABCA0990
Assembly ID:   0x0b3d         Assembly Version: 01.17
Date:          03-07-2013     Assembly Flags: 0x00
Version:       REV 17         CLEI Code:       IPUCBA8CAA
ID: Adapter Card              FRU Model Number: MX2000-LC-ADAPTER
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 3d 01 11 52 45 56 20 31 37 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 34 33 35 39 36 00 00
Address 0x20: 53 2f 4e 20 41 42 43 41 30 39 39 30 00 07 03 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 43 42 41 38 43 41 41 4d
Address 0x50: 58 32 30 30 30 2d 4c 43 2d 41 44 41 50 54 45 52
Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff
Address 0x70: ff ff ff 3a 00 00 00 00 00 00 00 00 00 00 00 00
Fan Tray 0     REV 01    760-052467    ACAY6190          172mm FanTray - 6 Fans
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           760-052467      S/N:           ACAY6190
Assembly ID:   0x0b96         Assembly Version: 02.10
Date:          09-18-2015     Assembly Flags: 0x00
Version:       REV 01         CLEI Code:       IPUCBENCAA
ID: 172mm FanTray - 6 Fans    FRU Model Number: MX2000-FANTRAY-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 96 02 0a 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 36 30 2d 30 35 32 34 36 37 00 00
Address 0x20: 53 2f 4e 20 41 43 41 59 36 31 39 30 00 12 09 07
Address 0x30: df ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 43 42 45 4e 43 41 41 4d
Address 0x50: 58 32 30 30 30 2d 46 41 4e 54 52 41 59 2d 53 00
Address 0x60: 00 00 00 00 00 00 31 ff ff ff ff ff ff ff ff

```



```

Address 0x70: ff ff ff 1a ff ff ff ff ff ff ff ff ff ff ff
Fan Tray 1      REV 01    760-052467    ACAY6414      172mm FanTray - 6 Fans
Jedec Code:    0x7fb0      EEPROM Version: 0x02
P/N:           760-052467    S/N:          ACAY6414
Assembly ID:   0x0b96      Assembly Version: 02.10
Date:          10-28-2015    Assembly Flags: 0x00
Version:       REV 01      CLEI Code:    IPUCBENCAA
ID: 172mm FanTray - 6 Fans    FRU Model Number: MX2000-FANTRAY-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 96 02 0a 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 36 30 2d 30 35 32 34 36 37 00 00
Address 0x20: 53 2f 4e 20 41 43 41 59 36 34 31 34 00 1c 0a 07
Address 0x30: df ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 43 42 45 4e 43 41 41 4d
Address 0x50: 58 32 30 30 30 2d 46 41 4e 54 52 41 59 2d 53 00
Address 0x60: 00 00 00 00 00 00 31 ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff 1a ff ff ff ff ff ff ff ff ff ff ff

```

### show chassis hardware models (MX2008 Router)

```

user@host>show chassis hardware models
Hardware inventory:

```

Item	Version	Part number	Serial number	FRU model number
Midplane	REV 47	750-044636	ABAD1739	CHAS-BP-MX2010-S
PMP	REV 01	711-051406	ACVD0738	
FPM Board	REV 02	760-068193	ABDG7408	PROTO-ASSEMBLY
PSM 1	REV 06	740-050037	1EDB61200R8	MX2000-PSM-DC-S
PSM 2	REV 06	740-050037	1EDB61200WA	MX2000-PSM-DC-S
PSM 3	REV 06	740-050037	1EDB61200NY	MX2000-PSM-DC-S
PSM 4	REV 06	740-050037	1EDB61200N2	MX2000-PSM-DC-S
PSM 5	REV 06	740-050037	1EDB61200RN	MX2000-PSM-DC-S
PSM 6	REV 06	740-050037	1EDB61200RF	MX2000-PSM-DC-S
PSM 7	REV 06	740-050037	1EDB61200R7	MX2000-PSM-DC-S
PDM 0	REV 01	740-060189	1EFF5250143	MX2K-PDM-OP-DC-S
PDM 1	REV 01	740-060189	1EFF5250074	MX2K-PDM-OP-DC-S
CB 0	REV 01	750-067373	ABDJ0047	PROTO-ASSEMBLY
CB 1	REV 03	750-067373	ABDH3016	PROTO-ASSEMBLY
SFB 0	REV 08	750-067371	ABDK7180	PROTO-ASSEMBLY
SFB 1	REV 08	750-067371	ABDK7024	PROTO-ASSEMBLY
SFB 2	REV 08	750-067371	ABDK7188	PROTO-ASSEMBLY
SFB 3	REV 08	750-067371	ABDK7143	PROTO-ASSEMBLY
SFB 4	REV 08	750-067371	ABDK7030	PROTO-ASSEMBLY
SFB 5	REV 08	750-067371	ABDK7146	PROTO-ASSEMBLY
SFB 6	REV 08	750-067371	ABDK7203	PROTO-ASSEMBLY
SFB 7	REV 08	750-067371	ABDK7238	PROTO-ASSEMBLY
FPC 0	REV 36	750-044130	ABCS8607	PROTO-ASSEMBLY
MIC 0	REV 21	750-050008	ABCT5920	MIC6-100G-CXP
FPC 1	REV 22	750-063414	CAFJ3026	MX2K-MPC9E
FPC 7	REV 08	750-038492	ZX4080	MX-MPC2E-3D-EQ
MIC 0	REV 05	750-037128	ZR4031	MIC-3D-4CHOC3-10C12-CE
MIC 1	REV 23	750-032479	CADE8614	MIC-3D-8DS3-E3
ADC 7	REV 17	750-043596	ABCA0990	MX2000-LC-ADAPTER
Fan Tray 0	REV 01	760-052467	ACAY6190	MX2000-FANTRAY-S
Fan Tray 1	REV 01	760-052467	ACAY6414	MX2000-FANTRAY-S

### show chassis hardware clei-models (MX2008 Router)

```

user@host>show chassis hardware clei-models

```

## Hardware inventory:

Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 47	750-044636	IPMU810ARB	CHAS-BP-MX2010-S
PMP	REV 01	711-051406		
FPM Board	REV 02	760-068193	PROTOXCLEI	PROTO-ASSEMBLY
PSM 1	REV 06	740-050037	IPUPAPDKAA	MX2000-PSM-DC-S
PSM 2	REV 06	740-050037	IPUPAPDKAA	MX2000-PSM-DC-S
PSM 3	REV 06	740-050037	IPUPAPDKAA	MX2000-PSM-DC-S
PSM 4	REV 06	740-050037	IPUPAPDKAA	MX2000-PSM-DC-S
PSM 5	REV 06	740-050037	IPUPAPDKAA	MX2000-PSM-DC-S
PSM 6	REV 06	740-050037	IPUPAPDKAA	MX2000-PSM-DC-S
PSM 7	REV 06	740-050037	IPUPAPDKAA	MX2000-PSM-DC-S
PDM 0	REV 01	740-060189	IPUPAN1KAA	MX2K-PDM-OP-DC-S
PDM 1	REV 01	740-060189	IPUPAN1KAA	MX2K-PDM-OP-DC-S
CB 0	REV 01	750-067373	PROTOXCLEI	PROTO-ASSEMBLY
CB 1	REV 03	750-067373	PROTOXCLEI	PROTO-ASSEMBLY
SFB 0	REV 08	750-067371	PROTOXCLEI	PROTO-ASSEMBLY
SFB 1	REV 08	750-067371	PROTOXCLEI	PROTO-ASSEMBLY
SFB 2	REV 08	750-067371	PROTOXCLEI	PROTO-ASSEMBLY
SFB 3	REV 08	750-067371	PROTOXCLEI	PROTO-ASSEMBLY
SFB 4	REV 08	750-067371	PROTOXCLEI	PROTO-ASSEMBLY
SFB 5	REV 08	750-067371	PROTOXCLEI	PROTO-ASSEMBLY
SFB 6	REV 08	750-067371	PROTOXCLEI	PROTO-ASSEMBLY
SFB 7	REV 08	750-067371	PROTOXCLEI	PROTO-ASSEMBLY
FPC 0	REV 36	750-044130	PROTOXCLEI	PROTO-ASSEMBLY
MIC 0	REV 21	750-050008	IP9IATYDAA	MIC6-100G-CXP
FPC 1	REV 22	750-063414	IPUCBMUCAA	MX2K-MPC9E
FPC 7	REV 08	750-038492	COUIBA5BAA	MX-MPC2E-3D-EQ
MIC 0	REV 05	750-037128	PROTOXCLEI	MIC-3D-4CHOC3-10C12-CE
MIC 1	REV 23	750-032479	COUIA8DBAA	MIC-3D-8DS3-E3
ADC 7	REV 17	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER
Fan Tray 0	REV 01	760-052467	IPUCBENCAA	MX2000-FANTRAY-S
Fan Tray 1	REV 01	760-052467	IPUCBENCAA	MX2000-FANTRAY-S

## show chassis hardware (MX10003 Router)

user@host&gt; show chassis hardware

## Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			BLANK	JNP10003 [MX10003]
Midplane	REV 01	750-066883	CAGM0759	Midplane 2
Routing Engine 0		BUILTIN	BUILTIN	Routing Engine
Routing Engine 1		BUILTIN	BUILTIN	Routing Engine
CB 0	REV 07	750-067071	CAGX4354	SPM
Mezz	REV 10	711-066896	CAHS7200	SPM Mezz Board
CB 1	REV 07	750-067071	CAGX4363	SPM
Mezz	REV 10	711-066896	CAHS7193	SPM Mezz Board
FPC 0	REV 05	750-066879	CAGV0273	LC2103
CPU		BUILTIN	BUILTIN	SMPC PMB
PIC 0				
PIC 1				
FPC 1	REV 05	750-066879	CAGV0278	LC2103
CPU		BUILTIN	BUILTIN	SMPC PMB
PIC 0		BUILTIN	BUILTIN	6xQSFP
PIC 1				
PEM 0	REV 01	740-066937	1HS16320003	JNP-PWR1600-AC
PEM 1	REV 01	740-066937	1HS16320002	JNP-PWR1600-AC
Fan Tray 0	REV 02	760-069329	CAGS7731	JNP FAN 3RU
Fan Tray 1	REV 02	760-069329	CAGS7776	JNP FAN 3RU

Fan Tray 2	REV 02	760-069329	CAGS7659	JNP FAN 3RU
Fan Tray 3	REV 02	760-069329	CAGS7669	JNP FAN 3RU

### show chassis hardware (MX204 Router)

```
user@host> show chassis hardware
```

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			BB768	JNP204 [MX204]
Routing Engine 0		BUILTIN	BUILTIN	RE-S-2X00x6
CB 0	REV 11	750-069579	CAJD3113	JNP204 [MX204]
FPC 0		BUILTIN	BUILTIN	MPC
PIC 0		BUILTIN	BUILTIN	4XQSFP28 PIC
Xcvr 0	REV 01	740-061405	1ACQ110409R	QSFP-100GBASE-SR4
Xcvr 1	REV 01	740-054053	QF027546	QSFP+-4X10G-SR
Xcvr 2	REV 01	740-058732	1AMQA142092	QSFP-100GBASE-LR4
Xcvr 3	REV 01	740-058732	1AMQA14203J	QSFP-100GBASE-LR4
PIC 1		BUILTIN	BUILTIN	8XSFP PIC
PEM 1	REV 04	740-043886	1GA46361256	JPSU-650W-DC-AFO
Fan Tray 0				Fan Tray, Front to Back
Airflow - AFO				
Fan Tray 1				Fan Tray, Front to Back
Airflow - AFO				
Fan Tray 2				Fan Tray, Front to Back
Airflow - AFO				

### show chassis hardware (vMX running in lite mode)

```
user@host> show chassis hardware
```

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			VM54599D128A	VMX
Midplane				
Routing Engine 0				RE-VMX
CB 0				VMX SCB
CB 1				VMX SCB
FPC 0				Virtual FPC
CPU	Rev. 1.0	RIOT-LITE	BUILTIN	
MIC 0				Virtual
PIC 0		BUILTIN	BUILTIN	Virtual

### show chassis hardware (vMX running in performance mode)

```
user@host> show chassis hardware
```

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			VM54599D128A	VMX
Midplane				
Routing Engine 0				RE-VMX
CB 0				VMX SCB
CB 1				VMX SCB
FPC 0				Virtual FPC
CPU	Rev. 1.0	RIOT-PERF	BUILTIN	
MIC 0				Virtual
PIC 0		BUILTIN	BUILTIN	Virtual

## show chassis hardware (T320 Router)

```

user@host> show chassis hardware
Hardware inventory:
Item              Version  Part number  Serial number  Description
Chassis                               19093         T320
Midplane          REV 04   710-004339   BC1436        T320 Backplane
FPM GBUS          REV 03   710-004461   BC1407        T320 FPM Board
FPM Display       REV 04   710-002897   BE0763        FPM Display
CIP               REV 05   710-002895   BB2311        T Series CIP
PEM 0            Rev 01   740-004359   NB12546       Power Entry Module
SCG 0            REV 06   710-004455   AY4522        T320 Sonet
Clock Gen.
Routing Engine 0
CB 0              REV 13   710-002728   BC1577        unknown
                  T Series
Control Board
CB 1              REV 13   710-002728   BC1595        T Series
Control Board
FPC 1             REV 09   710-007531   HS1572        FPC Type 2
CPU               REV 15   710-001726   HR8763        FPC CPU
PIC 0             REV 01   750-010618   CB5579        4x G/E SFP,
1000 BASE
SFP 0             REV 01   740-007326   P5809Z1       SFP-SX
SFP 1             REV 01   740-007326   P4Q10XU       SFP-SX
SFP 2             NON-JNPR RA45020031    SFP-SX
SFP 3             NON-JNPR RA45020032    SFP-SX
PIC 1             REV 01   750-010618   CD9587        4x G/E SFP,
1000 BASE
SFP 0             NON-JNPR P5A08QZ       SFP-T
SFP 1             REV 01   740-007326   P4Q133K       SFP-SX
SFP 2             REV 01   740-007326   P5809YY       SFP-SX
SFP 3             REV 01   740-007327   4C81704       SFP-LX
MMB 1             REV 03   710-005555   HR9401        MMB-288mbit
PPB 0             REV 04   710-003758   HR2886        PPB Type 2
FPC 2             REV 07   710-005860   HP2392        FPC Type 1
CPU               REV 14   710-001726   HP7797        FPC CPU
PIC 0             REV 02   750-007643   HM0853        1x G/E QPP,
1000 BASE
SFP 0             REV 01   740-007326   P11E9JJ       SFP-SX
MMB 1             REV 02   710-005555   HN2379        MMB-288mbit
PPB 0             REV 04   710-003758   HP8092        PPB Type 2
FPC 3             REV 07   710-005860   HP2393        FPC Type 1
CPU               REV 14   710-001726   HP0968        FPC CPU
PIC 0             REV 01   750-010240   CB5363        1x G/E SFP,
1000 BASE
SFP 0             REV 01   740-007326   P4R0PNH       SFP-SX
PIC 1             REV 03   750-003034   HD2832        4x OC-3 SONET,
SMIR
MMB 1             REV 02   710-005555   HN6307        MMB-288mbit
PPB 0             REV 04   710-003758   HP5051        PPB Type 2
FPC 4             REV 01   710-010845   JD3872        FPC Type 4
CPU               REV 02   710-011481   JB6042        FPC CPU
5                 REV 01   710-005802   BC1566        FPC Type 2
CPU               REV 09   710-001726   AY4922        FPC CPU
PIC 0             REV 02   750-008155   BE2114        2x G/E QPP,
1000 BASE
SFP 0             REV 01   740-007326   P4R0PMQ       SFP-SX
SFP 1             REV 01   740-007326   P4R0PN9       SFP-SX
PIC 1             REV 01   750-008155   BE2116        2x G/E QPP,
1000 BASE
SFP 0             REV 01   740-007326   P4R0PNZ       SFP-SX

```

```

SFP 1
MMB 1      REV 01  710-005555  AZ2246      SFP-T
PPB 0      REV 03  710-003758  AY4839      MMB-288mbit
FPC 7      REV 01  710-005803  AZ2123      PPB Type 2
...
FPC Type 3

```

### show chassis hardware (T640 Router)

```

user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               19182         T640
Midplane      REV 04   710-002726   AX5608        T640 Backplane
FPM GBUS      REV 02   710-002901   HE3064        T640 FPM Board
FPM Display   REV 02   710-002897   HE7864        FPM Display
CIP           REV 05   710-002895   HA5024        T Series CIP
PEM 0         Rev 02   740-029522   VH26235       AC PEM 10kW US
PEM 1         Rev 02   740-029522   VH26230       AC PEM 10kW US
SCG 0         REV 03   710-003423   HA4508        T640 Sonet Clock Gen.
Routing Engine 0 REV 02   740-005022   210865700483 RE-3.0 (RE-600)
CB 0          REV 01   710-002728   HD3044        T Series Control Board
FPC 2         REV 04   710-001721   HD5572        FPC Type 3
CPU           REV 06   710-001726   HA4712        FPC CPU
PIC 1         REV 03   750-009567   HV2331        1x 10GE(LAN),XENPAK
SFP 0         REV 01   740-009898   USC202R103    XENPAK-SR
PIC 2         REV 03   750-009567   HV2332        1x 10GE(LAN),XENPAK
SFP 0         REV 01   740-011268   USC202R112    XENPAK-ZR
PIC 3         REV 03   750-009567   HX4416        1x 10GE(LAN),XENPAK
SFP 0         REV 01   740-012056   434TC004      XENPAK-CX4
PIC 4         REV 03   750-009567   HX4420        1x 10GE(LAN),XENPAK
SFP 0         REV 01   740-012058   434TC124      XENPAK-LX4
FPC 5         REV 01   710-013553   JE4839        E2-FPC Type 1
CPU           REV 01   710-013569   JW9163        FPC CPU
PIC 0         REV 01   750-009567   HX4419        1x 10GE(LAN),XENPAK
SFP 0         REV 01   740-009898   USC202RT05    XENPAK-LR
PIC 1         REV 03   750-009567   HN7426        1x 10GE(LAN),XENPAK
SFP 0         REV 01   740-009550   03L90051      XENPAK-ER
PIC 2         REV 03   750-009467   HT7423        1x 10GE(LAN),XENPAK
SFP 0         NON-JNPR UNKNOWON
PIC 3         REV 04   750-005100   AY4850        1x 10GE(LAN),DWDM
FPC 4         REV 01   710-010845   JD3872        FPC Type 4
CPU           REV 02   710-011481   JB6042        FPC CPU
Fan Tray 0                               Front Top Fan Tray
Fan Tray 1                               Front Bottom Fan Tray
Fan Tray 2                               Rear Fan Tray

```

### show chassis hardware models (T640 Router)

```

user@host> show chassis hardware models
Hardware inventory:
Item          Version  Part number  CLEI code      FRU model number
Midplane      REV 04   710-002726   CHAS-BP-T640-S
FPM Display   REV 02   710-002897   CRAFT-T640-S
CIP           REV 05   710-002895   CIP-L-T640-S
PEM 0         Rev 01   740-002595   PWR-T-DC-S
SCG 0         REV 04   710-003423   SCG-T-S
SCG 1         REV 04   710-003423   SCG-T-S
Routing Engine 0 REV 01   740-005022   RE-600-2048-S
Routing Engine 1 REV 07   740-005022   RE-600-2048-S
CB 0          REV 06   710-002726   CHAS-BP-T640-S

```

CB 1	REV 06	710-002728	CB-L-T-S
FPC 5	REV 05	710-007527	T640-FPC2
PIC 0	REV 05	750-002510	PB-2GE-SX
PIC 1	REV 05	750-001901	PB-40C12-SON-SMIR
FPC 6	REV 03	710-001721	T640-FPC3
PIC 1	REV 01	750-009553	PC-40C48-SON-SFP
SIB 4	REV 02	750-005486	SIB-I-T640-S
Fan Tray 0			FANTRAY-T-S
Fan Tray 1			FANTRAY-T-S
Fan Tray 2			FAN-REAR-TX-T640-S

### show chassis hardware extensive (T640 Router)

```

user@host> show chassis hardware extensive
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis
Jedec Code:   0x7fb0          EEPROM Version: 0x01
P/N:          .....          S/N:           .....
Assembly ID:  0x0507          Assembly Version: 00.00
Date:         00-00-0000      Assembly Flags:  0x00
Version:      .....
ID: Gibson LCC Chassis
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 7f b0 01 ff 05 07 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x20: ff ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane
Jedec Code:   0x7fb0          EEPROM Version: 0x01
P/N:          710-002726.      S/N:           AX5633.
Assembly ID:  0x0127          Assembly Version: 01.04
Date:         06-27-2001      Assembly Flags:  0x00
Version:      REV 04.....
ID: Gibson Backplane
Board Information Record:
Address 0x00: ad 01 08 00 00 90 69 0e f8 00 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 01 27 01 04 52 45 56 20 30 34 00 00
Address 0x10: 00 00 00 00 37 31 30 2d 30 30 32 37 32 36 00 00
Address 0x20: 53 2f 4e 20 41 58 35 36 33 33 00 00 00 00 1b 06 07
Address 0x30: d1 ff ff ff ad 01 08 00 00 90 69 0e f8 00 ff ff
Address 0x40: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
FPM GBUS
REV 02      710-002901  HE3245
...
FPM Display
REV 02      710-002897  HA4873
...
CIP
REV 05      710-002895  HA4729
...
PEM 1
RevX02      740-002595  MD21815      Power Entry Module
...
SCG 0
REV 04      710-003423  HF6023
...
SCG 1
REV 04      710-003423  HF6061
...
Routing Engine 0
REV 01      740-005022  210865700292  RE-3.0
...
CB 0
REV 06      710-002728  HE3614

```

```

...
FPC 1          REV 01  710-002385  HE3009          FPC Type 1
...           REV 06  710-001726  HC0010

```

### show chassis hardware (T4000 Router)

```
user@host> show chassis hardware
```

```
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			JN1172F25AHA	T4000
Midplane	REV 01	710-027486	RC8355	T-series Backplane
FPM GBUS	REV 13	710-002901	BBAE0927	T640 FPM Board
FPM Display	REV 01	710-021387	EF6764	T1600 FPM Display
CIP	REV 06	710-002895	BBAD9210	T-series CIP
PEM 0	REV 01	740-036442	VA00016	Power Entry Module 6x60
SCG 0	REV 18	710-003423	BBAD7248	T640 Sonet Clock Gen.
SCG 1	REV 18	710-003423	BBAE3874	T640 Sonet Clock Gen.
Routing Engine 0	REV 05	740-026941	P737F-002248	RE-DUO-1800
Routing Engine 1	REV 06	740-026941	P737F-002653	RE-DUO-1800
CB 0	REV 09	710-022597	ED0295	LCC Control Board
CB 1	REV 09	710-022597	EA6050	LCC Control Board
FPC 0	REV 26	750-032819	EK1173	FPC Type 5-3D
CPU	REV 12	711-030686	EJ8584	SNG PMB
PIC 0	REV 07	750-034624	EF6837	12x10GE (LAN/WAN) SFPP
Xcvr 0	REV 01	740-031980	123363A01145	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	123363A01147	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AJJ01P3	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B10M03256	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	AJJ01M2	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	123363A01137	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	AJJ01PN	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	AJJ01NW	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	123363A01139	SFP+-10G-SR
Xcvr 9	REV 01	740-031980	AJJ01KE	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	123363A01336	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	B10M01325	SFP+-10G-SR
PIC 1	REV 07	750-034624	EF6800	12x10GE (LAN/WAN) SFPP
Xcvr 0	REV 01	740-031980	AJJ01SA	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AJJ01QZ	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AJJH0217	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AJJ01TE	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	AJJ01KV	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	AJJ01MU	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	AJJ01R0	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	AJJ01TC	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	AJJ0364	SFP+-10G-SR
Xcvr 9	REV 01	740-031980	AJD0GV3	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	B10M03343	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	AJJ01QJ	SFP+-10G-SR
LMB 0	REV 05	711-034381	EJ8490	Type-0 LMB
LMB 1	REV 04	711-035774	EJ8517	Type-1 LMB
LMB 2	REV 05	711-034381	EJ8489	Type-0 LMB
FPC 3	REV 07	750-032819	EG3637	FPC Type 5-3D
CPU	REV 09	711-030686	EG0150	SNG PMB
PIC 0	REV 08	750-035293	EF3657	1x100GE
Xcvr 0	REV 01	740-032210	C22CQNJ	CFP-100G-LR4
PIC 1	REV 10	750-034624	BBAN4098	12x10GE (LAN/WAN) SFPP
Xcvr 0	REV 01	740-031980	B11J04902	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11J04891	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AJJ01MX	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11J04183	SFP+-10G-SR

Xcvr 4	REV 01	740-031980	B11J04894	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	B11J04184	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	B11J04897	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	B11J04899	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	AJJ01TV	SFP+-10G-SR
Xcvr 9	REV 01	740-031980	B11J04057	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	AJJ01M4	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	B11J04905	SFP+-10G-SR
LMB 0	REV 04	711-034381	EG1524	Type-0 LMB
LMB 1	REV 03	711-035774	EG0345	Type-1 LMB
LMB 2	REV 04	711-034381	EG1522	Type-0 LMB
FPC 5	REV 03	710-033871	BBAJ0768	FPC Type 4-ES
CPU	REV 11	710-016744	BBAH9342	ST-PMB2
PIC 0	REV 09	750-029262	EE6789	100GE
PIC 1	REV 03	750-034781	EE6655	100GE CFP
Xcvr 0	REV 01	740-032210	J11A22334	CFP-100G-LR4
BRIDGE 0	REV 03	711-029995	EE6572	100GE Bridge Board
MMB 0	REV 07	710-025563	BBAJ4657	ST-MMB2
MMB 1	REV 07	710-025563	BBAJ3073	ST-MMB2
FPC 6	REV 05	750-010153	EF4936	FPC Type 5-3D
CPU	REV 06	711-030686	EF4189	SNG PMB
PIC 0	REV 10	750-034624	BBAN4109	12x10GE (LAN/WAN) SFPP
Xcvr 0	REV 01	740-031980	B11J04895	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11J04898	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11J04021	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11J04903	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	B11J04311	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	B11J04059	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	B11J04016	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	B11J04017	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	B11J04887	SFP+-10G-SR
Xcvr 9	REV 01	740-031980	B11J04297	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	B11J04893	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	B11J04022	SFP+-10G-SR
PIC 1	REV 02	750-034624	EE3711	12x10GE (LAN/WAN) SFPP
Xcvr 0	REV 01	740-031980	AJH033X	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AJJ01N0	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AJJ01SV	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AJJ032L	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	B10M01593	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	AJD0FF1	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	AJJ01NU	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	123363A01305	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	B10M00361	SFP+-10G-SR
Xcvr 9	REV 01	740-031980	AJJ01M7	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	AJJ032X	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	AJJ01PG	SFP+-10G-SR
LMB 0	REV 04	711-034381	EF3838	Type-0 LMB
LMB 1	REV 03	711-035774	EF3821	Type-1 LMB
LMB 2	REV 04	711-034381	EF3834	Type-0 LMB
SPMB 0	REV 05	710-023321	ED1990	LCC Switch CPU
SPMB 1	REV 05	710-023321	EA2768	LCC Switch CPU
SIB 0	REV 02	711-036340	EF8802	SIB-HC-3D
SIB 1	REV 07	711-036340	EG2286	SIB-HC-3D
SIB 2	REV 07	711-036340	EG2252	SIB-HC-3D
SIB 3	REV 02	711-036340	EF1358	SIB-HC-3D
SIB 4	REV 02	711-036340	EF8806	SIB-HC-3D
Fan Tray 0				Front Top Fan Tray
Fan Tray 1				Front Bottom Fan Tray
-- Rev 2				
Fan Tray 2				Rear Fan Tray -- Rev 3



## show chassis hardware (T4000 Router with 16-GB Line Card Chassis (LCC) Routing Engine)

```

user@host> show chassis hardware
Hardware inventory:

```

Item	Version	Part number	Serial number	Description
Chassis			JN11BDF2CAHA	T1600
Midplane	REV 01	710-027486	ACAJ0774	T640 Backplane
FPM GBUS	REV 13	710-002901	BBAL6812	T640 FPM Board
FPM Display	REV 04	710-021387	BBAP2679	T1600 FPM Display
CIP	REV 06	710-002895	BBAP4758	T-series CIP
PEM 0	Rev 03	740-026384	XF86421	Power Entry Module 3x80
PEM 1	Rev 03	740-026384	XF86429	Power Entry Module 3x80
SCG 0	REV 18	710-003423	BBAP1896	T640 Sonet Clock Gen.
SCG 1	REV 18	710-003423	BBAN8659	T640 Sonet Clock Gen.
Routing Engine 0	REV 01	740-042243	737F-002238	RE-DUO-1800-16G
Routing Engine 1	REV 01	740-042243	737F-002403	RE-DUO-1800-16G
CB 1	REV 11	710-022597	EK4526	LCC Control Board
CB 1	REV 11	710-022597	EK4527	LCC Control Board
FPC 0	REV 05	710-033871	EK5644	FPC Type 4-ES
CPU	REV 11	710-016744	EK3428	ST-PMB2
PIC 0	REV 20	750-017405	EJ3041	4x 10GE (LAN/WAN) XFP
PIC 1	REV 17	750-026962	EH7536	10x10GE (LAN/WAN) SFPP
MMB 0	REV 07	710-025563	EK6039	ST-MMB2
MMB 1	REV 07	710-025563	EK6086	ST-MMB2
FPC 1	REV 05	710-033871	EK6583	FPC Type 4-ES
CPU	REV 11	710-016744	EK3401	ST-PMB2
PIC 0	REV 17	750-026962	EJ8948	10x10GE (LAN/WAN) SFPP
MMB 0	REV 07	710-025563	EK6202	ST-MMB2
MMB 1	REV 07	710-025563	EK6112	ST-MMB2
SPMB 1	REV 05	710-023321	EK4900	LCC Switch CPU
SIB 0	REV 11	710-013074	EK5958	SIB-I8-SF
SIB 1	REV 11	710-013074	EK4606	SIB-I8-SF
SIB 2	REV 11	710-013074	EK5971	SIB-I8-SF
SIB 3	REV 11	710-013074	EK4609	SIB-I8-SF
SIB 4	REV 11	710-013074	EK4602	SIB-I8-SF
Fan Tray 0				Front Top Fan Tray
Fan Tray 1				Front Bottom Fan Tray
Fan Tray 2				Rear Fan Tray -- Rev 2

## show chassis hardware (T4000 Router with LSR FPC)

```

user@host> show chassis hardware
Hardware inventory:

```

Item	Version	Part number	Serial number	Description
Chassis			JN1173A24AHA	T4000
FPC 3	REV	750-048373	AN7797	FPC Type 5-LSR
CPU	REV 10	711-030686	AN6649	SNG PMB
PIC 0	REV 07	750-034624	EF6830	12x10GE (LAN/WAN) SFPP

## show chassis hardware clei-models (T4000 Router)

```

user@host> show chassis hardware clei-models
Hardware inventory:

```

Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 01	710-027486	IPMJ700DRD	CHAS-BP-T1600-S
FPM Display	REV 01	710-021387		CRAFT-T1600-S
CIP	REV 06	710-002895		CIP-L-T640-S
PEM 0	REV 01	740-036442	IPUPAG6KAA	PWR-T-6-60-DC
SCG 0	REV 18	710-003423		SCG-T-S
SCG 1	REV 18	710-003423		SCG-T-S

Routing Engine 0	REV 05	740-026941		RE-DUO-C1800-8G-S
Routing Engine 1	REV 06	740-026941		RE-DUO-C1800-8G-S
CB 0	REV 09	710-022597		CB-LCC-S
CB 1	REV 09	710-022597		CB-LCC-S
FPC 3				
PIC 0	REV 08	750-035293	XXXXXXXXBB	PF-1CGE-CFP
PIC 1	REV 10	750-034624	XXXXXXXXCC	PF-12XGE-SFPP
FPC 5	REV 03	710-033871	IPUCAMBCTD	T1600-FPC4-ES
PIC 1	REV 03	750-034781	IPUIBKLMMA	PD-1CE-CFP-FPC4
FPC 6				
PIC 0	REV 10	750-034624	XXXXXXXXCC	PF-12XGE-SFPP
Fan Tray 0				FANTRAY-T-S
Fan Tray 1				FANTRAY-T4000-S
Fan Tray 2				FANTRAY-TXP-R-S

### show chassis hardware detail (T4000 Router)

```

user@host> show chassis hardware detail
Hardware inventory:

```

Item	Version	Part number	Serial number	Description
Chassis			JN1172F25AHA	T4000
Midplane	REV 01	710-027486	RC8355	T-series Backplane
FPM GBUS	REV 13	710-002901	BBAE0927	T640 FPM Board
FPM Display	REV 01	710-021387	EF6764	T1600 FPM Display
CIP	REV 06	710-002895	BBAD9210	T-series CIP
PEM 0	REV 01	740-036442	VA00016	Power Entry Module 6x60
SCG 0	REV 18	710-003423	BBAD7248	T640 Sonet Clock Gen.
SCG 1	REV 18	710-003423	BBAE3874	T640 Sonet Clock Gen.
Routing Engine 0	REV 05	740-026941	P737F-002248	RE-DUO-1800
ad0	3823 MB	SMART CF	2009121602A661576157	Compact Flash
ad1	59690 MB	STEC MACH-8 SSD	STM000103FDB	Disk 1
Routing Engine 1	REV 06	740-026941	P737F-002653	RE-DUO-1800
ad0	3823 MB	SMART CF	201011150153F52CF52C	Compact Flash
ad1	62720 MB	SMART Lite SATA Drive	2010110900150A880A88	Disk 1
CB 0	REV 09	710-022597	ED0295	LCC Control Board
CB 1	REV 09	710-022597	EA6050	LCC Control Board
FPC 0	REV 26	750-032819	EK1173	FPC Type 5-3D
CPU	REV 12	711-030686	EJ8584	SNG PMB
PIC 0	REV 07	750-034624	EF6837	12x10GE (LAN/WAN) SFPP
Xcvr 0	REV 01	740-031980	123363A01145	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	123363A01147	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AJJ01P3	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B10M03256	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	AJJ01M2	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	123363A01137	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	AJJ01PN	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	AJJ01NW	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	123363A01139	SFP+-10G-SR
Xcvr 9	REV 01	740-031980	AJJ01KE	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	123363A01336	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	B10M01325	SFP+-10G-SR
PIC 1	REV 07	750-034624	EF6800	12x10GE (LAN/WAN) SFPP
Xcvr 0	REV 01	740-031980	AJJ01SA	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AJJ01QZ	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AJH0217	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AJJ01TE	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	AJJ01KV	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	AJJ01MU	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	AJJ01R0	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	AJJ01TC	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	AJJ0364	SFP+-10G-SR

Xcvr 9	REV 01	740-031980	AJD0GV3	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	B10M03343	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	AJJ01QJ	SFP+-10G-SR
LMB 0	REV 05	711-034381	EJ8490	Type-0 LMB
LMB 1	REV 04	711-035774	EJ8517	Type-1 LMB
LMB 2	REV 05	711-034381	EJ8489	Type-0 LMB
FPC 3	REV 07	750-032819	EG3637	FPC Type 5-3D
CPU	REV 09	711-030686	EG0150	SNG PMB
PIC 0	REV 08	750-035293	EF3657	1x100GE
Xcvr 0	REV 01	740-032210	C22CQNJ	CFP-100G-LR4
PIC 1	REV 10	750-034624	BBAN4098	12x10GE (LAN/WAN) SFPP
Xcvr 0	REV 01	740-031980	B11J04902	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11J04891	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AJJ01MX	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11J04183	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	B11J04894	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	B11J04184	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	B11J04897	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	B11J04899	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	AJJ01TV	SFP+-10G-SR
Xcvr 9	REV 01	740-031980	B11J04057	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	AJJ01M4	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	B11J04905	SFP+-10G-SR
LMB 0	REV 04	711-034381	EG1524	Type-0 LMB
LMB 1	REV 03	711-035774	EG0345	Type-1 LMB
LMB 2	REV 04	711-034381	EG1522	Type-0 LMB
FPC 5	REV 03	710-033871	BBAJ0768	FPC Type 4-ES
CPU	REV 11	710-016744	BBAH9342	ST-PMB2
PIC 0	REV 09	750-029262	EE6789	100GE
PIC 1	REV 03	750-034781	EE6655	100GE CFP
Xcvr 0	REV 01	740-032210	J11A22334	CFP-100G-LR4
BRIDGE 0	REV 03	711-029995	EE6572	100GE Bridge Board
MMB 0	REV 07	710-025563	BBAJ4657	ST-MMB2
MMB 1	REV 07	710-025563	BBAJ3073	ST-MMB2
FPC 6	REV 05	750-010153	EF4936	FPC Type 5-3D
CPU	REV 06	711-030686	EF4189	SNG PMB
PIC 0	REV 10	750-034624	BBAN4109	12x10GE (LAN/WAN) SFPP
Xcvr 0	REV 01	740-031980	B11J04895	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11J04898	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11J04021	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11J04903	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	B11J04311	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	B11J04059	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	B11J04016	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	B11J04017	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	B11J04887	SFP+-10G-SR
Xcvr 9	REV 01	740-031980	B11J04297	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	B11J04893	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	B11J04022	SFP+-10G-SR
PIC 1	REV 02	750-034624	EE3711	12x10GE (LAN/WAN) SFPP
Xcvr 0	REV 01	740-031980	AJH033X	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AJJ01N0	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AJJ01SV	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AJJ032L	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	B10M01593	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	AJD0FF1	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	AJJ01NU	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	123363A01305	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	B10M00361	SFP+-10G-SR
Xcvr 9	REV 01	740-031980	AJJ01M7	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	AJJ032X	SFP+-10G-SR

Xcvr 11	REV 01	740-031980	AJJ01PG	SFP+-10G-SR
LMB 0	REV 04	711-034381	EF3838	Type-0 LMB
LMB 1	REV 03	711-035774	EF3821	Type-1 LMB
LMB 2	REV 04	711-034381	EF3834	Type-0 LMB
SPMB 0	REV 05	710-023321	ED1990	LCC Switch CPU
SPMB 1	REV 05	710-023321	EA2768	LCC Switch CPU
SIB 0	REV 02	711-036340	EF8802	SIB-HC-3D
SIB 1	REV 07	711-036340	EG2286	SIB-HC-3D
SIB 2	REV 07	711-036340	EG2252	SIB-HC-3D
SIB 3	REV 02	711-036340	EF1358	SIB-HC-3D
SIB 4	REV 02	711-036340	EF8806	SIB-HC-3D
Fan Tray 0				Front Top Fan Tray
Fan Tray 1				Front Bottom Fan Tray
-- Rev 2				
Fan Tray 2				Rear Fan Tray -- Rev 3

### show chassis hardware models (T4000 Router)

user@host> show chassis hardware models

Hardware inventory:

Item	Version	Part number	Serial number	FRU model number
Midplane	REV 01	710-027486	RC8355	CHAS-BP-T1600-S
FPM Display	REV 01	710-021387	EF6764	CRAFT-T1600-S
CIP	REV 06	710-002895	BBAD9210	CIP-L-T640-S
PEM 0	REV 01	740-036442	VA00016	PWR-T-6-60-DC
SCG 0	REV 18	710-003423	BBAD7248	SCG-T-S
SCG 1	REV 18	710-003423	BBAE3874	SCG-T-S
Routing Engine 0	REV 05	740-026941	P737F-002248	RE-DUO-C1800-8G-S
Routing Engine 1	REV 06	740-026941	P737F-002653	RE-DUO-C1800-8G-S
CB 0	REV 09	710-022597	ED0295	CB-LCC-S
CB 1	REV 09	710-022597	EA6050	CB-LCC-S
FPC 3				
PIC 0	REV 08	750-035293	EF3657	PF-1CGE-CFP
PIC 1	REV 10	750-034624	BBAN4098	PF-12XGE-SFPP
FPC 5	REV 03	710-033871	BBAJ0768	T1600-FPC4-ES
PIC 1	REV 03	750-034781	EE6655	PD-1CE-CFP-FPC4
FPC 6				
PIC 0	REV 10	750-034624	BBAN4109	PF-12XGE-SFPP
Fan Tray 0				FANTRAY-T-S
Fan Tray 1				FANTRAY-T4000-S
Fan Tray 2				FAN-REAR-TXP-LCC

### show chassis hardware lcc (TX Matrix Router)

user@host> show chassis hardware lcc 0

lcc0-re0:

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			65751	T640
Midplane	REV 03	710-005608	RA1408	T640 Backplane
FPM GBUS	REV 09	710-002901	RA2784	T640 FPM Board
FPM Display	REV 05	710-002897	RA2825	FPM Display
CIP	REV 06	710-002895	HT0684	T Series CIP
PEM 0	Rev 11	740-002595	PM18483	Power Entry Module
PEM 1	Rev 11	740-002595	qb13984	Power Entry Module
SCG 0	REV 11	710-003423	HT0022	T640 Sonet Clock Gen.
Routing Engine 0	REV 13	740-005022	210865700363	RE-3.0 (RE-600)
CB 0	REV 03	710-007655	HW1195	Control Board (CB-T)

FPC 1	REV 05	710-007527	HM3245	FPC Type 2
CPU	REV 14	710-001726	HM1084	FPC CPU
PIC 0	REV 02	750-007218	AZ1112	2x OC-12 ATM2 IQ, SMIR
PIC 1	REV 02	750-007745	HG3462	4x OC-3 SONET, SMIR
PIC 2	REV 14	750-001901	BA5390	4x OC-12 SONET, SMIR
PIC 3	REV 09	750-008155	HS3012	2x G/E IQ, 1000 BASE
SFP 0		NON-JNPR	P1186TY	SFP-S
SFP 1	REV 01	740-007326	P11WLTf	SFP-SX
MMB 1	REV 02	710-005555	HL7514	MMB-288mbit
PPB 0	REV 04	710-003758	HM4405	PPB Type 2
PPB 1	REV 04	710-003758	AV1960	PPB Type 2
FPC 2	REV 08	710-010154	HZ3578	E-FPC Type 3
CPU	REV 05	710-010169	HZ3219	FPC CPU-Enhanced
PIC 0	REV 02	750-009567	HX2882	1x 10GE(LAN), XENPAK
SFP 0	REV 01	740-009898	USC202U709	XENPAK-LR
PIC 1	REV 03	750-003336	HJ9954	4x OC-48 SONET, SMSR
PIC 2	REV 01	750-004535	HC0235	1x OC-192 SM SR1
PIC 3	REV 07	750-007141	HX1699	10x 1GE(LAN), 1000 BASE
SFP 0	REV 01	740-007326	2441042	SFP-SX
SFP 1	REV 01	740-007326	2441027	SFP-SX
MMB 0	REV 03	710-010171	HV2365	MMB-5M3-288mbit
MMB 1	REV 03	710-010171	HZ3888	MMB-5M3-288mbit
SPMB 0	REV 09	710-003229	HW5245	T Series Switch CPU
SIB 3	REV 07	710-005781	HR5927	SIB-L8-F16
B Board	REV 06	710-005782	HR5971	SIB-L8-F16 (B)
SIB 4	REV 07	710-005781	HR5903	SIB-L8-F16
B Board	REV 06	710-005782	HZ5275	SIB-L8-F16 (B)

#### show chassis hardware scc (TX Matrix Router)

```
user@host> show chassis hardware scc
scc-re0:
```

```
-----
```

Hardware inventory:				
Item	Version	Part number	Serial number	Description
Chassis				TX Matrix
Midplane	REV 04	710-004396	RB0014	SCC Midplane
FPM GBUS	REV 04	710-004617	HW9141	SCC FPM Board
FPM Display	REV 04	710-004619	HS5950	SCC FPM
CIP 0	REV 01	710-010218	HV9151	SCC CIP
CIP 1	REV 01	710-010218	HV9152	SCC CIP
PEM 1	Rev 11	740-002595	QB13977	Power Entry Module
Routing Engine 0	REV 05	740-008883	P11123900153	RE-4.0 (RE-1600)
CB 0	REV 01	710-011709	HR5964	Control Board (CB-TX)
SPMB 0	REV 09	710-003229	HW5293	T Series Switch CPU
SIB 3				
SIB 4	REV 01	710-005839	HW1177	SIB-S8-F16
B Board	REV 01	710-005840	HW1202	SIB-S8-F16 (B)

#### show chassis hardware (T1600 Router)

```
user@host> show chassis hardware
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			B2703	T1600
Midplane	REV 03	710-005608	RC4137	T640 Backplane
FPM GBUS	REV 10	710-002901	DT7062	T640 FPM Board
FPM Display	REV 05	710-002897	DS3067	FPM Display
CIP	REV 06	710-002895	DT3386	T-series CIP

PEM 0	Rev 07	740-017906	UA26344	Power Entry Module 3x80
PEM 1	Rev 18	740-002595	UF38441	Power Entry Module
SCG 0	REV 15	710-003423	DV0941	T640 Sonet Clock Gen.
Routing Engine 0	REV 08	740-014082	9009014502	RE-A-2000
Routing Engine 1	REV 07	740-014082	9009009591	RE-A-2000
CB 0	REV 05	710-007655	JA9360	Control Board (CB-T)
CB 1	REV 03	710-017707	DT3251	Control Board (CB-T)
FPC 0	REV 07	710-013558	DR4253	E2-FPC Type 2
CPU	REV 05	710-013563	DS3902	FPC CPU-Enhanced
PIC 0	REV 01	750-010618	CB5446	4x G/E SFP, 1000 BASE
Xcvr 0	REV 01	740-011613	P9F11CW	SFP-SX
Xcvr 1	REV 01	740-011613	P9F15C2	SFP-SX
Xcvr 2	REV 01	740-011782	PB94K0L	SFP-SX
PIC 1	REV 06	750-001900	HB6399	1x OC-48 SONET, SMSR
PIC 2	REV 14	750-001901	AP1092	4x OC-12 SONET, SMIR
PIC 3	REV 07	750-001900	AR8275	1x OC-48 SONET, SMSR
MMB 1	REV 07	710-010171	DS1524	MMB-5M3-288mbit
FPC 1	REV 06	710-013553	DL9067	E2-FPC Type 1
CPU	REV 04	710-013563	DM1685	FPC CPU-Enhanced
PIC 0	REV 08	750-001072	AB1688	1x G/E, 1000 BASE-SX
PIC 1	REV 10	750-012266	JX5519	4x 1GE(LAN), IQ2
Xcvr 0	REV 01	740-011613	AM0812S8UK6	SFP-SX
Xcvr 2	REV 01	740-011613	AM0812S8UK1	SFP-SX
Xcvr 3	REV 01	740-011782	P8N1YHG	SFP-SX
PIC 2	REV 22	750-005634	DP0083	1x CHOC12 IQ SONET, SMIR
MMB 1	REV 07	710-008923	DN1862	MMB 3M 288-bit
FPC 2	REV 01	710-005548	HJ9899	FPC Type 3
CPU	REV 06	710-001726	HC0586	FPC CPU
PIC 0	REV 16	750-007141	NC9660	10x 1GE(LAN), 1000 BASE
Xcvr 0	REV 01	740-011613	AM0812S8XAR	SFP-SX
Xcvr 1	REV 01	740-011782	P920E7B	SFP-SX
Xcvr 2	REV 01	740-011613	AM0812S8XAU	SFP-SX
Xcvr 4	REV 01	740-011613	AM0812S8XAK	SFP-SX
Xcvr 5	REV 01	740-011613	AM0812S8XAA	SFP-SX
Xcvr 6	REV 01	740-011613	PAJ4NKY	SFP-SX
Xcvr 7	REV 01	740-011613	AM0812S8UJW	SFP-SX
Xcvr 8	REV 01	740-011782	PB81X89	SFP-SX
Xcvr 9	REV 01	740-011613	AM0812S8UJX	SFP-SX
PIC 1	REV 06	750-015217	DK3280	8x 1GE(TYPE3), IQ2
Xcvr 0	REV 01	740-011782	P8POA3T	SFP-SX
Xcvr 1	REV 01	740-013111	5090002	SFP-T
Xcvr 2	REV 01	740-011613	AM0814S93BQ	SFP-SX
Xcvr 4		NON-JNPR	PDE0FAN	SFP-SX
Xcvr 5	REV 01	740-011782	P8Q20XY	SFP-SX
Xcvr 6	REV 01	740-011613	AM0812S8UJV	SFP-SX
Xcvr 7	REV 01	740-011613	AM0812S8UP7	SFP-SX
PIC 2	REV 05	750-004695	HT4383	1x Tunnel
PIC 3	REV 17	750-009553	RL0204	4x OC-48 SONET
Xcvr 0	REV 01	740-011785	PDS3T23	SFP-SR
Xcvr 1	REV 01	740-011785	P6Q0F3E	SFP-SR
MMB 0	REV 03	710-004047	HD5843	MMB-288mbit
MMB 1	REV 03	710-004047	HE3208	MMB-288mbit
PPB 0	REV 02	710-002845	HA4524	PPB Type 3
PPB 1	REV 02	710-002845	HA4766	PPB Type 3
FPC 3	REV 01	710-010154	HR0863	E-FPC Type 3
CPU	REV 01	710-010169	HN3422	FPC CPU-Enhanced
PIC 0	REV 07	750-012793	WF5096	1x 10GE(LAN/WAN) IQ2
Xcvr 0		NON-JNPR	M64294TP	XFP-10G-LR
PIC 1	REV 25	750-007141	DV2127	10x 1GE(LAN), 1000 BASE

Xcvr 0	REV 01	740-011613	PFA6LTJ	SFP-SX
Xcvr 1	REV 01	740-011782	P9P0XV4	SFP-SX
Xcvr 2	REV 01	740-011782	P9M0TNX	SFP-SX
Xcvr 4	REV 01	740-011782	P9B0TTP	SFP-SX
Xcvr 5		NON-JNPR	PBS4LED	SFP-SX
PIC 2	REV 17	750-009553	RL0212	4x OC-48 SONET
Xcvr 0	REV 01	740-011785	PDS3T8G	SFP-SR
PIC 3	REV 32	750-003700	DL1279	1x OC-192 12xMM VSR
MMB 0	REV 01	710-010171	HR0821	MMB-288mbit
MMB 1	REV 01	710-010171	HR0818	MMB-288mbit
FPC 4	REV 16	710-013037	EB4919	FPC Type 4-ES
CPU	REV 09	710-016744	BBAA4382	ST-PMB2
PIC 0	REV 03	711-029996	EB1569	100GE
PIC 1	REV 05	711-029999	EB9983	100GE CFP
Xcvr 0	REV 0	740-032210	J10G80746	CFP-100G-LR4
BRIDGE 0	REV 02	711-029995	EB2235	100GE Bridge Board
MMB 0	REV 04	710-025563	BBAA7112	ST-MMB2
MMB 1	REV 04	710-025563	BBAA7149	ST-MMB2
FPC 5	REV 02	710-013037	DE3407	FPC Type 4-ES
CPU	REV 04	710-016744	DA2124	ST-PMB2
PIC 0	REV 16	750-012518	DF2554	4x OC-192 SONET XFP
Xcvr 0	REV 01	740-014279	AA0745N1FX8	XFP-OC192-SR
Xcvr 1	REV 01	740-014279	AA0748N1HN5	XFP-OC192-SR
Xcvr 2	REV 01	740-014279	AA0748N1HT6	XFP-OC192-SR
Xcvr 3	REV 01	740-014279	AA0744N1EC9	XFP-OC192-SR
PIC 1	REV 01	750-010850	JA0329	1x OC-768 SONET SR
MMB 0	REV 04	710-016036	DE9577	ST-MMB2
MMB 1	REV 04	710-016036	DK4060	ST-MMB2
FPC 6	REV 14	710-013037	DV1431	FPC Type 4-ES
CPU	REV 09	710-016744	DT9020	ST-PMB2
PIC 0	REV 11	750-017405	DM6261	4x 10GE (LAN/WAN) XFP
Xcvr 0	REV 01	740-014289	C701XU05Q	XFP-10G-SR
Xcvr 1	REV 01	740-014279	AA0748N1HPT	XFP-10G-LR
Xcvr 2	REV 01	740-014289	T08E19189	XFP-10G-SR
Xcvr 3	REV 01	740-014289	C715XU058	XFP-10G-SR
PIC 1	REV 13	750-017405	DP8772	4x 10GE (LAN/WAN) XFP
Xcvr 0	REV 02	740-011571	C850XJ037	XFP-10G-SR
Xcvr 1	REV 02	740-014289	C839XU0L9	XFP-10G-SR
Xcvr 2	REV 02	740-014289	C834XU05A	XFP-10G-SR
Xcvr 3	REV 02	740-014289	C810XU0CE	XFP-10G-SR
MMB 0	REV 01	710-025563	DT8454	ST-MMB2
MMB 1	REV 01	710-025563	DT8366	ST-MMB2
FPC 7	REV 09	710-007529	HZ7624	FPC Type 3
CPU	REV 15	710-001726	HZ1413	FPC CPU
PIC 0	REV 10	750-012793	DM5627	1x 10GE(LAN/WAN) IQ2
Xcvr 0	REV 02	740-011571	C831XJ062	XFP-10G-SR
PIC 1	REV 01	750-015217	JT6762	8x 1GE(TYPE3), IQ2
Xcvr 0	REV 01	740-011782	P8Q25JU	SFP-SX
Xcvr 1	REV 01	740-011782	P9B0U0K	SFP-SX
PIC 2	REV 01	750-015217	JS4268	8x 1GE(TYPE3), IQ2
Xcvr 0	REV 01	740-011613	AM0812S8XBZ	SFP-SX
Xcvr 1	REV 01	740-011613	AM0812S8XAP	SFP-SX
Xcvr 2	REV 01	740-011613	AM0812S8XBY	SFP-SX
Xcvr 3	REV 01	740-011613	AM0812S8XBX	SFP-SX
Xcvr 4	REV 01	740-011613	P9F1652	SFP-SX
Xcvr 5	REV 01	740-011782	P8Q21YC	SFP-SX
Xcvr 6	REV 01	740-011782	P8Q27HQ	SFP-SX
Xcvr 7	REV 01	740-011613	P8E2SSU	SFP-SX
PIC 3	REV 15	750-009450	NB6790	1x OC-192 SM SR2
MMB 0	REV 03	710-005555	HZ3450	MMB-288mbit

MMB 1	REV 03	710-005555	HZ3415	MMB-288mbit
PPB 0	REV 04	710-002845	HP0887	PPB Type 3
PPB 1	REV 04	710-002845	HW5255	PPB Type 3
SPMB 0	REV 10	710-003229	HX3699	T-series Switch CPU
SPMB 1	REV 12	710-003229	DT3091	T-series Switch CPU
SIB 0	REV 07	710-013074	DS4747	SIB-I8-SF
SIB 1	REV 07	710-013074	DS4942	SIB-I8-SF
SIB 2	REV 07	710-013074	DS4965	SIB-I8-SF
SIB 3	REV 07	710-013074	DS4990	SIB-I8-SF
SIB 4	REV 07	710-013074	DS4944	SIB-I8-SF
Fan Tray 0				Front Top Fan Tray
Fan Tray 1				Front Bottom Fan Tray
Fan Tray 2				Rear Fan Tray -- Rev 2

### show chassis hardware (TX Matrix Plus Router)

```
user@host> show chassis hardware
sfc0-re0:
```

```
-----
```

Hardware inventory:				
Item	Version	Part number	Serial number	Description
Chassis			JN113186EAHB	TXP
Midplane	REV 05	710-022574	TS3822	SFC Midplane
FPM Display	REV 03	710-024027	DW4701	TXP FPM Display
CIP 0	REV 05	710-023792	DW7998	TXP CIP
CIP 1	REV 05	710-023792	DW7999	TXP CIP
PEM 0	Rev 04	740-027463	UM26367	Power Entry Module
PEM 1	Rev 04	740-027463	UM26346	Power Entry Module
Routing Engine 0	REV 06	740-026942	737A-1081	RE-DUO-2600
Routing Engine 1	REV 06	740-026942	737A-1043	RE-DUO-2600
CB 0	REV 05	710-022606	DW4435	SFC Control Board
CB 1	REV 09	710-022606	DW6100	SFC Control Board
SPMB 0		BUILTIN		SFC Switch CPU
SPMB 1		BUILTIN		SFC Switch CPU
SIB F13 0	REV 04	750-024564	DW5764	F13 SIB
B Board	REV 03	710-023431	DW9053	F13 SIB Mezz
SIB F13 3	REV 04	750-024564	DW5785	F13 SIB
B Board	REV 03	710-023431	DW9030	F13 SIB Mezz
SIB F13 6				
SIB F13 8	REV 04	750-024564	DW5752	F13 SIB
B Board	REV 03	710-023431	DW9051	F13 SIB Mezz
SIB F13 11	REV 04	750-024564	DW5782	F13 SIB
B Board	REV 03	710-023431	DW9058	F13 SIB Mezz
SIB F13 12	REV 03	750-024564	DT9466	F13 SIB
B Board	REV 02	710-023431	DT6556	F13 SIB Mezz
SIB F2S 0/0	REV 05	710-022603	DW7898	F2S SIB
B Board	REV 05	710-023787	DW7625	F2S SIB Mezz
SIB F2S 0/2	REV 05	710-022603	DW7811	F2S SIB
B Board	REV 05	710-023787	DW7550	F2S SIB Mezz
SIB F2S 0/4	REV 04	710-022603	DW4873	F2S SIB
B Board	REV 05	710-023787	DW8509	F2S SIB Mezz
SIB F2S 0/6	REV 04	710-022603	DW4867	F2S SIB
B Board	REV 05	710-023787	DW8472	F2S SIB Mezz
SIB F2S 1/0	REV 04	710-022603	DW4871	F2S SIB
B Board	REV 05	710-023787	DW8497	F2S SIB Mezz
SIB F2S 1/2	REV 05	710-022603	DW7868	F2S SIB
B Board	REV 05	710-023787	DW7551	F2S SIB Mezz
SIB F2S 1/4	REV 04	710-022603	DW4854	F2S SIB
B Board	REV 05	710-023787	DW8496	F2S SIB Mezz
SIB F2S 1/6	REV 05	710-022603	DW7889	F2S SIB
B Board	REV 05	710-023787	DW7496	F2S SIB Mezz



SIB F2S 2/0	REV 04	710-022603	DW4852	F2S SIB
B Board	REV 05	710-023787	DW8498	F2S SIB Mezz
SIB F2S 2/2	REV 04	710-022603	DW4845	F2S SIB
B Board	REV 05	710-023787	DW8457	F2S SIB Mezz
SIB F2S 2/4	REV 05	710-022603	DW7802	F2S SIB
B Board	REV 05	710-023787	DW7562	F2S SIB Mezz
SIB F2S 2/6	REV 04	710-022603	DW4822	F2S SIB
B Board	REV 05	710-023787	DW8467	F2S SIB Mezz
SIB F2S 3/0	REV 05	710-022603	DW7815	F2S SIB
B Board	REV 05	710-023787	DW7518	F2S SIB Mezz
SIB F2S 3/2	REV 03	710-022603	DV0068	F2S SIB
B Board	REV 03	710-023787	DT9974	F2S SIB Mezz
SIB F2S 3/4	REV 05	710-022603	DW7874	F2S SIB
B Board	REV 05	710-023787	DW7601	F2S SIB Mezz
SIB F2S 3/6	REV 03	710-022603	DV0033	F2S SIB
B Board	REV 03	710-023787	DT9969	F2S SIB Mezz
SIB F2S 4/0	REV 03	710-022603	DV0043	F2S SIB
B Board	REV 03	710-023787	DT9948	F2S SIB Mezz
SIB F2S 4/2	REV 05	710-022603	DW5446	F2S SIB
B Board	REV 05	710-023787	DW7611	F2S SIB Mezz
SIB F2S 4/4	REV 04	710-022603	DW4826	F2S SIB
B Board	REV 05	710-023787	DW8458	F2S SIB Mezz
SIB F2S 4/6	REV 03	710-022603	DV0026	F2S SIB
B Board	REV 03	710-023787	DT9963	F2S SIB Mezz
Fan Tray 0	REV 02	760-024497	DR8290	Front Fan Tray
Fan Tray 1	REV 02	760-024497	DR8293	Front Fan Tray
Fan Tray 2	REV 05	760-024502	DR8280	Rear Fan Tray
Fan Tray 3				
Fan Tray 4	REV 05	760-024502	DR8276	Rear Fan Tray
Fan Tray 5	REV 02	760-024502	DP5643	Rear Fan Tray

lcc0-re0:

-----  
Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN11036F8AHA	T1600
Midplane	REV 03	710-017247	RC3799	T-series Backplane
FPM GBUS	REV 10	710-002901	DP7009	T640 FPM Board
FPM Display	REV 01	710-021387	DN7026	T1600 FPM Display
CIP	REV 06	710-002895	DP6024	T-series CIP
PEM 1	Rev 02	740-023211	WA50019	Power Entry Module 4x60A
SCG 0	REV 15	710-003423	DR6757	T640 Sonet Clock Gen.
SCG 1	REV 15	710-003423	DS2225	T640 Sonet Clock Gen.
Routing Engine 0	REV 01	740-026941	737F-1040	RE-DUO-1800
Routing Engine 1	REV 01	740-026941	737F-1016	RE-DUO-1800
CB 0	REV 06	710-022597	DX4011	LCC Control Board
CB 1	REV 06	710-022597	DX4017	LCC Control Board
FPC 1	REV 07	710-013035	DN5847	FPC Type 3-ES
CPU	REV 08	710-016744	DP2570	ST-PMB2
PIC 0	REV 05	750-015217	DB0418	8x 1GE(TYPE3), IQ2
Xcvr 0	REV 01	740-011782	P8Q27ZG	SFP-SX
Xcvr 1		NON-JNPR	PDA1U0D	SFP-SX
Xcvr 2	REV 01	740-011613	P9F1ALW	SFP-SX
Xcvr 3	REV 01	740-011782	PBA403V	SFP-SX
Xcvr 4		NON-JNPR	PDE09DP	SFP-SX
Xcvr 5	REV 01	740-011782	PCH2P4K	SFP-SX
Xcvr 6	REV 01	740-011782	PB94K0F	SFP-SX
Xcvr 7	REV 01	740-011782	PBA2R2A	SFP-SX
PIC 1	REV 03	750-004424	HJ4020	1x 10GE(LAN), DWDM
PIC 2	REV 01	750-003336	HG6073	4x OC-48 SONET, SMSR
MMB 0	REV 04	710-016036	DP3401	ST-MMB2

FPC 3	REV 12	710-013037	DR1169	FPC Type 4-ES
CPU	REV 08	710-016744	DP9429	ST-PMB2
PIC 0	REV 02	750-010850	JA0332	1x OC-768 SONET SR
MMB 0	REV 04	710-016036	DR0628	ST-MMB2
MMB 1	REV 04	710-016036	DR0592	ST-MMB2
FPC 4	REV 05	710-021534	DR7350	FPC Type 1-ES
CPU	REV 08	710-016744	DP8096	ST-PMB2
PIC 0	REV 04	750-014627	DP9171	4x OC-3 1x OC-12 SFP
Xcvr 0	REV 02	740-011615	PDE2RVR	SFP-SR
PIC 1	REV 22	750-005634	DS5815	1x CHOC12 IQ SONET, SMIR
PIC 2	REV 09	750-002911	CF4539	4x F/E, 100 BASE-TX
PIC 3	REV 08	750-021652	DR2827	1x CHOC12 IQE SONET
Xcvr 0		NON-JNPR	8	UNKNOWN
MMB 0	REV 04	710-016036	DR0809	ST-MMB2
FPC 5	REV 07	710-007529	HS5608	FPC Type 3
CPU	REV 15	710-001726	HX4351	FPC CPU
PIC 0	REV 14	750-009567	WJ8961	1x 10GE(LAN), XENPAK
Xcvr 0	REV 01	740-013170	J05K05961	XENPAK-LR
PIC 1	REV 16	750-007141	JJ8146	10x 1GE(LAN), 1000 BASE
Xcvr 1	REV 01	740-011613	P9F117T	SFP-SX
Xcvr 2	REV 01	740-011782	PBA2VCL	SFP-SX
Xcvr 3	REV 01	740-011782	PB83DRB	SFP-SX
Xcvr 4	REV 01	740-011613	AM0812S8UP8	SFP-SX
PIC 2	REV 12	750-009567	WF3566	1x 10GE(LAN), XENPAK
Xcvr 0	REV 02	740-013170	T07C94489	XENPAK-LR
MMB 0	REV 03	710-005555	HZ1907	MMB-288mbit
MMB 1	REV 03	710-005555	HW5283	MMB-288mbit
PPB 0	REV 04	710-002845	HZ7717	PPB Type 3
PPB 1	REV 04	710-002845	HS0110	PPB Type 3
FPC 6	REV 07	710-013035	DP7486	FPC Type 3-ES
CPU	REV 08	710-016744	DP2545	ST-PMB2
PIC 0	REV 09	750-009567	NE6323	1x 10GE(LAN), XENPAK
Xcvr 0	REV 02	740-013170	T09C71959	XENPAK-LR
PIC 1	REV 06	750-015217	DN4775	8x 1GE(TYPE3), IQ2
Xcvr 0	REV 01	740-011782	P7E0T6M	SFP-SX
Xcvr 1	REV 01	740-011613	AM0812S8XAY	SFP-SX
Xcvr 2	REV 01	740-011782	P7E0T6J	SFP-SX
Xcvr 3	REV 01	740-011782	PCH2P7D	SFP-SX
Xcvr 4	REV 01	740-011782	P9B0QYT	SFP-SX
Xcvr 5	REV 01	740-011613	AM0812S8WQJ	SFP-SX
Xcvr 6	REV 02	740-013111	9301220	SFP-T
Xcvr 7	REV 01	740-011782	P9B0TZ5	SFP-SX
PIC 2	REV 06	750-015217	DM6747	8x 1GE(TYPE3), IQ2
Xcvr 0	REV 01	740-011613	PAP0ZB2	SFP-SX
Xcvr 1	REV 01	740-013111	70191002	SFP-T
Xcvr 6	REV 01	740-011782	PBA29H8	SFP-SX
Xcvr 7	REV 01	740-011613	AM0812S8WQG	SFP-SX
MMB 0	REV 04	710-016036	DP3238	ST-MMB2
FPC 7	REV 03	710-021540	DV3154	FPC Type 2-ES
CPU	REV 09	710-016744	DT9053	ST-PMB2
PIC 0	REV 13	750-001901	HB4225	4x OC-12 SONET, SMIR
PIC 1	REV 05	750-001900	AD3644	1x OC-48 SONET, SMSR
PIC 2	REV 10	750-008155	HV0335	2x G/E IQ, 1000 BASE
Xcvr 0	REV 01	740-011782	PCH2UKF	SFP-SX
Xcvr 1	REV 01	740-011782	PCH2V19	SFP-SX
PIC 3	REV 03	750-014638	JS9493	1x OC-48-12-3 SFP
Xcvr 0	REV 01	740-011785	P6Q0ENK	SFP-SR
MMB 0	REV 05	710-016036	DP3323	ST-MMB2
SPMB 0	REV 04	710-023321	DX3004	LCC Switch CPU

SPMB 1	REV 04	710-023321	DX3009	LCC Switch CPU
SIB 0	REV 07	710-022594	DW4195	LCC SIB
B Board	REV 07	710-023185	DW3930	LCC SIB Mezz
SIB 1	REV 07	710-022594	DW4179	LCC SIB
B Board	REV 07	710-023185	DW3919	LCC SIB Mezz
SIB 2				
SIB 3	REV 06	710-022594	DT8251	LCC SIB
B Board	REV 06	710-023185	DT5792	LCC SIB Mezz
SIB 4	REV 08	710-022594	DW8014	LCC SIB
B Board	REV 07	710-023185	DW3917	LCC SIB Mezz
Fan Tray 0				Front Top Fan Tray
Fan Tray 1				Front Bottom Fan Tray
Fan Tray 2				Rear Fan Tray -- Rev 3

lcc1-re0:

-----  
Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN1102270AHA	T1600
Midplane	REV 04	710-017247	RC5358	T-series Backplane
FPM GBUS	REV 10	710-002901	DS3443	T640 FPM Board
FPM Display	REV 01	710-021387	DS6411	T1600 FPM Display
CIP	REV 06	710-002895	DS4235	T-series CIP
PEM 0	Rev 02	740-023211	VM82438	Power Entry Module 4x60A
SCG 0	REV 15	710-003423	DS6649	T640 Sonet Clock Gen.
SCG 1	REV 15	710-003423	DR6775	T640 Sonet Clock Gen.
Routing Engine 0	REV 01	740-026941	737F-1083	RE-DUO-1800
Routing Engine 1	REV 01	740-026941	737F-1104	RE-DUO-1800
CB 0	REV 06	710-022597	DW8542	LCC Control Board
CB 1	REV 06	710-022597	DW8530	LCC Control Board
FPC 0	REV 02	710-010845	JE2392	FPC Type 4
CPU	REV 02	710-011481	JF6820	FPC CPU-Enhanced
PIC 0	REV 11	750-017405	DP7259	4x 10GE (LAN/WAN) XFP
Xcvr 0	REV 01	740-014279	AA0741N1C8T	XFP-10G-LR
Xcvr 1	REV 01	740-014279	AA0746N1GAM	XFP-10G-LR
Xcvr 2	REV 01	740-014279	AA0747N1H0B	XFP-10G-LR
Xcvr 3	REV 01	740-014279	AA0748N1HZ5	XFP-10G-LR
MMB 0	REV 03	710-010842	HY7601	ST-MMB
FPC 1	REV 16	710-013037	BBAA7398	FPC Type 4-ES
CPU	REV 09	710-016744	BBAA2329	ST-PMB2
PIC 0	REV 03	711-029996	EB1575	100GE
PIC 1	REV 06	750-034781	EB9980	100GE CFP
MMB 0	REV 04	710-025563	BBAA5325	ST-MMB2
MMB 1	REV 04	710-025563	BBAA5444	ST-MMB2
FPC 2	REV 16	710-013037	BBAA7185	FPC Type 4-ES
CPU	REV 09	710-016744	BBAA3522	ST-PMB2
PIC 0	REV 03	711-029996	EB1557	100GE
PIC 1	REV 05	750-034781	EB4660	100GE CFP
Xcvr 0	REV 0	740-032210	J10F73666	CFP-100G-LR4
BRIDGE 0	REV 02	711-029995	EB2237	100GE Bridge Board
MMB 0	REV 04	710-025563	BBAA5347	ST-MMB2
MMB 1	REV 04	710-025563	BBAA5401	ST-MMB2
FPC 3	REV 10	710-021534	DZ0941	FPC Type 1-ES
CPU	REV 09	710-016744	DY6364	ST-PMB2
PIC 0	REV 13	750-012266	DK9192	4x 1GE(LAN), IQ2
Xcvr 0	REV 01	740-011613	AM0812S8WVD	SFP-SX
Xcvr 1		NON-JNPR	PDD63Q4	SFP-SX
Xcvr 2		NON-JNPR	PDE4G54	SFP-SX
Xcvr 3		NON-JNPR	PD40MAG	SFP-SX
PIC 1	REV 01	750-007641	HJ2003	1x G/E IQ, 1000 BASE
Xcvr 0	REV 01	740-011613	AM0812S8WVG	SFP-SX

PIC 3	REV 17	750-007444	JB6873	1x CHSTM1 IQ SDH, SMIR
MMB 0	REV 04	710-025563	DZ0281	ST-MMB2
FPC 4	REV 06	710-013035	DK0614	FPC Type 3-ES
CPU	REV 07	710-016744	DK1616	ST-PMB2
PIC 0	REV 22	750-007141	DM1870	10x 1GE(LAN), 1000 BASE
Xcvr 0	REV 01	740-011782	PCL3UKW	SFP-SX
Xcvr 1	REV 01	740-011782	P7E0T73	SFP-SX
Xcvr 2	REV 01	740-007326	P4TOWLR	SFP-SX
Xcvr 3	REV 01	740-011782	PAR1LRL	SFP-SX
Xcvr 4	REV 01	740-011782	P9M0U3Z	SFP-SX
Xcvr 5	REV 01	740-011782	P9M0U0C	SFP-SX
Xcvr 6	REV 01	740-011782	P9M0TLG	SFP-SX
Xcvr 7	REV 01	740-011782	P9M0U0F	SFP-SX
Xcvr 8	REV 01	740-011613	PFA6LAP	SFP-SX
Xcvr 9	REV 01	740-011782	PCH2P0U	SFP-SX
PIC 1	REV 16	750-009450	CV2565	1x OC-192 SM SR2
PIC 2	REV 05	750-004424	HH3057	1x 10GE(LAN), 10GBASE-LR
PIC 3	REV 12	750-013423	DP0403	MultiServices 500
MMB 0	REV 04	710-016036	DK1988	ST-MMB2
FPC 5	REV 07	710-013560	DR0004	E2-FPC Type 3
CPU	REV 05	710-013563	DR0089	FPC CPU-Enhanced
PIC 0	REV 11	750-012793	DR6107	1x 10GE(LAN/WAN) IQ2
Xcvr 0	REV 01	740-014289	C743XU074	XFP-10G-SR
PIC 1	REV 01	750-004695	HD5980	1x Tunnel
PIC 2	REV 32	750-003700	DL3770	1x OC-192 12xMM VSR
PIC 3	REV 12	750-009553	WB8901	4x OC-48 SONET
Xcvr 0	REV 01	740-011785	P9D1GTQ	SFP-SR
Xcvr 1	REV 01	740-011785	PDSOMMB	SFP-SR
Xcvr 3	REV 01	740-011785	PDE1KXP	SFP-SR
MMB 0	REV 07	710-010171	DP7374	MMB-5M3-288mbit
MMB 1	REV 07	710-010171	DP7404	MMB-5M3-288mbit
FPC 6	REV 07	710-013035	DM0994	FPC Type 3-ES
CPU	REV 07	710-016744	DM3651	ST-PMB2
PIC 0	REV 07	750-015217	DN4743	8x 1GE(TYPE3), IQ2
Xcvr 3	REV 01	740-011613	AM0812S8XB0	SFP-SX
Xcvr 4	REV 01	740-011782	PB829RB	SFP-SX
Xcvr 5	REV 01	740-011782	P8J1SYX	SFP-SX
PIC 1	REV 03	750-003336	HJ9954	4x OC-48 SONET, SMSR
PIC 3	REV 02	750-012793	JM7665	1x 10GE(LAN/WAN) IQ2
MMB 0	REV 04	710-016036	DN6913	ST-MMB2
FPC 7	REV 08	710-010845	JM3958	FPC Type 4
CPU	REV 04	710-011481	JK3669	FPC CPU-Enhanced
PIC 0	REV 11	750-017405	DP8837	4x 10GE (LAN/WAN) XFP
Xcvr 1	REV 01	740-014279	753019A00277	XFP-10G-LR
Xcvr 2	REV 02	740-011571	C850XJ00P	XFP-10G-SR
Xcvr 3	REV 01	740-014279	AA0813N1RTG	XFP-10G-LR
MMB 0	REV 04	710-010842	JN1971	ST-MMB
SPMB 0	REV 04	710-023321	DW3629	LCC Switch CPU
SPMB 1	REV 04	710-023321	DW3621	LCC Switch CPU
SIB 0	REV 07	710-022594	DW4200	LCC SIB
B Board	REV 07	710-023185	DW3932	LCC SIB Mezz
SIB 1	REV 07	710-022594	DW4193	LCC SIB
B Board	REV 07	710-023185	DW3904	LCC SIB Mezz
SIB 2				
SIB 3	REV 07	710-022594	DW4210	LCC SIB
B Board	REV 06	710-023185	DT5780	LCC SIB Mezz
SIB 4	REV 08	710-022594	DW8019	LCC SIB
B Board	REV 06	710-023185	DT5795	LCC SIB Mezz
Fan Tray 0				Front Top Fan Tray

Fan Tray 1  
Fan Tray 2

Front Bottom Fan Tray  
Rear Fan Tray -- Rev 3

### show chassis hardware sfc (TX Matrix Plus Router)

```
user@host> show chassis hardware sfc 0
sfc0-re0:
```

-----  
Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN112F007AHB	TXP
Midplane	REV 05	710-022574	TS4027	SFC Midplane
FPM Display	REV 03	710-024027	DX0282	TXP FPM Display
CIP 0	REV 04	710-023792	DW4889	TXP CIP
CIP 1	REV 04	710-023792	DW4887	TXP CIP
PEM 0	Rev 07	740-027463	UM26368	Power Entry Module
Routing Engine 0	REV 01	740-026942	737A-1064	SFC RE
Routing Engine 1	REV 01	740-026942	737A-1082	SFC RE
CB 0	REV 09	710-022606	DW6099	SFC Control Board
CB 1	REV 09	710-022606	DW6096	SFC Control Board
SPMB 0		BUILTIN		SFC Switch CPU
SPMB 1		BUILTIN		SFC Switch CPU
SIB F13 0	REV 04	710-022600	DX0841	F13 SIB
B Board	REV 03	710-023431	DX0966	F13 SIB Mezz
SIB F13 1	REV 04	750-024564	DW5776	F13 SIB
B Board	REV 03	710-023431	DW9028	F13 SIB
SIB F13 3	REV 04	750-024564	DW5762	F13 SIB
B Board	REV 03	710-023431	DW9059	F13 SIB
SIB F13 4	REV 04	750-024564	DW5797	F13 SIB
B Board	REV 03	710-023431	DW9041	F13 SIB
SIB F13 6	REV 04	750-024564	DW5770	F13 SIB
B Board	REV 03	710-023431	DW9079	F13 SIB Mezz
SIB F13 7	REV 04	750-024564	DW5758	F13 SIB
B Board	REV 03	710-023431	DW9047	F13 SIB
SIB F13 8	REV 04	750-024564	DW5761	F13 SIB
B Board	REV 03	710-023431	DW9043	F13 SIB Mezz
SIB F13 9	REV 04	750-024564	DW5754	F13 SIB
B Board	REV 03	710-023431	DW9078	F13 SIB Mezz
SIB F13 11	REV 04	710-022600	DX0826	F13 SIB
B Board	REV 03	710-023431	DX0967	F13 SIB Mezz
SIB F13 12	REV 04	750-024564	DW5794	F13 SIB
B Board	REV 03	710-023431	DW9044	F13 SIB Mezz
SIB F2S 0/0	REV 05	710-022603	DW7897	F2S SIB
B Board	REV 05	710-023787	DW7657	NEO PMB
SIB F2S 0/2	REV 05	710-022603	DW7833	F2S SIB
B Board	REV 05	710-023787	DW7526	NEO PMB
SIB F2S 0/4	REV 05	710-022603	DW7875	F2S SIB
B Board	REV 05	710-023787	DW7588	NEO PMB
SIB F2S 0/6	REV 05	710-022603	DW7860	F2S SIB
B Board	REV 05	710-023787	DW7589	NEO PMB
SIB F2S 1/0	REV 04	710-022603	DW4820	F2S SIB
B Board	REV 05	710-023787	DW8510	NEO PMB
SIB F2S 1/2	REV 05	710-022603	DW7849	F2S SIB
B Board	REV 05	710-023787	DW7525	NEO PMB
SIB F2S 1/4	REV 05	710-022603	DW7927	F2S SIB
B Board	REV 05	710-023787	DW7556	F2S SIB Mezz
SIB F2S 1/6	REV 05	710-022603	DW7866	F2S SIB
B Board	REV 05	710-023787	DW7651	NEO PMB
SIB F2S 2/0	REV 05	710-022603	DW7880	F2S SIB
B Board	REV 05	710-023787	DW7523	NEO PMB
SIB F2S 2/2	REV 05	710-022603	DW7895	F2S SIB

B Board	REV 05	710-023787	DW7591	NEO PMB
SIB F2S 2/4	REV 05	710-022603	DW7907	F2S SIB
B Board	REV 05	710-023787	DW7590	NEO PMB
SIB F2S 2/6	REV 05	710-022603	DW7785	F2S SIB
B Board	REV 05	710-023787	DW7524	NEO PMB
SIB F2S 3/0	REV 05	710-022603	DW7782	F2S SIB
B Board	REV 05	710-023787	DW7634	NEO PMB
SIB F2S 3/2	REV 05	710-022603	DW7793	F2S SIB
B Board	REV 05	710-023787	DW7548	NEO PMB
SIB F2S 3/4	REV 05	710-022603	DW7779	F2S SIB
B Board	REV 05	710-023787	DW7587	NEO PMB
SIB F2S 3/6	REV 05	710-022603	DW7930	F2S SIB
B Board	REV 05	710-023787	DW7505	NEO PMB
SIB F2S 4/0	REV 05	710-022603	DW7867	F2S SIB
B Board	REV 05	710-023787	DW7656	NEO PMB
SIB F2S 4/2	REV 05	710-022603	DW7917	F2S SIB
B Board	REV 05	710-023787	DW7640	NEO PMB
SIB F2S 4/4	REV 05	710-022603	DW7929	F2S SIB
B Board	REV 05	710-023787	DW7643	NEO PMB
SIB F2S 4/6	REV 05	710-022603	DW7870	F2S SIB
B Board	REV 05	710-023787	DW7635	NEO PMB
Fan Tray 0	REV 06	760-024497	DV7831	Front Fan Tray
Fan Tray 1	REV 06	760-024497	DV9614	Front Fan Tray
Fan Tray 2	REV 06	760-024502	DV9618	Rear Fan Tray
Fan Tray 3	REV 06	760-024502	DV9616	Rear Fan Tray
Fan Tray 4	REV 06	760-024502	DV7807	Rear Fan Tray
Fan Tray 5	REV 06	760-024502	DV7828	Rear Fan Tray

### show chassis hardware extensive (TX Matrix Plus Router)

```
user@host> show chassis hardware extensive
sfc0-re0:
```

#### Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN112F007AHB	TXP
Jedec Code:	0x7fb0	EEPROM Version:	0x02	
		S/N:	JN112F007AHB	
Assembly ID:	0x052c	Assembly Version:	00.00	
Date:	00-00-0000	Assembly Flags:	0x00	
ID:	TXP			

#### Board Information Record:

Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

#### I2C Hex Data:

Address 0x00: 7f b0 02 ff 05 2c 00 00 00 00 00 00 00 00 00 00

Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Address 0x20: 4a 4e 31 31 32 46 30 30 37 41 48 42 00 00 00 00

Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Midplane	REV 05	710-022574	TS4027	SFC Midplane
----------	--------	------------	--------	--------------

Jedec Code:	0x7fb0	EEPROM Version:	0x01
P/N:	710-022574	S/N:	TS4027
Assembly ID:	0x0962	Assembly Version:	01.05
Date:	03-23-2009	Assembly Flags:	0x00
Version:	REV 05		

ID: SFC Midplane

#### Board Information Record:

Address 0x00: ad 01 ff ff 00 1d b5 14 00 00 ff ff ff ff ff ff

```

I2C Hex Data:
Address 0x00: 7f b0 01 ff 09 62 01 05 52 45 56 20 30 35 00 00
Address 0x10: 00 00 00 00 37 31 30 2d 30 32 32 35 37 34 00 00
Address 0x20: 53 2f 4e 20 54 53 34 30 32 37 00 00 00 17 03 07
Address 0x30: d9 ff ff ff ad 01 ff ff 00 1d b5 14 00 00 ff ff
Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff
Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
FPM Display      REV 03    710-024027    DX0282      TXP FPM Display
Jedec Code:      0x7fb0      EEPROM Version: 0x01
P/N:             710-024027    S/N:         DX0282
Assembly ID:     0x096c      Assembly Version: 01.03
Date:           02-10-2009    Assembly Flags: 0x00
Version:        REV 03
ID: TXP FPM Display      FRU Model Number: CRAFT-TXP
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 09 6c 01 03 52 45 56 20 30 33 00 00
Address 0x10: 00 00 00 00 37 31 30 2d 30 32 34 30 32 37 00 00
Address 0x20: 53 2f 4e 20 44 58 30 32 38 32 00 00 00 0a 02 07
Address 0x30: d9 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 43
Address 0x50: 52 41 46 54 2d 54 58 50 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
CIP 0            REV 04    710-023792    DW4889      TXP CIP
Jedec Code:      0x7fb0      EEPROM Version: 0x01
P/N:             710-023792    S/N:         DW4889
Assembly ID:     0x0969      Assembly Version: 01.04
Date:           01-26-2009    Assembly Flags: 0x00
Version:        REV 04
ID: TXP CIP      FRU Model Number: CIP-TXP
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

```

### show chassis hardware clei-models (TX Matrix Plus Router)

```

user@host> show chassis hardware clei-models
sfc0-re0:
-----
Hardware inventory:

```

Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 05	710-022574		CHAS-BP-TXP-S
FPM Display	REV 03	710-024027		CRAFT-TXP-S
CIP 0	REV 05	710-023792		CIP-TXP-S
CIP 1	REV 05	710-023792		CIP-TXP-S
PEM 0	Rev 04	740-027463	IPUPAFGKTA	PWR-TXP-7-60-DC
PEM 1	Rev 04	740-027463	IPUPAFGKTA	PWR-TXP-7-60-DC
Routing Engine 0	REV 06	740-026942		RE-DUO-C2600-16G-S
Routing Engine 1	REV 06	740-026942		RE-DUO-C2600-16G-S
CB 0	REV 05	710-022606		CB-TXP-S
CB 1	REV 09	710-022606		CB-TXP-S
SIB F13 0	REV 04	750-024564		SIB-TXP-F13
SIB F13 3	REV 04	750-024564		SIB-TXP-F13
SIB F13 8	REV 04	750-024564		SIB-TXP-F13
SIB F13 11	REV 04	750-024564		SIB-TXP-F13
SIB F13 12	REV 03	750-024564		SIB-TXP-F13
SIB F2S 0/0	REV 05	710-022603		SIB-TXP-F2S-S
SIB F2S 0/2	REV 05	710-022603		SIB-TXP-F2S-S

SIB F2S 0/4	REV 04	710-022603	SIB-TXP-F2S-S
SIB F2S 0/6	REV 04	710-022603	SIB-TXP-F2S-S
SIB F2S 1/0	REV 04	710-022603	SIB-TXP-F2S-S
SIB F2S 1/2	REV 05	710-022603	SIB-TXP-F2S-S
SIB F2S 1/4	REV 04	710-022603	SIB-TXP-F2S-S
SIB F2S 1/6	REV 05	710-022603	SIB-TXP-F2S-S
SIB F2S 2/0	REV 04	710-022603	SIB-TXP-F2S-S
SIB F2S 2/2	REV 04	710-022603	SIB-TXP-F2S-S
SIB F2S 2/4	REV 05	710-022603	SIB-TXP-F2S-S
SIB F2S 2/6	REV 04	710-022603	SIB-TXP-F2S-S
SIB F2S 3/0	REV 05	710-022603	SIB-TXP-F2S-S
SIB F2S 3/2	REV 03	710-022603	SIB-TXP-F2S-S
SIB F2S 3/4	REV 05	710-022603	SIB-TXP-F2S-S
SIB F2S 3/6	REV 03	710-022603	SIB-TXP-F2S-S
SIB F2S 4/0	REV 03	710-022603	SIB-TXP-F2S-S
SIB F2S 4/2	REV 05	710-022603	SIB-TXP-F2S-S
SIB F2S 4/4	REV 04	710-022603	SIB-TXP-F2S-S
SIB F2S 4/6	REV 03	710-022603	SIB-TXP-F2S-S
Fan Tray 0	REV 02	760-024497	FANTRAY-TXP-H-S
Fan Tray 1	REV 02	760-024497	FANTRAY-TXP-H-S
Fan Tray 2	REV 05	760-024502	FANTRAY-TXP-V-S
Fan Tray 3			
Fan Tray 4	REV 05	760-024502	FANTRAY-TXP-V-S
Fan Tray 5	REV 02	760-024502	FANTRAY-TXP-V-S

1cc0-re0:

-----  
Hardware inventory:

Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 03	710-017247		CHAS-BP-T1600-S
FPM Display	REV 01	710-021387		CRAFT-T1600-S
CIP	REV 06	710-002895		CIP-L-T640-S
PEM 1	Rev 02	740-023211	IPUPAC8KTA	PWR-T1600-4-60-DC-S
SCG 0	REV 15	710-003423		SCG-T-S
SCG 1	REV 15	710-003423		SCG-T-S
Routing Engine 0	REV 01	740-026941		RE-DUO-C1800-8G-S
Routing Engine 1	REV 01	740-026941		RE-DUO-C1800-8G-S
CB 0	REV 06	710-022597		CB-LCC-S
CB 1	REV 06	710-022597		CB-LCC-S
FPC 1	REV 07	710-013035		T640-FPC3-ES
PIC 0	REV 05	750-015217		PC-8GE-TYPE3-SFP-IQ2
PIC 1	REV 03	750-004424		PC-1XGE-LR
PIC 2	REV 01	750-003336		PC-40C48-SON-SMSR
FPC 3	REV 12	710-013037		T1600-FPC4-ES
PIC 0	REV 02	750-010850		PD-10C768-SON-SR
FPC 4	REV 05	710-021534		T640-FPC1-ES
PIC 0	REV 04	750-014627		PB-40C3-10C12-SON-SFP
PIC 1	REV 22	750-005634		PB-1CHOC12SMIR-QPP
PIC 2	REV 09	750-002911		PB-4FE-TX
PIC 3	REV 08	750-021652		PB-1CHOC12-STM4-IQE-SFP
FPC 5	REV 07	710-007529		T640-FPC3
PIC 0	REV 14	750-009567		PC-1XGE-XENPAK
PIC 1	REV 16	750-007141		PC-10GE-SFP
PIC 2	REV 12	750-009567		PC-1XGE-XENPAK
FPC 6	REV 07	710-013035		T640-FPC3-ES
PIC 0	REV 09	750-009567		PC-1XGE-XENPAK
PIC 1	REV 06	750-015217		PC-8GE-TYPE3-SFP-IQ2
PIC 2	REV 06	750-015217		PC-8GE-TYPE3-SFP-IQ2
FPC 7	REV 03	710-021540		T640-FPC2-ES
PIC 0	REV 13	750-001901		PB-40C12-SON-SMIR
PIC 1	REV 05	750-001900		PB-10C48-SON-SMSR



PIC 2	REV 10	750-008155	PB-2GE-SFP-QPP
PIC 3	REV 03	750-014638	PB-10C48-SON-B-SFP
SIB 0	REV 07	710-022594	SIB-TXP-T1600-S
SIB 1	REV 07	710-022594	SIB-TXP-T1600-S
SIB 3	REV 06	710-022594	SIB-TXP-T1600-S
SIB 4	REV 08	710-022594	SIB-TXP-T1600-S
Fan Tray 0			FANTRAY-T-S
Fan Tray 1			FANTRAY-T-S
Fan Tray 2			FANTRAY-TXP-R-S

```
lcc1-re0:
```

```
-----
Hardware inventory:
```

Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 04	710-017247		CHAS-BP-T1600-S
FPM Display	REV 01	710-021387		CRAFT-T1600-S
CIP	REV 06	710-002895		CIP-L-T640-S
PEM 0	Rev 02	740-023211	IPUPAC8KTA	PWR-T1600-4-60-DC-S
SCG 0	REV 15	710-003423		SCG-T-S
SCG 1	REV 15	710-003423		SCG-T-S
Routing Engine 0	REV 01	740-026941		RE-DUO-C1800-8G-S
Routing Engine 1	REV 01	740-026941		RE-DUO-C1800-8G-S
CB 0	REV 06	710-022597		CB-LCC-S
CB 1	REV 06	710-022597		CB-LCC-S
FPC 0	REV 02	710-010845		T640-FPC4-ES
PIC 0	REV 11	750-017405		PD-4XGE-XFP
FPC 1	REV 16	710-013037		T1600-FPC4-ES
PIC 1	REV 06	750-034781		PD-1CE-CFP
FPC 2	REV 16	710-013037		T1600-FPC4-ES
PIC 1	REV 05	750-034781		PD-1CE-CFP
FPC 3	REV 10	710-021534		T640-FPC1-ES
PIC 0	REV 13	750-012266		PB-4GE-TYPE1-SFP-IQ2
PIC 1	REV 01	750-007641		PE-1GE-SFP-QPP
PIC 3	REV 17	750-007444		PB-1CHSTM1-SMIR-QPP
FPC 4	REV 06	710-013035		T640-FPC3-ES
PIC 0	REV 22	750-007141		PC-10GE-SFP
PIC 1	REV 16	750-009450		PC-10C192-SON-SR2
PIC 2	REV 05	750-004424		PC-1XGE-LR
PIC 3	REV 12	750-013423		PC-MS-500-3
FPC 5	REV 07	710-013560		T640-FPC3-E2
PIC 0	REV 11	750-012793		PC-1XGE-TYPE3-XFP-IQ2
PIC 1	REV 01	750-004695		PC-TUNNEL
PIC 2	REV 32	750-003700		PC-10C192-SON-VSR
PIC 3	REV 12	750-009553		PC-40C48-SON-SFP
FPC 6	REV 07	710-013035		T640-FPC3-ES
PIC 0	REV 07	750-015217		PC-8GE-TYPE3-SFP-IQ2
PIC 1	REV 03	750-003336		PC-40C48-SON-SMSR
PIC 3	REV 02	750-012793		PC-1XGE-TYPE3-XFP-IQ2
FPC 7	REV 08	710-010845		T640-FPC4-ES
PIC 0	REV 11	750-017405		PD-4XGE-XFP
SIB 0	REV 07	710-022594		SIB-TXP-T1600-S
SIB 1	REV 07	710-022594		SIB-TXP-T1600-S
SIB 3	REV 07	710-022594		SIB-TXP-T1600-S
SIB 4	REV 08	710-022594		SIB-TXP-T1600-S
Fan Tray 0				FANTRAY-T-S
Fan Tray 1				FANTRAY-T-S
Fan Tray 2				FANTRAY-TXP-R-S

```
show chassis hardware detail (TX Matrix Plus Router)
```

```
user@host> show chassis hardware detail
```

sfc0-re0:

-----  
Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN111B023AHB	TXP
Midplane	REV 01	710-022574	TR7990	SFC Midplane
FPM Display	REV 03	710-024027	DW4699	TXP FPM Display
CIP 0	REV 01	710-023792	DR1437	TXP CIP
CIP 1	REV 02	710-023792	DS4564	TXP CIP
PEM 0	Rev 07	740-027463	UM26360	Power Entry Module
Routing Engine 0	REV 01	740-026942	737A-1024	SFC RE
ad0	3887 MB	SMART CF	200811050193CEB1CEB1	Compact Flash
ad1	30533 MB	SAMSUNG	MCBQE32G8MPP-0V SY814A0762	Disk 1
Routing Engine 1	REV 01	740-026942	737A-1024	SFC RE
ad0	3887 MB	SMART CF	20081105004C19A019A0	Compact Flash
ad1	30533 MB	SAMSUNG	MCBQE32G8MPP-0V SY814A0794	Disk 1
CB 0	REV 03	710-022606	DR7134	SFC Control Board
CB 1	REV 01	710-022606	DP8890	SFC Control Board
SPMB 0		BUILTIN		SFC Switch CPU
SPMB 1		BUILTIN		SFC Switch CPU
SIB F13 0	REV 03	750-024564	DT9478	F13 SIB
B Board	REV 02	710-023431	DT6554	F13 SIB
SIB F13 1	REV 03	750-024564	DT9454	F13 SIB
B Board	REV 02	710-023431	DT6551	F13 SIB
SIB F2S 0/0	REV 02	710-022603	DT2838	F2S SIB
B Board	REV 02	710-023787	DT1725	NEO PMB
SIB F2S 0/2	REV 02	710-022603	DT2824	F2S SIB
B Board	REV 02	710-023787	DT1706	NEO PMB
SIB F2S 0/4	REV 02	710-022603	DT2822	F2S SIB
B Board	REV 02	710-023787	DT1696	NEO PMB
SIB F2S 0/6	REV 02	710-022603	DT2823	F2S SIB
B Board	REV 02	710-023787	DT1717	NEO PMB
SIB F2S 1/0	REV 03	710-022603	DV0059	F2S SIB
B Board	REV 03	710-023787	DT9942	NEO PMB
SIB F2S 1/2	REV 02	710-022603	DT2826	F2S SIB
B Board	REV 02	710-023787	DT1713	NEO PMB
SIB F2S 1/4	REV 03	710-022603	DV0092	F2S SIB
B Board	REV 03	710-023787	DV0000	NEO PMB
SIB F2S 1/6	REV 03	710-022603	DV0079	F2S SIB
B Board	REV 03	710-023787	DT9972	NEO PMB
SIB F2S 2/0	REV 03	710-022603	DV0100	F2S SIB
B Board	REV 03	710-023787	DT9925	NEO PMB
SIB F2S 2/2	REV 03	710-022603	DV0050	F2S SIB
B Board	REV 03	710-023787	DV0005	NEO PMB
SIB F2S 2/4	REV 03	710-022603	DV0097	F2S SIB
B Board	REV 03	710-023787	DT9936	NEO PMB
Fan Tray 0	REV 02	760-024497	DR8286	Front Fan Tray
Fan Tray 1	REV 06	760-024497	DV9624	Front Fan Tray
Fan Tray 2	REV 02	760-024502	DR8259	Rear Fan Tray
Fan Tray 3	REV 02	760-024502	DR8270	Rear Fan Tray
Fan Tray 4	REV 02	760-024502	DR8284	Rear Fan Tray
Fan Tray 5	REV 06	760-024502	DV7813	Rear Fan Tray

lcc0-re0:

-----  
Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN1101F27AHA	T1600
Midplane	REV 04	710-017247	RC5317	T Series Backplane
FPM GBUS	REV 10	710-002901	DS8197	T640 FPM Board
FPM Display	REV 01	710-021387	DS6433	T1600 FPM Display

CIP	REV 06	710-002895	DS1493	T Series CIP
PEM 0	Rev 08	740-017906	UD26601	Power Entry Module 3x80
SCG 0	REV 15	710-003423	DP5847	T640 Sonet Clock Gen.
SCG 1	REV 15	710-003423	DR0924	T640 Sonet Clock Gen.
Routing Engine 0	REV 01	740-026942	737F-1024	LCC RE
ad0	3887 MB	SMART CF	2008110502B63E513E51	Compact Flash
ad1	30533 MB	SAMSUNG	MCBQE32G8MPP-0V SY814A1208	Disk 1
Routing Engine 1	REV 01	740-026942	737F-1024	LCC RE
ad0	3887 MB	SMART CF	2008110500F9A8A8A8A8	Compact Flash
ad1	30533 MB	SAMSUNG	MCBQE32G8MPP-0V SY814A1076	Disk 1
CB 0	REV 05	710-022597	DV4264	LCC Control Board
CB 1	REV 03	710-022597	DP8558	LCC Control Board
FPC 0	REV 14	710-013037	DS9967	FPC Type 4-ES
CPU	REV 08	710-016744	DS3989	ST-PMB2
PIC 0	REV 12	750-013198	DL7506	1x Tunnel
PIC 1	REV 12	750-013198	DL7505	1x Tunnel
MMB 0	REV 01	710-025563	DS8524	ST-MMB2
MMB 1	REV 01	710-025563	DS8373	ST-MMB2
FPC 1	REV 14	710-013037	DT0027	FPC Type 4-ES
CPU	REV 09	710-016744	DS7684	ST-PMB2
PIC 0	REV 12	750-013198	DL7512	1x Tunnel
PIC 1	REV 12	750-013198	DL7498	1x Tunnel
MMB 0	REV 01	710-025563	DS8494	ST-MMB2
MMB 1	REV 01	710-025563	DS8436	ST-MMB2
SPMB 0	REV 04	710-023321	DV3867	LCC Switch CPU
SPMB 1	REV 02	710-023321	DP0238	LCC Switch CPU
SIB 0	REV 06	710-022594	DT8268	LCC SIB
B Board	REV 06	710-023185	DT5791	LCC SIB Mezz
SIB 1	REV 06	710-022594	DT8261	LCC SIB
B Board	REV 06	710-023185	DT5769	LCC SIB Mezz
SIB 2	REV 04	710-022594	DS2315	LCC SIB
B Board	REV 06	710-023185	DT5788	LCC SIB Mezz
SIB 3	REV 06	710-022594	DT8253	LCC SIB
B Board	REV 06	710-023185	DT5811	LCC SIB Mezz
SIB 4	REV 06	710-022594	DT8248	LCC SIB
B Board	REV 06	710-023185	DT5812	LCC SIB Mezz
Fan Tray 0				Front Top Fan Tray
Fan Tray 1				Front Bottom Fan Tray
Fan Tray 2				Rear Fan Tray

### show chassis hardware models (TX Matrix Plus Router)

```
user@host> show chassis hardware models
sfc0-re0:
```

#### Hardware inventory:

Item	Version	Part number	Serial number	FRU model number
FPM Display	REV 03	710-024027	DX0282	CRAFT-TXP
CIP 0	REV 04	710-023792	DW4889	CIP-TXP
CIP 1	REV 04	710-023792	DW4887	CIP-TXP
PEM 0	Rev 07	740-027463	UM26368	yyyyyyyyyyyyyyyyyyyyyyyy
Routing Engine 0	REV 01	740-026942	737A-1064	RE-TXP-SFC-DU0-2600-16G
Routing Engine 1	REV 01	740-026942	737A-1082	RE-TXP-SFC-DU0-2600-16G
CB 0	REV 09	710-022606	DW6099	CB-TXP
CB 1	REV 09	710-022606	DW6096	CB-TXP
SIB F13 1	REV 04	750-024564	DW5776	SIB-TXP-F13
SIB F13 3	REV 04	750-024564	DW5762	SIB-TXP-F13
SIB F13 4	REV 04	750-024564	DW5797	SIB-TXP-F13
SIB F13 6	REV 04	750-024564	DW5770	SIB-TXP-F13
SIB F13 7	REV 04	750-024564	DW5758	SIB-TXP-F13
SIB F13 8	REV 04	750-024564	DW5761	SIB-TXP-F13

SIB F13 9	REV 04	750-024564	DW5754	SIB-TXP-F13
SIB F13 12	REV 04	750-024564	DW5794	SIB-TXP-F13
SIB F2S 0/0	REV 05	710-022603	DW7897	
SIB F2S 0/2	REV 05	710-022603	DW7833	
SIB F2S 0/4	REV 05	710-022603	DW7875	
SIB F2S 0/6	REV 05	710-022603	DW7860	
SIB F2S 1/0	REV 04	710-022603	DW4820	
SIB F2S 1/2	REV 05	710-022603	DW7849	
SIB F2S 1/4	REV 05	710-022603	DW7927	SIB-TXP-F2S
SIB F2S 1/6	REV 05	710-022603	DW7866	
SIB F2S 2/0	REV 05	710-022603	DW7880	
SIB F2S 2/2	REV 05	710-022603	DW7895	
SIB F2S 2/4	REV 05	710-022603	DW7907	
SIB F2S 2/6	REV 05	710-022603	DW7785	
SIB F2S 3/0	REV 05	710-022603	DW7782	
SIB F2S 3/2	REV 05	710-022603	DW7793	
SIB F2S 3/4	REV 05	710-022603	DW7779	
SIB F2S 3/6	REV 05	710-022603	DW7930	
SIB F2S 4/0	REV 05	710-022603	DW7867	
SIB F2S 4/2	REV 05	710-022603	DW7917	
SIB F2S 4/4	REV 05	710-022603	DW7929	
SIB F2S 4/6	REV 05	710-022603	DW7870	
Fan Tray 0	REV 06	760-024497	DV7831	FANTRAY-TXP-F
Fan Tray 1	REV 06	760-024497	DV9614	FANTRAY-TXP-F
Fan Tray 2	REV 06	760-024502	DV9618	FANTRAY-TXP-R
Fan Tray 3	REV 06	760-024502	DV9616	FANTRAY-TXP-R
Fan Tray 4	REV 06	760-024502	DV7807	FANTRAY-TXP-R
Fan Tray 5	REV 06	760-024502	DV7828	FANTRAY-TXP-R

lcc0-re0:

-----  
Hardware inventory:

Item	Version	Part number	Serial number	FRU model number
Midplane	REV 03	710-017247	RC3765	CHAS-BP-T1600-S
FPM Display	REV 01	710-021387	DN5441	CRAFT-T1600-S
CIP	REV 06	710-002895	DP6021	CIP-L-T640-S
PEM 0	Rev 07	740-017906	UA26384	PWR-T1600-3-80-DC-S
PEM 1	Rev 07	740-017906	UA26296	PWR-T1600-3-80-DC-S
SCG 0	REV 15	710-003423	DR0875	SCG-T-S
CB 0	REV 06	710-022597	DW8534	CB-LCC
CB 1	REV 06	710-022597	DW8527	CB-LCC
FPC 4	REV 12	710-013037	DJ8717	T1600-FPC4-ES
PIC 0	REV 11	750-017405	DP8795	PD-4XGE-XFP
PIC 1	REV 11	750-017405	DP8794	PD-4XGE-XFP
FPC 6	REV 14	710-013037	DS5335	T1600-FPC4-ES
PIC 0	REV 13	750-017405	DS7634	PD-4XGE-XFP
PIC 1	REV 13	750-017405	DS7637	PD-4XGE-XFP
FPC 7	REV 07	710-013035	DM0990	T1600-FPC3-ES
PIC 0	REV 16	750-007141	JJ8067	PC-10GE-SFP
PIC 1	REV 08	750-015749	WE9598	PC-10C192-SON-XFP
PIC 2	REV 10	750-009450	HX6466	PC-10C192-SON-SR2
SIB 0	REV 08	710-022594	DW8033	SIB-TXP-T1600-S
SIB 1	REV 08	710-022594	DW8044	SIB-TXP-T1600-S
SIB 2	REV 08	710-022594	DW8020	SIB-TXP-T1600-S
SIB 3	REV 08	710-022594	DW8063	SIB-TXP-T1600-S
SIB 4	REV 08	710-022594	DW8064	SIB-TXP-T1600-S
Fan Tray 0				FANTRAY-T-S
Fan Tray 1				FANTRAY-T-S
Fan Tray 2				FANTRAY-TXP-R-S

lcc1-re0:

-----  
Hardware inventory:

Item	Version	Part number	Serial number	FRU model number
Midplane	REV 04	710-017247	RC5361	CHAS-BP-T1600-S
FPM Display	REV 01	710-021387	DS6430	CRAFT-T1600-S
CIP	REV 06	710-002895	DS4239	CIP-L-T640-S
PEM 0	Rev 08	740-017906	UD26649	PWR-T1600-3-80-DC-S
SCG 0	REV 15	710-003423	DP5820	SCG-T-S
CB 0	REV 06	710-022597	DW8523	CB-LCC
CB 1	REV 06	710-022597	DW8528	CB-LCC
FPC 4	REV 12	710-013037	DP8509	T1600-FPC4-ES
PIC 0	REV 11	750-017405	DP8808	PD-4XGE-XFP
PIC 1	REV 11	750-017405	DP7263	PD-4XGE-XFP
FPC 6	REV 14	710-013037	DS9961	T1600-FPC4-ES
PIC 0	REV 13	750-017405	DS5532	PD-4XGE-XFP
PIC 1	REV 13	750-017405	DS7639	PD-4XGE-XFP
FPC 7	REV 03	710-013035	DF5564	T1600-FPC3-ES
PIC 0	REV 16	750-007141	JJ8063	PC-10GE-SFP
SIB 0	REV 08	710-022594	DW8035	SIB-TXP-T1600-S
SIB 1	REV 10	710-022594	DX7672	SIB-TXP-T1600-S
SIB 2	REV 08	710-022594	DW8060	SIB-TXP-T1600-S
SIB 3	REV 08	710-022594	DW8072	SIB-TXP-T1600-S
SIB 4	REV 08	710-022594	DW8043	SIB-TXP-T1600-S
Fan Tray 0				FANTRAY-T-S
Fan Tray 1				FANTRAY-T-S
Fan Tray 2				FANTRAY-TXP-R-S

lcc2-re0:

-----  
Hardware inventory:

Item	Version	Part number	Serial number	FRU model number
Midplane	REV 03	710-017247	RC3956	CHAS-BP-T1600-S
FPM Display	REV 01	710-021387	DN7030	CRAFT-T1600-S
CIP	REV 06	710-002895	DM3962	CIP-L-T640-S
PEM 0	Rev 08	740-017906	UD26519	PWR-T1600-3-80-DC-S
PEM 1	Rev 07	740-017906	UC26601	PWR-T1600-3-80-DC-S
SCG 0	REV 15	710-003423	DP0277	SCG-T-S
CB 0	REV 06	710-022597	DW8524	CB-LCC
CB 1	REV 06	710-022597	DW8536	CB-LCC
FPC 4	REV 12	710-013037	DR1194	T1600-FPC4-ES
PIC 0	REV 11	750-017405	DP8811	PD-4XGE-XFP
PIC 1	REV 11	750-017405	DP8823	PD-4XGE-XFP
FPC 5	REV 12	710-013037	DR1184	T1600-FPC4-ES
PIC 1	REV 11	750-017405	DP4744	PD-4XGE-XFP
FPC 6	REV 12	710-013037	DN8622	T1600-FPC4-ES
PIC 0	REV 14	750-012518	JY9924	PD-40C192-SON-XFP
PIC 1	REV 11	750-017405	DP8776	PD-4XGE-XFP
FPC 7	REV 04	710-013560	JR3968	T640-FPC3-E2
PIC 0	REV 16	750-007141	NC9330	PC-10GE-SFP
SIB 0	REV 07	710-022594	DW4217	SIB-TXP-T1600-S
SIB 1	REV 07	710-022594	DW4213	SIB-TXP-T1600-S
SIB 2	REV 07	710-022594	DW4189	SIB-TXP-T1600-S
SIB 3	REV 07	710-022594	DW4173	SIB-TXP-T1600-S
SIB 4	REV 07	710-022594	DW4201	SIB-TXP-T1600-S
Fan Tray 0				FANTRAY-T-S
Fan Tray 1				FANTRAY-T-S
Fan Tray 2				FANTRAY-TXP-R-S

lcc3-re0:

-----  
Hardware inventory:

Item	Version	Part number	Serial number	FRU model number
Midplane	REV 04	710-017247	RC5319	CHAS-BP-T1600-S
FPM Display	REV 01	710-021387	DS6402	CRAFT-T1600-S
CIP	REV 06	710-002895	DR9973	CIP-L-T640-S
PEM 0	Rev 07	740-017906	UC26496	PWR-T1600-3-80-DC-S
PEM 1	Rev 07	740-017906	UC26599	PWR-T1600-3-80-DC-S
SCG 0	REV 15	710-003423	DP5831	SCG-T-S
CB 0	REV 06	710-022597	DW8533	CB-LCC
CB 1	REV 06	710-022597	DW8538	CB-LCC
FPC 0	REV 14	710-013037	DS5345	T1600-FPC4-ES
PIC 0	REV 13	750-017405	DS7641	PD-4XGE-XFP
PIC 1	REV 13	750-017405	DS5479	PD-4XGE-XFP
FPC 1	REV 14	710-013037	DS7338	T1600-FPC4-ES
PIC 0	REV 13	750-017405	DS7631	PD-4XGE-XFP
PIC 1	REV 13	750-017405	DS7632	PD-4XGE-XFP
FPC 2	REV 14	710-013037	DS9962	T1600-FPC4-ES
PIC 0	REV 13	750-017405	DS7581	PD-4XGE-XFP
PIC 1	REV 13	750-017405	DS7627	PD-4XGE-XFP
FPC 4	REV 10	710-010845	JZ6573	T640-FPC4-ES
PIC 0	REV 14	750-012518	JT5124	PD-40C192-SON-XFP
FPC 5	REV 14	710-013037	DT0016	T1600-FPC4-ES
PIC 0	REV 14	750-012518	JY9918	PD-40C192-SON-XFP
FPC 7	REV 07	710-013035	DM0967	T1600-FPC3-ES
PIC 0	REV 16	750-007141	JJ8059	PC-10GE-SFP
PIC 1	REV 13	750-004695	DM5712	PC-TUNNEL
SIB 0	REV 07	710-022594	DW4174	SIB-TXP-T1600-S
SIB 1	REV 07	710-022594	DW4207	SIB-TXP-T1600-S
SIB 2	REV 06	710-022594	DT8231	SIB-TXP-T1600-S
SIB 3	REV 07	710-022594	DW4175	SIB-TXP-T1600-S
SIB 4	REV 07	710-022594	DW4209	SIB-TXP-T1600-S
Fan Tray 0				FANTRAY-T-S
Fan Tray 1				FANTRAY-T-S
Fan Tray 2				FANTRAY-TXP-R-S

### show chassis hardware (TX Matrix Plus Router with 3D SIBs)

```

user@host> show chassis hardware
sfc0-re0:
-----
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               JN11CAAA4AHB  TXP
Midplane      REV 05   710-022574  ABAC4696      SFC Midplane
FPM Display   REV 09   710-024027  EH3138        TXP FPM Display
CIP 0         REV 12   710-023792  EF6349        TXP CIP
CIP 1         REV 12   710-023792  EG5294        TXP CIP
PEM 0         Rev 06   740-027463  XH04595       Power Entry Module
PEM 1         Rev 06   740-027463  XH04592       Power Entry Module
Routing Engine 0 REV 07   740-026942  P737A-002541  RE-DUO-2600
Routing Engine 1 REV 07   740-026942  P737A-002602  RE-DUO-2600
CB 0          REV 15   710-022606  EH4376        SFC Control Board
CB 1          REV 15   710-022606  EH4379        SFC Control Board
SPMB 0        BUILTIN  BUILTIN      SFC Switch CPU
SPMB 1        BUILTIN  BUILTIN      SFC Switch CPU
SIB F13 0     REV 10   750-035002  EM9305        F13 SIB 3D
  B Board    REV 06   711-035082  EM9667        F13 SIB 3D Mezz
  P Board    REV 05   711-043544  EM9708        F13 SIB 3D Power
  Xcvr 0     REV 01   740-047547  XB34FB00S     CXP Module
  Xcvr 2     REV 01   740-047547  XB48FB01H     CXP Module
  Xcvr 4     REV 01   740-047547  XB34FB02W     CXP Module
  Xcvr 6     REV 01   740-047547  XB34FB01T     CXP Module

```

Xcvr 8	REV 01	740-047547	XB48FB00W	CXP Module
Xcvr 10	REV 01	740-047547	XB34FB01S	CXP Module
Xcvr 12	REV 01	740-047547	XB34FB03H	CXP Module
Xcvr 14	REV 01	740-047547	XB34FB023	CXP Module
SIB F13 3	REV 01	710-035001	EJ2612	F13 SIB 3D
B Board	REV 01	711-035082	EJ3815	F13 SIB 3D Mezz
P Board	REV 01	711-043544	EJ2678	F13 SIB 3D Power
Xcvr 0	REV 01	740-047547	XB48FB04C	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB00Z	CXP Module
Xcvr 4	REV 01	740-047547	XB47FB036	CXP Module
Xcvr 6	REV 01	740-047547	XB47FB029	CXP Module
Xcvr 8	REV 01	740-047547	XB48FB02N	CXP Module
Xcvr 10	REV 01	740-047547	XB42FB0CS	CXP Module
Xcvr 12	REV 01	740-047547	XB47FB01X	CXP Module
Xcvr 14	REV 01	740-047547	XB48FB02F	CXP Module
SIB F13 6	REV 05	750-035002	EK2675	F13 SIB 3D
B Board	REV 03	711-035082	EK2612	F13 SIB 3D Mezz
P Board	REV 04	711-043544	EK1179	F13 SIB 3D Power
Xcvr 0	REV 01	740-047547	XB48FB01T	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB02M	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB031	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB04P	CXP Module
Xcvr 8	REV 01	740-047547	XB48FB02T	CXP Module
Xcvr 10	REV 01	740-047547	XB34FB01V	CXP Module
Xcvr 12	REV 01	740-047547	XB48FB02C	CXP Module
Xcvr 14		NON-JNPR		No Module
SIB F13 12	REV 01	710-035001	EJ2631	F13 SIB 3D
B Board	REV 01	711-035082	EJ3808	F13 SIB 3D Mezz
P Board	REV 01	711-043544	EJ2676	F13 SIB 3D Power
SIB F2S 0/0	REV 01	711-034977	EH9829	F2S SIB 3D
B Board	REV 01	711-034979	EH9927	F2S SIB 3D Mezz
SIB F2S 0/2	REV 01	711-034977	EH9791	F2S SIB 3D
B Board	REV 01	711-034979	EH9852	F2S SIB 3D Mezz
SIB F2S 0/4	REV 01	711-034977	EH9803	F2S SIB 3D
B Board	REV 01	711-034979	EH9915	F2S SIB 3D Mezz
SIB F2S 0/6	REV 01	711-034977	EH9763	F2S SIB 3D
B Board	REV 01	711-034979	EH9880	F2S SIB 3D Mezz
SIB F2S 1/0	REV 01	711-034977	EH9757	F2S SIB 3D
B Board	REV 01	711-034979	EH9889	F2S SIB 3D Mezz
SIB F2S 1/2	REV 01	711-034977	EH9815	F2S SIB 3D
B Board	REV 01	711-034979	EH9890	F2S SIB 3D Mezz
SIB F2S 1/4	REV 08	750-034978	EN1954	F2S SIB 3D
B Board	REV 02	711-034979	EN1436	F2S SIB 3D Mezz
SIB F2S 1/6	REV 01	711-034977	EJ7054	F2S SIB 3D
B Board	REV 01	711-034979	EJ8238	F2S SIB 3D Mezz
SIB F2S 2/0	REV 01	711-034977	EH9830	F2S SIB 3D
B Board	REV 01	711-034979	EH9844	F2S SIB 3D Mezz
SIB F2S 2/2	REV 01	711-034977	EH9818	F2S SIB 3D
B Board	REV 01	711-034979	EH9888	F2S SIB 3D Mezz
SIB F2S 2/4	REV 01	711-034977	EH9795	F2S SIB 3D
B Board	REV 01	711-034979	EH9869	F2S SIB 3D Mezz
SIB F2S 2/6	REV 01	711-034977	EJ7026	F2S SIB 3D
B Board	REV 01	711-034979	EJ8273	F2S SIB 3D Mezz
SIB F2S 3/0	REV 01	711-034977	EH9811	F2S SIB 3D
B Board	REV 01	711-034979	EH9892	F2S SIB 3D Mezz
SIB F2S 3/2	REV 01	711-034977	EH9812	F2S SIB 3D
B Board	REV 01	711-034979	EH9877	F2S SIB 3D Mezz
SIB F2S 3/4	REV 08	750-034978	EN1947	F2S SIB 3D
B Board	REV 02	711-034979	EN1471	F2S SIB 3D Mezz
Fan Tray 0	REV 10	760-024497	EH3313	Front Fan Tray
Fan Tray 1	REV 10	760-024497	EH3290	Front Fan Tray

Fan Tray 2	REV 10	760-024502	EH3292	Rear Fan Tray
Fan Tray 3	REV 10	760-024502	EH3287	Rear Fan Tray
Fan Tray 4	REV 10	760-024502	EH3286	Rear Fan Tray
Fan Tray 5	REV 10	760-024502	EH3285	Rear Fan Tray

lcc0-re0:

-----  
Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN11B23FEAHA	T1600
Midplane	REV 01	710-027486	RC9787	T-series Backplane
FPM GBUS	REV 13	710-002901	BBAG5132	T640 FPM Board
FPM Display	REV 04	710-021387	BBAL9612	T1600 FPM Display
CIP	REV 06	710-002895	BBAN0605	T-series CIP
PEM 0	REV 05	740-036442	1G022060143	Power Entry Module 6x60
PEM 1	REV 05	740-036442	1G022060011	Power Entry Module 6x60
SCG 0	REV 18	710-003423	BBAL7318	T640 Sonet Clock Gen.
SCG 1	REV 18	710-003423	BBAL7255	T640 Sonet Clock Gen.
Routing Engine 0	REV 07	740-026941	P737F-002933	RE-DUO-1800
Routing Engine 1	REV 06	740-026941	P737F-002749	RE-DUO-1800
CB 0	REV 11	710-022597	EH3611	LCC Control Board
CB 1	REV 11	710-022597	EH4798	LCC Control Board
FPC 5	REV 17	710-013037	BBAC5333	FPC Type 4-ES
CPU	REV 10	710-016744	BBAB7619	ST-PMB2
PIC 0	REV 18	750-017405	BBAE3420	4x 10GE (LAN/WAN) XFP
Xcvr 0	REV 03	740-014289	T10C90659	XFP-10G-SR
MMB 0	REV 05	710-025563	BBAB9538	ST-MMB2
MMB 1	REV 05	710-025563	BBAB9502	ST-MMB2
FPC 7	REV 01	750-045173	BBAV0032	FPC Type 5-3D
CPU				
SPMB 0	REV 05	710-023321	EG9434	LCC Switch CPU
SPMB 1	REV 05	710-023321	EH3878	LCC Switch CPU
SIB 0	REV 01	750-041657	EH7997	LCC SIB 3D
B Board	REV 01	711-042424	EH7674	LCC SIB 3D Mezz
Xcvr 0	REV 01	740-047547	XB48FB014	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB05A	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB052	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB01B	CXP Module
SIB 1	REV 01	750-041657	EH8023	LCC SIB 3D
B Board	REV 01	711-042424	EH7659	LCC SIB 3D Mezz
Xcvr 0	REV 01	740-047547	XB48FB05J	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB01E	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB01J	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB02S	CXP Module
SIB 2	REV 03	750-041657	EJ6554	LCC SIB 3D
B Board	REV 02	711-042424	EJ5756	LCC SIB 3D Mezz
Xcvr 0	REV 01	740-047547	XB34FB01Z	CXP Module
Xcvr 2	REV 01	740-047547	XB34FB013	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB04Z	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB05N	CXP Module
Fan Tray 0				Front Top Fan Tray
Fan Tray 1				Front Bottom Fan Tray
Fan Tray 2				Rear Fan Tray -- Rev 4

lcc2-re0:

-----  
Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN11B3975AHA	T1600
Midplane	REV 01	710-027486	RC9826	T-series Backplane
FPM GBUS	REV 13	710-002901	BBAG5124	T640 FPM Board



FPM Display	REV 03	710-021387	BBAJ1112	T1600 FPM Display
CIP	REV 06	710-002895	BBAL3744	T-series CIP
PEM 0	REV 05	740-036442	1G022060081	Power Entry Module 6x60
PEM 1	REV 05	740-036442	1G022060188	Power Entry Module 6x60
SCG 0	REV 18	710-003423	BBAH8775	T640 Sonet Clock Gen.
SCG 1	REV 18	710-003423	BBAL7272	T640 Sonet Clock Gen.
Routing Engine 0	REV 07	740-026941	P737F-002992	RE-DUO-1800
Routing Engine 1	REV 07	740-026941	P737F-002938	RE-DUO-1800
CB 0	REV 11	710-022597	EH4805	LCC Control Board
CB 1	REV 11	710-022597	EH4786	LCC Control Board
FPC 1	REV 01	710-033873	BBAH0320	FPC Type 3-ES
CPU	REV 11	710-016744	BBAF3281	ST-PMB2
MMB 0	REV 06	710-025563	BBAF5061	ST-MMB2
FPC 5	REV 04	710-033871	BBAM5070	FPC Type 4-ES
CPU	REV 11	710-016744	BBAM6653	ST-PMB2
PIC 1	REV 20	750-017405	BBAM1296	4x 10GE (LAN/WAN) XFP
Xcvr 0	REV 03	740-014289	T10B42981	XFP-10G-SR
MMB 1	REV 07	710-025563	BBAN2631	ST-MMB2
MMB 1	REV 07	710-025563	BBAN2538	ST-MMB2
SPMB 0	REV 05	710-023321	EH3903	LCC Switch CPU
SPMB 1	REV 05	710-023321	EH3902	LCC Switch CPU
SIB 0	REV 01	750-041657	EH8019	LCC SIB 3D
B Board	REV 01	711-042424	EH7680	LCC SIB 3D Mezz
Xcvr 0	REV 01	740-047547	XB48FB04F	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB04S	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB04B	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB043	CXP Module
SIB 1	REV 01	750-041657	EH8012	LCC SIB 3D
B Board	REV 01	711-042424	EH7658	LCC SIB 3D Mezz
Xcvr 0	REV 01	740-047547	XB48FB05E	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB01Z	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB018	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB054	CXP Module
SIB 2	REV 01	750-041657	EH7993	LCC SIB 3D
B Board	REV 01	711-042424	EH7678	LCC SIB 3D Mezz
Xcvr 0	REV 01	740-047547	XB48FB05C	CXP Module
Xcvr 2	REV 01	740-047547	XB47FB00N	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB05U	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB05L	CXP Module
Fan Tray 0				Front Top Fan Tray
Fan Tray 1				Front Bottom Fan Tray
Fan Tray 2				Rear Fan Tray -- Rev 4

### show chassis hardware clei-models (TX Matrix Plus Router with 3D SIBs)

```
user@host> show chassis hardware clei-models
sfc0-re0:
```

#### Hardware inventory:

Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 05	710-022574		CHAS-BP-TXP-S
FPM Display	REV 09	710-024027		CRAFT-TXP-S
CIP 0	REV 12	710-023792		CIP-TXP-S
CIP 1	REV 12	710-023792		CIP-TXP-S
PEM 0	Rev 06	740-027463	IPUPAFGKTA	PWR-TXP-7-60-DC-S
Routing Engine 0	REV 07	740-026942		RE-DUO-C2600-16G-S
Routing Engine 1	REV 07	740-026942		RE-DUO-C2600-16G-S
CB 0	REV 13	710-022606		CB-TXP-S
CB 1	REV 14	710-022606		CB-TXP-S
SIB F13 0	REV 10	750-035002	PROTOXCLEI	SIB-TXP-3D-F13-S
Xcvr 0	REV 01	740-048813		

Xcvr 1	REV 01	740-048813		
Xcvr 2	REV 01	740-048813		
Xcvr 3	REV 01	740-048813		
Xcvr 4	REV 01	740-048813		
Xcvr 5	REV 01	740-048813		
Xcvr 6	REV 01	740-048813		
Xcvr 7	REV 01	740-048813		
Xcvr 8	REV 01	740-047547		CXP-TXP-3D
Xcvr 10	REV 01	740-047547		CXP-TXP-3D
Xcvr 12	REV 01	740-047547		CXP-TXP-3D
Xcvr 14	REV 01	740-047547		CXP-TXP-3D
SIB F13 1	REV 10	750-035002	PROTOXCLEI	SIB-TXP-3D-F13-S
Xcvr 0	REV 01	740-047547		CXP-TXP-3D
Xcvr 1	REV 01	740-047547		CXP-TXP-3D
Xcvr 2	REV 01	740-047547		CXP-TXP-3D
Xcvr 3	REV 01	740-047547		CXP-TXP-3D
Xcvr 4	REV 01	740-047547		CXP-TXP-3D
Xcvr 5	REV 01	740-047547		CXP-TXP-3D
Xcvr 6	REV 01	740-047547		CXP-TXP-3D
Xcvr 7	REV 01	740-047547		CXP-TXP-3D
Xcvr 8	REV 01	740-047547		CXP-TXP-3D
Xcvr 10	REV 01	740-047547		CXP-TXP-3D
Xcvr 12	REV 01	740-047547		CXP-TXP-3D
Xcvr 14	REV 01	740-047547		CXP-TXP-3D
Xcvr 0	REV 01	740-048813		
Xcvr 1	REV 01	740-048813		
Xcvr 2	REV 01	740-048813		
Xcvr 3	REV 01	740-048813		
Xcvr 4	REV 01	740-048813		
Xcvr 5	REV 01	740-048813		
Xcvr 6	REV 01	740-048813		
Xcvr 7	REV 01	740-048813		
Xcvr 8	REV 01	740-048813		
Xcvr 10	REV 01	740-048813		
Xcvr 12	REV 01	740-048813		
Xcvr 14	REV 01	740-048813		
Xcvr 0	REV 01	740-047547		CXP-TXP-3D
Xcvr 1	REV 01	740-047547		CXP-TXP-3D
Xcvr 2	REV 01	740-047547		CXP-TXP-3D
Xcvr 3	REV 01	740-047547		CXP-TXP-3D
Xcvr 4	REV 01	740-047547		CXP-TXP-3D
Xcvr 5	REV 01	740-047547		CXP-TXP-3D
Xcvr 6	REV 01	740-047547		CXP-TXP-3D
Xcvr 7	REV 01	740-047547		CXP-TXP-3D
Xcvr 8	REV 01	740-047547		CXP-TXP-3D
Xcvr 10	REV 01	740-047547		CXP-TXP-3D
Xcvr 12	REV 01	740-047547		CXP-TXP-3D
Xcvr 14	REV 01	740-047547		CXP-TXP-3D
SIB F13 6	REV 16	750-035002	PROTOXCLEI	SIB-TXP-3D-F13
Xcvr 0	REV 01	740-048813		
Xcvr 1	REV 01	740-048813		
Xcvr 2	REV 01	740-048813		
Xcvr 3	REV 01	740-048813		
Xcvr 4	REV 01	740-048813		
Xcvr 5	REV 01	740-048813		
Xcvr 6	REV 01	740-048813		
Xcvr 7	REV 01	740-048813		
Xcvr 8	REV 01	740-047547		CXP-TXP-3D
Xcvr 10	REV 01	740-047547		CXP-TXP-3D
Xcvr 12	REV 01	740-047547		CXP-TXP-3D
Xcvr 14	REV 01	740-047547		CXP-TXP-3D

SIB F13 7	REV 10	750-035002	PROTOXCLEI	SIB-TXP-3D-F13-S
Xcvr 0	REV 01	740-047547		CXP-TXP-3D
Xcvr 1	REV 01	740-047547		CXP-TXP-3D
Xcvr 2	REV 01	740-047547		CXP-TXP-3D
Xcvr 3	REV 01	740-047547		CXP-TXP-3D
Xcvr 4	REV 01	740-047547		CXP-TXP-3D
Xcvr 5	REV 01	740-047547		CXP-TXP-3D
Xcvr 6	REV 01	740-047547		CXP-TXP-3D
Xcvr 7	REV 01	740-047547		CXP-TXP-3D
Xcvr 8	REV 01	740-047547		CXP-TXP-3D
Xcvr 10	REV 01	740-047547		CXP-TXP-3D
Xcvr 12	REV 01	740-047547		CXP-TXP-3D
Xcvr 14	REV 01	740-047547		CXP-TXP-3D
Xcvr 0	REV 01	740-048813		
Xcvr 1	REV 01	740-048813		
Xcvr 2	REV 01	740-048813		
Xcvr 3	REV 01	740-048813		
Xcvr 4	REV 01	740-048813		
Xcvr 5	REV 01	740-047547		CXP-TXP-3D
Xcvr 6	REV 01	740-047547		CXP-TXP-3D
Xcvr 7	REV 01	740-047547		CXP-TXP-3D
Xcvr 8	REV 01	740-047547		CXP-TXP-3D
Xcvr 10	REV 01	740-047547		CXP-TXP-3D
Xcvr 12	REV 01	740-047547		CXP-TXP-3D
Xcvr 14	REV 01	740-047547		CXP-TXP-3D
SIB F13 9	REV 16	750-035002	PROTOXCLEI	SIB-TXP-3D-F13
Xcvr 0	REV 01	740-047547		CXP-TXP-3D
Xcvr 1	REV 01	740-047547		CXP-TXP-3D
Xcvr 2	REV 01	740-047547		CXP-TXP-3D
Xcvr 3	REV 01	740-047547		CXP-TXP-3D
Xcvr 4	REV 01	740-047547		CXP-TXP-3D
Xcvr 5	REV 01	740-047547		CXP-TXP-3D
Xcvr 6	REV 01	740-047547		CXP-TXP-3D
Xcvr 7	REV 01	740-047547		CXP-TXP-3D
Xcvr 8	REV 01	740-047547		CXP-TXP-3D
Xcvr 10	REV 01	740-047547		CXP-TXP-3D
Xcvr 12	REV 01	740-047547		CXP-TXP-3D
Xcvr 14	REV 01	740-047547		CXP-TXP-3D
SIB F13 11	REV 10	750-035002	PROTOXCLEI	750-035002
Xcvr 0	REV 01	740-048813		
Xcvr 1	REV 01	740-048813		
Xcvr 2	REV 01	740-048813		
Xcvr 3	REV 01	740-048813		
Xcvr 4	REV 01	740-048813		
Xcvr 5	REV 01	740-048813		
Xcvr 6	REV 01	740-047547		CXP-TXP-3D
Xcvr 7	REV 01	740-048813		
Xcvr 8	REV 01	740-047547		CXP-TXP-3D
Xcvr 12	REV 01	740-047547		CXP-TXP-3D
Xcvr 14	REV 01	740-047547		CXP-TXP-3D
SIB F13 12	REV 16	750-035002	PROTOXCLEI	SIB-TXP-3D-F13
Xcvr 0	REV 01	740-047547		CXP-TXP-3D
Xcvr 1	REV 01	740-047547		CXP-TXP-3D
Xcvr 2	REV 01	740-047547		CXP-TXP-3D
Xcvr 3	REV 01	740-047547		CXP-TXP-3D
Xcvr 4	REV 01	740-047547		CXP-TXP-3D
Xcvr 5	REV 01	740-047547		CXP-TXP-3D
Xcvr 6	REV 01	740-047547		CXP-TXP-3D
Xcvr 7	REV 01	740-047547		CXP-TXP-3D
Xcvr 8	REV 01	740-047547		CXP-TXP-3D
Xcvr 10	REV 01	740-047547		CXP-TXP-3D

Xcvr 12	REV 01	740-047547		CXP-TXP-3D
Xcvr 14	REV 01	740-047547		CXP-TXP-3D
SIB F2S 0/0	REV 06	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 0/2	REV 07	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 0/4	REV 06	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 0/6	REV 06	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 1/0	REV 07	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 1/2	REV 07	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 1/4	REV 07	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 1/6	REV 08	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 2/0	REV 06	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 2/2	REV 06	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 2/4	REV 07	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 2/6	REV 06	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 3/0	REV 07	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 3/2	REV 06	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 3/4	REV 06	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 3/6	REV 06	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 4/0	REV 07	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 4/2	REV 06	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 4/4	REV 06	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 4/6	REV 06	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
Fan Tray 0	REV 10	760-024497		FANTRAY-TXP-H-S
Fan Tray 1	REV 10	760-024497		FANTRAY-TXP-H-S
Fan Tray 2	REV 10	760-024502		FANTRAY-TXP-V-S
Fan Tray 3	REV 10	760-024502		FANTRAY-TXP-V-S
Fan Tray 4	REV 10	760-024502		FANTRAY-TXP-V-S
Fan Tray 5	REV 10	760-024502		FANTRAY-TXP-V-S

lcc0-re0:

-----  
Hardware inventory:

Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 01	710-027486	IPMJ700DRD	CHAS-BP-T1600-S
FPM Display	REV 04	710-021387		CRAFT-T1600-S
CIP	REV 06	710-002895		CIP-L-T640-S
PEM 0	REV 05	740-036442	IPUPAG6KAA	PWR-T-6-60-DC-S
PEM 1	REV 05	740-036442	IPUPAG6KAA	PWR-T-6-60-DC-S
SCG 0	REV 18	710-003423		SCG-T-S
SCG 1	REV 18	710-003423		SCG-T-S
Routing Engine 0	REV 10	740-026941		RE-DUO-C1800-8G-S
Routing Engine 1	REV 07	740-026941		RE-DUO-C1800-8G-S
CB 0	REV 11	710-022597		CB-LCC-S
CB 1	REV 11	710-022597		CB-LCC-S
FPC 0	REV 01	750-045173	IP9IAL4DAB	T4000-FPC5-3D
PIC 0	REV 17	750-034624	IP9IAL2DAA	PF-12XGE-SFPP
PIC 1	REV 17	750-034624	IP9IAL2DAA	PF-12XGE-SFPP
FPC 3	REV 01	750-045173	IP9IAL4DAB	T4000-FPC5-3D
PIC 0	REV 13	750-033423	XXXXXXXXDD	PF-12-24XGE-SFPP
FPC 4	REV 02	750-045173	IP9IAL4DAC	T4000-FPC5-3D
PIC 0	REV 17	750-034624	IP9IAL2DAA	PF-12XGE-SFPP
PIC 1	REV 17	750-034624	IP9IAL2DAA	PF-12XGE-SFPP
FPC 5	REV 01	750-045173	IP9IAL4DAB	T4000-FPC5-3D
PIC 0	REV 17	750-034624	IP9IAL2DAA	PF-12XGE-SFPP
PIC 1	REV 17	750-034624	IP9IAL2DAA	PF-12XGE-SFPP
FPC 6	REV 01	750-045173	IP9IAL4DAB	T4000-FPC5-3D
PIC 0	REV 17	750-034624	IP9IAL2DAA	PF-12XGE-SFPP
PIC 1	REV 10	750-035293	IP9IAL3DAA	PF-1CGE-CFP
SIB 0	REV 06	750-041657	PROTOXCLEI	SIB-TXP-3D-LCC
Xcvr 0	REV 01	740-048813		
Xcvr 1	REV 01	740-048813		

```

Xcvr 2      REV 01  740-048813
Xcvr 3      REV 01  740-048813
Xcvr 4      REV 01  740-048813
Xcvr 5      REV 01  740-048813
Xcvr 6      REV 01  740-048813
Xcvr 7      REV 01  740-048813
SIB 1       REV 06  750-041657  PROTOXCLEI  SIB-TXP-3D-LCC
Xcvr 0      REV 01  740-048813
Xcvr 1      REV 01  740-048813
Xcvr 2      REV 01  740-048813
Xcvr 3      REV 01  740-048813
Xcvr 4      REV 01  740-048813
Xcvr 5      REV 01  740-048813
Xcvr 6      REV 01  740-048813
Xcvr 7      REV 01  740-048813
SIB 2       REV 06  750-041657  PROTOXCLEI  SIB-TXP-3D-LCC
Xcvr 0      REV 01  740-048813
Xcvr 1      REV 01  740-048813
Xcvr 2      REV 01  740-048813
Xcvr 3      REV 01  740-048813
Xcvr 4      REV 01  740-048813
Xcvr 5      REV 01  740-048813
Xcvr 6      REV 01  740-048813
Xcvr 7      REV 01  740-048813
SIB 3       REV 07  750-041657  PROTOXCLEI  SIB-TXP-3D-LCC
Xcvr 0      REV 01  740-048813
Xcvr 1      REV 01  740-048813
Xcvr 2      REV 01  740-048813
Xcvr 3      REV 01  740-048813
Xcvr 4      REV 01  740-048813
Xcvr 5      REV 01  740-048813
Xcvr 6      REV 01  740-048813
Xcvr 7      REV 01  740-048813
SIB 4       REV 06  750-041657  PROTOXCLEI  SIB-TXP-3D-LCC
Xcvr 0      REV 01  740-048813
Xcvr 1      REV 01  740-048813
Xcvr 2      REV 01  740-048813
Xcvr 3      REV 01  740-048813
Xcvr 4      REV 01  740-048813
Xcvr 5      REV 01  740-048813
Xcvr 6      REV 01  740-048813
Xcvr 7      REV 01  740-048813
Fan Tray 0
Fan Tray 1
Fan Tray 2
[Output Truncated]
FANTRAY-T-S
FANTRAY-T-S
FANTRAY-TXP3D-LCC-R-S

```

### show chassis hardware detail (TX Matrix Plus Router with 3D SIBs)

```

user@host> show chassis hardware detail
sfc0-re0:

```

```

-----
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               JN11CAA4AHB    TXP
Midplane      REV 05    710-022574   ABAC4696      SFC Midplane
FPM Display   REV 09    710-024027   EH3138        TXP FPM Display
CIP 0         REV 12    710-023792   EF6349        TXP CIP
CIP 1         REV 12    710-023792   EG5294        TXP CIP
PEM 0         Rev 06    740-027463   XH04595       Power Entry Module
PEM 1         Rev 06    740-027463   XH04592       Power Entry Module

```

Routing Engine 0	REV 07	740-026942	P737A-002541	RE-DUO-2600
ad0 3823 MB	SMART CF		2011030400062C132C13	Compact Flash
ad1 62720 MB	SMART	Lite SATA Drive	201105100009A452A452	Disk 1
Routing Engine 1	REV 07	740-026942	P737A-002602	RE-DUO-2600
ad0 3823 MB	SMART CF		20110508085EE471E471	Compact Flash
ad1 62720 MB	SMART	Lite SATA Drive	201110210089DF39DF39	Disk 1
CB 0	REV 15	710-022606	EH4376	SFC Control Board
CB 1	REV 15	710-022606	EH4379	SFC Control Board
SPMB 0		BUILTIN		SFC Switch CPU
SPMB 1		BUILTIN		SFC Switch CPU
SIB F13 0	REV 10	750-035002	EM9305	F13 SIB 3D
B Board	REV 06	711-035082	EM9667	F13 SIB 3D Mezz
P Board	REV 05	711-043544	EM9708	F13 SIB 3D Power
Xcvr 0	REV 01	740-047547	XB34FB00S	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB01H	CXP Module
Xcvr 4	REV 01	740-047547	XB34FB02W	CXP Module
Xcvr 6	REV 01	740-047547	XB34FB01T	CXP Module
Xcvr 8	REV 01	740-047547	XB48FB00W	CXP Module
Xcvr 10	REV 01	740-047547	XB34FB01S	CXP Module
Xcvr 12	REV 01	740-047547	XB34FB03H	CXP Module
Xcvr 14	REV 01	740-047547	XB34FB023	CXP Module
SIB F13 3	REV 01	710-035001	EJ2612	F13 SIB 3D
B Board	REV 01	711-035082	EJ3815	F13 SIB 3D Mezz
P Board	REV 01	711-043544	EJ2678	F13 SIB 3D Power
Xcvr 0	REV 01	740-047547	XB48FB04C	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB00Z	CXP Module
Xcvr 4	REV 01	740-047547	XB47FB036	CXP Module
Xcvr 6	REV 01	740-047547	XB47FB029	CXP Module
Xcvr 8	REV 01	740-047547	XB48FB02N	CXP Module
Xcvr 10	REV 01	740-047547	XB42FB0CS	CXP Module
Xcvr 12	REV 01	740-047547	XB47FB01X	CXP Module
Xcvr 14	REV 01	740-047547	XB48FB02F	CXP Module
SIB F13 6	REV 05	750-035002	EK2675	F13 SIB 3D
B Board	REV 03	711-035082	EK2612	F13 SIB 3D Mezz
P Board	REV 04	711-043544	EK1179	F13 SIB 3D Power
Xcvr 0	REV 01	740-047547	XB48FB01T	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB02M	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB031	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB04P	CXP Module
Xcvr 8	REV 01	740-047547	XB48FB02T	CXP Module
Xcvr 10	REV 01	740-047547	XB34FB01V	CXP Module
Xcvr 12	REV 01	740-047547	XB48FB02C	CXP Module
Xcvr 14		NON-JNPR		No Module
SIB F13 12	REV 01	710-035001	EJ2631	F13 SIB 3D
B Board	REV 01	711-035082	EJ3808	F13 SIB 3D Mezz
P Board	REV 01	711-043544	EJ2676	F13 SIB 3D Power
SIB F2S 0/0	REV 01	711-034977	EH9829	F2S SIB 3D
B Board	REV 01	711-034979	EH9927	F2S SIB 3D Mezz
SIB F2S 0/2	REV 01	711-034977	EH9791	F2S SIB 3D
B Board	REV 01	711-034979	EH9852	F2S SIB 3D Mezz
SIB F2S 0/4	REV 01	711-034977	EH9803	F2S SIB 3D
B Board	REV 01	711-034979	EH9915	F2S SIB 3D Mezz
SIB F2S 0/6	REV 01	711-034977	EH9763	F2S SIB 3D
B Board	REV 01	711-034979	EH9880	F2S SIB 3D Mezz
SIB F2S 1/0	REV 01	711-034977	EH9757	F2S SIB 3D
B Board	REV 01	711-034979	EH9889	F2S SIB 3D Mezz
SIB F2S 1/2	REV 01	711-034977	EH9815	F2S SIB 3D
B Board	REV 01	711-034979	EH9890	F2S SIB 3D Mezz
SIB F2S 1/4	REV 08	750-034978	EN1954	F2S SIB 3D
B Board	REV 02	711-034979	EN1436	F2S SIB 3D Mezz
SIB F2S 1/6	REV 01	711-034977	EJ7054	F2S SIB 3D

B Board	REV 01	711-034979	EJ8238	F2S SIB 3D Mezz
SIB F2S 2/0	REV 01	711-034977	EH9830	F2S SIB 3D
B Board	REV 01	711-034979	EH9844	F2S SIB 3D Mezz
SIB F2S 2/2	REV 01	711-034977	EH9818	F2S SIB 3D
B Board	REV 01	711-034979	EH9888	F2S SIB 3D Mezz
SIB F2S 2/4	REV 01	711-034977	EH9795	F2S SIB 3D
B Board	REV 01	711-034979	EH9869	F2S SIB 3D Mezz
SIB F2S 2/6	REV 01	711-034977	EJ7026	F2S SIB 3D
B Board	REV 01	711-034979	EJ8273	F2S SIB 3D Mezz
SIB F2S 3/0	REV 01	711-034977	EH9811	F2S SIB 3D
B Board	REV 01	711-034979	EH9892	F2S SIB 3D Mezz
SIB F2S 3/2	REV 01	711-034977	EH9812	F2S SIB 3D
B Board	REV 01	711-034979	EH9877	F2S SIB 3D Mezz
SIB F2S 3/4	REV 08	750-034978	EN1947	F2S SIB 3D
B Board	REV 02	711-034979	EN1471	F2S SIB 3D Mezz
Fan Tray 0	REV 10	760-024497	EH3313	Front Fan Tray
Fan Tray 1	REV 10	760-024497	EH3290	Front Fan Tray
Fan Tray 2	REV 10	760-024502	EH3292	Rear Fan Tray
Fan Tray 3	REV 10	760-024502	EH3287	Rear Fan Tray
Fan Tray 4	REV 10	760-024502	EH3286	Rear Fan Tray
Fan Tray 5	REV 10	760-024502	EH3285	Rear Fan Tray

lcc0-re0:

-----  
Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN11B23FEAHA	T1600
Midplane	REV 01	710-027486	RC9787	T-series Backplane
FPM GBUS	REV 13	710-002901	BBAG5132	T640 FPM Board
FPM Display	REV 04	710-021387	BBAL9612	T1600 FPM Display
CIP	REV 06	710-002895	BBAN0605	T-series CIP
PEM 0	REV 05	740-036442	1G022060143	Power Entry Module 6x60
PEM 1	REV 05	740-036442	1G022060011	Power Entry Module 6x60
SCG 0	REV 18	710-003423	BBAL7318	T640 Sonet Clock Gen.
SCG 1	REV 18	710-003423	BBAL7255	T640 Sonet Clock Gen.
Routing Engine 0	REV 07	740-026941	P737F-002933	RE-DUO-1800
ad0 3823 MB	SMART CF		201103030490604E604E	Compact Flash
ad1 62720 MB	SMART Lite SATA Drive		20110729028B11D411D4	Disk 1
Routing Engine 1	REV 06	740-026941	P737F-002749	RE-DUO-1800
ad0 3823 MB	SMART CF		2011010504EB99649964	Compact Flash
ad1 62720 MB	SMART Lite SATA Drive		201102140058934A934A	Disk 1
CB 0	REV 11	710-022597	EH3611	LCC Control Board
CB 1	REV 11	710-022597	EH4798	LCC Control Board
FPC 5	REV 17	710-013037	BBAC5333	FPC Type 4-ES
CPU	REV 10	710-016744	BBAB7619	ST-PMB2
PIC 0	REV 18	750-017405	BBAE3420	4x 10GE (LAN/WAN) XFP
Xcvr 0	REV 03	740-014289	T10C90659	XFP-10G-SR
MMB 0	REV 05	710-025563	BBAB9538	ST-MMB2
MMB 1	REV 05	710-025563	BBAB9502	ST-MMB2
FPC 7	REV 01	750-045173	BBAV0032	FPC Type 5-3D
CPU				
SPMB 0	REV 05	710-023321	EG9434	LCC Switch CPU
SPMB 1	REV 05	710-023321	EH3878	LCC Switch CPU
SIB 0	REV 01	750-041657	EH7997	LCC SIB 3D
B Board	REV 01	711-042424	EH7674	LCC SIB 3D Mezz
Xcvr 0	REV 01	740-047547	XB48FB014	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB05A	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB052	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB01B	CXP Module
SIB 1	REV 01	750-041657	EH8023	LCC SIB 3D
B Board	REV 01	711-042424	EH7659	LCC SIB 3D Mezz

Xcvr 0	REV 01	740-047547	XB48FB05J	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB01E	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB01J	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB02S	CXP Module
SIB 2	REV 03	750-041657	EJ6554	LCC SIB 3D
B Board	REV 02	711-042424	EJ5756	LCC SIB 3D Mezz
Xcvr 0	REV 01	740-047547	XB34FB01Z	CXP Module
Xcvr 2	REV 01	740-047547	XB34FB013	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB04Z	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB05N	CXP Module
Fan Tray 0				Front Top Fan Tray
Fan Tray 1				Front Bottom Fan Tray
Fan Tray 2				Rear Fan Tray -- Rev 4

lcc2-re0:

-----  
Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN11B3975AHA	T1600
Midplane	REV 01	710-027486	RC9826	T-series Backplane
FPM GBUS	REV 13	710-002901	BBAG5124	T640 FPM Board
FPM Display	REV 03	710-021387	BBAJ1112	T1600 FPM Display
CIP	REV 06	710-002895	BBAL3744	T-series CIP
PEM 0	REV 05	740-036442	1G022060081	Power Entry Module 6x60
PEM 1	REV 05	740-036442	1G022060188	Power Entry Module 6x60
SCG 0	REV 18	710-003423	BBAH8775	T640 Sonet Clock Gen.
SCG 1	REV 18	710-003423	BBAL7272	T640 Sonet Clock Gen.
Routing Engine 0	REV 07	740-026941	P737F-002992	RE-DUO-1800
ad0 3823 MB	SMART CF		201103030356329E329E	Compact Flash
ad1 62720 MB	SMART Lite SATA Drive		2011051000488D8B8D8B	Disk 1
Routing Engine 1	REV 07	740-026941	P737F-002938	RE-DUO-1800
ad0 3823 MB	SMART CF		20110304000F02680268	Compact Flash
ad1 62720 MB	SMART Lite SATA Drive		201105300A70F325F325	Disk 1
CB 0	REV 11	710-022597	EH4805	LCC Control Board
CB 1	REV 11	710-022597	EH4786	LCC Control Board
FPC 1	REV 01	710-033873	BBAH0320	FPC Type 3-ES
CPU	REV 11	710-016744	BBAF3281	ST-PMB2
MMB 0	REV 06	710-025563	BBAF5061	ST-MMB2
FPC 5	REV 04	710-033871	BBAM5070	FPC Type 4-ES
CPU	REV 11	710-016744	BBAM6653	ST-PMB2
PIC 1	REV 20	750-017405	BBAM1296	4x 10GE (LAN/WAN) XFP
Xcvr 0	REV 03	740-014289	T10B42981	XFP-10G-SR
MMB 0	REV 07	710-025563	BBAN2631	ST-MMB2
MMB 1	REV 07	710-025563	BBAN2538	ST-MMB2
SPMB 0	REV 05	710-023321	EH3903	LCC Switch CPU
SPMB 1	REV 05	710-023321	EH3902	LCC Switch CPU
SIB 0	REV 01	750-041657	EH8019	LCC SIB 3D
B Board	REV 01	711-042424	EH7680	LCC SIB 3D Mezz
Xcvr 0	REV 01	740-047547	XB48FB04F	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB04S	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB04B	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB043	CXP Module
SIB 1	REV 01	750-041657	EH8012	LCC SIB 3D
B Board	REV 01	711-042424	EH7658	LCC SIB 3D Mezz
Xcvr 0	REV 01	740-047547	XB48FB05E	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB01Z	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB018	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB054	CXP Module
SIB 2	REV 01	750-041657	EH7993	LCC SIB 3D
B Board	REV 01	711-042424	EH7678	LCC SIB 3D Mezz
Xcvr 0	REV 01	740-047547	XB48FB05C	CXP Module



Xcvr 2	REV 01	740-047547	XB47FB00N	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB05U	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB05L	CXP Module
Fan Tray 0				Front Top Fan Tray
Fan Tray 1				Front Bottom Fan Tray
Fan Tray 2				Rear Fan Tray -- Rev 4

### show chassis hardware lcc (TX Matrix Plus Router with 3D SIBs)

```
user@host> show chassis hardware lcc 0
lcc0-re0:
```

#### Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN11B23FEAHA	T1600
Midplane	REV 01	710-027486	RC9787	T-series Backplane
FPM GBUS	REV 13	710-002901	BBAG5132	T640 FPM Board
FPM Display	REV 04	710-021387	BBAL9612	T1600 FPM Display
CIP	REV 06	710-002895	BBAN0605	T-series CIP
PEM 0	REV 05	740-036442	1G022060143	Power Entry Module 6x60
PEM 1	REV 05	740-036442	1G022060011	Power Entry Module 6x60
SCG 0	REV 18	710-003423	BBAL7318	T640 Sonet Clock Gen.
SCG 1	REV 18	710-003423	BBAL7255	T640 Sonet Clock Gen.
Routing Engine 0	REV 07	740-026941	P737F-002933	RE-DUO-1800
Routing Engine 1	REV 06	740-026941	P737F-002749	RE-DUO-1800
CB 0	REV 11	710-022597	EH3611	LCC Control Board
CB 1	REV 11	710-022597	EH4798	LCC Control Board
FPC 5	REV 17	710-013037	BBAC5333	FPC Type 4-ES
CPU	REV 10	710-016744	BBAB7619	ST-PMB2
PIC 0	REV 18	750-017405	BBAE3420	4x 10GE (LAN/WAN) XFP
Xcvr 0	REV 03	740-014289	T10C90659	XFP-10G-SR
MMB 0	REV 05	710-025563	BBAB9538	ST-MMB2
MMB 1	REV 05	710-025563	BBAB9502	ST-MMB2
FPC 7	REV 01	750-045173	BBAV0032	FPC Type 5-3D
CPU				
SPMB 0	REV 05	710-023321	EG9434	LCC Switch CPU
SPMB 1	REV 05	710-023321	EH3878	LCC Switch CPU
SIB 0	REV 01	750-041657	EH7997	LCC SIB 3D
B Board	REV 01	711-042424	EH7674	LCC SIB 3D Mezz
Xcvr 0	REV 01	740-047547	XB48FB014	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB05A	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB052	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB01B	CXP Module
SIB 1	REV 01	750-041657	EH8023	LCC SIB 3D
B Board	REV 01	711-042424	EH7659	LCC SIB 3D Mezz
Xcvr 0	REV 01	740-047547	XB48FB05J	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB01E	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB01J	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB02S	CXP Module
SIB 2	REV 03	750-041657	EJ6554	LCC SIB 3D
B Board	REV 02	711-042424	EJ5756	LCC SIB 3D Mezz
Xcvr 0	REV 01	740-047547	XB34FB01Z	CXP Module
Xcvr 2	REV 01	740-047547	XB34FB013	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB04Z	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB05N	CXP Module
Fan Tray 0				Front Top Fan Tray
Fan Tray 1				Front Bottom Fan Tray
Fan Tray 2				Rear Fan Tray -- Rev 4

## show chassis hardware sfc (TX Matrix Plus Router with 3D SIBs)

```
user@host> show chassis hardware sfc 0
sfc0-re0:
```

```
-----
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			JN11CAAA4AHB	TXP
Midplane	REV 05	710-022574	ABAC4696	SFC Midplane
FPM Display	REV 09	710-024027	EH3138	TXP FPM Display
CIP 0	REV 12	710-023792	EF6349	TXP CIP
CIP 1	REV 12	710-023792	EG5294	TXP CIP
PEM 0	Rev 06	740-027463	XH04595	Power Entry Module
PEM 1	Rev 06	740-027463	XH04592	Power Entry Module
Routing Engine 0	REV 07	740-026942	P737A-002541	RE-DUO-2600
Routing Engine 1	REV 07	740-026942	P737A-002602	RE-DUO-2600
CB 0	REV 15	710-022606	EH4376	SFC Control Board
CB 1	REV 15	710-022606	EH4379	SFC Control Board
SPMB 0		BUILTIN		SFC Switch CPU
SPMB 1		BUILTIN		SFC Switch CPU
SIB F13 0	REV 10	750-035002	EM9305	F13 SIB 3D
B Board	REV 06	711-035082	EM9667	F13 SIB 3D Mezz
P Board	REV 05	711-043544	EM9708	F13 SIB 3D Power
Xcvr 0	REV 01	740-047547	XB34FB00S	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB01H	CXP Module
Xcvr 4	REV 01	740-047547	XB34FB02W	CXP Module
Xcvr 6	REV 01	740-047547	XB34FB01T	CXP Module
Xcvr 8	REV 01	740-047547	XB48FB00W	CXP Module
Xcvr 10	REV 01	740-047547	XB34FB01S	CXP Module
Xcvr 12	REV 01	740-047547	XB34FB03H	CXP Module
Xcvr 14	REV 01	740-047547	XB34FB023	CXP Module
SIB F13 3	REV 01	710-035001	EJ2612	F13 SIB 3D
B Board	REV 01	711-035082	EJ3815	F13 SIB 3D Mezz
P Board	REV 01	711-043544	EJ2678	F13 SIB 3D Power
Xcvr 0	REV 01	740-047547	XB48FB04C	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB00Z	CXP Module
Xcvr 4	REV 01	740-047547	XB47FB036	CXP Module
Xcvr 6	REV 01	740-047547	XB47FB029	CXP Module
Xcvr 8	REV 01	740-047547	XB48FB02N	CXP Module
Xcvr 10	REV 01	740-047547	XB42FB0CS	CXP Module
Xcvr 12	REV 01	740-047547	XB47FB01X	CXP Module
Xcvr 14	REV 01	740-047547	XB48FB02F	CXP Module
SIB F13 6	REV 05	750-035002	EK2675	F13 SIB 3D
B Board	REV 03	711-035082	EK2612	F13 SIB 3D Mezz
P Board	REV 04	711-043544	EK1179	F13 SIB 3D Power
Xcvr 0	REV 01	740-047547	XB48FB01T	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB02M	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB031	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB04P	CXP Module
Xcvr 8	REV 01	740-047547	XB48FB02T	CXP Module
Xcvr 10	REV 01	740-047547	XB34FB01V	CXP Module
Xcvr 12	REV 01	740-047547	XB48FB02C	CXP Module
Xcvr 14		NON-JNPR		No Module
SIB F13 12	REV 01	710-035001	EJ2631	F13 SIB 3D
B Board	REV 01	711-035082	EJ3808	F13 SIB 3D Mezz
P Board	REV 01	711-043544	EJ2676	F13 SIB 3D Power
SIB F2S 0/0	REV 01	711-034977	EH9829	F2S SIB 3D
B Board	REV 01	711-034979	EH9927	F2S SIB 3D Mezz
SIB F2S 0/2	REV 01	711-034977	EH9791	F2S SIB 3D
B Board	REV 01	711-034979	EH9852	F2S SIB 3D Mezz
SIB F2S 0/4	REV 01	711-034977	EH9803	F2S SIB 3D

B Board	REV 01	711-034979	EH9915	F2S SIB 3D Mezz
SIB F2S 0/6	REV 01	711-034977	EH9763	F2S SIB 3D
B Board	REV 01	711-034979	EH9880	F2S SIB 3D Mezz
SIB F2S 1/0	REV 01	711-034977	EH9757	F2S SIB 3D
B Board	REV 01	711-034979	EH9889	F2S SIB 3D Mezz
SIB F2S 1/2	REV 01	711-034977	EH9815	F2S SIB 3D
B Board	REV 01	711-034979	EH9890	F2S SIB 3D Mezz
SIB F2S 1/4	REV 08	750-034978	EN1954	F2S SIB 3D
B Board	REV 02	711-034979	EN1436	F2S SIB 3D Mezz
SIB F2S 1/6	REV 01	711-034977	EJ7054	F2S SIB 3D
B Board	REV 01	711-034979	EJ8238	F2S SIB 3D Mezz
SIB F2S 2/0	REV 01	711-034977	EH9830	F2S SIB 3D
B Board	REV 01	711-034979	EH9844	F2S SIB 3D Mezz
SIB F2S 2/2	REV 01	711-034977	EH9818	F2S SIB 3D
B Board	REV 01	711-034979	EH9888	F2S SIB 3D Mezz
SIB F2S 2/4	REV 01	711-034977	EH9795	F2S SIB 3D
B Board	REV 01	711-034979	EH9869	F2S SIB 3D Mezz
SIB F2S 2/6	REV 01	711-034977	EJ7026	F2S SIB 3D
B Board	REV 01	711-034979	EJ8273	F2S SIB 3D Mezz
SIB F2S 3/0	REV 01	711-034977	EH9811	F2S SIB 3D
B Board	REV 01	711-034979	EH9892	F2S SIB 3D Mezz
SIB F2S 3/2	REV 01	711-034977	EH9812	F2S SIB 3D
B Board	REV 01	711-034979	EH9877	F2S SIB 3D Mezz
SIB F2S 3/4	REV 08	750-034978	EN1947	F2S SIB 3D
B Board	REV 02	711-034979	EN1471	F2S SIB 3D Mezz
Fan Tray 0	REV 10	760-024497	EH3313	Front Fan Tray
Fan Tray 1	REV 10	760-024497	EH3290	Front Fan Tray
Fan Tray 2	REV 10	760-024502	EH3292	Rear Fan Tray
Fan Tray 3	REV 10	760-024502	EH3287	Rear Fan Tray
Fan Tray 4	REV 10	760-024502	EH3286	Rear Fan Tray
Fan Tray 5	REV 10	760-024502	EH3285	Rear Fan Tray

### show chassis hardware (16-Port 10-Gigabit Ethernet MPC with SFP+ Optics [MX Series Routers])

user@host> show chassis hardware

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN112D865AFA	MX960
Midplane	REV 03	710-013698	TS3339	MX960 Backplane
FPM Board	REV 03	710-014974	WW6267	Front Panel Display
PDM	Rev 03	740-013110	QCS12485026	Power Distribution
Module				
PEM 0	Rev 04	740-013682	QCS12434086	PS 1.7kW; 200-240VAC
in				
PEM 1	Rev 04	740-013682	QCS1243408Z	PS 1.7kW; 200-240VAC
in				
PEM 2	Rev 04	740-013682	QCS1243407X	PS 1.7kW; 200-240VAC
in				
Routing Engine 0	REV 07	740-015113	9009009677	RE-S-1300
Routing Engine 1	REV 07	740-015113	9009011510	RE-S-1300
CB 0	REV 03	710-021523	XF0394	MX SCB
CB 1	REV 03	710-021523	XF0550	MX SCB
CB 2	REV 03	710-021523	XD7455	MX SCB
FPC 4	REV 02	750-028467	JR6127	MPC M 16x 10GE
CPU	REV 02	711-029089	JX0129	AS PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+

Fan Tray 0	REV 05	740-014971	TP9990	Fan Tray
Fan Tray 1	REV 05	740-014971	VS1709	Fan Tray

**show chassis hardware (MPC3E [MX Series Routers])**

user@host&gt; show chassis hardware

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN1101AFEAFB	MX480
Midplane	REV 05	710-017414	TR4444	MX480 Midplane
FPM Board	REV 02	710-017254	KG6056	Front Panel Display
PEM 0	Rev 03	740-017330	QCS082090FC	PS 1.2-1.7kW; 100-240V
PEM 1	Rev 03	740-017330	QCS082090FD	PS 1.2-1.7kW; 100-240V
Routing Engine 0	REV 07	740-013063	9009004124	RE-S-2000
Routing Engine 1	REV 07	740-013063	9009005569	RE-S-2000
CB 0	REV 07	710-021523	XZ3587	MX SCB
CB 1	REV 03	710-021523	KH8306	MX SCB
FPC 1	REV 04.1.07	750-033205	P1240	MPC Type 3
CPU	REV 01	711-035209	YL0504	HMPC PMB 2G
MIC 1	REV 10	750-033199	YX4495	1X100GE CFP
PIC 2		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-032210	C22CQNE	CFP-100G-LR4
FPC 2	REV 26	750-016670	KH0045	DPCE 40x 1GE R EQ
CPU	REV 07	710-013713	KF5448	DPC PMB
PIC 0		BUILTIN	BUILTIN	10x 1GE(LAN) EQ
Xcvr 0	REV 01	740-011613	PF21JHU	SFP-SX
PIC 1		BUILTIN	BUILTIN	10x 1GE(LAN) EQ
Xcvr 9	REV 01	740-011613	AM0813S8ZL6	SFP-SX
PIC 2		BUILTIN	BUILTIN	10x 1GE(LAN) EQ
Xcvr 0	REV 02	740-011613	PGL2KYF	SFP-SX
Xcvr 2	REV 01	740-011613	AM0806S8N4P	SFP-SX
PIC 3		BUILTIN	BUILTIN	10x 1GE(LAN) EQ
Xcvr 5	REV 01	740-011613	AM0815S967N	SFP-SX
Xcvr 7	REV 01	740-011613	AM0806S8N1X	SFP-SX
Xcvr 8	REV 01	740-011613	AM0815S967J	SFP-SX
Xcvr 9	REV 01	740-011613	AM0815S967M	SFP-SX
FPC 3	REV 12.2.09	750-033205	YR9443	MPC Type 3
CPU	REV 03	711-035209	YL6931	HMPC PMB 2G
MIC 0	REV 05	750-033199	YR3269	1X100GE CFP
PIC 0		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-032210	ULH0KG3	CFP-100G-LR4
MIC 1	REV 02	750-033199	YG3245	1X100GE CFP
PIC 2		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-032210	ULH0KGF	CFP-100G-LR4
FPC 4	REV 12.3.09	750-033205	YR9437	MPC Type 3
CPU	REV 03	711-035209	YT5857	HMPC PMB 2G
MIC 0	REV 05	750-033199	YR3295	1X100GE CFP
PIC 0		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0		NON-JNPR	X12000187	CFP-100G-SR10
MIC 1	REV 10	750-033199	YX4518	1X100GE CFP
PIC 2		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-035329	X12J00008	CFP-100G-SR10
FPC 5	REV 06	750-024884	JW9769	MPC Type 2 3D EQ
CPU	REV 02	711-028401	JR6158	MPC PMB 2G Proto
MIC 0	REV 05	750-028387	JR6197	3D 4x 10GE XFP
PIC 0		BUILTIN	BUILTIN	2x 10GE XFP
Xcvr 0	REV 01	740-014289	T07M71112	XFP-10G-SR
Xcvr 1	REV 02	740-014289	T08L85610	XFP-10G-SR

PIC 1		BUILTIN	BUILTIN	2x 10GE XFP
MIC 1	REV 22	750-028392	YM0053	3D 20x 1GE(LAN) SFP
PIC 2		BUILTIN	BUILTIN	10x 1GE(LAN) SFP
Xcvr 0	REV 01	740-011613	AM0703S005B	SFP-SX
Xcvr 1	REV 01	740-011613	E07L01352	SFP-SX
PIC 3		BUILTIN	BUILTIN	10x 1GE(LAN) SFP
Xcvr 5	REV 01	740-013111	6500217	SFP-T
Xcvr 9	REV 02	740-013111	8499527	SFP-T
Fan Tray				Left Fan Tray

The PIC number for MIC 1 always starts from 2 (even if the first MIC is a 1X100GE CFP or a legacy MIC).

### show chassis hardware (QFX3500 Switches)

```
user@switch> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               QFX3500
Routing Engine 0                       BUILTIN      BUILTIN      QFX Routing Engine
FPC 0          REV 04    750-044071   BBAR3902     QFX3500-48S4Q-AFI
CPU            BUILTIN      BUILTIN      FPC CPU
PIC 0          BUILTIN      BUILTIN      48x 10G-SFP+
PIC 1          BUILTIN      BUILTIN      15x 10G-SFP+
MGMT BRD       REV 02    750-044063   BBAR0398     QFX3500-MGMT-SFP-AFO
Xcvr 0         REV 01    740-011614   AC0946S0BD1  SFP-LX10
Xcvr 1         REV 02    740-013111   A281922      SFP-T
Power Supply 0 Rev 04    740-032091   UI00677      JPSU-650W-AC-AFI
Power Supply 1 REV 00    740-041741   VJ00162      JPSU-650W-AC-AFO
Fan Tray 0                               QFX Fan Tray, Back to
Front Airlfow
Fan Tray 1                               QFX Fan Tray, Back to
Front Airlfow
Fan Tray 2                               QFX Fan Tray, Back to
Front Airlfow
```

### show chassis hardware detail (QFX3500 Switches)

```
user@switch> show chassis hardware detail
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               QFX3500
Routing Engine 0                       BUILTIN      BUILTIN      QFX Routing Engine
FPC 0          REV 05    750-036931   EE0823       QFX3500-48S4Q-AFI

CPU            BUILTIN      BUILTIN      FPC CPU
PIC 0          BUILTIN      BUILTIN      48x 10G-SFP+
Xcvr 0         REV 01    740-030589   S99E270079   SFP+-10G-LPBK
Xcvr 1         REV 01    740-030589   S9AK450099   SFP+-10G-LPBK
Xcvr 2         REV 01    740-030589   S99E270078   SFP+-10G-LPBK
Xcvr 3         REV 01    740-030589   S9AK450098   SFP+-10G-LPBK
Xcvr 4         REV 01    740-030589   S99E270075   SFP+-10G-LPBK
Xcvr 5         REV 01    740-030589   S9AK450093   SFP+-10G-LPBK
Xcvr 6         REV 01    740-030589   S9AK450097   SFP+-10G-LPBK
Xcvr 7         REV 01    740-030589   S9AK450095   SFP+-10G-LPBK
Xcvr 8         REV 01    740-030589   S99E270072   SFP+-10G-LPBK
Xcvr 9         REV 01    740-030589   S99E270073   SFP+-10G-LPBK
Xcvr 10        REV 01    740-030589   S99E270080   SFP+-10G-LPBK
```

Xcvr 11	REV 01	740-030589	S9AK450169	SFP+-10G-LPBK
Xcvr 12	REV 01	740-030589	S99E270076	SFP+-10G-LPBK
Xcvr 13	REV 01	740-030589	S9AK450167	SFP+-10G-LPBK
Xcvr 14	REV 01	740-030589	S9AK450170	SFP+-10G-LPBK
Xcvr 15	REV 01	740-030589	S9AK450166	SFP+-10G-LPBK
Xcvr 16	REV 01	740-030589	S9AK450092	SFP+-10G-LPBK
Xcvr 17	REV 01	740-030589	S9AK450163	SFP+-10G-LPBK
Xcvr 18	REV 01	740-030589	S9AK450094	SFP+-10G-LPBK
Xcvr 19	REV 01	740-030589	S9AK450100	SFP+-10G-LPBK
Xcvr 20	REV 01	740-030589	S9AK450168	SFP+-10G-LPBK
Xcvr 21	REV 01	740-030589	S9AK450165	SFP+-10G-LPBK
Xcvr 22	REV 01	740-030589	S9AK450073	SFP+-10G-LPBK
Xcvr 23	REV 01	740-030589	S9AK450164	SFP+-10G-LPBK
Xcvr 24	REV 01	740-030589	S9AK450074	SFP+-10G-LPBK
Xcvr 25	REV 01	740-030589	SA62270195	SFP+-10G-LPBK
Xcvr 26	REV 01	740-030589	S9AK450078	SFP+-10G-LPBK
Xcvr 27	REV 01	740-030589	S9AK450024	SFP+-10G-LPBK
Xcvr 28	REV 01	740-030589	S9AK450027	SFP+-10G-LPBK
Xcvr 29	REV 01	740-030589	S9AK450080	SFP+-10G-LPBK
Xcvr 30	REV 01	740-030589	S9AK450030	SFP+-10G-LPBK
Xcvr 31	REV 01	740-030589	S9AK450025	SFP+-10G-LPBK
Xcvr 32	REV 01	740-030589	S9AK450023	SFP+-10G-LPBK
Xcvr 33	REV 01	740-030589	S9AK450075	SFP+-10G-LPBK
Xcvr 34	REV 01	740-030589	S9AK450161	SFP+-10G-LPBK
Xcvr 35	REV 01	740-030589	S9AK450071	SFP+-10G-LPBK
Xcvr 36	REV 01	740-030589	S9AK450072	SFP+-10G-LPBK
Xcvr 37	REV 01	740-030589	S9AK450022	SFP+-10G-LPBK
Xcvr 38	REV 01	740-030589	S9AK450021	SFP+-10G-LPBK
Xcvr 39	REV 01	740-030589	S9AK450175	SFP+-10G-LPBK
Xcvr 40	REV 01	740-030589	S9AK450162	SFP+-10G-LPBK
Xcvr 41	REV 01	740-030589	S99E270074	SFP+-10G-LPBK
Xcvr 42	REV 01	740-030589	S9AK450174	SFP+-10G-LPBK
Xcvr 43	REV 01	740-030589	S9AK450077	SFP+-10G-LPBK
Xcvr 44	REV 01	740-030589	S9AK450076	SFP+-10G-LPBK
Xcvr 45	REV 01	740-030589	S9AK450026	SFP+-10G-LPBK
Xcvr 46	REV 01	740-030589	S9AK450079	SFP+-10G-LPBK
Xcvr 47	REV 01	740-030589	S9AK450029	SFP+-10G-LPBK
PIC 1		BUILTIN	BUILTIN	15x 10G-SFP+
Xcvr 1	REV 01	740-032986	QA170087	QSFP+-40G-SR4
Xcvr 4	REV 01	740-032986	QA360442	QSFP+-40G-SR4
Xcvr 8	REV 01	740-032986	QA170091	QSFP+-40G-SR4
Xcvr 12	REV 01	740-032986	QA170042	QSFP+-40G-SR4
MGMT BRD	REV 08	750-036946	EE0731	QFX3500-MB
Power Supply 0	Rev 04	740-032091	UI00690	QFX PS 650W AC
Power Supply 1	Rev 04	740-032091	UI00679	QFX PS 650W AC
Fan Tray 0				QFX Fan Tray
Fan Tray 1				QFX Fan Tray

### show chassis hardware models (QFX3500 Switches)

```

user@switch> show chassis hardware models
Hardware inventory:
Item          Version  Part number  Serial number  FRU model number
Routing Engine 0      BUILTIN    BUILTIN
FPC 0          REV 02     711-032234   EC4074
Power Supply 0  PSMI 2C   11-d65800   --

```

### show chassis hardware clei-models (QFX3500 Switches)

```

user@switch> show chassis hardware clei-models

```

## Hardware inventory:

Item	Version	Part number	CLEI code	FRU model number
Routing Engine 0		BUILTIN		
FPC 0	REV 02	711-032234		
Power Supply 0	PSMI 2C	11-d65800		

## show chassis hardware clei-models (QFX5100 Switches)

user@switch&gt; show chassis hardware clei-models

## Hardware inventory:

Item	Version	Part number	CLEI code	FRU model number
Routing Engine 0		BUILTIN	CMMNV10BRA	
FPC 0	REV 01	611-053010	CMMNV10BRA	
PIC 0		BUILTIN	CMMNV10BRA	
Power Supply 0	REV 03	740-053352	MUPABHBAA	JPSU-850W-AC-AFO
Power Supply 1	REV 03	740-053352	MUPABHBAA	JPSU-850W-AC-AFO
Fan Tray 0				QFX5100-96S-FANAF0
Fan Tray 1				QFX5100-96S-FANAF0
Fan Tray 2				QFX5100-96S-FANAF0

## show chassis hardware (QFX10002 Switches)

user@switch&gt; show chassis hardware

## Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			12345	QFX10002-36Q
Pseudo CB 0				
Routing Engine 0		BUILTIN	BUILTIN	RE-QFX10002-36Q
FPC 0	REV 26	750-059497	ACNL1387	QFX10002-36Q
CPU		BUILTIN	BUILTIN	FPC CPU
PIC 0		BUILTIN	BUILTIN	36X40G
Xcvr 0	REV 01	740-038623	MOC15476230389	QSFP+-40G-CU1M
Xcvr 1	REV 01	740-038623	MOC15476230438	QSFP+-40G-CU1M
Xcvr 2	REV 01	740-038623	MOC15446231917	QSFP+-40G-CU1M
Xcvr 3	REV 01	740-038623	MOC15446232043	QSFP+-40G-CU1M
Xcvr 4	REV	740-038624	APF15470032AVB	QSFP+-40G-CU3M
Xcvr 5	REV	740-038624	APF15470032H15	QSFP+-40G-CU3M
Xcvr 6	REV	740-038624	APF15470032A9J	QSFP+-40G-CU3M
Xcvr 7	REV	740-038624	APF15470032AG7	QSFP+-40G-CU3M
Xcvr 8	REV	740-038624	APF15470032ALD	QSFP+-40G-CU3M
Xcvr 9	REV 01	740-053203	APF15470071V43	QSFP+-40G-ACU7M
Xcvr 10	REV 01	740-053203	APF15470071V15	QSFP+-40G-ACU7M
Xcvr 11	REV 01	740-053203	APF15470071V12	QSFP+-40G-ACU7M
Xcvr 13	REV	740-038624	APF15470032H1N	QSFP+-40G-CU3M
Xcvr 18	REV 01	740-053203	APF154800738HW	QSFP+-40G-ACU7M
Xcvr 19	REV 01	740-038153	MOC12161530041	QSFP+-40G-CU3M
Xcvr 20	REV 01	740-038153	APF15500034A29	QSFP+-40G-CU3M
Xcvr 30	REV 01	740-038623	MOC15476230444	QSFP+-40G-CU1M
Xcvr 31	REV 01	740-032986	QC330038	QSFP+-40G-SR4
Xcvr 32	REV 01	740-032986	QC290540	QSFP+-40G-SR4
Mezz	REV 02	711-059316	ACNG9344	QFX10002 36X40G Mezz
Power Supply 0	REV 03	740-054405	1EDN5389293	AC AFO 1600W PSU
Power Supply 1	REV 03	740-054405	1EDN5346300	AC AFO 1600W PSU
Fan Tray 0				QFX10002 Fan Tray 0,
Front to Back Airflow - AFO				
Fan Tray 1				QFX10002 Fan Tray 1,
Front to Back Airflow - AFO				
Fan Tray 2				QFX10002 Fan Tray 2,

## Front to Back Airflow - AFO

## show chassis hardware detail (QFX10002 Switches)

```

user@switch> show chassis hardware detail
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               12345         QFX10002-72Q
Pseudo CB 0
Routing Engine 0          BUILTIN      BUILTIN        RE-QFX10002-72Q
ada0    8193 MB  QEMU          QM00001        Virtio Block Disk
ada1    4096 MB  QEMU          QM00002        Virtio Block Disk
ada2    512 MB   QEMU          QM00003        Virtio Block Disk
ada3    1024 MB  QEMU          QM00004        Virtio Block Disk
usb0 (addr 0.1)  UHCI root HUB 0   Intel          uhub0
usb0 (addr 1.1)  EHCI root HUB 0   Intel          uhub1
usb0 (addr 1.2)  product 0x0020 32 vendor 0x8087   uhub2
usb0 (addr 1.3)  Ultra Fit 21891   SanDisk        umass0
FPC 0          REV 05   750-055415   ACAM4724        QFX10002-72Q
CPU            BUILTIN      BUILTIN        FPC CPU

```

## show chassis hardware (QFX10008 and QFX10016 Switches)

```

user@switch> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               DE994         QFX10008
Midplane      REV 28   750-054097   ACPG3671       QFX10008 Midplane
Routing Engine 0          BUILTIN      BUILTIN        Routing Engine
Routing Engine 1          BUILTIN      BUILTIN        Routing Engine
CB 0          REV 03   750-068820   ACPA3224       Control Board
CB 1          REV 03   750-068820   ACPM9059       Control Board
FPC 0         REV 33   750-051354   ACNP4522       ULC-36Q-12Q28
CPU            BUILTIN      BUILTIN        FPC CPU
PIC 0          BUILTIN      BUILTIN        36X40G
  Xcvr 0       REV 01   740-038623   MOC16016230802 QSFP+-40G-CU1M
  Xcvr 1       REV 01   740-038623   MOC16016230802 QSFP+-40G-CU1M
  Xcvr 2       REV 01   740-038623   MOC16016231080 QSFP+-40G-CU1M
  Xcvr 3       REV 01   740-038623   MOC16016231080 QSFP+-40G-CU1M
  Xcvr 4       REV    740-038624   APF16220038H15 QSFP+-40G-CU3M
  Xcvr 5       REV    740-038624   APF16220038H5M QSFP+-40G-CU3M
  Xcvr 6       REV    740-038624   APF160600308W8 QSFP+-40G-CU3M
  Xcvr 8       REV    740-038624   APF16210038FFL QSFP+-40G-CU3M
  Xcvr 9       REV    740-038624   APF16210038F6F QSFP+-40G-CU3M
  Xcvr 10      REV    740-038624   APF1605003032B QSFP+-40G-CU3M
  Xcvr 11      REV    740-038624   APF16070030CDB QSFP+-40G-CU3M
  Xcvr 13      REV    740-038624   APF16210038FEW QSFP+-40G-CU3M
  Xcvr 15      REV 01   740-052307   APF16100071C1L QSFP+-40G-ACU7M
  Xcvr 16      REV    740-038625   APF1623005048E QSFP+-40G-CU5M
  Xcvr 17      REV    740-038625   APF1623005047I QSFP+-40G-CU5M
  Xcvr 18      REV    740-038625   APF1623005044D QSFP+-40G-CU5M
  Xcvr 19      REV 01   740-052307   APF16100071C30 QSFP+-40G-ACU7M
  Xcvr 20      REV    740-038625   APF16290055004 QSFP+-40G-CU5M
  Xcvr 21      REV 01   740-038153   APF1622003970G QSFP+-40G-CU3M
  Xcvr 22      REV    740-038624   APF16190036R90 QSFP+-40G-CU3M
  Xcvr 23      REV    740-038624   APF16050030374 QSFP+-40G-CU3M
  Xcvr 24      REV 01   740-038153   APF162400318HC QSFP+-40G-CU3M
  Xcvr 30      REV    740-038624   APF1606003097A QSFP+-40G-CU3M
  Xcvr 31      REV 01   740-052307   APF160500702R9 QSFP+-40G-ACU7M

```



Xcvr 32	REV	740-038624	APF16220038GVR	QSFP+-40G-CU3M
FPD Board	REV 07	711-054687	ACPC7158	QFX10000 FPD
Power Supply 0	REV 02	740-049388	1EDL63104D6	QFX10000 AC
Power Supply 1	REV 02	740-049388	1EDL62503XC	QFX10000 AC
Power Supply 2	REV 02	740-049388	1EDL62503XS	QFX10000 AC
Power Supply 3	REV 02	740-049388	1EDL62503T8	QFX10000 AC
Power Supply 4	REV 02	740-049388	1EDL62503TR	QFX10000 AC
Power Supply 5	REV 02	740-049388	1EDL62503T5	QFX10000 AC
FTC 0	REV 15	750-050108	ACPF4227	QFX10000 FTC
FTC 1	REV 15	750-050108	ACPF4228	QFX10000 FTC
Fan Tray 0	REV 09	760-054372	ACNV5506	QFX10008 FHB
Fan Tray 1	REV 09	760-054372	ACNV5365	QFX10008 FHB
SIB 0	REV 27	750-050058	ACPM4212	QFX10008 SIB
SIB 1	REV 27	750-050058	ACPM4253	QFX10008 SIB
SIB 2	REV 27	750-050058	ACPM4174	QFX10008 SIB
SIB 3	REV 27	750-050058	ACPM4191	QFX10008 SIB
SIB 4	REV 27	750-050058	ACPM4216	QFX10008 SIB
SIB 5	REV 27	750-050058	ACPM4286	QFX10008 SIB

### show chassis hardware detail (QFX10008 and QFX10016 Switches)

```

user@switch> show chassis hardware details
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               12345         QFX10008
Midplane      REV 01   750-054097   ACAM1754       QFX10008 Midplane
Routing Engine 0      BUILTIN   BUILTIN       Routing Engine
ada0    8193 MB  QEMU                QM00001       Virtio Block Disk
ada1    4096 MB  QEMU                QM00002       Virtio Block Disk
ada2     512 MB  QEMU                QM00003       Virtio Block Disk
ada3   1024 MB  QEMU                QM00004       Virtio Block Disk
usb0 (addr 1) UHCI root HUB 0    Intel         uhub0
usb0 (addr 1) EHCI root HUB 0    Intel         uhub1
usb0 (addr 2) product 0x0020 32  vendor 0x8087  uhub2
Routing Engine 1      BUILTIN   BUILTIN       Routing Engine
ada0    8193 MB  QEMU                QM00001       Virtio Block Disk
ada1    4096 MB  QEMU                QM00002       Virtio Block Disk
ada2     512 MB  QEMU                QM00003       Virtio Block Disk
ada3   1024 MB  QEMU                QM00004       Virtio Block Disk
usb0 (addr 0.1) UHCI root HUB 0    Intel         uhub0
usb0 (addr 1.1) EHCI root HUB 0    Intel         uhub1
usb0 (addr 1.2) product 0x0020 32  vendor 0x8087  uhub2
CB 0          REV 16   750-052688   ACAM7936       Control Board
CB 1          REV 18   750-052688   ACAM7708       Control Board
FPC 0         REV 26   750-051351   ACPJ1372       ULC-60S-6Q Main Board
CPU                               BUILTIN   BUILTIN       FPC CPU

```

### show chassis hardware interconnect-device (QFabric Systems)

```

user@switch> show chassis hardware interconnect-device interconnect1
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               REV 07        QFX_olive
Midplane      REV 07   750-021261   BH0208188289  QFX Midplane
CB 0          REV 07   750-021261   BH0208188289  QFXIC08-CB4S

```

### show chassis hardware node-device (QFabric Systems)

```

user@switch> show chassis hardware node-device node1

```

```

Routing Engine 0   BUILTIN   BUILTIN   QFX Routing Engine
node1             REV 05   711-032234 ED3694      QFX3500-48S4Q-AFI

CPU
PIC 0             BUILTIN   BUILTIN   FPC CPU
Xcvr 8           REV 01   740-030658 AD0946A028B 48x 10G-SFP+
...              SFP+-10G-USR

```

### show chassis hardware (PTX5000 Packet Transport Router)

```

user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               JN11D1FD7AJA  PTX5000
Midplane      REV 03   711-031896  ABAC5589      Midplane-8S
FPM           REV 08   760-030647  EG1679        Front Panel Display
PDU 0         Rev 05   740-032019  ZE00006       DC Power Dist Unit
  PSM 0        Rev 05   740-032022  ZJ00018       DC 12V Power Supply
  PSM 1        Rev 04   740-032022  ZC00052       DC 12V Power Supply
  PSM 2        Rev 04   740-032022  ZD00051       DC 12V Power Supply
  PSM 3        Rev 05   740-032022  ZJ00060       DC 12V Power Supply
CCG 0         REV 04   750-030653  EG3703        Clock Generator
CCG 1         REV 04   750-030653  EG3698        Clock Generator
Routing Engine 0 REV 05   740-026942  P737A-002231  RE-DUO-2600
Routing Engine 1 REV 06   740-026942  P737A-002438  RE-DUO-2600
CB 0          REV 08   750-030625  EG5519        Control Board
CB 1          REV 08   750-030625  EG5516        Control Board
FPC 0         REV 18   750-036844  EJ3080        FPC
  CPU         REV 12   711-030686  EJ3260        SNG PMB
FPC 2         REV 13   750-036844  EG5065        FPC
  CPU         REV 09   711-030686  EG4082        SNG PMB
  PIC 0        REV 14   750-031913  EG5127        24x 10GE(LAN) SFP+
    Xcvr 0     REV 01   740-031980  143363A00240 SFP+-10G-SR
    Xcvr 1     REV 01   740-031981  UK90PZ1       SFP+-10G-LR
    Xcvr 2     REV 01   740-031980  AD1141A04XH   SFP+-10G-SR
    Xcvr 3     REV 01   740-031981  UK90Q46       SFP+-10G-LR
    Xcvr 4     REV 01   740-031980  AD1141A04X4   SFP+-10G-SR
    Xcvr 6     REV 01   740-031980  B11H02560     SFP+-10G-SR
    Xcvr 7     REV 01   740-031980  B11C01589     SFP+-10G-SR
    Xcvr 8     REV 01   740-031980  AD1141A04XF   SFP+-10G-SR
    Xcvr 10    REV 01   740-031980  123363A01094 SFP+-10G-SR
    Xcvr 11    REV 01   740-031980  AK80LKF       SFP+-10G-SR
    Xcvr 12    REV 01   740-031980  183363A01528 SFP+-10G-SR
    Xcvr 14    REV 01   740-031980  193363A01079 SFP+-10G-SR
    Xcvr 15    REV 01   740-031980  AK80MC8       SFP+-10G-SR
    Xcvr 16    REV 01   740-031980  AJC0BHC       SFP+-10G-SR
    Xcvr 19    REV 01   740-021309  J08D26856     SFP+-10G-LR
    Xcvr 21    REV 01   740-031980  AK80KCT       SFP+-10G-SR
    Xcvr 22    REV 01   740-031981  UK90PZL       SFP+-10G-LR
    Xcvr 23    REV 01   740-031980  AK80N1V       SFP+-10G-SR
FPC 3         REV 13   750-036844  EG5074        FPC
  CPU         REV 09   711-030686  EG4064        SNG PMB
  PIC 1        REV 10   750-031903  EG0325        SNG Load
FPC 5         REV 06   750-036844  EH3198        FPC
  CPU
  PIC 0        REV 14   750-031913  EG5134        24x 10GE(LAN) SFP+
    Xcvr 0     REV 01   740-031980  AK80LBH       SFP+-10G-SR
    Xcvr 1     REV 01   740-031980  B11B03724     SFP+-10G-SR
    Xcvr 2     REV 01   740-031980  AK80FMH       SFP+-10G-SR
    Xcvr 5     REV 01   740-031980  B11J00818     SFP+-10G-SR

```

Xcvr 6	REV 01	740-031980	193363A00743	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	B11B06125	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	B11H02529	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	AK80LFB	SFP+-10G-SR
Xcvr 12	REV 01	740-031980	193363A01061	SFP+-10G-SR
Xcvr 15	REV 01	740-031980	B11J00687	SFP+-10G-SR
Xcvr 16	REV 01	740-031980	193363A00738	SFP+-10G-SR
Xcvr 18	REV 01	740-031980	AK80MQX	SFP+-10G-SR
Xcvr 19	REV 01	740-021309	J08C17257	SFP+-10G-LR
Xcvr 22	REV 01	740-031980	B11J00730	SFP+-10G-SR
Xcvr 23	REV 01	740-031980	AK80KEE	SFP+-10G-SR
PIC 1	REV 08	750-036710	EG3105	2x 40GE CFP
Xcvr 0	REV 01	740-034554	B260HLT	CFP-40G-LR4
Xcvr 1	REV 01	740-034554	B11C02847	CFP-40G-LR4
FPC 6	REV 18	750-036844	EJ4391	FPC
CPU	REV 12	711-030686	EJ3257	SNG PMB
FPC 7	REV 18	750-036844	EJ4382	FPC
CPU	REV 12	711-030686	EJ3238	SNG PMB
SPMB 0	REV 10	711-030686	EG5418	SNG PMB
SPMB 1	REV 09	711-030686	EG5373	SNG PMB
SIB 0	REV 07	750-030631	EG4858	SIB-I-8S
SIB 1	REV 07	750-030631	EG4872	SIB-I-8S
SIB 2	REV 07	750-030631	EG4866	SIB-I-8S
SIB 3	REV 07	750-030631	EG6011	SIB-I-8S
SIB 4	REV 07	750-030631	EG4907	SIB-I-8S
SIB 5	REV 07	750-030631	EG4879	SIB-I-8S
SIB 6	REV 07	750-030631	EG4864	SIB-I-8S
SIB 7	REV 07	750-030631	EG4899	SIB-I-8S
SIB 8	REV 07	750-030631	EG4880	SIB-I-8S
Fan Tray 0	REV 04	760-032784	EG1496	Vertical Fan Tray
Fan Tray 1	REV 04	760-030642	EG1335	Horizontal Fan Tray
Fan Tray 2	REV 02	760-030642	ED4952	Horizontal Fan Tray

### show chassis hardware (PTX5000 Packet Transport Router with AC PSM and PDU)

```
user@host> show chassis hardware
```

Hardware inventory:				
Item	Version	Part number	Serial number	Description
Chassis			JN12223A6AJA	PTX5000
Midplane	REV 16	750-035893	ACRA1350	Midplane-8S
FPM	REV 12	760-030647	BBBD5625	Front Panel Display
PDU 0	Rev 01	740-048338	1GB83360005	High Capacity AC WYE PDU
PSM 0	Rev 01	740-048334	1GB43360074	High Capacity AC PSM
PSM 1	Rev 01	740-048334	1GB43360001	High Capacity AC PSM
PSM 2	Rev 01	740-048334	1GB43360104	High Capacity AC PSM
PSM 3	Rev 01	740-048334	1GB43360042	High Capacity AC PSM
PSM 4	Rev 01	740-048334	1GB43360068	High Capacity AC PSM
PSM 5	Rev 01	740-048334	1GB43360080	High Capacity AC PSM
PSM 6	Rev 01	740-048334	1GB43360046	High Capacity AC PSM
PSM 7	Rev 01	740-048334	1GB43360100	High Capacity AC PSM
PDU 1	Rev 01	740-048338	1GB83360006	High Capacity AC WYE PDU
PSM 0	Rev 01	740-048334	1GB43360069	High Capacity AC PSM
PSM 1	Rev 01	740-048334	1GB43360099	High Capacity AC PSM
PSM 2	Rev 01	740-048334	1GB43360050	High Capacity AC PSM
PSM 3	Rev 01	740-048334	1GB43360095	High Capacity AC PSM
PSM 4	Rev 01	740-048334	1GB43360101	High Capacity AC PSM
PSM 5	Rev 01	740-048334	1GB43360075	High Capacity AC PSM
PSM 6	Rev 01	740-048334	1GB43360047	High Capacity AC PSM
PSM 7	Rev 01	740-048334	1GB43360019	High Capacity AC PSM

```

CCG 0          REV 09   750-030653   BBAZ5345      Clock Generator
...

```

### show chassis hardware (PTX5000 Packet Transport Router with FPC2-PTX-P1A)

```

user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               JN1204FC0AJA   PTX5000
Midplane      REV 11   750-035893   ACAB8038      Midplane-8S
FPM           REV 12   760-030647   BBBD5619      Front Panel
Display
PDU 0         Rev 04   740-048336   1GB93470043   High Capacity DC PDU
  PSM 0       Rev 04   740-046988   1GB63500184   High Capacity DC PSM
  PSM 2       Rev 04   740-046988   1GB63500169   High Capacity DC PSM
  PSM 4       Rev 04   740-046988   1GB63500306   High Capacity DC PSM
  PSM 6       Rev 04   740-046988   1GB63500074   High Capacity DC PSM
PDU 1         Rev 04   740-048336   1GB93470045   High Capacity DC PDU
  PSM 1       Rev 04   740-046988   1GB63500193   High Capacity DC PSM
  PSM 3       Rev 04   740-046988   1GB63500143   High Capacity DC PSM
  PSM 5       Rev 04   740-046988   1GB63500146   High Capacity DC PSM
  PSM 7       Rev 04   740-046988   1GB63500192   High Capacity DC PSM
CCG 0         REV 09   750-030653   BBBC1909      Clock Generator
CCG 1         REV 09   750-030653   BBBD2970      Clock Generator
...

```

### show chassis hardware clei-models (PTX5000 Packet Transport Router)

```

user@host> show chassis hardware clei-models
Hardware inventory:
Item          Version  Part number  CLEI code      FRU model number
FPM           REV 08   760-030647   PROTOXCLEI     CRAFT-PTX5000-S
PDU 0         Rev 05   740-032019   IPUPAHLKAA     PWR-SAN-PDU-DC
  PSM 0       Rev 05   740-032022   IPUPAHNKAA     PSM-PTX-DC-120-S
  PSM 1       Rev 04   740-032022   032022XXXX     PWR-SAN-12-DC
  PSM 2       Rev 04   740-032022   032022XXXX     PWR-SAN-12-DC
  PSM 3       Rev 05   740-032022   IPUPAHNKAA     PSM-PTX-DC-120-S
CCG 0         REV 04   750-030653   PROTOXCLEI     CCG-PTX-S
CCG 1         REV 04   750-030653   PROTOXCLEI     CCG-PTX-S
Routing Engine 0 REV 05   740-026942   RE-DUO-C2600-16G-S
Routing Engine 1 REV 06   740-026942   RE-DUO-C2600-16G-S
CB 0          REV 08   750-030625   PROTOXCLEI     CB-PTX-S
CB 1          REV 08   750-030625   PROTOXCLEI     CB-PTX-S
FPC 0         REV 18   750-036844   PROTOXCLEI     FPC-PTX-P1-A
FPC 2         REV 13   750-036844   PROTOXCLEI     FPC-PTX-P1-A
  PIC 0       REV 14   750-031913   PROTOXCLEI     P1-PTX-24-10GE-SFPP
FPC 3         REV 13   750-036844   PROTOXCLEI     FPC-PTX-P1-A
FPC 5
  PIC 0       REV 14   750-031913   PROTOXCLEI     P1-PTX-24-10GE-SFPP
FPC 6         REV 18   750-036844   PROTOXCLEI     FPC-PTX-P1-A
FPC 7         REV 18   750-036844   PROTOXCLEI     FPC-PTX-P1-A
SIB 0         REV 07   750-030631   PROTOXCLEI     SIB-I-PTX5008
SIB 1         REV 07   750-030631   PROTOXCLEI     SIB-I-PTX5008
SIB 2         REV 07   750-030631   PROTOXCLEI     SIB-I-PTX5008
SIB 3         REV 07   750-030631   PROTOXCLEI     SIB-I-PTX5008
SIB 4         REV 07   750-030631   PROTOXCLEI     SIB-I-PTX5008
SIB 5         REV 07   750-030631   PROTOXCLEI     SIB-I-PTX5008
SIB 6         REV 07   750-030631   PROTOXCLEI     SIB-I-PTX5008
SIB 7         REV 07   750-030631   PROTOXCLEI     SIB-I-PTX5008

```

SIB 8	REV 07	750-030631	PROTOXCLEI	SIB-I-PTX5008
Fan Tray 1	REV 04	760-030642	PROTOXCLEI	FAN-PTX-H-S

### show chassis hardware clei-models (PTX5000 Packet Transport Router with AC PSM and PDU)

```
user@host> show chassis hardware clei-models
Hardware inventory:
```

Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 16	750-035893	IPMUN00ARA	CHAS-MP-PTX5000-S
FPM	REV 12	760-030647	IPUCA7SCAA	CRAFT-PTX5000-S
PDU 0	Rev 01	740-048338	PROTOACPDU	PDU2-PTX-AC-W
PSM 0	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 1	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 2	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 3	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 4	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 5	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 6	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 7	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PDU 1	Rev 01	740-048338	PROTOACPDU	PDU2-PTX-AC-W
PSM 0	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 1	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 2	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 3	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 4	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 5	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 6	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 7	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
CCG 0	REV 09	750-030653	IPUCA7DCAA	CCG-PTX-S
...				

### show chassis hardware clei-models (PTX5000 Packet Transport Router with FPC2-PTX-P1A)

```
user@host> show chassis hardware clei-models
Hardware inventory:
```

Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 11	750-035893	IPMUN00ARA	CHAS-MP-PTX5000-S
FPM	REV 12	760-030647	IPUCA7SCAA	CRAFT-PTX5000-S
PDU 0	Rev 04	740-048336	IPUPAL7KAA	PDU2-PTX-DC-S
PSM 0	Rev 04	740-046988	IPUPAL8KAA	PSM2-PTX-DC-S
PSM 2	Rev 04	740-046988	IPUPAL8KAA	PSM2-PTX-DC-S
PSM 4	Rev 04	740-046988	IPUPAL8KAA	PSM2-PTX-DC-S
PSM 6	Rev 04	740-046988	IPUPAL8KAA	PSM2-PTX-DC-S
PDU 1	Rev 04	740-048336	IPUPAL7KAA	PDU2-PTX-DC-S
PSM 1	Rev 04	740-046988	IPUPAL8KAA	PSM2-PTX-DC-S
PSM 3	Rev 04	740-046988	IPUPAL8KAA	PSM2-PTX-DC-S
PSM 5	Rev 04	740-046988	IPUPAL8KAA	PSM2-PTX-DC-S
PSM 7	Rev 04	740-046988	IPUPAL8KAA	PSM2-PTX-DC-S
CCG 0	REV 09	750-030653	IPUCA7DCAA	CCG-PTX-S
CCG 1	REV 09	750-030653	IPUCA7DCAA	CCG-PTX-S
...				

### show chassis hardware detail (PTX5000 Packet Transport Router)

```
user@host> show chassis hardware detail
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			JN11D1FD7AJA	PTX5000
Midplane	REV 03	711-031896	ABAC5589	Midplane-8S
FPM	REV 08	760-030647	EG1679	Front Panel Display

PDU 0	Rev 05	740-032019	ZE00006	DC Power Dist Unit
PSM 0	Rev 05	740-032022	ZJ00018	DC 12V Power Supply
PSM 1	Rev 04	740-032022	ZC00052	DC 12V Power Supply
PSM 2	Rev 04	740-032022	ZD00051	DC 12V Power Supply
PSM 3	Rev 05	740-032022	ZJ00060	DC 12V Power Supply
CCG 0	REV 04	750-030653	EG3703	Clock Generator
CCG 1	REV 04	750-030653	EG3698	Clock Generator
Routing Engine 0	REV 05	740-026942	P737A-002231	RE-DUO-2600
ad0 3823 MB	SMART CF		201006190039C02DC02D	Compact Flash
ad1 62720 MB	SMART Lite SATA Drive		2011042300CF4C6B4C6B	Disk 1
Routing Engine 1	REV 06	740-026942	P737A-002438	RE-DUO-2600
ad0 3823 MB	SMART CF		20100619053455F055F0	Compact Flash
ad1 62720 MB	SMART Lite SATA Drive		20110423000AE8E7E8E7	Disk 1
CB 0	REV 08	750-030625	EG5519	Control Board
CB 1	REV 08	750-030625	EG5516	Control Board
FPC 0	REV 18	750-036844	EJ3080	FPC
CPU	REV 12	711-030686	EJ3260	SNG PMB
FPC 2	REV 13	750-036844	EG5065	FPC
CPU	REV 09	711-030686	EG4082	SNG PMB
PIC 0	REV 14	750-031913	EG5127	24x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	143363A00240	SFP+-10G-SR
Xcvr 1	REV 01	740-031981	UK90PZ1	SFP+-10G-LR
Xcvr 2	REV 01	740-031980	AD1141A04XH	SFP+-10G-SR
Xcvr 3	REV 01	740-031981	UK90Q46	SFP+-10G-LR
Xcvr 4	REV 01	740-031980	AD1141A04X4	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	B11H02560	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	B11C01589	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	AD1141A04XF	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	123363A01094	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	AK80LKF	SFP+-10G-SR
Xcvr 12	REV 01	740-031980	183363A01528	SFP+-10G-SR
Xcvr 14	REV 01	740-031980	193363A01079	SFP+-10G-SR
Xcvr 15	REV 01	740-031980	AK80MC8	SFP+-10G-SR
Xcvr 16	REV 01	740-031980	AJC0BHC	SFP+-10G-SR
Xcvr 19	REV 01	740-021309	J08D26856	SFP+-10G-LR
Xcvr 21	REV 01	740-031980	AK80KCT	SFP+-10G-SR
Xcvr 22	REV 01	740-031981	UK90PZL	SFP+-10G-LR
Xcvr 23	REV 01	740-031980	AK80N1V	SFP+-10G-SR
FPC 3	REV 13	750-036844	EG5074	FPC
CPU	REV 09	711-030686	EG4064	SNG PMB
PIC 1	REV 10	750-031903	EG0325	SNG Load
FPC 5	REV 06	750-036844	EH3198	FPC
CPU				
PIC 0	REV 14	750-031913	EG5134	24x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LBH	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11B03724	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80FMH	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	B11J00818	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	193363A00743	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	B11B06125	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	B11H02529	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	AK80LFB	SFP+-10G-SR
Xcvr 12	REV 01	740-031980	193363A01061	SFP+-10G-SR
Xcvr 15	REV 01	740-031980	B11J00687	SFP+-10G-SR
Xcvr 16	REV 01	740-031980	193363A00738	SFP+-10G-SR
Xcvr 18	REV 01	740-031980	AK80MQX	SFP+-10G-SR
Xcvr 19	REV 01	740-021309	J08C17257	SFP+-10G-LR
Xcvr 22	REV 01	740-031980	B11J00730	SFP+-10G-SR
Xcvr 23	REV 01	740-031980	AK80KEE	SFP+-10G-SR
PIC 1	REV 08	750-036710	EG3105	2x 40GE CFP
Xcvr 0	REV 01	740-034554	B260HLT	CFP-40G-LR4

Xcvr 1	REV 01	740-034554	B11C02847	CFP-40G-LR4
FPC 6	REV 18	750-036844	EJ4391	FPC
CPU	REV 12	711-030686	EJ3257	SNG PMB
FPC 7	REV 18	750-036844	EJ4382	FPC
CPU	REV 12	711-030686	EJ3238	SNG PMB
SPMB 0	REV 10	711-030686	EG5418	SNG PMB
SPMB 1	REV 09	711-030686	EG5373	SNG PMB
SIB 0	REV 07	750-030631	EG4858	SIB-I-8S
SIB 1	REV 07	750-030631	EG4872	SIB-I-8S
SIB 2	REV 07	750-030631	EG4866	SIB-I-8S
SIB 3	REV 07	750-030631	EG6011	SIB-I-8S
SIB 4	REV 07	750-030631	EG4907	SIB-I-8S
SIB 5	REV 07	750-030631	EG4879	SIB-I-8S
SIB 6	REV 07	750-030631	EG4864	SIB-I-8S
SIB 7	REV 07	750-030631	EG4899	SIB-I-8S
SIB 8	REV 07	750-030631	EG4880	SIB-I-8S
Fan Tray 0	REV 04	760-032784	EG1496	Vertical Fan Tray
Fan Tray 1	REV 04	760-030642	EG1335	Horizontal Fan Tray
Fan Tray 2	REV 02	760-030642	ED4952	Horizontal Fan Tray

#### show chassis hardware detail (PTX5000 Packet Transport Router with AC PSM and PDU)

```
user@host> show chassis hardware detail
```

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN12223A6AJA	PTX5000
Midplane	REV 16	750-035893	ACRA1350	Midplane-8S
FPM	REV 12	760-030647	BBBD5625	Front Panel Display
PDU 0	Rev 01	740-048338	1GB83360005	High Capacity AC WYE PDU
PSM 0	Rev 01	740-048334	1GB43360074	High Capacity AC PSM
PSM 1	Rev 01	740-048334	1GB43360001	High Capacity AC PSM
PSM 2	Rev 01	740-048334	1GB43360104	High Capacity AC PSM
PSM 3	Rev 01	740-048334	1GB43360042	High Capacity AC PSM
PSM 4	Rev 01	740-048334	1GB43360068	High Capacity AC PSM
PSM 5	Rev 01	740-048334	1GB43360080	High Capacity AC PSM
PSM 6	Rev 01	740-048334	1GB43360046	High Capacity AC PSM
PSM 7	Rev 01	740-048334	1GB43360100	High Capacity AC PSM
PDU 1	Rev 01	740-048338	1GB83360006	High Capacity AC WYE PDU
PSM 0	Rev 01	740-048334	1GB43360069	High Capacity AC PSM
PSM 1	Rev 01	740-048334	1GB43360099	High Capacity AC PSM
PSM 2	Rev 01	740-048334	1GB43360050	High Capacity AC PSM
PSM 3	Rev 01	740-048334	1GB43360095	High Capacity AC PSM
PSM 4	Rev 01	740-048334	1GB43360101	High Capacity AC PSM
PSM 5	Rev 01	740-048334	1GB43360075	High Capacity AC PSM
PSM 6	Rev 01	740-048334	1GB43360047	High Capacity AC PSM
PSM 7	Rev 01	740-048334	1GB43360019	High Capacity AC PSM
CCG 0	REV 09	750-030653	BBAZ5345	Clock Generator

#### show chassis hardware detail (PTX5000 Packet Transport Router with FPC2-PTX-P1A)

```
user@host> show chassis hardware detail
```

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN1204FC0AJA	PTX5000
Midplane	REV 11	750-035893	ACAB8038	Midplane-8S
FPM	REV 12	760-030647	BBBD5619	Front Panel
Display				
PDU 0	Rev 04	740-048336	1GB93470043	High Capacity DC PDU

PSM 0	Rev 04	740-046988	1GB63500184	High Capacity DC PSM
PSM 2	Rev 04	740-046988	1GB63500169	High Capacity DC PSM
PSM 4	Rev 04	740-046988	1GB63500306	High Capacity DC PSM
PSM 6	Rev 04	740-046988	1GB63500074	High Capacity DC PSM
PDU 1	Rev 04	740-048336	1GB93470045	High Capacity DC PDU
PSM 1	Rev 04	740-046988	1GB63500193	High Capacity DC PSM
PSM 3	Rev 04	740-046988	1GB63500143	High Capacity DC PSM
PSM 5	Rev 04	740-046988	1GB63500146	High Capacity DC PSM
PSM 7	Rev 04	740-046988	1GB63500192	High Capacity DC PSM
CCG 0	REV 09	750-030653	BBBC1909	Clock Generator
CCG 1	REV 09	750-030653	BBBD2970	Clock Generator
...				

### show chassis hardware models (PTX5000 Packet Transport Router)

```
user@host> show chassis hardware models
Hardware inventory:
```

Item	Version	Part number	Serial number	FRU model number
FPM	REV 08	760-030647	EG1679	CRAFT-PTX5000-S
PDU 0	Rev 05	740-032019	ZE00006	PWR-SAN-PDU-DC
PSM 0	Rev 05	740-032022	ZJ00018	PSM-PTX-DC-120-S
PSM 1	Rev 04	740-032022	ZC00052	PWR-SAN-12-DC
PSM 2	Rev 04	740-032022	ZD00051	PWR-SAN-12-DC
PSM 3	Rev 05	740-032022	ZJ00060	PSM-PTX-DC-120-S
CCG 0	REV 04	750-030653	EG3703	CCG-PTX-S
CCG 1	REV 04	750-030653	EG3698	CCG-PTX-S
Routing Engine 0	REV 05	740-026942	P737A-002231	RE-DUO-C2600-16G-S
Routing Engine 1	REV 06	740-026942	P737A-002438	RE-DUO-C2600-16G-S
CB 0	REV 08	750-030625	EG5519	CB-PTX-S
CB 1	REV 08	750-030625	EG5516	CB-PTX-S
FPC 0	REV 18	750-036844	EJ3080	FPC-PTX-P1-A
FPC 2	REV 13	750-036844	EG5065	FPC-PTX-P1-A
PIC 0	REV 14	750-031913	EG5127	P1-PTX-24-10GE-SFPP
FPC 3	REV 13	750-036844	EG5074	FPC-PTX-P1-A
FPC 5				
PIC 0	REV 14	750-031913	EG5134	P1-PTX-24-10GE-SFPP
FPC 6	REV 18	750-036844	EJ4391	FPC-PTX-P1-A
FPC 7	REV 18	750-036844	EJ4382	FPC-PTX-P1-A
SIB 0	REV 07	750-030631	EG4858	SIB-I-PTX5008
SIB 1	REV 07	750-030631	EG4872	SIB-I-PTX5008
SIB 2	REV 07	750-030631	EG4866	SIB-I-PTX5008
SIB 3	REV 07	750-030631	EG6011	SIB-I-PTX5008
SIB 4	REV 07	750-030631	EG4907	SIB-I-PTX5008
SIB 5	REV 07	750-030631	EG4879	SIB-I-PTX5008
SIB 6	REV 07	750-030631	EG4864	SIB-I-PTX5008
SIB 7	REV 07	750-030631	EG4899	SIB-I-PTX5008
SIB 8	REV 07	750-030631	EG4880	SIB-I-PTX5008
Fan Tray 1	REV 04	760-030642	EG1335	FAN-PTX-H-S

### show chassis hardware models (PTX5000 Packet Transport Router with AC PSM and PDU)

```
user@host> show chassis hardware models
Hardware inventory:
```

Item	Version	Part number	Serial number	FRU model number
Midplane	REV 16	750-035893	ACRA1350	CHAS-MP-PTX5000-S
FPM	REV 12	760-030647	BBBD5625	CRAFT-PTX5000-S
PDU 0	Rev 01	740-048338	1GB83360005	PDU2-PTX-AC-W
PSM 0	Rev 01	740-048334	1GB43360074	PSM2-PTX-AC
PSM 1	Rev 01	740-048334	1GB43360001	PSM2-PTX-AC
PSM 2	Rev 01	740-048334	1GB43360104	PSM2-PTX-AC



PSM 3	Rev 01	740-048334	1GB43360042	PSM2-PTX-AC
PSM 4	Rev 01	740-048334	1GB43360068	PSM2-PTX-AC
PSM 5	Rev 01	740-048334	1GB43360080	PSM2-PTX-AC
PSM 6	Rev 01	740-048334	1GB43360046	PSM2-PTX-AC
PSM 7	Rev 01	740-048334	1GB43360100	PSM2-PTX-AC
PDU 1	Rev 01	740-048338	1GB83360006	PDU2-PTX-AC-W
PSM 0	Rev 01	740-048334	1GB43360069	PSM2-PTX-AC
PSM 1	Rev 01	740-048334	1GB43360099	PSM2-PTX-AC
PSM 2	Rev 01	740-048334	1GB43360050	PSM2-PTX-AC
PSM 3	Rev 01	740-048334	1GB43360095	PSM2-PTX-AC
PSM 4	Rev 01	740-048334	1GB43360101	PSM2-PTX-AC
PSM 5	Rev 01	740-048334	1GB43360075	PSM2-PTX-AC
PSM 6	Rev 01	740-048334	1GB43360047	PSM2-PTX-AC
PSM 7	Rev 01	740-048334	1GB43360019	PSM2-PTX-AC
CCG 0	REV 09	750-030653	BBAZ5345	CCG-PTX-S
...				

### show chassis hardware models (PTX5000 Packet Transport Router with FPC2-PTX-P1A)

```

user@host> show chassis hardware models
Hardware inventory:
Item                Version  Part number  Serial number  FRU model number
Midplane            REV 11    750-035893   ACAB8038      CHAS-MP-PTX5000-S
FPM                 REV 12    760-030647   BBBD5619      CRAFT-PTX5000-S
PDU 0               Rev 04    740-048336   1GB93470043   PDU2-PTX-DC-S
  PSM 0             Rev 04    740-046988   1GB63500184   PSM2-PTX-DC-S
  PSM 2             Rev 04    740-046988   1GB63500169   PSM2-PTX-DC-S
  PSM 4             Rev 04    740-046988   1GB63500306   PSM2-PTX-DC-S
  PSM 6             Rev 04    740-046988   1GB63500074   PSM2-PTX-DC-S
PDU 1               Rev 04    740-048336   1GB93470045   PDU2-PTX-DC-S
  PSM 1             Rev 04    740-046988   1GB63500193   PSM2-PTX-DC-S
  PSM 3             Rev 04    740-046988   1GB63500143   PSM2-PTX-DC-S
  PSM 5             Rev 04    740-046988   1GB63500146   PSM2-PTX-DC-S
  PSM 7             Rev 04    740-046988   1GB63500192   PSM2-PTX-DC-S
CCG 0               REV 09    750-030653   BBBC1909      CCG-PTX-S
CCG 1               REV 09    750-030653   BBBD2970      CCG-PTX-S
...

```

### show chassis hardware extensive (PTX5000 Packet Transport Router)

```

user@host> show chassis hardware extensive
Hardware inventory:
Item                Version  Part number  Serial number  Description
.....
PDU 0               Rev 04    740-032019   UE0003         DC Power Dist Unit
Jedec Code:         0x7fb0          EEPROM Version: 0x02
P/N:                 740-032019      S/N:           UE0003
Assembly ID:         0x043d          Assembly Version: 04.00
Date:                11-29-2010      Assembly Flags: 0x00
Version:             Rev 04          CLEI Code:     032022XXXX
ID: DC Power Dist Unit      FRU Model Number: PWR-SAN-PDU-DC
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 3d 04 00 52 65 76 20 30 34 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 33 32 30 31 39 00 00
Address 0x20: 53 2f 4e 20 55 45 30 30 30 33 00 00 00 1d 0b 07
Address 0x30: da ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 30 33 32 30 32 32 58 58 58 58 50
Address 0x50: 57 52 2d 53 41 4e 2d 50 44 55 2d 44 43 00 00 00

```

```

Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 a3 ff ff ff ff ff ff ff ff ff ff ff ff
PSM 0          Rev 04    740-032022    YG00065          DC 12V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           740-032022      S/N:              YG00065
Assembly ID:   0x0440          Assembly Version:  04.00
Date:          07-30-2010      Assembly Flags:    0x00
Version:       Rev 04          CLEI Code:         032022XXXX
ID: DC 12V Power Supply Module FRU Model Number: PWR-SAN-12-DC
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 40 04 00 52 65 76 20 30 34 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 33 32 30 32 32 00 00
Address 0x20: 53 2f 4e 20 59 47 30 30 30 36 35 00 00 1e 07 07
Address 0x30: da ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 30 33 32 30 32 32 58 58 58 58 50
Address 0x50: 57 52 2d 53 41 4e 2d 31 32 2d 44 43 20 20 20 20
Address 0x60: 20 20 20 20 20 20 01 00 ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff 0c ff ff ff ff ff ff ff ff ff ff ff ff

```

#### show chassis hardware extensive (PTX1000 Packet Transport Router)

```

user@host> show chassis hardware extensive
Hardware inventory:
Item                Version  Part number  Serial number  Description
Chassis
Pseudo CB 0
Routing Engine 0
FPC 0               REV 06    750-053330   ACAM4850       PTX1000-FPC-P2-BUILTIN
CPU
PIC 0               BUILTIN   BUILTIN      288X10GE/72X40GE/24X100GE

Xcvr 2              REV 01    740-046565   QE240845       QSFP+-40G-SR4
Xcvr 3              REV 01    740-046565   QE240962       QSFP+-40G-SR4
Xcvr 5              REV 01    740-032986   ES400LZ        QSFP+-40G-SR4
Xcvr 12             REV 01    740-054053   QE419452       QSFP+-4X10G-SR
Xcvr 18             REV 01    740-054053   QE419481       QSFP+-4X10G-SR
Xcvr 30             REV 01    740-046565   QE440485       QSFP+-40G-SR4
Xcvr 48             REV 01    740-032986   ES400K3        QSFP+-40G-SR4
Xcvr 68             REV 01    740-046565   QF2805J3       QSFP+-40G-SR4
Mezz                REV 05    711-053333   ACAM4282       Mezzanine Board
Power Supply 2      REV 01    740-054405   1EDN4470131    AC AFO 1600W PSU
Power Supply 3      REV 01    740-054405   1EDN4470112    AC AFO 1600W PSU
Fan Tray 0
to Back Airflow - AFO
Fan Tray 1
to Back Airflow - AFO
Fan Tray 2
to Back Airflow - AFO

```

#### show chassis hardware extensive (PTX5000 with Control Board 2)

```

user@host> show chassis hardware grep CB
CB 0                REV 06    750-055537   ACLZ9541       Control Board 2
CB 1                REV 06    750-055537   ACLY5329       Control Board 2

```

**show chassis hardware (MX Routers with Media Services Blade [MSB])**

```

user@switch> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number  Description
Chassis                               JN1100FB1AFB  MX480
Midplane         REV 05   710-017414   TR3310         MX480 Midplane
FPM Board        REV 02   710-017254   KG1872         Front Panel Display
PEM 2            Rev 02   740-017343   QCS0812A00N    DC Power Entry Module
PEM 3            Rev 02   740-017343   QCS0812A00U    DC Power Entry Module
Routing Engine 0 REV 07   740-015113   1000740938     RE-S-1300
CB 0             REV 03   710-021523   KF4630         MX SCB
FPC 1            REV 11   750-037207   ZW9726         AS-MCC
  CPU            REV 04   711-038173   ZW4819         AS-MCC PMB
  MIC 0          REV 06   750-037214   ZW3574         AS-MSC
    PIC 0                BUILTIN    BUILTIN        AS-MSC
  MIC 1          REV 00   750-037211                AS-MXC
    PIC 2                BUILTIN    BUILTIN        AS-MXC

```

**show chassis hardware extensive (MX Routers with Media Services Blade [MSB])**

```

user@switch> show chassis hardware extensive
FPC 1            REV 11   750-037207   ZW9726         AS-MCC
Jedec Code:      0x7fb0          EEPROM Version: 0x02
P/N:             750-037207      S/N:           ZW9726
Assembly ID:     0x0b37          Assembly Version: 01.11
Date:            02-17-2012      Assembly Flags: 0x00
Version:         REV 11          CLEI Code:     PROTOXCLEI
ID: AS-MCC       FRU Model Number: 750-037207
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 37 01 0b 52 45 56 20 31 31 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 32 30 37 00 00
Address 0x20: 53 2f 4e 20 5a 57 39 37 32 36 00 00 00 11 02 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 37
Address 0x50: 35 30 2d 30 33 37 32 30 37 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 31 31 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 5e ff ff ff ff ff ff ff ff ff ff ff ff
CPU            REV 04   711-038173   ZW4819         AS-MCC-PMB
Jedec Code:      0x7fb0          EEPROM Version: 0x02
P/N:             711-038173      S/N:           ZW4819
Assembly ID:     0x0b38          Assembly Version: 01.04
Date:            12-30-2011      Assembly Flags: 0x00
Version:         REV 04
ID: AS-MCC PMB
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 38 01 04 52 45 56 20 30 34 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 33 38 31 37 33 00 00
Address 0x20: 53 2f 4e 20 5a 57 34 38 31 39 00 00 00 1e 0c 07
Address 0x30: db ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 00 50 52 4f 54 4f 58 43 4c 45 49 37
Address 0x50: 31 31 2d 30 33 38 31 37 33 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 30 34 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 60 00 00 00 00 00 00 00 00 00 00 00 00
MIC 0            REV 06   750-037214   ZW3574         AS-MSC

```

```

Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N: 750-037214           S/N: ZW3574
Assembly ID: 0x0a44        Assembly Version: 01.06
Date: 02-19-2012          Assembly Flags: 0x00
Version: REV 06            CLEI Code: PROTOXCLEI
ID: AS-MSC                 FRU Model Number: 750-037214
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0a 44 01 06 52 45 56 20 30 36 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 32 31 34 00 00
  Address 0x20: 53 2f 4e 20 5a 57 33 35 37 34 00 00 00 13 02 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 37
  Address 0x50: 35 30 2d 30 33 37 32 31 34 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 30 36 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 60 c0 03 e5 f4 00 00 00 00 00 00 00 00
  PIC 0                     BUILTIN          BUILTIN          AS-MSC
MIC 1                       REV 00           750-037211         AS-MXC
Jedec Code: 0x7fb0          EEPROM Version: 0x01
P/N: 750-037211
Assembly ID: 0x0a43        Assembly Version: 01.00
Date: 255-255-65535       Assembly Flags: 0x00
Version: REV 00
ID: AS-MXC
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 01 ff 0a 43 01 00 52 45 56 20 30 30 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 32 31 31 00 00
  Address 0x20: 00 00 00 00 00 00 00 00 00 00 00 00 00 ff ff ff
  Address 0x30: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff c0 02 e6 6c 7f b0 02 ff 0a 44 01 06
  PIC 2                     BUILTIN          BUILTIN          AS-MXC

```

### show chassis hardware (ACX5048 Router)

```

user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis
Pseudo CB 0
Routing Engine 0
FPC 0         REV 05    650-056267   VF3714170810   ACX5048
CPU
PIC 0         BUILTIN    BUILTIN      48x10G-6x40G
  Xcvr 0      REV 02    740-011613   NR2051S        SFP-SX
  Xcvr 33     REV 01    740-030589   SE5N290041     SFP+-10G-LPBK
  Xcvr 35     REV 01    740-030589   SE5N290926     SFP+-10G-LPBK
  Xcvr 37     REV 01    740-030589   SE5N290049     SFP+-10G-LPBK
  Xcvr 39     REV 01    740-030589   SE5N290046     SFP+-10G-LPBK
  Xcvr 48     NON-JNPR  409310098    UNKNOWN
Power Supply 1 REV 03    740-041741   1GA24081097    JPSU-650W-AC-AFO
Fan Tray 0
to Back Airflow - AFO
Fan Tray 1
to Back Airflow - AFO

```

```

Fan Tray 2
to Back Airflow - AFO
Fan Tray 3
to Back Airflow - AFO
Fan Tray 4
to Back Airflow - AFO

```

ACX5K Fan Tray 2, Front

ACX5K Fan Tray 3, Front

ACX5K Fan Tray 4, Front

### show chassis hardware detail (ACX5048 Router)

```

user@host> show chassis hardware detail
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis
Pseudo CB 0
Routing Engine 0      BUILTIN    BUILTIN        ACX5K Routing Engine
ad0      509 MB  QEMU HARDDISK  QM00001        Hard Disk
ad1      4095 MB  QEMU HARDDISK  QM00002        Hard Disk
ad2       511 MB  QEMU HARDDISK  QM00003        Hard Disk
ad3      1023 MB  QEMU HARDDISK  QM00004        Hard Disk
usb0 (addr 1) product 0x0000 0 vendor 0x0000    uhub1
usb0 (addr 2) product 0x0020 32 vendor 0x8087    uhub2
FPC 0          REV 05   650-056267    VF3714170810   ACX5048
CPU           BUILTIN    BUILTIN        FPC CPU
PIC 0         BUILTIN    BUILTIN        48x10G-6x40G
Xcvr 0        REV 02   740-011613    NR2051S        SFP-SX
Xcvr 33       REV 01   740-030589    SE5N290041     SFP+-10G-LPBK
Xcvr 35       REV 01   740-030589    SE5N290926     SFP+-10G-LPBK
Xcvr 37       REV 01   740-030589    SE5N290049     SFP+-10G-LPBK
Xcvr 39       REV 01   740-030589    SE5N290046     SFP+-10G-LPBK
Xcvr 48       NON-JNPR   409310098     UNKNOWN
Power Supply 1  REV 03   740-041741    1GA24081097    JPSU-650W-AC-AFO
Fan Tray 0
to Back Airflow - AFO
Fan Tray 1
to Back Airflow - AFO
Fan Tray 2
to Back Airflow - AFO
Fan Tray 3
to Back Airflow - AFO
Fan Tray 4
to Back Airflow - AFO

```

ACX5K Fan Tray 0, Front

ACX5K Fan Tray 1, Front

ACX5K Fan Tray 2, Front

ACX5K Fan Tray 3, Front

ACX5K Fan Tray 4, Front

### show chassis hardware clei-models (ACX5048 Router)

```

user@host> show chassis hardware clei-models
Hardware inventory:
Item          Version  Part number  CLEI code      FRU model number
Routing Engine 0      BUILTIN    CMMRG00BRA     ACX5048
FPC 0          REV 05   650-056267    CMMRG00BRA     ACX5048
PIC 0         BUILTIN    CMMRG00BRA     ACX5048
Power Supply 1  REV 03   740-041741    CMUPABHBAA     JPSU-650W-AC-AFO
Fan Tray 0
Fan Tray 1
Fan Tray 2
Fan Tray 3
Fan Tray 4

```

ACX5K-FAN

ACX5K-FAN

ACX5K-FAN

ACX5K-FAN

ACX5K-FAN

### show chassis hardware models (ACX5048 Router)

```

user@host> show chassis hardware models

```

## Hardware inventory:

Item	Version	Part number	Serial number	FRU model number
Routing Engine 0		BUILTIN	BUILTIN	ACX5048
FPC 0	REV 05	650-056267	VF3714170810	ACX5048
PIC 0		BUILTIN	BUILTIN	ACX5048
Power Supply 1	REV 03	740-041741	1GA24081097	JPSU-650W-AC-AFO
Fan Tray 0				ACX5K-FAN
Fan Tray 1				ACX5K-FAN
Fan Tray 2				ACX5K-FAN
Fan Tray 3				ACX5K-FAN
Fan Tray 4				ACX5K-FAN

## show chassis hardware (ACX5096 Router)

user@host&gt; show chassis hardware

## Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			VB3714510139	ACX5096
Pseudo CB 0				
Routing Engine 0		BUILTIN	BUILTIN	ACX5K Routing Engine
FPC 0	REV 09	650-053391	VB3714510139	ACX5096
CPU		BUILTIN	BUILTIN	FPC CPU
PIC 0		BUILTIN	BUILTIN	96x10G-8x40G
Xcvr 0	REV 01	740-021308	ARS186H	SFP+-10G-SR
Xcvr 2	REV 01	740-031851	AM1045SUA1G	SFP-SX
Xcvr 10	REV 02	740-011613	NS11KRP	SFP-SX
Xcvr 14	REV 01	740-031980	AMCOLKL	SFP+-10G-SR
Xcvr 20	REV 01	740-021308	ARS18A2	SFP+-10G-SR
Xcvr 30	REV 02	740-011613	PJ21954	SFP-SX
Xcvr 35	REV 01	740-031851	PN344LV	SFP-SX
Xcvr 40	REV 01	740-031851	PLG028R	SFP-SX
Xcvr 41	REV 01	740-021308	L12D01919	SFP+-10G-SR
Xcvr 46	REV 01	740-011613	PD91F10	SFP-SX
Xcvr 64	REV 01	740-031980	AMSOYSS	SFP+-10G-SR
Xcvr 96	REV 01	740-032986	QE481421	QSFP+-40G-SR4
Xcvr 99	REV 01	740-032986	QE494942	QSFP+-40G-SR4
Xcvr 100	REV 01	740-032986	QE494756	QSFP+-40G-SR4
Power Supply 0	REV 01	740-053352	1GD14220106	JPSU-850W-AC-AFO
Power Supply 1	REV 01	740-053352	1GD14220102	JPSU-850W-AC-AFO
Fan Tray 0				ACX5K Fan Tray 0, Front
to Back Airflow - AFO				
Fan Tray 1				ACX5K Fan Tray 1, Front
to Back Airflow - AFO				
Fan Tray 2				ACX5K Fan Tray 2, Front
to Back Airflow - AFO				

## show chassis hardware detail (ACX5096 Router)

user@host&gt; show chassis hardware detail

## Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			VB3714510139	ACX5096
Pseudo CB 0				
Routing Engine 0		BUILTIN	BUILTIN	ACX5K Routing Engine
ad0	509 MB	QEMU HARDDISK	QM00001	Hard Disk
ad1	4095 MB	QEMU HARDDISK	QM00002	Hard Disk
ad2	511 MB	QEMU HARDDISK	QM00003	Hard Disk
ad3	1023 MB	QEMU HARDDISK	QM00004	Hard Disk
usb0 (addr 1)	product 0x0000 0		vendor 0x0000	uhub1
usb0 (addr 2)	product 0x0020 32		vendor 0x8087	uhub2

FPC 0	REV 09	650-053391	VB3714510139	ACX5096
CPU		BUILTIN	BUILTIN	FPC CPU
PIC 0		BUILTIN	BUILTIN	96x10G-8x40G
Xcvr 0	REV 01	740-021308	ARS186H	SFP+-10G-SR
Xcvr 10	REV 02	740-011613	NS11KRP	SFP-SX
Xcvr 14	REV 01	740-031980	AMCOLKL	SFP+-10G-SR
Xcvr 20	REV 01	740-021308	ARS18A2	SFP+-10G-SR
Xcvr 30	REV 02	740-011613	PJ21954	SFP-SX
Xcvr 41	REV 01	740-021308	L12D01919	SFP+-10G-SR
Xcvr 46	REV 01	740-011613	PD91F10	SFP-SX
Xcvr 64	REV 01	740-031980	AMSOYSS	SFP+-10G-SR
Xcvr 78	REV 01	740-031851	AM1045SUA1G	SFP-SX
Xcvr 96	REV 01	740-032986	QE481421	QSFP+-40G-SR4
Xcvr 99	REV 01	740-032986	QE494942	QSFP+-40G-SR4
Xcvr 100	REV 01	740-032986	QE494756	QSFP+-40G-SR4
Power Supply 0	REV 01	740-053352	1GD14220106	JPSU-850W-AC-AFO
Power Supply 1	REV 01	740-053352	1GD14220102	JPSU-850W-AC-AFO
Fan Tray 0				ACX5K Fan Tray 0, Front
to Back Airflow - AFO				
Fan Tray 1				ACX5K Fan Tray 1, Front
to Back Airflow - AFO				
Fan Tray 2				ACX5K Fan Tray 2, Front
to Back Airflow - AFO				

#### show chassis hardware clei-models (ACX5096 Router)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item          Version  Part number  CLEI code  FRU model number
Routing Engine 0
FPC 0         REV 09    650-053391  CMMNX10BRA ACX5096
PIC 0         BUILTIN  CMMNX10BRA  ACX5096
Power Supply 0 REV 01    740-053352  CMUPACSBAA JPSU-850W-AC-AFO
Power Supply 1 REV 01    740-053352  CMUPACSBAA JPSU-850W-AC-AFO
Fan Tray 0
Fan Tray 1
Fan Tray 2
ACX5K-FAN
ACX5K-FAN
ACX5K-FAN
```

#### show chassis hardware models (ACX5096 Router)

```
user@host> show chassis hardware models
Hardware inventory:
Item          Version  Part number  Serial number  FRU model number
Routing Engine 0
FPC 0         REV 09    650-053391  VB3714510139 ACX5096
PIC 0         BUILTIN  CMMNX10BRA  ACX5096
Power Supply 0 REV 01    740-053352  1GD14220106 JPSU-850W-AC-AFO
Power Supply 1 REV 01    740-053352  1GD14220102 JPSU-850W-AC-AFO
Fan Tray 0
Fan Tray 1
Fan Tray 2
ACX5K-FAN
ACX5K-FAN
ACX5K-FAN
```

#### show chassis hardware (ACX500 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis
Midplane      REV 01    650-055932  VJ0214510035 ACX500-AC
Routing Engine BUILTIN  BUILTIN      ACX500-AC
Routing Engine
```

FEB 0			BUILTIN	BUILTIN	Forwarding Engine
Processor					
FPC 0			BUILTIN	BUILTIN	FPC BUILTIN
MIC 0			BUILTIN	BUILTIN	2x 1GE(LAN) SFP
PIC 0			BUILTIN	BUILTIN	2x 1GE(LAN) SFP
Xcvr 0	REV 01	740-031851	PMF2Y3C		SFP-SX
Xcvr 1	REV 01	740-031851	PN342QN		SFP-SX
MIC 1			BUILTIN	BUILTIN	4x 1GE(LAN) SFP, RJ45
PIC 1			BUILTIN	BUILTIN	4x 1GE(LAN) SFP, RJ45
Xcvr 0	REV 01	740-011613	PF30K0L		SFP-SX
MIC 2			BUILTIN	BUILTIN	MS BUILTIN
PIC 2			BUILTIN	BUILTIN	MS BUILTIN

### show chassis hardware detail (ACX500 Router)

```

user@host> show chassis hardware detail
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               VJ0214510035  ACX500-AC
Midplane      REV 01   650-055932  VJ0214510035  ACX500-AC
Routing Engine BUILTIN  BUILTIN      Routing Engine
da0           3820 MB  USB DISK 2.0 Nand Flash 0
FEB 0                               BUILTIN      BUILTIN      Forwarding Engine
Processor
FPC 0                               BUILTIN      BUILTIN      FPC BUILTIN
MIC 0                               BUILTIN      BUILTIN      2x 1GE(LAN) SFP
PIC 0                               BUILTIN      BUILTIN      2x 1GE(LAN) SFP
Xcvr 0        REV 01   740-031851  PMF2Y3C      SFP-SX
Xcvr 1        REV 01   740-031851  PN342QN      SFP-SX
MIC 1                               BUILTIN      BUILTIN      4x 1GE(LAN) SFP, RJ45
PIC 1                               BUILTIN      BUILTIN      4x 1GE(LAN) SFP, RJ45
Xcvr 0        REV 01   740-011613  PF30K0L      SFP-SX
MIC 2                               BUILTIN      BUILTIN      MS BUILTIN
PIC 2                               BUILTIN      BUILTIN      MS BUILTIN

```

### show chassis hardware extensive (ACX500 Router)

```

user@host> show chassis hardware extensive
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               VJ0214510035  ACX500-AC
Jedec Code:   0x7fb0                      EEPROM Version: 0x02
S/N:          VJ0214510035
Assembly ID:  0x057c                      Assembly Version: 00.00
Date:         00-00-0000                  Assembly Flags:  0x00
ID: ACX500-AC
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 7f b0 02 ff 05 7c 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x20: 56 4a 30 32 31 34 35 31 30 30 33 35 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane      REV 01   650-055932  VJ0214510035  ACX500-AC
Jedec Code:   0x7fb0                      EEPROM Version: 0x02
P/N:         650-055932                  S/N:          VJ0214510035

```



```

Assembly ID: 0x057c      Assembly Version: 01.00
Date:      12-23-2014    Assembly Flags: 0x00
Version:    REV 01       CLEI Code:      PROTOXCLEI
ID: ACX500-AC            FRU Model Number: ACX500-AC

```

## Board Information Record:

```
Address 0x00: ad 01 00 80 f0 1c 2d 1b 60 80 ff ff ff ff ff ff
```

## I2C Hex Data:

```

Address 0x00: 7f b0 02 fe 05 7c 01 00 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 36 35 30 2d 30 35 35 39 33 32 00 00
Address 0x20: 56 4a 30 32 31 34 35 31 30 30 33 35 00 17 0c 07
Address 0x30: de ff ff ff ad 01 00 80 f0 1c 2d 1b 60 80 ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 41
Address 0x50: 43 58 35 30 30 2d 41 43 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 30 41 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 93 56 4a 30 32 31 34 35 31 30 30 33 35

```

```

Routing Engine      BUILTIN      BUILTIN      Routing Engine
da0      3820 MB  USB DISK 2.0      Nand Flash 0
FEB 0      BUILTIN      BUILTIN      Forwarding Engine

```

## Processor

```

FPC 0      BUILTIN      BUILTIN      FPC BUILTIN
MIC 0      BUILTIN      BUILTIN      2x 1GE(LAN) SFP

```

```

Jedec Code: 0x0000      EEPROM Version: 0x00
P/N:      BUILTIN      S/N:      BUILTIN
Assembly ID: 0x0a40      Assembly Version: 00.00
Date:      00-00-0000      Assembly Flags: 0x00
ID: 2x 1GE(LAN) SFP

```

## Board Information Record:

```
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
```

## I2C Hex Data:

```

Address 0x00: 00 00 00 00 0a 40 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 49 6e 76 61
Address 0x20: 42 55 49 4c 54 49 4e 00 49 6e 76 61 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 de ad be ef 64 20 22 a8 60 af 21 38

```

```

PIC 0      BUILTIN      BUILTIN      2x 1GE(LAN) SFP
Xcvr 0      REV 01      740-031851      PMF2Y3C      SFP-SX
Xcvr 1      REV 01      740-031851      PN342QN      SFP-SX
MIC 1      BUILTIN      BUILTIN      4x 1GE(LAN) SFP, RJ45

```

```

Jedec Code: 0x0000      EEPROM Version: 0x00
P/N:      BUILTIN      S/N:      BUILTIN
Assembly ID: 0x0aac      Assembly Version: 00.00
Date:      00-00-0000      Assembly Flags: 0x00
ID: 4x 1GE(LAN) SFP, RJ45

```

## Board Information Record:

```
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
```

## I2C Hex Data:

```

Address 0x00: 00 00 00 00 0a ac 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 49 6e 76 61
Address 0x20: 42 55 49 4c 54 49 4e 00 49 6e 76 61 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 00 00 00 00 64 20 b5 c0 60 af 21 38

```

```

PIC 1      BUILTIN      BUILTIN      4x 1GE(LAN) SFP, RJ45
Xcvr 0      REV 01      740-011613      PF30K0L      SFP-SX
MIC 2      BUILTIN      BUILTIN      MS BUILTIN
Jedec Code: 0x0000      EEPROM Version: 0x00

```

```

P/N:          BUILTIN          S/N:          BUILTIN
Assembly ID:  0x0aaf          Assembly Version: 00.00
Date:         00-00-0000      Assembly Flags:  0x00
ID: MS BUILTIN
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 0a af 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 49 6e 76 61
Address 0x20: 42 55 49 4c 54 49 4e 00 49 6e 76 61 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 de ad be ef 64 22 cd 48 60 af 21 38
PIC 2          BUILTIN          BUILTIN          MS BUILTIN

```

### show chassis hardware clei-models (ACX500 Router)

```

user@host> show chassis hardware clei-models
Hardware inventory:
Item          Version  Part number  CLEI code      FRU model number
Midplane      REV 01    650-055932  PROTOXCLEI    ACX500-AC
Routing Engine
FEB 0         BUILTIN
FPC 0         BUILTIN

```

### show chassis hardware models (ACX500 Router)

```

user@host> show chassis hardware models
Hardware inventory:
Item          Version  Part number  Serial number  FRU model number
Midplane      REV 01    650-055932  VJ0214510035  ACX500-AC
Routing Engine
FEB 0         BUILTIN    BUILTIN
FPC 0         BUILTIN    BUILTIN

```

## show chassis lcd

<b>List of Syntax</b>	<a href="#">show chassis lcd (EX Series) on page 883</a> <a href="#">show chassis lcd (QFX Series) on page 883</a> <a href="#">show chassis lcd (OCX Series) on page 883</a>
<b>show chassis lcd (EX Series)</b>	<pre>show chassis lcd &lt;fpc-slot <i>fpc-slot-number</i>&gt; &lt;menu &lt;(all-members   local   member <i>member-id</i>)&gt;&gt;</pre>
<b>show chassis lcd (QFX Series)</b>	<pre>show chassis lcd &lt;fpc-slot <i>fpc-slot-number</i>&gt; &lt;interconnect-device <i>device-id</i>&gt; &lt;node-device <i>device-id</i>&gt;</pre>
<b>show chassis lcd (OCX Series)</b>	<pre>show chassis lcd &lt;fpc-slot <i>fpc-slot-number</i>&gt;</pre>
<b>Release Information</b>	<p>Command introduced in Junos OS Release 9.0 for EX Series switches.</p> <p><b>menu</b> option introduced in Junos OS Release 10.2 for EX Series switches.</p> <p>Command introduced in Junos OS Release 11.1 for the QFX Series.</p> <p>Command introduced in Junos OS Release 13.1 for QFabric systems.</p> <p>Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.</p>
<b>Description</b>	<p>Display the information that appears on the LCD panel of EX3200, EX3300, EX4200, EX4500, EX6200, and EX8200 switches, XRE200 External Routing Engines, QFX Series standalone switches, OCX Series switches, and Interconnect devices and Node devices within a QFabric system. Display the status of the currently selected port parameter of the Status LED for each network port on the device.</p>
<b>Options</b>	<p><b>none</b>—Display the information that appears on the LCD panel (for any EX Series member switch in a Virtual Chassis or for XRE200 External Routing Engines, display the information for all Virtual Chassis members). Display the status of the currently selected port parameter of the Status LED for each network port.</p> <p><b>fpc-slot &lt;fpc-slot-number&gt;</b>—(Optional) Display the information as follows:</p> <ul style="list-style-type: none"> <li>(EX3200, EX3300, EX4200, and EX4500 switches, QFX Series, or OCX Series) Display the information that appears on the LCD panel for either an FPC slot with no <i>fpc-slot-number</i> value specified or for the FPC slot specified by <b>fpc-slot 0</b>. <b>fpc-slot</b> refers to the switch itself and <b>0</b> is the only valid value for <i>fpc-slot-number</i>. Output for these options is the same as for the <b>none</b> option.  Also display the status of the currently selected port parameter of the Status LED for each network port.</li> <li>(EX Series Virtual Chassis member switches or XRE200 External Routing Engines) If no <i>fpc-slot-number</i> value is specified, display the information that appears on the LCD panel for all members of the Virtual Chassis. Output for this option is the</li> </ul>

same as for the **none** option. If the **fpc-slot-number** value is specified (it equals the **member-id** value), display the information for the specified member.

Also display the status of the currently selected port parameter of the Status LED for each network port.

- (EX6200 or EX8200 switches)—Display the information that appears on the LCD panel for the line card in the line-card slot specified by the **fpc-slot-number** value.

Also display the status of the currently selected port parameter of the Status LED for each network port.

**interconnect-device device-id**—(QFabric systems only) (Optional) Display the front panel contents and LED status of all the ports on the Interconnect device.

**menu**—(Optional) Display the names of the menus and menu options that are currently enabled on the LCD panel.

**menu all-members**—(EX Series Virtual Chassis member switches or XRE200 External Routing Engines) (Optional) Display the names of the menus and menu options that are currently enabled on the LCD panel for all Virtual Chassis members.

**menu local**—(EX Series Virtual Chassis member switches or XRE200 External Routing Engines) (Optional) Display the names of the menus and menu options that are currently enabled on the LCD panel for the Virtual Chassis member from which you issued the command.

**menu member member-id**—(EX Series Virtual Chassis member switches or XRE200 External Routing Engines) (Optional) Display the names of the menus and menu options that are currently enabled on the LCD panel for the specified Virtual Chassis member.

**node-device device-id**—(QFabric systems only) (Optional) Display the front panel contents and LED status of all the ports on the Node device.

**Required Privilege Level**

view

**Related Documentation**

- [LCD Panel in EX3200 Switches](#)
- [LCD Panel in EX4200 Switches](#)
- [LCD Panel in EX4500 Switches](#)
- [LCD Panel in an EX8200 Switch](#)
- [LCD Panel in an XRE200 External Routing Engine](#)
- [Configuring the LCD Panel on EX Series Switches \(CLI Procedure\) on page 25](#)
- [set chassis display message on page 163](#)

**List of Sample Output**    [show chassis lcd \(Two-Member EX4200 Virtual Chassis\) on page 886](#)

[show chassis lcd fpc-slot 1 \(EX4200 Virtual Chassis\) on page 887](#)  
[show chassis lcd \(EX8200 Switch\) on page 888](#)  
[show chassis lcd fpc-slot 2 \(EX8200 Switch\) on page 889](#)  
[show chassis lcd menu \(EX4200 Switch\) on page 890](#)  
[show chassis lcd menu \(EX8200 Switch\) on page 890](#)  
[show chassis lcd \(QFX3500 Switches\) on page 890](#)  
[show chassis lcd \(XRE200 External Routing Engine in EX8200 Virtual Chassis\) on page 890](#)  
[show chassis lcd interconnect-device \(QFabric Systems\) on page 893](#)  
[show chassis lcd node-device \(QFabric Systems\) on page 895](#)

**Output Fields** Table 27 on page 885 lists the output fields for the **show chassis lcd** command. Output fields are listed in the approximate order in which they appear.

*Table 27: show chassis lcd Output Fields*

Field Name	Field Description
<b>membernumber</b> (XRE200 External Routing Engine)	Member ID of the device whose content is being displayed.
<b>Front panel contents for slot</b>  <b>Front panel contents</b> (EX6200, EX8200 switch, XRE200 External Routing Engine, and QFX Series)	<p>FPC slot number of the switch whose content is being displayed. The number is always 0, except for EX4200 switches in a Virtual Chassis, where it is the member ID value.</p> <p>On EX6200 switches, EX8200 switches, and XRE200 External Routing Engines, no slot number is displayed.</p> <p>On XRE200 External Routing Engines, this field appears under the <b>member number</b> field for each member device in the EX8200 Virtual Chassis.</p>
<b>LCD screen</b>	<p>The first line displays the hostname (for Virtual Chassis members, displays the member ID, the current role, and hostname; for EX8200 switches, displays RE and the hostname). The second line displays the currently selected port parameter of the Status LED and the alarms counter. The Status LED port parameters are:</p> <ul style="list-style-type: none"> <li>• <b>ADM</b>—Administrative</li> <li>• <b>SPD</b>—Speed</li> <li>• <b>DPX</b>—Duplex</li> <li>• <b>POE</b>—Power over Ethernet (EX3200 and EX4200 switches only)</li> </ul>
<b>LEDs status</b>	Current state of the Alarms, System, and Master LEDs (chassis status LEDs).
<b>Interface</b>	Names of the interfaces on the switch.

Table 27: show chassis lcd Output Fields (continued)

Field Name	Field Description
LED (ADM/SPD/DPX/POE)	<p>State of the currently selected port parameter of the Status LED for the interface. The Status LED port parameters are:</p> <p><b>NOTE:</b> The XRE200 External Routing Engine always displays the <b>NA</b> parameter. The QFX Series products do not have any of the port parameters listed below.</p> <ul style="list-style-type: none"> <li>• <b>ADM</b>—Administrative</li> <li>• <b>SPD</b>—Speed</li> <li>• <b>DPX</b>—Duplex</li> <li>• <b>NA</b>—Not applicable.</li> <li>• <b>POE</b>—Power over Ethernet</li> </ul>
fpcx	On standalone EX Series and QFX Series switches, always 0. On EX Series Virtual Chassis member switches, member ID of the Virtual Chassis member whose LCD menu is displayed.

## Sample Output

### show chassis lcd (Two-Member EX4200 Virtual Chassis)

```

user@switch> show chassis lcd
Front panel contents for slot: 0
-----
LCD screen:
  00:BK switch1
  LED:SPD ALARM 00
LEDs status:
  Alarms LED: Off
  System LED: Green
  Master LED: Off
Interface      LED(ADM/SPD/DPX/POE)
-----
ge-0/0/0      Off
ge-0/0/1      Off
ge-0/0/2      Off
ge-0/0/3      Off
ge-0/0/4      Off
ge-0/0/5      Off
ge-0/0/6      Off
ge-0/0/7      Off
ge-0/0/8      Off
ge-0/0/9      Off
ge-0/0/10     Off
ge-0/0/11     Off
ge-0/0/12     Off
ge-0/0/13     Off
ge-0/0/14     Off
ge-0/0/15     Off
ge-0/0/16     Off
ge-0/0/17     Off
ge-0/0/18     Off
ge-0/0/19     Off
ge-0/0/20     Off
ge-0/0/21     Off
ge-0/0/22     Off

```

```

ge-0/0/23      Off
Front panel contents for slot: 1
-----
LCD screen:
  01:RE switch2
  LED:SPD ALARM 01
LEDs status:
  Alarms LED: Yellow
  System LED: Green
  Master LED: Green
Interface      LED(ADM/SPD/DPX/POE)
-----
ge-1/0/0      Off
ge-1/0/1      Off
ge-1/0/2      Off
ge-1/0/3      Off
ge-1/0/4      Off
ge-1/0/5      Off
ge-1/0/6      Off
ge-1/0/7      Off
ge-1/0/8      Off
ge-1/0/9      Off
ge-1/0/10     Off
ge-1/0/11     Off
ge-1/0/12     Off
ge-1/0/13     Off
ge-1/0/14     Off
ge-1/0/15     Off
ge-1/0/16     Off
ge-1/0/17     Off
ge-1/0/18     Off
ge-1/0/19     Off
ge-1/0/20     Off
ge-1/0/21     Off
ge-1/0/22     Off
ge-1/0/23     Off

```

The output for the **show chassis lcd fpc-slot** command is the same as the output for the **show chassis lcd** command.

#### show chassis lcd fpc-slot 1 (EX4200 Virtual Chassis)

```

user@switch> show chassis lcd fpc-slot 1
Front panel contents for slot: 1
-----
LCD screen:
  01:RE switch2
  LED:SPD ALARM 01
LEDs status:
  Alarms LED: Yellow
  System LED: Green
  Master LED: Green
Interface      LED(ADM/SPD/DPX/POE)
-----
ge-1/0/0      Off
ge-1/0/1      Off
ge-1/0/2      Off
ge-1/0/3      Off
ge-1/0/4      Off

```

ge-1/0/5	Off
ge-1/0/6	Off
ge-1/0/7	Off
ge-1/0/8	Off
ge-1/0/9	Off
ge-1/0/10	Off
ge-1/0/11	Off
ge-1/0/12	Off
ge-1/0/13	Off
ge-1/0/14	Off
ge-1/0/15	Off
ge-1/0/16	Off
ge-1/0/17	Off
ge-1/0/18	Off
ge-1/0/19	Off
ge-1/0/20	Off
ge-1/0/21	Off
ge-1/0/22	Off
ge-1/0/23	Off

#### show chassis lcd (EX8200 Switch)

```
user@switch> show chassis lcd
```

```
Front panel contents:
```

```
-----
```

```
LCD screen:
```

```
RE st-8200-r
```

```
LED:ADM ALARM 01
```

```
LEDs status:
```

```
Alarms LED: Yellow
```

```
System LED: Yellow
```

```
Master LED: Green
```

```
Interface      LED(ADM/SPD/DPX)
```

```
-----
```

ge-0/0/0	Off
ge-0/0/1	Off
ge-0/0/2	Off
ge-0/0/3	Off
ge-0/0/4	Off
ge-0/0/5	Off
ge-0/0/6	Off
ge-0/0/7	Off
ge-0/0/8	Off
ge-0/0/9	Off
ge-0/0/10	Off
ge-0/0/11	Off
ge-0/0/12	Off
ge-0/0/13	Off
ge-0/0/14	Off
ge-0/0/15	Off
ge-0/0/16	Off
ge-0/0/17	Off
ge-0/0/18	Off
ge-0/0/19	Off
ge-0/0/20	Off
ge-0/0/21	Off
ge-0/0/22	Off
ge-0/0/23	Off
ge-0/0/24	Off
ge-0/0/25	Off
ge-0/0/26	Off



```

ge-0/0/27      Off
ge-0/0/28      Off
ge-0/0/29      Off
ge-0/0/30      Off
ge-0/0/31      Off
ge-0/0/32      Off
ge-0/0/33      Off
ge-0/0/34      Off
ge-0/0/35      Off
ge-0/0/36      Off
ge-0/0/37      Off
ge-0/0/38      Off
ge-0/0/39      Off
ge-0/0/40      Off
ge-0/0/41      Off
ge-0/0/42      Off
ge-0/0/43      Off
ge-0/0/44      Off
ge-0/0/45      Off
ge-0/0/46      Off
ge-0/0/47      Off
xe-2/0/0       Off
xe-2/0/1       Off
xe-2/0/2       Off
xe-2/0/3       Off
xe-2/0/4       Off
xe-2/0/5       Off
xe-2/0/6       Off
xe-2/0/7       Off
xe-3/0/0       Off
xe-3/0/1       Off
xe-3/0/2       Off
xe-3/0/3       Off
xe-3/0/4       Off
xe-3/0/5       Off
xe-3/0/6       Off
xe-3/0/7       Off
xe-5/0/0       Off
xe-5/0/1       Off
xe-5/0/2       Off
xe-5/0/3       Off
xe-5/0/4       Off
xe-5/0/5       Off
xe-5/0/6       On
xe-5/0/7       On
xe-7/0/5       Off

```

#### show chassis lcd fpc-slot 2 (EX8200 Switch)

```
show chassis lcd fpc-slot 2
```

Interface	LED(ADM/SPD/DPX)
xe-2/0/0	Off
xe-2/0/1	Off
xe-2/0/2	Off
xe-2/0/3	Off
xe-2/0/4	Off
xe-2/0/5	Off
xe-2/0/6	Off
xe-2/0/7	Off

### show chassis lcd menu (EX4200 Switch)

```
user@switch> show chassis lcd menu
fpc0:
-----
status-menu
status-menu vcp-status
status-menu power-status
status-menu environ-menu
status-menu show-version
maintenance-menu
maintenance-menu halt-menu
maintenance-menu system-reboot
maintenance-menu rescue-config
maintenance-menu vc-uplink-config
maintenance-menu factory-default
```

On an EX4200 switch in a Virtual Chassis, the output for the **show chassis lcd menu all-members** command is the same as the output for the **show chassis lcd menu** command.

### show chassis lcd menu (EX8200 Switch)

```
user@switch> show chassis lcd menu
status-menu
status-menu sf-status1-menu
status-menu sf-status2-menu
status-menu psu-status1-menu
status-menu psu-status2-menu
status-menu environ-menu
status-menu show-version
maintenance-menu
maintenance-menu halt-menu
maintenance-menu system-reboot
maintenance-menu rescue-config
maintenance-menu factory-default
```

### show chassis lcd (QFX3500 Switches)

```
user@switch> show chassis lcd
Front panel contents for slot: 0
-----
LCD screen:
00:RE switch
ALARM 01
LEDs status:
Status/Beacon LED: Yellow Blinking
Interface STATUS LED ACTIVITY LED
-----
fte-0/1/0 Off Off
```

### show chassis lcd (XRE200 External Routing Engine in EX8200 Virtual Chassis)

```
user@external-routing-engine> show chassis lcd
member0:
-----
Front panel contents:
-----
LCD screen:
  RE ex8200-member0
```

```

    LED:ADM ALARM 04
LEDs status:
    Alarms LED: Red
    System LED: Yellow
    Master LED: Green

```

```
member1:
```

```
member8:
```

```
Front panel contents:
```

```

LCD screen:
    BACKUP

```

```
member9:
```

```
Front panel contents:
```

```

LCD screen:
    09:RE xre200-member9
    LED: NA ALARM 01

```

```
Interface          LED(ADM/SPD/DPX/POE)
```

```

ge-0/0/0           On
ge-0/0/1           On
ge-0/0/2           On
ge-0/0/3           On
ge-0/0/4           Off
ge-0/0/5           Off
ge-0/0/6           Off
ge-0/0/7           Off
ge-0/0/8           Off
ge-0/0/9           Off
ge-0/0/10          On
ge-0/0/11          Off
ge-0/0/12          Off
ge-0/0/13          Off
ge-0/0/14          Off
ge-0/0/15          Off
ge-0/0/16          Off
ge-0/0/17          Off
ge-0/0/18          Off
ge-0/0/19          Off
ge-0/0/20          Off
ge-0/0/21          Off
ge-0/0/22          Off
ge-0/0/23          Off
ge-0/0/24          Off
ge-0/0/25          Off
ge-0/0/26          Off
ge-0/0/27          Off
ge-0/0/28          Off
ge-0/0/29          Off
ge-0/0/30          Off
ge-0/0/31          Off
ge-0/0/32          Off
ge-0/0/33          Off
ge-0/0/34          Off
ge-0/0/35          Off

```

ge-0/0/36	Off
ge-0/0/37	Off
ge-0/0/38	Off
ge-0/0/39	Off
ge-0/0/40	On
ge-0/0/41	On
ge-0/0/42	On
ge-0/0/43	On
ge-0/0/44	On
ge-0/0/45	On
ge-0/0/46	On
ge-0/0/47	On
ge-16/0/0	On
ge-16/0/1	Off
ge-16/0/2	On
ge-16/0/3	Off
ge-16/0/4	On
ge-16/0/5	Off
ge-16/0/6	On
ge-16/0/7	Off
ge-16/0/8	Off
ge-16/0/9	Off
ge-16/0/10	Off
ge-16/0/11	Off
ge-16/0/12	Off
ge-16/0/13	On
ge-16/0/14	Off
ge-16/0/15	On
ge-16/0/16	Off
ge-16/0/17	On
ge-16/0/18	On
ge-16/0/19	On
ge-16/0/20	On
ge-16/0/21	Off
ge-16/0/22	On
ge-16/0/23	Off
ge-16/0/24	Off
ge-16/0/25	Off
ge-16/0/26	On
ge-16/0/27	Off
ge-16/0/28	Off
ge-16/0/29	Off
ge-16/0/30	On
ge-16/0/31	Off
ge-16/0/32	On
ge-16/0/33	On
ge-16/0/34	On
ge-16/0/35	Off
ge-16/0/36	On
ge-16/0/37	Off
ge-16/0/38	Off
ge-16/0/39	Off
ge-16/0/40	Off
ge-16/0/41	Off
ge-16/0/42	On
ge-16/0/43	Off
ge-16/0/44	Off
ge-16/0/45	Off
ge-16/0/46	Off
ge-16/0/47	Off
xe-19/0/0	Off

```

xe-19/0/1      On
xe-19/0/2      On
xe-19/0/3      On
xe-19/0/4      On
xe-19/0/5      On
ge-22/0/0      Off
ge-22/0/1      Off
ge-22/0/2      On
ge-22/0/3      Off
ge-22/0/4      On
ge-22/0/5      On
ge-22/0/6      On
ge-22/0/7      On
ge-22/0/8      Off
ge-22/0/9      Off
ge-22/0/10     Off
ge-22/0/11     Off
ge-22/0/12     Off
ge-22/0/13     Off
ge-22/0/14     Off
ge-22/0/15     Off
ge-22/0/16     On
ge-22/0/17     Off
ge-22/0/18     On
ge-22/0/19     Off
ge-22/0/20     On
ge-22/0/21     Off
ge-22/0/22     On
ge-22/0/23     Off
ge-22/0/24     On
ge-22/0/25     Off
ge-22/0/26     Off
ge-22/0/27     Off
ge-22/0/28     Off
ge-22/0/29     Off
ge-22/0/30     Off
ge-22/0/31     Off
ge-22/0/32     On
ge-22/0/33     Off
ge-22/0/34     On
ge-22/0/35     Off
ge-22/0/36     Off
ge-22/0/37     Off
ge-22/0/38     Off
ge-22/0/39     Off
ge-22/0/40     Off
ge-22/0/41     Off
ge-22/0/42     Off
ge-22/0/43     Off
ge-22/0/44     Off
ge-22/0/45     Off
ge-22/0/46     Off
ge-22/0/47     Off

```

#### show chassis lcd interconnect-device (QFabric Systems)

```

show chassis lcd interconnect-device IC-F1012
Front Panel Module Information
-----
LCD screen:
IC-F1012      3 Alarms active

```

## LEDs status:

Status LED: Green  
 Power LED : Green  
 Major Alarm LED: off  
 Minor Alarm LED: Yellow  
 Fan 0 LED : Green  
 Fan 1 LED : Green  
 Fan 2 LED : Green  
 Fan 3 LED : Green  
 Fan 4 LED : Green  
 Fan 5 LED : Green  
 Fan 6 LED : Green  
 Fan 7 LED : Green  
 Fan 8 LED : Green  
 Fan 9 LED : Green  
 PEM 0 LED : Green  
 PEM 1 LED : Green  
 PEM 2 LED : Green  
 PEM 3 LED : off  
 PEM 4 LED : off  
 PEM 5 LED : off

LED info for: CB - 0

-----

## LEDs status:

Status LED: Green  
 Mastership LED: Green

Interface	STATUS LED	LINK/ACTIVITY LED
IC-F1012:pme0 :	Green	N/A
IC-F1012:pme1 :	Green	N/A
IC-F1012:pme2 :	off	N/A
IC-F1012:pme3 :	off	N/A

LED info for: CB - 1

-----

## LEDs status:

Status LED: Green  
 Mastership LED: Amber

Interface	STATUS LED	LINK/ACTIVITY LED
IC-F1012:pme0 :	Green	N/A
IC-F1012:pme1 :	Green	N/A
IC-F1012:pme2 :	off	N/A
IC-F1012:pme3 :	off	N/A

LED info for: FC 0 FPC - 0

-----

## LEDs status:

Status LED: Green

Interface	STATUS LED	LINK/ACTIVITY LED
IC-F1012:fte-0/0/0	Green	N/A
IC-F1012:fte-0/0/1	Green	N/A
IC-F1012:fte-0/0/2	Green	N/A
IC-F1012:fte-0/0/3	Green	N/A
IC-F1012:fte-0/0/4	Green	N/A

```

                                LED info for: FC 1 FPC - 1
                                -----
LEDs status:
  Status LED: Green

Interface                STATUS LED    LINK/ACTIVITY LED
-----
IC-F1012:fte-1/0/0       Green      N/A
IC-F1012:fte-1/0/1       Green      N/A
IC-F1012:fte-1/0/2       Green      N/A
IC-F1012:fte-1/0/3       Green      N/A
IC-F1012:fte-1/0/4       Green      N/A

                                LED info for: RC 0 FPC - 8
                                -----
LEDs status:
  Status LED: Green

                                LED info for: RC 1 FPC - 9
                                -----
LEDs status:
  Status LED: Green

                                LED info for: RC 2 FPC - 10
                                -----
LEDs status:
  Status LED: Green

                                LED info for: RC 3 FPC - 11
                                -----
LEDs status:
  Status LED: Green

                                LED info for: RC 4 FPC - 12
                                -----
LEDs status:
  Status LED: Green

                                LED info for: RC 5 FPC - 13
                                -----
LEDs status:
  Status LED: Green

                                LED info for: RC 6 FPC - 14
                                -----
LEDs status:
  Status LED: Green

                                LED info for: RC 7 FPC - 15
                                -----
LEDs status:
  Status LED: Green

```

#### show chassis lcd node-device (QFabric Systems)

```

show chassis lcd node-device P3774-C
Front panel contents for: P3774-C
-----
LCD screen:
P3774-C

LEDs status:

```

## Status/Beacon LED: Yellow Blinking

Interface	STATUS LED	LINK/ACTIVITY LED
P3774-C:xe-0/0/6	Green	Green
P3774-C:xe-0/0/7	Green	Green
P3774-C:ge-0/0/10	Green	Green
P3774-C:ge-0/0/11	Green	Green Blinking
P3774-C:ge-0/0/12	Green	Off
P3774-C:ge-0/0/13	Green	Green Blinking
P3774-C:ge-0/0/20	Green	Green
P3774-C:ge-0/0/21	Green	Green
P3774-C:ge-0/0/22	Green	Green Blinking
P3774-C:ge-0/0/23	Green	Off
P3774-C:ge-0/0/30	Green	Green
P3774-C:ge-0/0/31	Green	Green
P3774-C:ge-0/0/32	Green	Green Blinking
P3774-C:ge-0/0/33	Green	Green Blinking
P3774-C:fte-0/1/0	Green	Green
P3774-C:fte-0/1/1	Green	Green Blinking
P3774-C:fte-0/1/2	Green	Green Blinking
P3774-C:fte-0/1/3	Green	Green



## show chassis led

<b>List of Syntax</b>	<a href="#">show chassis led (EX Series) on page 897</a> <a href="#">show chassis led (QFX Series) on page 897</a> <a href="#">Syntax (OCX Series) on page 897</a>
<b>show chassis led (EX Series)</b>	<pre>show chassis led &lt;fpc-slot &lt;fpc-slot-number&gt;&gt;</pre>
<b>show chassis led (QFX Series)</b>	<pre>show chassis led &lt;fpc-slot &lt;fpc-slot-number&gt;&gt; interconnect-device name node-device name</pre>
<b>Syntax (OCX Series)</b>	<pre>show chassis led &lt;fpc-slot &lt;fpc-slot-number&gt;&gt;</pre>
<b>Release Information</b>	<p>Command introduced in Junos OS Release 10.1 for EX Series switches.</p> <p>Command introduced in Junos OS Release 11.1 for the QFX Series.</p> <p>Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.</p>
<b>Description</b>	<p>Display the status and colors of the chassis LEDs on the front panel of the switch. A major alarm (red) indicates a critical error condition that requires immediate action. A minor alarm (yellow) indicates a noncritical condition that requires monitoring or maintenance. A minor alarm that is left unchecked might cause interruption in service or performance degradation.</p>
<b>Options</b>	<p><b>none</b>—Display the status of the chassis status LEDs (for EX4200 switches configured as a Virtual Chassis, display the information for all Virtual Chassis members).</p> <p><b>fpc-slot &lt;fpc-slot-number&gt;</b>—(Optional) (Not on EX2200 switches) Display the information as follows:</p> <ul style="list-style-type: none"> <li>(EX3200, standalone EX4200, standalone QFX3500, EX4500, and OCX Series switches) Display the status of the chassis status LEDs for either an FPC slot with no <b>fpc-slot-number</b> value specified or for the FPC slot specified by <b>fpc-slot 0</b>. <b>fpc-slot</b> refers to the switch itself and <b>0</b> is the only valid value for <b>fpc-slot-number</b>. Output for these options is the same as for the <b>none</b> option.</li> <li>(EX4200 switches in a Virtual Chassis with two or more members) If no <b>fpc-slot-number</b> value is specified, display the status of the chassis status LEDs for all members of the Virtual Chassis. Output for this option is the same as for the <b>none</b> option. If the <b>fpc-slot-number</b> value is specified (it equals the <b>member-id</b> value), display the status of the chassis status LEDs for the specified member.</li> <li>(EX8200 switches)—Display the status of the chassis status LEDs for the line card in the line-card slot specified by the <b>fpc-slot-number</b> value.</li> </ul>

**interconnect-device *name***—

— (QFabric systems only) (Optional) Display the status of the chassis and interface status LEDs for the Interconnect device.

**node-device *name***— (QFabric systems only) (Optional) Display the status of the chassis and interface status LEDs for the Node device.

**Required Privilege Level**

view

**Related Documentation**

- *Chassis Status LEDs in EX2200 Switches*
- *Chassis Status LEDs in EX3200 Switches*
- *Chassis Status LEDs in EX4200 Switches*
- *Chassis Status LEDs in EX4500 Switches*
- *Chassis Status LEDs in an EX8200 Switch*
- *Chassis Status LEDs on a QFX3500 Device*
- *Chassis Status LEDs in the QFX3600 and QFX3600-I Device*
- *Management Port LEDs on a QFX3500 Device*
- *Management Port LEDs in the QFX3600 and QFX3600-I Device*
- *Chassis Status LEDs on a QFX3008-I Interconnect Device*
- *Control Board LEDs on a QFX3008-I Interconnect Device*

**List of Sample Output**

[show chassis led \(EX2200 Switch\) on page 901](#)  
[show chassis led on page 902](#)  
[show chassis led fpc-slot 0 on page 903](#)  
[show chassis led \(EX Series\) on page 903](#)  
[show chassis led node-device \(QFabric System Node Device\) on page 904](#)  
[show chassis led interconnect-device \(QFabric System - QFX3600-I Interconnect Device\) on page 905](#)  
[show chassis led interconnect-device \(QFabric System - QFX3008-I Interconnect Device\) on page 905](#)

**Output Fields**

[Table 8 on page 187](#) lists the output fields for the **show chassis led** command. Output fields are listed in the approximate order in which they appear.

Table 28: show chassis led Output Fields

Field Name	Field Description
<b>Front panel contents for slot</b>	FPC slot number of the device whose content is being displayed. The number is always <b>0</b> , except for EX4200 switches in a Virtual Chassis, where it is the member ID value.
<b>Front panel contents</b> (EX8200 Switches)	
<b>Front Panel Module Information</b> (QFabric system QFX3008-I Interconnect device)	On EX8200 switches, no slot number is displayed.
<b>Front panel contents for</b> (QFabric system Node devices and QFX3600-I Interconnect devices)	On QFabric system Node devices, the name of the Node device whose content is being displayed.
<b>Alarms LED</b>	<p>(EX Series switches only) Displays status of the ALM LED:</p> <ul style="list-style-type: none"> <li>• Off—No alarm has been configured.</li> <li>• Green—No alarm has been triggered.</li> <li>• Red—Major alarm.</li> <li>• Yellow—Minor alarm</li> </ul>
<b>System LED</b>	<p>(EX Series switches only) Displays status of the SYS LED:</p> <ul style="list-style-type: none"> <li>• Off—Switch is powered off.</li> <li>• Green—Switch is operating normally.</li> <li>• Yellow—Switch is booting.</li> </ul>
<b>Master LED:</b>	<p>Displays status of the MST LED (on EX3200, EX4200, and EX8200 switches):</p> <ul style="list-style-type: none"> <li>• Green—On an EX4200 Virtual Chassis switch, indicates the switch is the master in the Virtual Chassis configuration. On other switches, indicates that the Routing Engine is operational.</li> <li>• Off <ul style="list-style-type: none"> <li>• On an EX4200 Virtual Chassis switch, indicates that this switch is not the master in the Virtual Chassis configuration.</li> <li>• On EX3200, standalone EX4200, and EX8200 switches, indicates that the Routing Engine is not operational.</li> </ul> </li> </ul>
<b>Mode LED:</b>	<p>(EX Series switches only) On an EX2200 switch only, displays the currently selected port parameter of the Status LED:</p> <ul style="list-style-type: none"> <li>• <b>ADM</b>—Administrative</li> <li>• <b>SPD</b>—Speed</li> <li>• <b>DPX</b>—Duplex</li> <li>• <b>POE</b>—Power over Ethernet</li> </ul>
<b>Status/Beacon LED</b>	<p>(QFX Series and OCX Series) Displays the system status as indicated by the Status LED on the chassis. For more information, see:</p> <ul style="list-style-type: none"> <li>• <i>Chassis Status LEDs on a QFX3500 Device</i></li> <li>• <i>Chassis Status LEDs in the QFX3600 and QFX3600-I Device</i></li> </ul>

Table 28: show chassis led Output Fields (continued)

Field Name	Field Description
<b>LINK/SPEED LED</b>	<p>(QFX Series and OCX Series) Displays the link status and speed of a management port. For more information, see:</p> <ul style="list-style-type: none"> <li>• <i>Management Port LEDs on a QFX3500 Device</i></li> <li>• <i>Management Port LEDs in the QFX3600 and QFX3600-I Device</i></li> </ul>
<b>ACTIVITY LED</b>	<p>(QFX Series and OCX Series) Displays the activity status of a management port. For more information, see:</p> <ul style="list-style-type: none"> <li>• <i>Management Port LEDs on a QFX3500 Device</i></li> <li>• <i>Management Port LEDs in the QFX3600 and QFX3600-I Device</i></li> </ul>
<b>STATUS LED</b>	<p>(QFX Series and OCX Series) Displays the link status of an interface as indicated by the ST LED. For more information, see:</p> <ul style="list-style-type: none"> <li>• <i>Control Board LEDs on a QFX3008-I Interconnect Device</i></li> <li>• <i>Access Port and Uplink Port LEDs on a QFX3500 Device</i></li> <li>• <i>Access Port and Uplink Port LEDs on a QFX3600 or QFX3600-I Device</i></li> </ul>
<b>LINK/ACTIVITY LED</b>	<p>(QFX Series and OCX Series) Displays link activity or faults on an interface as indicated by the LA LED. For more information, see:</p> <ul style="list-style-type: none"> <li>• <i>Access Port and Uplink Port LEDs on a QFX3500 Device</i></li> <li>• <i>Access Port and Uplink Port LEDs on a QFX3600 or QFX3600-I Device</i></li> </ul>
<b>Status LED</b>	<p>(QFX3008-I Interconnect device only)</p> <ul style="list-style-type: none"> <li>• Displays the system status as indicated by the STATUS LED on the front panel of the chassis. For more information, see <i>Chassis Status LEDs on a QFX3008-I Interconnect Device</i>.</li> <li>• Displays the status of a Control Board as indicated by the STATUS LED on the Control Board. For more information, see <i>Control Board LEDs on a QFX3008-I Interconnect Device</i>.</li> </ul>
<b>Power LED</b>	<p>(QFX3008-I Interconnect device only) Displays the status of system power on the device. For more information, see <i>Chassis Status LEDs on a QFX3008-I Interconnect Device</i>.</p>
<b>Major Alarm LED</b>	<p>(QFX3008-I Interconnect device only) Displays whether a critical error condition that requires immediate action exists on the device. For more information, see <i>Chassis Status LEDs on a QFX3008-I Interconnect Device</i>.</p>
<b>Minor Alarm LED</b>	<p>(QFX3008-I Interconnect device only) Displays whether a noncritical condition that requires monitoring or maintenance exists on the device. For more information, see <i>Chassis Status LEDs on a QFX3008-I Interconnect Device</i>.</p>

Table 28: show chassis led Output Fields (continued)

Field Name	Field Description
Fan 0 LED	(QFX3008-I Interconnect device only) Displays the status of fan trays on the device. For more information, see <i>Chassis Status LEDs on a QFX3008-I Interconnect Device</i> .
Fan 1 LED	
Fan 2 LED	
Fan 3 LED	
Fan 4 LED	
Fan 5 LED	
Fan 6 LED	
Fan 7 LED	
Fan 8 LED	
PEM 0 LED	(QFX3008-I Interconnect device only) Displays the status of power supplies on the device. For more information, see <i>Chassis Status LEDs on a QFX3008-I Interconnect Device</i> .
PEM 1 LED	
PEM 2 LED	
PEM 3 LED	
PEM 4 LED	
LED info for	(QFX3008-I Interconnect device only) Displays the LED information for a Control Board.
Mastership LED	(QFX3008-I Interconnect device only) Displays status of the MASTER LED on a Control Board. For more information, see <i>Control Board LEDs on a QFX3008-I Interconnect Device</i> .
Interface	Names of the interfaces on the device.
LED (ADM/SPD/DPX/POE)	<p>(EX Series switches only) State of the currently selected port parameter of the Status LED for the interface. The Status LED port parameters are:</p> <p><b>NOTE:</b> EX4500 and EX8200 switches do not have the POE port parameter.</p> <ul style="list-style-type: none"> <li>• <b>ADM</b>—Administrative</li> <li>• <b>SPD</b>—Speed</li> <li>• <b>DPX</b>—Duplex</li> <li>• <b>POE</b>—Power over Ethernet</li> </ul>

## Sample Output

### show chassis led (EX2200 Switch)

```
user@switch> show chassis led
```

Front panel contents for slot: 0

-----  
LEDs status:

Alarms LED: Amber

System LED: Green

Mode LED : Duplex

Interface LED(ADM/SPD/DPX/POE)

-----  
ge-0/0/0 Off  
ge-0/0/1 Full Duplex  
ge-0/0/2 Full Duplex  
ge-0/0/3 Off  
ge-0/0/4 Off  
ge-0/0/5 Full Duplex  
ge-0/0/6 Full Duplex  
ge-0/0/7 Full Duplex  
ge-0/0/8 Full Duplex  
ge-0/0/9 Full Duplex  
ge-0/0/10 Full Duplex  
ge-0/0/11 Full Duplex  
ge-0/0/12 Full Duplex  
ge-0/0/13 Full Duplex  
ge-0/0/14 Full Duplex  
ge-0/0/15 Full Duplex  
ge-0/0/16 Full Duplex  
ge-0/0/17 Full Duplex  
ge-0/0/18 Full Duplex  
ge-0/0/19 Full Duplex  
ge-0/0/20 Full Duplex  
ge-0/0/21 Full Duplex  
ge-0/0/22 Off  
ge-0/0/23 Off  
ge-0/0/24 Full Duplex  
ge-0/0/25 Full Duplex  
ge-0/0/26 Off  
ge-0/0/27 Off  
ge-0/0/28 Full Duplex  
ge-0/0/29 Full Duplex

## show chassis led

user@switch> show chassis led

Front panel contents for slot: 0

-----  
LEDs status:

Alarms LED: Off

System LED: Green

Master LED: Green

Interface LED(ADM/SPD/DPX/POE)

-----  
ge-0/0/0 Off  
ge-0/0/1 Full Duplex  
ge-0/0/2 Full Duplex  
ge-0/0/3 Off  
ge-0/0/4 Off  
ge-0/0/5 Full Duplex  
ge-0/0/6 Full Duplex  
ge-0/0/7 Full Duplex  
ge-0/0/8 Full Duplex  
ge-0/0/9 Full Duplex

```

ge-0/0/10      Full Duplex
ge-0/0/11      Full Duplex
ge-0/0/12      Full Duplex
ge-0/0/13      Full Duplex
ge-0/0/14      Full Duplex
ge-0/0/15      Full Duplex
ge-0/0/16      Full Duplex
ge-0/0/17      Full Duplex
ge-0/0/18      Full Duplex
ge-0/0/19      Full Duplex
ge-0/0/20      Full Duplex
ge-0/0/21      Full Duplex
ge-0/0/22      Off
ge-0/0/23      Off
ge-0/0/24      Full Duplex
ge-0/0/25      Full Duplex
ge-0/0/26      Off
ge-0/0/27      Off
ge-0/0/28      Full Duplex
ge-0/0/29      Full Duplex

```

### show chassis led fpc-slot 0

```

user@switch> show chassis led fpc-slot 0
Front panel contents for slot: 0
-----
LEDs status:
  Alarms LED: Red
  System LED: Green
  Master LED: Green
Interface      LED(ADM/SPD/DPX/POE)
-----
ge-0/0/0       Off
ge-0/0/1       Off
ge-0/0/2       Off
ge-0/0/3       Off
ge-0/0/4       Off
ge-0/0/5       Off
ge-0/0/6       Off
ge-0/0/7       Off
ge-0/0/8       Off
ge-0/0/9       Off
ge-0/0/10      Off
ge-0/0/11      Off
ge-0/0/12      Off
ge-0/0/13      Off
ge-0/0/14      Off
ge-0/0/15      Off
ge-0/0/16      Off
ge-0/0/17      Off
ge-0/0/18      Off
ge-0/0/19      Off
ge-0/0/20      Off
ge-0/0/21      Off
ge-0/0/22      Off
ge-0/0/23      Off

```

### show chassis led (EX Series)

```

user@switch> show chassis led

```

Front panel contents for slot: 0

```

-----
LEDs status:
Alarms LED: Amber
Status LED: Green
Mode LED : Duplex
Interface LED(ADM/SPD/DPX/POE)
-----
ge-0/0/0 Off
ge-0/0/1 Full Duplex
ge-0/0/2 Full Duplex
ge-0/0/3 Off
ge-0/0/4 Off
ge-0/0/5 Full Duplex
ge-0/0/6 Full Duplex
ge-0/0/7 Full Duplex
ge-0/0/8 Full Duplex
ge-0/0/9 Full Duplex
ge-0/0/10 Full Duplex
ge-0/0/11 Full Duplex
ge-0/0/12 Full Duplex
ge-0/0/13 Full Duplex
ge-0/0/14 Full Duplex
ge-0/0/15 Full Duplex
ge-0/0/16 Full Duplex
ge-0/0/17 Full Duplex
ge-0/0/18 Full Duplex
ge-0/0/19 Full Duplex
ge-0/0/20 Full Duplex
ge-0/0/21 Full Duplex
ge-0/0/22 Off
ge-0/0/23 Off
ge-0/0/24 Full Duplex
ge-0/0/25 Full Duplex
ge-0/0/26 Off
ge-0/0/27 Off
ge-0/0/28 Full Duplex
ge-0/0/29 Full Duplex

```

#### show chassis led node-device (QFabric System Node Device)

user@switch> show chassis led node-device node1

Front panel contents for: node1

LEDs status:

Status/Beacon LED: Yellow Blinking

Interface	LINK/SPEED LED	ACTIVITY LED
node1:me5	Green	N/A
node1:me6	Green	N/A

Interface	STATUS LED	LINK/ACTIVITY LED
node1:xe-0/0/8	Green	Green
node1:ge-0/0/10	Green	Green
node1:ge-0/0/12	Green	Green
node1:ge-0/0/24	Green	Green
node1:ge-0/0/25	Green	Green
node1:ge-0/0/26	Green	Green
node1:ge-0/0/27	Green	Green
node1:ge-0/0/28	Green	Green



node1:ge-0/0/29	Green	Green
node1:ge-0/0/30	Green	Green
node1:ge-0/0/31	Green	Green
node1:ge-0/0/32	Green	Green
node1:ge-0/0/33	Green	Green
node1:ge-0/0/34	Green	Green
node1:ge-0/0/35	Green	Green
node1:ge-0/0/36	Green	Green
node1:ge-0/0/37	Green	Green
node1:ge-0/0/38	Green	Green
node1:ge-0/0/39	Green	Green
node1:fte-0/1/0	Green	Green Blinking
node1:fte-0/1/2	Green	Green Blinking

### show chassis led interconnect-device (QFabric System - QFX3600-I Interconnect Device)

```
user@switch> show chassis led interconnect-device IC2
Front panel contents for: FPC 0
```

LEDs status:

Status/Beacon LED: Yellow Blinking

Interface	LINK/SPEED LED	ACTIVITY LED
IC-EG0712:me5	Green	N/A
IC-EG0712:me6	Green	N/A

Interface	STATUS LED	LINK/ACTIVITY LED
IC2:fte-0/1/0	Green	Green
IC2:fte-0/1/1	Green	Green Blinking
IC2:fte-0/1/2	Green	Green
IC2:fte-0/1/3	Green	Green Blinking
IC2:fte-0/1/4	Green	Green
IC2:fte-0/1/5	Green	Green Blinking
IC2:fte-0/1/6	Green	Green
IC2:fte-0/1/7	Green	Green
IC2:fte-0/1/8	Green	Green Blinking
IC2:fte-0/1/9	Green	Green Blinking
IC2:fte-0/1/10	Green	Green Blinking

### show chassis led interconnect-device (QFabric System - QFX3008-I Interconnect Device)

```
user@switch> show chassis led interconnect-device IC2
Front Panel Module Information
```

LEDs status:

Status LED: Green  
 Power LED : Yellow Blinking  
 Major Alarm LED: Red  
 Minor Alarm LED: Yellow  
 Fan 0 LED : Green  
 Fan 1 LED : Green  
 Fan 2 LED : Green  
 Fan 3 LED : Green  
 Fan 4 LED : Green  
 Fan 5 LED : Green  
 Fan 6 LED : Green  
 Fan 7 LED : Green  
 Fan 8 LED : Green

Fan 9 LED : Green  
 PEM 0 LED : Green  
 PEM 1 LED : Green  
 PEM 2 LED : Green  
 PEM 3 LED : off  
 PEM 4 LED : Yellow Blinking  
 PEM 5 LED : off

LED info for: CB - 0

LEDs status:

Status LED: Green  
 Mastership LED: Green

Interface	STATUS LED	LINK/ACTIVITY LED
IC2:pme0 :	Green	N/A
IC2:pme1 :	off	N/A
IC2:pme2 :	off	N/A
IC2:pme3 :	off	N/A

LED info for: CB - 1

LEDs status:

Status LED: Green  
 Mastership LED: Amber

Interface	STATUS LED	LINK/ACTIVITY LED
IC2:pme0 :	Green	N/A
IC2:pme1 :	off	N/A
IC2:pme2 :	off	N/A
IC2:pme3 :	off	N/A

LED info for: FC 0 FPC - 0

LEDs status:

Status LED: Green

Interface	STATUS LED	LINK/ACTIVITY LED
IC2:fte-0/0/0	Green	N/A
IC2:fte-0/0/1	Green	N/A
IC2:fte-0/0/2	Green	N/A
IC2:fte-0/0/3	Green	N/A
IC2:fte-0/0/4	Green	N/A
IC2:fte-0/0/5	Green	N/A
IC2:fte-0/0/6	Green	N/A
IC2:fte-0/0/7	Green	N/A
IC2:fte-0/0/8	Green	N/A
IC2:fte-0/0/9	Green	N/A
IC2:fte-0/0/10	Green	N/A
IC2:fte-0/0/11	Green	N/A
IC2:fte-0/0/12	Green	N/A
IC2:fte-0/0/13	Green	N/A
IC2:fte-0/0/14	Green	N/A
IC2:fte-0/0/15	Green	N/A

LED info for: FC 1 FPC - 1

LEDs status:

Status LED: Green

Interface	STATUS LED	LINK/ACTIVITY LED
IC2:fte-1/0/0	Green	N/A
IC2:fte-1/0/1	Green	N/A

LED info for: RC 2 FPC - 10

LEDs status:

Status LED: Green

LED info for: RC 3 FPC - 11

LEDs status:

Status LED: Green

## show chassis location

---

<b>List of Syntax</b>	<a href="#">Syntax on page 908</a> <a href="#">Syntax (TX Matrix Router) on page 908</a> <a href="#">Syntax (TX Matrix Plus Router) on page 908</a> <a href="#">Syntax (MX Series Router) on page 908</a> <a href="#">Syntax (QFX Series) on page 908</a> <a href="#">Syntax (OCX Series) on page 908</a>
<b>Syntax</b>	show chassis location
<b>Syntax (TX Matrix Router)</b>	show chassis location <fpc   interface (by-name <i>name</i>   by-slot fpc number lcc number)   lcc number   scc>
<b>Syntax (TX Matrix Plus Router)</b>	show chassis location <fpc   interface (by-name <i>name</i>   by-slot fpc number lcc number)   lcc number   sfc number>
<b>Syntax (MX Series Router)</b>	show chassis location <all-members> <local> <member <i>member-id</i> >
<b>Syntax (QFX Series)</b>	show chassis location <interconnect-device <i>name</i> > <node-device <i>name</i> >
<b>Syntax (OCX Series)</b>	show chassis location
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. Command introduced in Junos OS Release 9.0 for EX Series switches. <b>sfc</b> option introduced for the TX Matrix Plus router in Junos OS Release 9.6. Command introduced in Junos OS Release 11.1 for the QFX Series. Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Display the physical location of the chassis. This command can only be used on the master Routing Engine.
<b>Options</b>	<b>none</b> —Display all information about the physical location of the chassis. On a TX Matrix router, display all information about the physical location of the TX Matrix router and its attached T640 routers. On a TX Matrix Plus router, display all information about the physical location of the TX Matrix Plus router and its attached routers.  <b>all-members</b> —(MX Series routers only) (Optional) Display the physical location of the chassis for all the member routers in the Virtual Chassis configuration.  <b>fpc</b> —(TX Matrix router and TX Matrix Plus router only) (Optional) Display the physical location of all Flexible PIC Concentrators (FPCs).

**interconnect-device *name***—(QFabric systems only) (Optional) Display the physical location of the Interconnect device.

**interface by-name *name***—(TX Matrix and TX Matrix Plus routers only) (Optional) Display the physical location of a specified interface name. On a TX Matrix router, this option displays the FPC number and T640 router (line-card chassis) number associated with the specified interface. On a TX Matrix Plus router, this option displays the FPC number and router (line-card chassis) number associated with the specified interface.

**interface by-slot fpc *number* lcc *number***—(TX Matrix and TX Matrix Plus router only) (Optional) On a TX Matrix router, display the global FPC number of an interface by specifying its local FPC number and T640 router (line-card chassis) number. On a TX Matrix Plus router, display the global FPC number of an interface by specifying its local FPC number and router (line-card chassis) number.

- The global FPC number is the FPC slot number when all the FPC slots in the routing matrix are considered: **0** through **31**. On TX Matrix Plus router with 3D SIBs, the value is **0** through **63**. The local FPC number is the FPC slot number on a particular T640 router.
- For **fpc**, replace *number* with a value from **0** through **7**.
- For **lcc**, replace *number* with a value from **0** through **7**.

**lcc *number***—(TX Matrix and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display the physical location of a specified T640 router (line-card chassis) that is connected to a TX Matrix router. On a TX Matrix Plus router, display the physical location of a specified router (line-card chassis) that is connected to a TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(MX Series routers only) (Optional) Display the physical location of the chassis for the local Virtual Chassis member.

**member *member-id***—(MX Series routers only) (Optional) Display the physical location of the chassis for the specified member of the Virtual Chassis configuration. Replace *member-id* with a value of 0 or 1.

**node-device name**—(QFabric systems only) (Optional) Display the physical location of the Node device.

**scc**—(TX Matrix routers only) (Optional) Display the physical location of the TX Matrix router (switch-card chassis).

**sfc**—(TX Matrix Plus routers only) (Optional) Display the physical location of the TX Matrix Plus router (or switch-fabric chassis).

**Required Privilege Level** view

**Related Documentation** • [Displaying Chassis Physical Locations for a Routing Matrix with a TX Matrix Plus Router](#)

**List of Sample Output** [show chassis location on page 911](#)  
[show chassis location fpc \(TX Matrix Router\) on page 911](#)  
[show chassis location interface by-slot \(TX Matrix Router\) on page 911](#)  
[show chassis location fpc \(TX Matrix Plus Router\) on page 911](#)  
[show chassis location interface by-slot \(TX Matrix Plus Router\) on page 911](#)  
[show chassis location \(QFX Series and OCX Series\) on page 911](#)  
[show chassis location \(QFabric Systems\) on page 911](#)

**Output Fields** [Table 29 on page 910](#) lists the output fields for the **show chassis location** command. Output fields are listed in the approximate order in which they appear.

*Table 29: show chassis location Output Fields*

Field Name	Field Description
country-code	Country code information.
postal-code	Postal code information.
Building	Building information.
Floor	Floor information.
Global FPC	Global FPC number. The FPC slot number, when all FPC slots in the routing matrix are considered. The range of values is 0 through 31. On TX Matrix Plus router with 3D SIBs the value is 0 through 63.
LATA	Local access transport area information.
LCC	Line-card chassis number. On a TX Matrix router, the number of a particular T640 router connected to the TX Matrix router. On a TX Matrix Plus router, the number of a particular router connected to the TX Matrix Plus router.

Table 29: show chassis location Output Fields (continued)

Field Name	Field Description
<b>Local FPC</b>	Local FPC number. On a TX Matrix router, the FPC slot number on a particular T640 router. On a TX Matrix Plus router, the FPC slot number on a particular router.

## Sample Output

### show chassis location

```
user@host> show chassis location
country-code: US
postal-code: 94404
Building: Building 2, Floor: 2
```

### show chassis location fpc (TX Matrix Router)

```
user@host> show chassis location fpc
Global FPC    LCC    Local FPC
    17         2        1
    21         2        5
```

### show chassis location interface by-slot (TX Matrix Router)

```
user@host> show chassis location interface by-slot fpc 1 lcc 1
Global FPC: 9
```

### show chassis location fpc (TX Matrix Plus Router)

```
user@host> show chassis location fpc
Global FPC    LCC    Local FPC
    0         0        0
    1         0        1
```

### show chassis location interface by-slot (TX Matrix Plus Router)

```
user@host> show chassis location interface by-slot fpc 2 lcc 1
Global FPC: 10
```

### show chassis location (QFX Series and OCX Series)

```
user@switch> show chassis location
country-code: US
postal-code: 94404
Building: Building 2, Floor: 2
```

### show chassis location (QFabric Systems)

```
user@switch> show chassis location interconnect-device interconnect1
country-code: US
postal-code: 94404
Building: Building 2, Floor: 2
```

## show chassis mac-addresses

---

<b>List of Syntax</b>	<a href="#">Syntax on page 912</a> <a href="#">Syntax (TX Matrix Router) on page 912</a> <a href="#">Syntax (TX Matrix Plus Router) on page 912</a> <a href="#">Syntax (MX Series Router) on page 912</a> <a href="#">Syntax (MX104, MX204, MX2010, MX2020, MX10003, MX2008, and MX10008 Universal Routing Platforms) on page 912</a> <a href="#">Syntax (PTX Series) on page 912</a> <a href="#">Syntax (QFX Series) on page 912</a> <a href="#">Syntax (OCX Series) on page 912</a> <a href="#">Syntax (ACX Series Universal Metro Routers) on page 912</a> <a href="#">Syntax (ACX5048 and ACX5096 Routers) on page 913</a> <a href="#">Syntax (ACX500 Routers) on page 913</a> <a href="#">Syntax (EX9251, EX9253 Switches) on page 913</a>
<b>Syntax</b>	show chassis mac-addresses
<b>Syntax (TX Matrix Router)</b>	show chassis mac-addresses <lcc <i>number</i>   scc>
<b>Syntax (TX Matrix Plus Router)</b>	show chassis mac-addresses <lcc <i>number</i>   sfc <i>number</i> >
<b>Syntax (MX Series Router)</b>	show chassis mac-addresses <all-members> <local> <member <i>member-id</i> >
<b>Syntax (MX104, MX204, MX2010, MX2020, MX10003, MX2008, and MX10008 Universal Routing Platforms)</b>	show chassis mac-addresses
<b>Syntax (PTX Series)</b>	show chassis mac-addresses
<b>Syntax (QFX Series)</b>	show chassis mac-addresses <interconnect-device <i>name</i> > <node-group <i>name</i> >
<b>Syntax (OCX Series)</b>	show chassis mac-addresses
<b>Syntax (ACX Series Universal Metro Routers)</b>	show chassis mac-addresses



<b>Syntax (ACX5048 and ACX5096 Routers)</b>	show chassis mac-addresses
<b>Syntax (ACX500 Routers)</b>	show chassis mac-addresses
<b>Syntax (EX9251, EX9253 Switches)</b>	show chassis mac-addresses
<b>Release Information</b>	<p>Command introduced before JUNOS Release 7.4.</p> <p>Command introduced in JUNOS Release 9.0 for EX Series switches.</p> <p>sfc option introduced for the TX Matrix Plus router in JUNOS Release 9.6.</p> <p>Command introduced in Junos OS Release 11.1 for QFX Series.</p> <p>Command introduced in Junos OS Release 12.2 for ACX Series Universal Metro Routers.</p> <p>Command introduced in Junos OS Release 12.3 for MX2020 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 12.3 for MX2010 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 15.1X54-D20 for ACX5048 and ACX5096 Routers.</p> <p>Command introduced in Junos OS Release 17.2 for MX2008 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 17.2 for PTX10008 Routers.</p> <p>Command introduced in Junos OS Release 17.3 for MX10003 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 17.3 for MX150 Router Appliance.</p> <p>Command introduced in Junos OS Release 17.4 for MX204 Universal Routing Platforms.</p> <p>Command introduced in JUNOS Release 18.1R1 for EX9251 switches.</p> <p>Command introduced in Junos OS Release 18.2 for EX9253 Switches.</p> <p>Command introduced in Junos OS Release 18.2 for MX10008 Universal Routing Platforms.</p>
<b>Description</b>	Display the media access control (MAC) addresses for the router, switch chassis, or switch.
<b>Options</b>	<p><b>none</b>—(TX Matrix, TX Matrix Plus routers, QFX Series, and OCX Series Switches) Display the MAC addresses for the router chassis or switch. On a TX Matrix router, display MAC addresses on the TX Matrix router and its attached T640 routers. On a TX Matrix Plus router, display MAC addresses on the TX Matrix Plus router and its attached routers.</p> <p><b>all-members</b>—(MX Series routers only) (Optional) Display the MAC addresses for all the member routers of the Virtual Chassis configuration.</p> <p><b>interconnect-device <i>name</i></b>—(QFabric switches only) (Optional) Display the MAC addresses for the Interconnect device.</p> <p><b>lcc <i>number</i></b>—(TX Matrix and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display MAC addresses for a specified T640 router (or line-card chassis) that is connected to the TX Matrix Plus router. On a TX Matrix Plus router, display MAC addresses for a specified router (line-card chassis) that is connected to the TX Matrix Plus router.</p>

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(MX Series routers only) (Optional) Display the MAC addresses for the local Virtual Chassis member.

**member *member-id***—(MX Series routers only) (Optional) Display the MAC addresses for the specified member of the Virtual Chassis configuration. Replace *member-id* with a value of 0 or 1.

**node-group *name***—(QFabric switches only) (Optional) Display the MAC addresses for the specified Node group.

**scc**—(TX Matrix routers only) (Optional) Display MAC addresses for the TX Matrix router (or switch-card chassis).

**sfc *number***—(TX Matrix Plus routers only) (Optional) Display MAC addresses for the TX Matrix Plus router (or switch-fabric chassis).

**Required Privilege Level**

view

**Related Documentation**

- *ACX2000 and ACX2100 Routers Hardware and CLI Terminology Mapping*

**List of Sample Output**

[show chassis mac-addresses on page 915](#)  
[show chassis mac-addresses \(MX150\) on page 915](#)  
[show chassis mac-addresses \(MX104 Router\) on page 916](#)  
[show chassis mac-addresses \(MX2010 Router\) on page 916](#)  
[show chassis mac-addresses \(MX2020 Router\) on page 916](#)  
[show chassis mac-addresses \(MX2008 Router\) on page 916](#)  
[show chassis mac-addresses \(MX10003\) on page 916](#)  
[show chassis mac-addresses \(MX204\) on page 916](#)  
[show chassis mac-addresses \(MX10008\) on page 917](#)  
[show chassis mac-addresses \(PTX10008 Router\) on page 917](#)  
[show chassis mac-addresses \(TX Matrix Router\) on page 917](#)  
[show chassis mac-addresses \(TX Matrix Plus Router\) on page 917](#)  
[show chassis mac-addresses \(QFX Series and OCX Series \) on page 918](#)  
[show chassis mac-addresses interconnect-device \(QFabric Switches\) on page 918](#)

[show chassis mac-addresses node-group \(QFabric Switches\) on page 918](#)  
[show chassis mac-addresses \(ACX2000 Universal Metro Router\) on page 919](#)  
[show chassis mac-addresses \(ACX5048 and ACX5096 Routers\) on page 919](#)  
[show chassis mac-addresses \(ACX500 Routers\) on page 919](#)  
[show chassis mac-addresses \(EX9251 Switches\) on page 919](#)  
[show chassis mac-addresses \(EX9253 Switches\) on page 919](#)

**Output Fields** Table 30 on page 915 lists the output fields for the **show chassis mac-addresses** command. Output fields are listed in the approximate order in which they appear.

*Table 30: show chassis mac-addresses Output Fields*

Field Name	Field Description
<b>MAC address information</b>	
Public base address	<p>Base address of the MAC addresses allocated to this router or switch, for example 00:24:dc:18:09:40. This address is also printed on the box of the device.</p> <p>Public MAC addresses are those addresses your switch/router assigns to Ethernet interfaces. The public base address is the first MAC address your device assigns to an interface. Consecutive public count MAC addresses are reserved for additional interfaces.</p>
	<p>Number of allocated public addresses, for example 64. Public addresses are calculated starting with the public base address. If the public base address is 00:24:dc:18:09:40, then The MAC address of ge-0/0/0 on this device is 00:24:dc:18:09:40, and ge-0/0/1 is 00:24:dc:18:09:41, and so on, up to 64 available addresses.</p>
Private base address	<p>Base address of the private MAC addresses allocated to this router or switch. The private base address is the first MAC address after the allocated consecutive public count addresses. For example, if 00:24:dc:18:09:40 is the public base and 0x40 is the public count in hex, then 00:24:dc:18:09:80 would be the private base.</p>
Private count	Number of allocated private addresses.

## Sample Output

### show chassis mac-addresses

```

user@host> show chassis mac-addresses
MAC address information
  Public base address  0:90:69:0:4:0
  Public count         1008
  Private base address 0:90:69:0:7:f0
  Private count        16

```

### show chassis mac-addresses (MX150)

```

user@host > show chassis mac-addresses
MAC address information:
  Public base address  f4:cc:55:2b:4c:00
  Public count         1984

```

```
Private base address    f4:cc:55:2b:53:c0
Private count          64
```

The MAC address displayed is the actual MAC address of the first physical port.

#### show chassis mac-addresses (MX104 Router)

```
user@host > show chassis mac-addresses
MAC address information:
  Public base address    b0:a8:6e:a1:e8:58
  Public count          2032
  Private base address   b0:a8:6e:a1:f0:48
  Private count          16
```

#### show chassis mac-addresses (MX2010 Router)

```
user@host> show chassis mac-addresses
MAC address information:
  Public base address    64:87:88:04:50:00
  Public count          1984
  Private base address   64:87:88:04:57:c0
  Private count          64
```

#### show chassis mac-addresses (MX2020 Router)

```
user@host> show chassis mac-addresses
MAC address information:
  Public base address    2c:21:72:70:20:00
  Public count          4032
  Private base address   2c:21:72:70:2f:c0
  Private count          64
```

#### show chassis mac-addresses (MX2008 Router)

```
user@host> show chassis mac-addresses
MAC address information:
  Public base address    f4:cc:55:3e:35:00
  Public count          1984
  Private base address   f4:cc:55:3e:3c:c0
  Private count          64
```

#### show chassis mac-addresses (MX10003)

```
user@host> show chassis mac-addresses

MAC address information:
  Public base address    28:8a:1c:6f:78:5c
  Public count          3904
  Private base address   28:8a:1c:6f:87:9c
  Private count          192
```

#### show chassis mac-addresses (MX204)

```
user@host> show chassis mac-addresses

MAC address information:
  Public base address    38:4f:49:80:18:00
  Public count          2032
```

```

Private base address    38:4f:49:80:1f:f0
Private count          16

```

#### show chassis mac-addresses (MX10008)

```

user@host> show chassis mac-addresses
MAC address information:
  Public base address    30:b6:4f:e9:74:c4
  Public count          1856
  Private base address   30:b6:4f:e9:7c:04
  Private count          192

```

#### show chassis mac-addresses (PTX10008 Router)

```

user@host> show chassis mac-addresses
MAC address information:
  Public base address    30:b6:4f:0a:7a:bb
  Public count          1856
  Private base address   30:b6:4f:0a:81:fb
  Private count          192

```

#### show chassis mac-addresses (TX Matrix Router)

```

user@host> show chassis mac-addresses
scc-re0:
-----
MAC address information:
  Public base address    00:05:85:9e:cc:00
  Public count          8064
  Private base address   00:05:85:9e:eb:80
  Private count          128
lcc0-re0:
-----
MAC address information:
  Public base address    00:05:85:68:98:00
  Public count          2032
  Private base address   00:05:85:68:9f:f0
  Private count          16
lcc2-re0:
-----
MAC address information:
  Public base address    00:05:85:68:78:00
  Public count          2032
  Private base address   00:05:85:68:7f:f0
  Private count          16

```

#### show chassis mac-addresses (TX Matrix Plus Router)

```

user@host> show chassis mac-addresses
sfc0-re0:
-----
MAC address information:
  Public base address    00:1d:b5:14:00:00
  Public count          65023
  Private base address   00:1d:b5:14:fd:ff
  Private count          512

lcc0-re0:
-----
MAC address information:

```

```

Public base address    00:1f:12:7a:84:00
Public count          2032
Private base address   00:1f:12:7a:8b:f0
Private count          16

```

```
lcc1-re0:
```

```
-----
MAC address information:
```

```

Public base address    00:22:83:42:48:00
Public count          2032
Private base address   00:22:83:42:4f:f0
Private count          16

```

```
lcc2-re0:
```

```
-----
MAC address information:
```

```

Public base address    00:1f:12:c3:58:00
Public count          2032
Private base address   00:1f:12:c3:5f:f0
Private count          16

```

```
lcc3-re0:
```

```
-----
MAC address information:
```

```

Public base address    00:21:59:ef:b8:00
Public count          2032
Private base address   00:21:59:ef:bf:f0
Private count          16

```

#### show chassis mac-addresses (QFX Series and OCX Series )

```

user@switch> show chassis mac-addresses
MAC address information:
Public base address 02:00:08:00:00:00
Public count 512
Private base address 02:00:00:00:00:00
Private count 64

```

#### show chassis mac-addresses interconnect-device (QFabric Switches)

```

user@switch> show chassis mac-addresses interconnect-device interconnect1
MAC address information:
Public base address    00:1f:12:30:9c:c0
Public count          58
Private base address   00:1f:12:30:9c:fa
Private count          6

```

#### show chassis mac-addresses node-group (QFabric Switches)

```

user@switch> show chassis mac-addresses node-group NW-NG-0
MAC address information:
-----
RE:
FC MAC base    00:11:00:00:00:00
FC MAC count   2
VLAN MAC       00:11:00:00:00:09
EC6007
Base address   00:00:01:76:00:00
Count          64
EC6008

```

```
Base address  00:22:83:22:52:ae
Count        260
```

#### show chassis mac-addresses (ACX2000 Universal Metro Router)

```
user@switch> show chassis mac-addresses
MAC address information:
Public base address  84:18:88:c0:2b:00
Public count        112
Private base address 84:18:88:c0:2b:70
Private count        16
```

#### show chassis mac-addresses (ACX5048 and ACX5096 Routers)

```
user@host> show chassis mac-addresses
FPC 0
Base address  64:64:9b:5e:0a:00
Count        1280
```

#### show chassis mac-addresses (ACX500 Routers)

```
user@host> show chassis mac-addresses
MAC address information:
Public base address  f0:1c:2d:1b:60:80
Public count        112
Private base address f0:1c:2d:1b:60:f0
Private count        16
```

#### show chassis mac-addresses (EX9251 Switch)

```
user@switch> show chassis mac-addresses
MAC address information:
Public base address  4c:16:fc:90:68:00
Public count        2032
Private base address 4c:16:fc:90:6f:f0
Private count        16
```

#### show chassis mac-addresses (EX9253 Switch)

```
user@switch> show chassis mac-addresses
MAC address information:
Public base address  38:4f:49:8f:00:b8
Public count        2330
Private base address 38:4f:49:8f:09:d2
Private count        1766
```

## show chassis pic

---

<b>List of Syntax</b>	<a href="#">Syntax on page 920</a> <a href="#">Syntax (TX Matrix and TX Matrix Plus Routers) on page 920</a> <a href="#">Syntax (MX Series Routers and EX Series Switches) on page 920</a> <a href="#">Syntax (MX104, MX204, MX2010, MX2020, MX10003, and MX2008 Universal Routing Platforms) on page 920</a> <a href="#">Syntax (PTX Series Packet Transport Router and MX240, MX480, MX960, MX2010, and MX2020 Routers) on page 920</a> <a href="#">Syntax (QFX Series) on page 920</a> <a href="#">Syntax (OCX Series) on page 920</a> <a href="#">Syntax (ACX Series Universal Metro Routers) on page 920</a> <a href="#">Syntax (ACX5048 and ACX5096 Routers) on page 921</a> <a href="#">Syntax (ACX500 Routers) on page 921</a>
<b>Syntax</b>	<code>show chassis pic fpc-slot <i>slot-number</i> pic-slot <i>slot-number</i></code>
<b>Syntax (TX Matrix and TX Matrix Plus Routers)</b>	<code>show chassis pic fpc-slot <i>slot-number</i> pic-slot <i>slot-number</i> &lt;lcc <i>number</i>&gt;</code>
<b>Syntax (MX Series Routers and EX Series Switches)</b>	<code>show chassis pic fpc-slot <i>slot-number</i> pic-slot <i>slot-number</i> &lt;all-members&gt; &lt;local&gt; &lt;member <i>member-id</i>&gt;</code>
<b>Syntax (MX104, MX204, MX2010, MX2020, MX10003, and MX2008 Universal Routing Platforms)</b>	<code>show chassis pic fpc-slot <i>slot-number</i> pic-slot <i>slot-number</i></code>
<b>Syntax (PTX Series Packet Transport Router and MX240, MX480, MX960, MX2010, and MX2020 Routers)</b>	<code>show chassis pic transport fpc-slot <i>slot-number</i> pic-slot <i>slot-number</i></code>
<b>Syntax (QFX Series)</b>	<code>show chassis pic fpc-slot <i>slot-number</i> pic-slot <i>slot-number</i> &lt;interconnect-device <i>name</i> (fpc-slot <i>slot-number</i>   pic-slot <i>slot-number</i>)&gt; &lt;node-device <i>name</i> pic-slot <i>slot-number</i>&gt;</code>
<b>Syntax (OCX Series)</b>	<code>show chassis pic fpc-slot <i>slot-number</i> pic-slot <i>slot-number</i></code>
<b>Syntax (ACX Series Universal Metro Routers)</b>	<code>show chassis pic fpc-slot <i>slot-number</i> pic-slot <i>slot-number</i></code>



<b>Syntax (ACX5048 and ACX5096 Routers)</b>	<pre>show chassis pic (fpc-slot <i>slot-number</i>   pic-slot <i>slot-number</i>)</pre>
<b>Syntax (ACX500 Routers)</b>	<pre>show chassis pic (fpc-slot <i>slot-number</i>   pic-slot <i>slot-number</i>)</pre>
<b>Release Information</b>	<p>Command introduced before Junos OS Release 7.4.</p> <p>Command introduced in Junos OS Release 9.0 for EX Series switches.</p> <p>Command introduced in Junos OS Release 11.1 for QFX Series.</p> <p>Command introduced in Junos OS Release 12.2 for ACX Series Universal Metro Routers.</p> <p>Command introduced in Junos OS Release 12.3 for MX2020 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 12.3 for MX2010 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 13.2 for PTX Series Packet Transport Routers.</p> <p>Command introduced in Junos OS Release 13.2 for MX104 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.</p> <p><b>transport</b> option introduced in Junos OS Release 16.1R1 for MX Series Routers.</p> <p>Command introduced in Junos OS Release 17.2 for MX2008 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 17.2 for PTX10008 Routers.</p> <p>Command introduced in Junos OS Release 17.3 for MX10003 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 17.3 for MX150 Router Appliance.</p> <p>Command introduced in Junos OS Release 17.4 for MX204 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 18.1R1 for EX9251 switches.</p> <p>Command introduced in Junos OS Release 18.2 for EX9253 Switches.</p>
<b>Description</b>	Display status information about the PIC installed in the specified Flexible PIC Concentrator (FPC) and PIC slot.
<b>Options</b>	<p><b>fpc-slot <i>slot-number</i></b>—Display information about the PIC in this particular FPC slot:</p> <ul style="list-style-type: none"> <li>On a TX Matrix router, if you specify the number of the T640 router by using the <b>lcc <i>number</i></b> option (the recommended method), replace <b><i>slot-number</i></b> with a value from 0 through 7. Otherwise, replace <b><i>slot-number</i></b> with a value from 0 through 31.</li> </ul> <p>Likewise, on a TX Matrix Plus router, if you specify the number of the T1600 router by using the <b>lcc <i>number</i></b> option (the recommended method), replace <b><i>slot-number</i></b> with a value from 0 through 7. Otherwise, replace <b><i>slot-number</i></b> with a value from 0 through 31. For example, the following commands have the same result:</p> <pre>user@host&gt; show chassis pic fpc-slot 1 lcc 1 pic-slot 1 user@host&gt; show chassis pic fpc-slot 9 pic-slot 1</pre> <ul style="list-style-type: none"> <li>M120 routers only—Replace <b><i>slot-number</i></b> with a value from 0 through 5.</li> <li>MX80 routers only—Replace <b><i>slot-number</i></b> with a value from 0 through 1.</li> <li>MX104 routers only—Replace <b><i>slot-number</i></b> with a value from 0 through 2.</li> <li>MX240 routers only—Replace <b><i>slot-number</i></b> with a value from 0 through 2.</li> <li>MX480 routers only—Replace <b><i>slot-number</i></b> with a value from 0 through 5.</li> <li>MX960 routers only—Replace <b><i>slot-number</i></b> with a value from 0 through 11.</li> </ul>

- MX2010 routers only—Replace **slot-number** with a value from 0 through 9.
- MX2020 routers only—Replace **slot-number** with a value from 0 through 19.
- MX2008 routers only—Replace **slot-number** with a value from 0 through 9.
- MX10003 routers only—Replace **slot-number** with a value from 0 through 1.
- Other routers—Replace **slot-number** with a value from 0 through 7.
- EX Series switches:
  - EX3200 switches and EX4200 standalone switches—Replace **slot-number** with 0.
  - EX4200 switches in a Virtual Chassis configuration—Replace **slot-number** with a value from 0 through 9 (switch's member ID).
  - EX8208 switches—Replace **slot-number** with a value from 0 through 7 (line card).
  - EX8216 switches—Replace **slot-number** with a value from 0 through 15 (line card).
- QFX Series:
  - QFX3500, QFX3600, QFX5100, and OCX Series standalone switches—Replace **slot-number** with 0. In the command output, FPC refers to a line card. The FPC number equals the slot number for the line card.
  - QFabric systems—Replace **slot-number** with any number between 0 and 15. In the command output, FPC refers to a line card. The FPC number equals the slot number for the line card.

**all-members**—(MX Series routers and EX Series switches only) (Optional) Display PIC information for all member routers in the Virtual Chassis configuration.

**interconnect-device name**—(QFabric systems only) (Optional) Display PIC information for a specified Interconnect device.

**lcc number**—(TX Matrix and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display PIC information for a specified T640 router (or line-card chassis) that is connected to the TX Matrix router. On a TX Matrix Plus router, display PIC information for a specified router (line-card chassis) that is connected to the TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.

- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(MX Series routers and EX Series switches only) (Optional) Display PIC information for the local Virtual Chassis member.

**member *member-id***—(MX Series routers and EX Series switches only) (Optional) Display PIC information for the specified member of the Virtual Chassis configuration. Replace *member-id* with a value of 0 or 1.

**node-device *name***—(QFabric systems only) (Optional) Display PIC information for a specified Node device.

**pic-slot *slot-number***—Display information about the PIC in this particular PIC slot. For routers, replace *slot-number* with a value from 0 through 3. For EX3200 and EX4200 switches, replace *slot-number* with 0 for built-in network interfaces and 1 for interfaces on uplink modules. For EX8208 and EX8216 switches, replace *slot-number* with 0. For the QFX3500 standalone switch and the QFabric system, replace *slot-number* with 0 or 1.

**transport**—Display PIC information for optical transport network.

**Required Privilege Level**

view

**Related Documentation**

- [request chassis pic on page 133](#)
- [show chassis hardware on page 624](#)
- *100-Gigabit Ethernet Type 4 PIC with CFP Overview*

**List of Sample Output**

[show chassis pic fpc-slot pic-slot on page 927](#)  
[show chassis pic fpc-slot pic-slot \(PIC Offline\) on page 927](#)  
[show chassis pic fpc-slot pic-slot \(FPC Offline\) on page 927](#)  
[show chassis pic fpc-slot pic-slot \(FPC Not Present\) on page 927](#)  
[show chassis pic fpc-slot pic-slot \(PIC Not Present\) on page 928](#)  
[show chassis pic fpc-slot 3 pic-slot 0 \(M120 Router\) on page 928](#)  
[show chassis pic fpc-slot pic-slot \(MX150\) on page 928](#)  
[show chassis pic fpc-slot pic-slot \(MX104 Router\) on page 928](#)  
[show chassis pic fpc-slot pic-slot \(MX960 Router with Bidirectional Optics\) on page 929](#)  
[show chassis pic fpc-slot pic-slot \(MX480 Router with 100-Gigabit Ethernet MIC\) on page 929](#)  
[show chassis pic fpc-slot pic-slot \(MX240, MX480, MX960 Routers with Application Services Modular Line Card\) on page 929](#)  
[show chassis pic fpc-slot pic-slot \(MX960 Router with MPC5EQ\) on page 929](#)

[show chassis pic fpc-slot pic-slot \(MX960 Router with MPC3E and 100-Gigabit DWDM OTN MIC\) on page 930](#)

[show chassis pic fpc-slot pic-slot on page 930](#)

[show chassis pic fpc-slot pic-slot \(MX10003 Routers\) on page 931](#)

[show chassis pic fpc-slot pic-slot \(MX204 Routers\) on page 931](#)

[show chassis pic fpc-slot pic-slot \(PTX3000 Router with 5-port 100-Gigabit DWDM OTN PIC\) on page 932](#)

[show chassis pic fpc-slot pic-slot \(MX480 Router with MPC4E\) on page 932](#)

[show chassis pic fpc-slot pic-slot \(MX480 router with OTN Interface\) on page 932](#)

[show chassis pic fpc-slot pic-slot \(MX2010 Router with OTN Interfaces\) on page 933](#)

[show chassis pic fpc-slot pic-slot \(MX2010 Router\) on page 933](#)

[show chassis pic fpc-slot pic-slot \(MX2020 Router\) on page 933](#)

[show chassis pic fpc-slot pic-slot \(MX2020 Router with MPC5EQ and MPC6E\) on page 934](#)

[show chassis pic fpc-slot pic-slot \(MX2020 Router with MPC6E and OTN MIC\) on page 934](#)

[show chassis pic fpc-slot pic-slot \(MX2020 Router with MPC4E\) on page 934](#)

[show chassis pic fpc-slot pic-slot \(MX2010 Router\) on page 935](#)

[show chassis pic fpc-slot pic-slot \(T1600 Router with 100-Gigabit Ethernet PIC\) on page 935](#)

[show chassis pic fpc-slot pic-slot lcc \(TX Matrix Router\) on page 935](#)

[show chassis pic fpc-slot pic-slot lcc \(TX Matrix Plus Router\) on page 935](#)

[show chassis pic fpc-slot pic-slot \(Next-Generation SONET/SDH SFP\) on page 936](#)

[show chassis pic fpc-slot pic-slot \(12-Port T1/E1\) on page 936](#)

[show chassis pic fpc-slot 0 pic-slot 1 \(4x CHOC3 SONET CE SFP\) on page 936](#)

[show chassis pic fpc-slot 0 pic-slot 0 \(SONET/SDH OC3/STM1 \[Multi-Rate\] MIC with SFP\) on page 937](#)

[show chassis pic fpc-slot 3 pic-slot 0 \(8-port Channelized SONET/SDH OC3/STM1 \[Multi-Rate\] MIC with SFP\) on page 937](#)

[show chassis pic fpc-slot 5 pic-slot 0 \(4-port Channelized SONET/SDH OC3/STM1 \[Multi-Rate\] MIC with SFP\) on page 937](#)

[show chassis pic fpc-slot 1 pic-slot 0 \(1-port OC192/STM64 MIC with XFP\) on page 938](#)

[show chassis pic fpc-slot 1 pic-slot 2 \(8-port DS3/E3 MIC\) on page 938](#)

[show chassis pic fpc-slot pic-slot \(OTN\) on page 938](#)

[show chassis pic fpc-slot pic-slot \(QFX3500 Switch\) on page 938](#)

[show chassis pic fpc-slot pic-slot \(QFX5100 Switches and OCX Series \) on page 938](#)

[show chassis pic interconnect-device fpc-slot pic-slot \(QFabric Systems\) on page 938](#)

[show chassis pic node-device fpc-slot pic-slot \(QFabric System\) on page 939](#)

[show chassis pic fpc-slot 0 pic-slot 1 \(ACX2000 Universal Metro Router\) on page 940](#)

[show chassis pic FPC-slot 1 PIC-slot 0 \(MX Routers with Media Services Blade \[MSB\]\) on page 940](#)

[show chassis pic FPC slot 1, PIC slot 2 \(MX Routers with Media Services Blade \[MSB\]\) on page 940](#)

[show chassis pic transport fpc-slot pic-slot \(PTX Series Packet Transport Routers\) on page 940](#)

[show chassis pic transport fpc-slot pic-slot \(MX960 Router with MPC3E and 100-Gigabit DWDM OTN MIC\) on page 940](#)

[show chassis pic fpc-slot 0 pic-slot 0 \(ACX5096 Router\) on page 940](#)

[show chassis pic fpc-slot 0 pic-slot 0 \(ACX5048 Router\) on page 944](#)

[show chassis pic fpc-slot 0 pic-slot 0 \(ACX500 Router\) on page 944](#)  
[show chassis pic fpc-slot 0 pic-slot 1 \(ACX500 Router\) on page 945](#)  
[show chassis pic transport fpc-slot pic-slot \(PTX Series Packet Transport Routers\) on page 945](#)  
[show chassis pic transport fpc-slot pic-slot \(MX960 Router with MPC3E and 100-Gigabit DWDM OTN MIC\) on page 945](#)  
[show chassis pic fpc-slot 0 pic-slot 0 \(EX9251 Switches\) on page 945](#)  
[show chassis pic fpc-slot 0 pic-slot 0 \(EX9253 Switches\) on page 945](#)

**Output Fields** Table 31 on page 925 lists the output fields for the **show chassis pic** command. Output fields are listed in the approximate order in which they appear.

*Table 31: show chassis pic Output Fields*

Field Name	Field Description
Type	PIC type.  <b>NOTE:</b> On the 1-port OC192/STM64 MICs with the SDH framing mode, the type is displayed as <b>MIC-3D-1STM64-XFP</b> and with the SONET framing mode, the type is displayed as <b>MIC-3D-1OC192-XFP</b> . By default, the 1-port OC192/STM64 MICs displays the type as <b>MIC-3D-1OC192-XFP</b> .
Account Layer2 Overhead	(MX Series routers) Indicates whether functionality to count the Layer 2 overhead bytes in the interface statistics at the PIC level is enabled or disabled.
ASIC type	Type of ASIC on the PIC.
State	Status of the PIC. State is displayed only when a PIC is in the slot. <ul style="list-style-type: none"> <li>• <b>Online</b>— PIC is online and running.</li> <li>• <b>Offline</b>—PIC is powered down.</li> </ul>
PIC version	PIC hardware version.
Uptime	How long the PIC has been online.
Package	(Multiservices PICs only) Services package supported: <b>Layer-2</b> or <b>Layer-3</b> .
Port Number	Port number for the PIC.
Cable Type	Type of cable connected to the port: <b>LH</b> , <b>LX</b> , or <b>SX</b> .

Table 31: show chassis pic Output Fields (continued)

Field Name	Field Description
<b>PIC Port Information (MX480 Router 100-Gigabit Ethernet CFP)</b>	<p>Port-level information for the PIC.</p> <ul style="list-style-type: none"> <li>• Port—Port number</li> <li>• Cable type—Type of optical transceiver installed.</li> <li>• Fiber type—Type of fiber. SM is single-mode.</li> <li>• Xcvr vendor—Transceiver vendor name.</li> <li>• Xcvr vendor part number—Transceiver vendor part number.</li> <li>• Wavelength—Wavelength of the transmitted signal. Uplinks and downlinks are always 1550 nm. There is a separate fiber for each direction</li> <li>• Xcvr Firmware—Transceiver firmware version.</li> </ul>
<b>PIC Port Information (MX960 Router Bidirectional Optics )</b>	<p>Port-level information for the PIC.</p> <ul style="list-style-type: none"> <li>• Port—Port number</li> <li>• Cable type—Type of small form-factor pluggable (SFP) optical transceiver installed. Uplink interfaces display -U. Down link interfaces display -D.</li> <li>• Fiber type—Type of fiber. SM is single-mode.</li> <li>• Xcvr vendor—Transceiver vendor name.</li> <li>• Xcvr vendor part number—Transceiver vendor part number. <ul style="list-style-type: none"> <li>• BX10-10-km bidirectional optics.</li> <li>• BX40-40-km bidirectional optics.</li> <li>• SFP-LX-40-km SFP optics.</li> </ul> </li> <li>• Wavelength—Wavelength of the transmitted signal. Uplinks are always 1310 nm. Downlinks are either 1490 nm or 1550 nm.</li> </ul>
<b>PIC Port Information (Next-Generation SONET/SDH SFP)</b>	<p>Port-level information for the next-generation SONET/SDH SFP PIC.</p> <ul style="list-style-type: none"> <li>• Port—Port number.</li> <li>• Cable type—Type of small form-factor pluggable (SFP) optical transceiver installed.</li> <li>• Fiber type—Type of fiber: <b>SM</b> (single-mode) or <b>MM</b> (multimode).</li> <li>• Xcvr vendor—Transceiver vendor name.</li> <li>• Xcvr vendor part number—Transceiver vendor part number.</li> <li>• Wavelength—Wavelength of the transmitted signal. Next-generation SONET/SDH SFPs use 1310 nm.</li> </ul>
<b>PIC port information (MX104 router)</b>	<p>Port-level information for the PIC.</p> <ul style="list-style-type: none"> <li>• Port—Port number</li> <li>• Cable type—Type of optical transceiver installed.</li> <li>• Fiber type—Type of fiber. SM is single-mode.</li> <li>• Xcvr vendor—Transceiver vendor name.</li> <li>• Xcvr vendor part number—Transceiver vendor part number.</li> <li>• Wavelength—Wavelength of the transmitted signal.</li> <li>• Xcvr Firmware—Firmware version of the transceiver.</li> </ul>

*Table 31: show chassis pic Output Fields (continued)*

Field Name	Field Description
Port speed information	Information pertaining to port speed: <ul style="list-style-type: none"> <li>• Port—Port number.</li> <li>• PFE—Packet Forwarding Engine slot number.</li> <li>• Capable Port Speed—Speed supported by each port.</li> </ul>
Multirate Mode	Rate-selectability status for the MIC: <b>Enabled</b> or <b>Disabled</b> .
Channelization	Indicates whether channelization is enabled or disabled on the DS3/E3 MIC.
Administrative State	Indicates the administrative state of the PIC. Possible values are: In Service (Default) and Out of Service.
Operational State	Indicates the operational state of the PIC. Possible values are: Normal and Fault.

## Sample Output

### show chassis pic fpc-slot pic-slot

```

user@host> show chassis pic fpc-slot 2 pic-slot 0
PIC fpc slot 2 pic slot 0 information:
  Type          10x 1GE(LAN), 1000 BASE
  ASIC type      H chip
  State          Online
  PIC version    1.1
  Uptime         1 day, 50 minutes, 58 seconds
PIC Port Information:
  Port      Cable      Xcvr      Xcvr Vendor
  Number    Type        Vendor Name Part Number
  0          GIGE 1000EX  FINISAR CORP.  FTRJ8519P1BNL-J3
  1          GIGE 1000EX  FINISAR CORP.  FTRJ-8519-7D-JUN

```

### show chassis pic fpc-slot pic-slot (PIC Offline)

```

user@host> show chassis pic fpc-slot 1 pic-slot 0
PIC fpc slot 1 pic slot 0 information:
  State          Offline

```

### show chassis pic fpc-slot pic-slot (FPC Offline)

```

user@host> show chassis pic fpc-slot 1 pic-slot 0
FPC 1 is not online

```

### show chassis pic fpc-slot pic-slot (FPC Not Present)

```

user@host> show chassis pic fpc-slot 4 pic-slot 0
FPC slot 4 is empty

```

**show chassis pic fpc-slot pic-slot (PIC Not Present)**

```
user@host> show chassis pic fpc-slot 5 pic-slot 2
FPC 5, PIC 2 is empty
```

**show chassis pic fpc-slot 3 pic-slot 0 (M120 Router)**

```
user@host> show chassis pic fpc-slot 3 pic-slot 0
PC slot 3, PIC slot 0 information:
  Type                2x G/E IQ, 1000 BASE
  ASIC type           IQ GE 2 VLAN-TAG FPGA
  State               Online
  PIC version         1.16
  Uptime              3 hours, 3 minutes

PIC Port Information:
  Port      Cable      Xcvr      Xcvr Vendor
  Number    Type        Vendor Name Part Number
  0         GIGE 1000SX  FINISAR CORP.  FTRJ8519P1BNL-J3
  1         GIGE 1000SX  FINISAR CORP.  FTRJ-8519-7D-JUN
```

**show chassis pic fpc-slot pic-slot (MX150)**

```
user@host> show chassis pic fpc-slot 0 pic-slot 0
FPC slot 0, PIC slot 0 information:
  Type                Virtual
  State               Online
  PIC version         0.0
  Uptime              7 days, 19 hours, 44 minutes, 40 seconds

PIC port information:
  Fiber              Xcvr vendor      Wave-      Xcvr
  Port Cable type   type  Xcvr vendor      part number  length
  Firmware
  10  GIGE 1000T    n/a  Methode Elec.    SP7041-M1-JN  n/a      0.0
  11  GIGE 1000T    n/a  Methode Elec.    SP7041-M1-JN  n/a      0.0
```

**show chassis pic fpc-slot pic-slot (MX104 Router)**

```
user@host> show chassis pic fpc-slot 1 pic-slot 1
FPC slot 1, PIC slot 1 information:
  Type                10x 1GE(LAN) -E SFP
  State               Online
  PIC version         1.1
  Uptime              1 hour, 30 minutes, 59 seconds

PIC port information:
  Fiber              Xcvr vendor      Wave-      Xcvr
  Port Cable type   type  Xcvr vendor      part number  length
  Firmware
  3    GIGE 1000T    n/a  Methode Elec.    SP7041-M1-JN  n/a      0.0
  6    GIGE 1000LX10 SM    FINISAR CORP.    FTLF1318P2BTL-J1 1310 nm 0.0
  8    GIGE 1000T    n/a  Methode Elec.    SP7041-M1-JN  n/a      0.0
```



```

9      GIGE 1000T      n/a      Methode Elec.      SP7041-M1-JN      n/a      0.0

```

#### show chassis pic fpc-slot pic-slot (MX960 Router with Bidirectional Optics)

```

user@host> show chassis pic fpc-slot 4 pic-slot 1
FPC slot 4, PIC slot 1 information:
  Type                10x 1GE(LAN)
  Account Layer2 Overhead  Enabled
  State                Online
  PIC version          0.0
  Uptime               18 days, 5 hours, 41 minutes, 54 seconds

PIC port information:

```

Port	Cable type	Fiber type	Xcvr vendor	Xcvr vendor part number	Wavelength
0	SFP-1000BASE-BX10-D	SM	SumitomoElectric	SBP6H44-J3-BW-49	1490 nm
1	SFP-1000BASE-BX10-D	SM	SumitomoElectric	SBP6H44-J3-BW-49	1490 nm
2	SFP-1000BASE-BX10-D	SM	SumitomoElectric	SBP6H44-J3-BW-49	1490 nm
3	SFP-1000BASE-BX10-D	SM	OCF	TRXBG1LXDBVM2-JW	1490 nm
4	SFP-1000BASE-BX10-D	SM	OCF	TRXBG1LXDBVM2-JW	1490 nm
5	SFP-1000BASE-BX10-U	SM	SumitomoElectric	SBP6H44-J3-BW-31	1310 nm
6	SFP-1000BASE-BX10-U	SM	SumitomoElectric	SBP6H44-J3-BW-31	1310 nm
7	SFP-1000BASE-BX10-U	SM	OCF	TRXBG1LXDBBMH-J1	1310 nm
8	SFP-1000BASE-BX10-U	SM	OCF	TRXBG1LXDBBMH-J1	1310 nm
9	SFP-1000BASE-BX10-U	SM	SumitomoElectric	SBP6H44-J3-BW-31	1310 nm

#### show chassis pic fpc-slot pic-slot (MX480 Router with 100-Gigabit Ethernet MIC)

```

user@host> show chassis pic fpc-slot 1 pic-slot 2
FPC slot 1, PIC slot 2 information:
  Type                1X100GE CFP
  State                Online
  PIC version          2.10
  Uptime               4 minutes, 48 seconds

PIC port information:

```

Port	Cable type	Fiber type	Xcvr vendor	Xcvr vendor part number	Wavelength
0	100GBASE LR4	SM	FINISAR CORP.	FTLC1181RDN5-J3	1310 nm

```

  Xcvr vendor
  firmware version
  1.8

```

#### show chassis pic fpc-slot pic-slot (MX240, MX480, MX960 Routers with Application Services Modular Line Card)

```

user@host>show chassis pic fpc-slot 1 pic-slot 2
FPC slot 1, PIC slot 2 information:
  Type                AS-MXC
  State                Online
  PIC version          1.0
  Uptime               11 hours, 18 minutes, 3 seconds

```

#### show chassis pic fpc-slot pic-slot (MX960 Router with MPC5EQ)

```

user@host> show chassis pic fpc-slot 0 pic-slot 3
FPC slot 0, PIC slot 3 information:
  Type                1X100GE CFP2 OTN

```

```

State                               Online
PIC version                         0.0
Uptime                             1 hour, 22 minutes, 42 seconds

PIC port information:
Fiber                               Xcvr vendor      Wave-      Xcvr

Port Cable type                    type Xcvr vendor      part number  length
Firmware
0  100GBASE LR4                    n/a  Oclaro Inc.      TRB5E20FNF-LF150  1309 nm  1.0

```

### show chassis pic fpc-slot pic-slot (MX960 Router with MPC3E and 100-Gigabit DWDM OTN MIC)

```

user@host> show chassis pic fpc-slot 3 pic-slot 0
FPC slot 3, PIC slot 0 information:
Type                               1X100GE DWDM CFP2-ACO
State                               Online
PIC version                         1.3
Uptime                             9 hours, 4 minutes, 43 seconds

PIC port information:
Fiber                               Xcvr vendor      Wave-      Xcvr

Port Cable type                    type Xcvr vendor      part number  length
Firmware
0  100G LH                        SM  OCLARO           TRB100AJ-01     1528.77 nm -
1568.36 nm 20.10

```

### show chassis pic fpc-slot pic-slot

```

user@host> show chassis pic fpc-slot 1 pic-slot 1

FPC slot 1, PIC slot 1 information:
Type                               MIC1-MACSEC
State                               Online
PIC version                         1.5
Uptime                             2 hours, 52 minutes, 1 second

PIC port information:
Fiber                               Xcvr vendor      Wave-      Xcvr

Port Cable type                    type Xcvr vendor      part number  length
Firmware
8  40GBASE SR4                    MM  AVAGO            AFBR-79EQDZ-JU2  850 nm  0.0

10 40GBASE SR4                    MM  AVAGO            AFBR-79EQDZ-JU2  850 nm  0.0

Port speed information:

Port  PFE      Capable Port Speeds
0      0        4x10GE, 40GE, 100GE
1      0        4x10GE, 40GE, 100GE
2      0        4x10GE, 40GE, 100GE
3      0        4x10GE, 40GE, 100GE
4      0        4x10GE, 40GE, 100GE
5      0        4x10GE, 40GE, 100GE
6      0        4x10GE, 40GE, 100GE
7      0        4x10GE, 40GE, 100GE
8      0        4x10GE, 40GE, 100GE

```

```

9      0      4x10GE, 40GE, 100GE
10     0      4x10GE, 40GE, 100GE
11     0      4x10GE, 40GE, 100GE

```

### show chassis pic fpc-slot pic-slot (MX10003 Routers)

```
user@host > show chassis pic fpc-slot 0 pic-slot 0
```

```
FPC slot 0, PIC slot 1 information:
```

```

Type           MIC1
State          Online
PIC version     1.5
Uptime         13 hours, 54 minutes, 33 seconds

```

```
PIC port information:
```

		Fiber		Xcvr vendor	Wave-	Xcvr
Port	Cable type	type	Xcvr vendor	part number	length	
0	40GBASE SR4	MM	AVAGO	AFBR-79EQDZ-JU2	850 nm	0.0
11	40GBASE SR4	MM	AVAGO	AFBR-79EQDZ-JU2	850 nm	0.0

```
Port speed information:
```

Port	PFE	Capable	Port Speeds
0	0	4x10GE, 40GE, 100GE	
1	0	4x10GE, 40GE, 100GE	
2	0	4x10GE, 40GE, 100GE	
3	0	4x10GE, 40GE, 100GE	
4	1	4x10GE, 40GE, 100GE	
5	1	4x10GE, 40GE, 100GE	
6	1	4x10GE, 40GE, 100GE	
7	1	4x10GE, 40GE, 100GE	
8	2	4x10GE, 40GE, 100GE	
9	2	4x10GE, 40GE, 100GE	
10	2	4x10GE, 40GE, 100GE	
11	2	4x10GE, 40GE, 100GE	

### show chassis pic fpc-slot pic-slot (MX204 Routers)

```
user@host > show chassis pic fpc-slot 0 pic-slot 0
```

```
FPC slot 0, PIC slot 0 information:
```

```

Type           4XQSFP28 PIC
State          Online
PIC version     0.0
Uptime         2 days, 7 hours, 6 minutes, 10 seconds

```

```
PIC port information:
```

		Fiber		Xcvr vendor	Wave-	Xcvr
Port	Cable type	type	Xcvr vendor	part number	length	
0	100GBASE SR4 REV 01	MM	JUNIPER-FINISAR	FTLC9551REPM-J1	850 nm	0.0
1	4X10GBASE SR REV 01	MM	AVAGO	AFBR-79EEPZ-JU2	850 nm	0.0
2	100GBASE LR4 REV 01	SM	JUNIPER-FINISAR	FTLC1151RDPL-J3	1302 nm	0.0

```

3    100GBASE LR4      SM    JUNIPER-FINISAR    FTLC1151RDPL-J3    1302 nm    0.0
    REV 01

```

Port speed information:

Port	PFE	Capable Port Speeds
0	0	4x10GE, 40GE, 100GE
1	0	4x10GE, 40GE, 100GE
2	0	4x10GE, 40GE, 100GE
3	0	4x10GE, 40GE, 100GE

### show chassis pic fpc-slot pic-slot (PTX3000 Router with 5-port 100-Gigabit DWDM OTN PIC)

```

user@host > show chassis pic fpc-slot 4 pic-slot 0
FPC slot 4, PIC slot 0 information:
  Type                    5X100GE DWDM CFP2-ACO
  State                   Online
  PIC version             1.17
  Uptime                  1 day, 5 hours, 15 minutes, 17 seconds

PIC port information:

```

Port	Cable type	Fiber type	Xcvr vendor	part number	Wave-length	Xcvr
0	100G LH	SM	MULTILANE SAL	ML4030-ACO-2	1528.77 nm	-
1	100G LH	SM	MULTILANE SAL	ML4030-ACO-2	1528.77 nm	-
2	100G LH	SM	JUNIPER-FUJITSU	FIM38500/222	1528.77 nm	-
3	100G LH	SM	FUJITSU	FIM38500/222	1528.77 nm	-
4	100G LH	SM	FUJITSU	FIM38500/222	1528.77 nm	-

### show chassis pic fpc-slot pic-slot (MX480 Router with MPC4E)

```

user@host> show chassis pic fpc-slot 3 pic-slot 0
FPC slot 3, PIC slot 0 information:
  Type                    4x10GE SFPP
  State                   Online
  PIC version             0.0
  Uptime                  41 seconds

PIC port information:

```

Port	Cable type	Fiber type	Xcvr vendor	part number	Wave-length	Xcvr
0	10GBASE SR	MM	OPNEXT, INC.	TRS2001EM-0014	850 nm	0.0
1	10GBASE SR	MM	OPNEXT, INC.	TRS2001EM-0014	850 nm	0.0

### show chassis pic fpc-slot pic-slot (MX480 router with OTN Interface)

```

user@host> show chassis pci fpc-slot 4 pic-slot 0
FPC slot 4, PIC slot 0 information:
  Type                    12X10GE SFPP OTN

```

```

State                               Online
PIC version                         0.0
Uptime                             5 hours, 28 minutes, 23 seconds

PIC port information:

```

		Fiber		Xcvr vendor	Wave-	Xcvr
Port	Cable type	type	Xcvr vendor	part number	length	
Firmware						
0	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BNL-J1	850 nm	0.0
1	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
2	10GBASE SR	MM	OPNEXT, INC.	TRS2001EM-0014	850 nm	0.0

#### show chassis pic fpc-slot pic-slot (MX2010 Router with OTN Interfaces)

```

user@host> show chassis pic fpc-slot 9 pic-slot 0
FPC slot 9, PIC slot 0 information:
Type                               2X100GE CFP2 OTN
State                               Online
PIC version                         1.9
Uptime                             3 hours, 56 minutes, 16 seconds

PIC port information:

```

		Fiber		Xcvr vendor	Wave-	Xcvr
Port	Cable type	type	Xcvr vendor	part number	length	
Firmware						
0	100GBASE LR4-D	SM	FUJITSU	FIM37300/222	1310 nm	1.3
1	100GBASE SR10	MM	AVAGO	AFBR-8420Z	n/a	1.0

#### show chassis pic fpc-slot pic-slot (MX2010 Router)

```

user@host> show chassis pic fpc-slot 9 pic-slot 3
FPC slot 9, PIC slot 3 information:
Type                               1X100GE CFP
Account Layer2 Overhead             Enabled
State                               Online
PIC version                         0.0
Uptime                             14 hours, 51 seconds

```

#### show chassis pic fpc-slot pic-slot (MX2020 Router)

```

user@host> show chassis pic fpc-slot 19 pic-slot 3
FPC slot 19, PIC slot 3 information:
Type                               4x 10GE(LAN) SFP+
Account Layer2 Overhead             Enabled
State                               Online
PIC version                         0.0
Uptime                             1 day, 11 hours, 26 minutes, 36 seconds

PIC port information:

```

		Fiber		Xcvr vendor	Wave-	Xcvr
Port	Cable type	type	Xcvr vendor	part number	length	
Firmware						
0	10GBASE SR	MM	SumitomoElectric	SPP5200SR-J6-M	850 nm	0.0

1	10GBASE SR	MM	SumitomoElectric	SPP5200SR-J6-M	850 nm	0.0
2	10GBASE SR	MM	SumitomoElectric	SPP5200SR-J6-M	850 nm	0.0
3	10GBASE SR	MM	SumitomoElectric	SPP5200SR-J6-M	850 nm	0.0

#### show chassis pic fpc-slot pic-slot (MX2020 Router with MPC5EQ and MPC6E)

```
user@host> show chassis pic fpc-slot 18 pic-slot 2
FPC slot 18, PIC slot 2 information:
  Type                3X40GE QSFP
  State                Online
  PIC version          0.0
  Uptime               6 minutes, 31 seconds
```

##### PIC port information:

		Fiber		Xcvr vendor	Wave-	Xcvr
Port	Cable type	type	Xcvr vendor	part number	length	
Firmware						
0	40GBASE SR4	MM	AVAGO	AFBR-79E4Z-D-JU2	850 nm	0.0
1	40GBASE SR4	MM	AVAGO	AFBR-79E4Z-D-JU2	850 nm	0.0
2	40GBASE SR4	MM	AVAGO	AFBR-79E4Z-D-JU2	850 nm	0.0

#### show chassis pic fpc-slot pic-slot (MX2020 Router with MPC6E and OTN MIC)

```
user@host> show chassis pic fpc-slot 3 pic-slot 0
FPC slot 0, PIC slot 1 information:
  Type                24X10GE SFPP OTN
  State                Online
  PIC version          1.1
  Uptime               1 hour, 33 minutes, 59 seconds
```

##### PIC port information:

		Fiber		Xcvr vendor	Wave-	Xcvr
Port	Cable type	type	Xcvr vendor	part number	length	
Firmware						
7	10GBASE SR	MM	SumitomoElectric	SPP5200SR-J6-M	850 nm	0.0
9	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BNL-J1	850 nm	0.0
12	10GBASE LR	SM	FINISAR CORP.	FTLX1472M3BNL-J3	1310 nm	0.0
20	10GBASE ZR	SM	FINISAR CORP.	FTLX1871M3BNL-J3	1550 nm	0.0
21	10GBASE ER	SM	FINISAR CORP.	FTLX1671D3BTL-J4	1550 nm	0.0
22	10GBASE LR	SM	SOURCEPHOTONICS	SPP10SLREDFCJNP	1310 nm	0.0
23	10GBASE LR	SM	FINISAR CORP.	FTLX1471D3BNL-J1	1310 nm	0.0

#### show chassis pic fpc-slot pic-slot (MX2020 Router with MPC4E)

```
user@host> show chassis pic fpc-slot 14 pic-slot 0
```

FPC slot 14, PIC slot 2 information:

```
Type                4x10GE SFPP
State                Online
PIC version          0.0
Uptime               1 day, 14 hours, 49 minutes, 9 seconds
```

PIC port information:

Port	Cable type	Fiber type	Xcvr vendor	Xcvr part number	Wave-length	Xcvr
0	10GBASE SR	MM	SumitomoElectric	SPP5100SR-J3	850 nm	0.0
1	10GBASE SR	MM	SumitomoElectric	SPP5100SR-J3	850 nm	0.0
3	10GBASE SR	MM	SumitomoElectric	SPP5100SR-J3	850 nm	0.0

#### show chassis pic fpc-slot pic-slot (MX2010 Router)

```
user@host> show chassis pic fpc-slot 9 pic-slot 3
```

FPC slot 9, PIC slot 3 information:

```
Type                1X100GE CFP
Account Layer2 Overhead Enabled
State                Online
PIC version          0.0
Uptime               14 hours, 51 seconds
```

#### show chassis pic fpc-slot pic-slot (T1600 Router with 100-Gigabit Ethernet PIC)

```
user@host> run show chassis pic fpc-slot 3 pic-slot 1
```

FPC slot 3, PIC slot 1 information:

```
Type                100GE SLOT1
ASIC type            Brooklyn 100GE FPGA
State                Online
PIC version          1.3
Uptime               10 minutes, 44 seconds
```

PIC port information:

Port	Cable type	Fiber type	Xcvr vendor	Xcvr part number	Wavelength
0	100GBASE LR4	SM	Opnext Inc.	TRC5E20ENFSF000F	1310 nm

#### show chassis pic fpc-slot pic-slot lcc (TX Matrix Router)

```
user@host> show chassis pic fpc-slot 1 pic-slot 1 lcc 0
```

lcc0-re0:

-----

PIC fpc slot 1 pic slot 1 information:

```
Type                4x OC-3 SONET, SMIR
ASIC type            D chip
State                Online
PIC version          1.2
Uptime               5 days, 2 hours, 12 minutes, 8 seconds
```

#### show chassis pic fpc-slot pic-slot lcc (TX Matrix Plus Router)

```
user@host> show chassis pic pic-slot 0 fpc-slot 8
```

lcc0-re0:

-----

FPC slot 8, PIC slot 0 information:

```
Type          1x 10GE(LAN/WAN)
State          Online
Uptime         2 hours, 46 minutes, 23 seconds
```

PIC port information:

Port	Cable type	Fiber type	Xcvr vendor	part number	Wavelength
0	10GBASE ZR	SM	Opnext Inc.	TRF7061BN-LF150	1550 nm
0	10GBASE ZR	SM	FINISAR CORP.	FTRX-1811-3-J2	1550 nm

### show chassis pic fpc-slot pic-slot (Next-Generation SONET/SDH SFP)

user@host> show chassis pic fpc-slot 4 pic-slot 0

FPC slot 4, PIC slot 0 information:

```
Type          4x OC-3 1x OC-12 SFP
ASIC type      D FPGA
State          Online
PIC version    1.3
Uptime         1 day, 50 minutes, 4 seconds
```

PIC port information:

Port	Cable type	Fiber type	Xcvr vendor	part number	Wavelength
0	OC48 short reach	SM	FINISAR CORP.	FTRJ1321P1BTL-J2	1310 nm
1	OC3 short reach	MM	OCF	TRPA03MM3BAS-JE	1310 nm
2	OC3 short reach	MM	OCF	TRXA03MM3BAS-JW	1310 nm
3	OC12 inter reach	SM	FINISAR CORP.	FTLF1322P1BTR	1310 nm

### show chassis pic fpc-slot pic-slot (12-Port T1/E1)

user@host> show chassis pic fpc-slot 0 pic-slot 3

FPC slot 0, PIC slot 3 information:

```
Type          12x T1/E1 CE
State          Online
PIC version    1.1
CPU load average 1 percent
Interrupt load average 0 percent
Total DRAM size 128 MB
Memory buffer utilization 100 percent
Memory heap utilization 4 percent
Uptime         1 day, 22 hours, 28 minutes, 12 seconds
Internal Clock Synchronization Normal
```

### show chassis pic fpc-slot 0 pic-slot 1 (4x CHOC3 SONET CE SFP)

user@host> show chassis pic fpc-slot 0 pic-slot 1

FPC slot 0, PIC slot 1 information:

```
Type          4x CHOC3 SONET CE SFP
State          Online
PIC version    1.3
CPU load average 1 percent
Interrupt load average 0 percent
Total DRAM size 128 MB
Memory buffer utilization 99 percent
Memory heap utilization 4 percent
Uptime         1 day, 22 hours, 55 minutes, 37 seconds
Internal Clock Synchronization Normal
```



## PIC port information:

Port	Cable type	Fiber type	Xcvr vendor	Xcvr vendor part number	Wavelength
0	OC3 short reach	MM	AVAGO	HFBR-57E0P-JU2	n/a
1	OC3 short reach	MM	AVAGO	HFBR-57E0P-JU2	n/a
3	OC3 long reach	SM	OPNEXT INC	TRF5456AVLB314	1310 nm

**show chassis pic fpc-slot 0 pic-slot 0 (SONET/SDH OC3/STM1 [Multi-Rate] MIC with SFP)**

```
user@host> show chassis pic fpc-slot 0 pic-slot 0
```

```
FPC slot 0, PIC slot 0 information:
```

Type	MIC-3D-80C30C12-40C48
State	Online
PIC version	1.8
Uptime	3 days, 22 hours, 3 minutes, 50 seconds

## PIC port information:

Port	Cable type	Fiber type	Xcvr vendor	Xcvr vendor part number	Wavelength
1	OC12 inter reach	SM	FINISAR CORP	FTRJ1322P1BTR-J3	1310 nm
7	OC12 inter reach	SM	FINISAR CORP	FTRJ1322P1BTR-J3	1310 nm
Multirate Mode		Enabled			

**show chassis pic fpc-slot 3 pic-slot 0 (8-port Channelized SONET/SDH OC3/STM1 [Multi-Rate] MIC with SFP)**

```
user@host> show chassis pic fpc-slot 3 pic-slot 0
```

```
FPC slot 3, PIC slot 0 information:
```

Type	MIC-3D-8CHOC3-4CHOC12
State	Online
PIC version	1.9
Uptime	1 hour, 21 minutes, 24 seconds

## PIC port information:

Port	Cable type	Fiber type	Xcvr vendor	Xcvr vendor part number	Wavelength
0	OC12 short reach	SM	FINISAR CORP.	FTRJ1322P1BTR-J3	1310 nm
1	OC12 short reach	SM	FINISAR CORP.	FTRJ1322P1BTR-J3	1310 nm
2	OC12 inter reach	SM	FINISAR CORP.	FTRJ1322P1BTR-J2	1310 nm
4	OC12 short reach	SM	FINISAR CORP.	FTRJ1322P1BTR-J3	1310 nm
5	OC12 short reach	SM	FINISAR CORP.	FTRJ1322P1BTR-J3	1310 nm
6	OC12 short reach	SM	FINISAR CORP.	FTRJ1322P1BTR-J3	1310 nm
7	OC12 short reach	SM	FINISAR CORP.	FTRJ1322P1BTR-J3	1310 nm

**show chassis pic fpc-slot 5 pic-slot 0 (4-port Channelized SONET/SDH OC3/STM1 [Multi-Rate] MIC with SFP)**

```
user@host> show chassis pic fpc-slot 5 pic-slot 0
```

```
FPC slot 5, PIC slot 0 information:
```

Type	MIC-3D-4CHOC3-2CHOC12
State	Online
PIC version	1.9
Uptime	1 hour, 21 minutes

## PIC port information:

Port	Cable type	Fiber type	Xcvr vendor	Xcvr vendor part number	Wavelength
1	OC12 inter reach	SM	FINISAR CORP.	FTRJ1322P1BTR-J3	1310 nm
2	OC12 inter reach	SM	FINISAR CORP.	FTRJ1322P1BTR-J3	1310 nm
3	OC12 short reach	SM	FINISAR CORP.	FTRJ1322P1BTR-J3	1310 nm

**show chassis pic fpc-slot 1 pic-slot 0 (1-port OC192/STM64 MIC with XFP)**

```

user@host> show chassis pic fpc-slot 1 pic-slot 0
FPC slot 1, PIC slot 0 information:
  Type          MIC-3D-10C192-XFP
  State         Online
  PIC version    1.2
  Uptime        1 day, 11 hours, 4 minutes, 6 seconds

PIC port information:
  Port  Cable type      Fiber type  Xcvr vendor  Xcvr vendor  Wavelength
  0      OC192 short reach n/a    FINISAR CORP.  FTLX1412M3BCL-J3  1310 nm

```

**show chassis pic fpc-slot 1 pic-slot 2 (8-port DS3/E3 MIC)**

```

user@host> show chassis pic fpc-slot 1 pic-slot 2
FPC slot 1, PIC slot 2 information:
  Type          MIC-3D-8DS3-E3
  State         Online
  PIC version    1.10
  Uptime        4 days, 1 hour, 29 minutes, 19 seconds
  Channelization Mode Disabled

```

**show chassis pic fpc-slot pic-slot (OTN)**

```

user@host> show chassis pic fpc-slot 5 pic-slot 0
PIC fpc slot 5 pic slot 0 information:
  Type          1x10GE(LAN),OTN
  ASIC type     H chip
  State         Online
  PIC version    1.0
  Uptime        5 minutes, 50 seconds

```

**show chassis pic fpc-slot pic-slot (QFX3500 Switch)**

```

user@switch> show chassis pic fpc-slot 0 pic-slot 0
FPC slot 0, PIC slot 0 information:
  Type 48x 10G-SFP+ Builtin
  State Online
  Uptime 3 days, 3 hours, 5 minutes, 20 seconds

```

**show chassis pic fpc-slot pic-slot (QFX5100 Switches and OCX Series )**

```

user@switch> show chassis pic fpc-slot 0 pic-slot 0
FPC slot 0, PIC slot 0 information:
  Type          Unknown Builtin
  State         Online
  Uptime        1 day, 17 hours, 5 minutes, 9 seconds

```

**show chassis pic interconnect-device fpc-slot pic-slot (QFabric Systems)**

```

user@switch> show chassis pic interconnect-device interconnect1 fpc-slot 9 pic-slot 0
FPC slot 9, PIC slot 0 information:
  Type          16x 40G-GE Builtin
  State         Online
  Uptime        2 hours, 47 minutes, 40 seconds

```

**show chassis pic node-device fpc-slot pic-slot (QFabric System)**

```
user@switch> show chassis pic node-device node1 pic-slot 0
```

```
FPC slot node1, PIC slot 0 information:
```

```

Type                48x 10G-SFP+BuiltIn
State               Online
Uptime              2 hours, 52 minutes, 37 seconds

```

```
PIC port information:
```

Port	Cable type	Fiber type	Xcvr vendor	Xcvr vendor part number	Wavelength
0	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
1	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
2	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
3	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
4	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
5	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
6	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
7	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
8	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
9	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
10	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
11	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
12	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
13	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
14	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
15	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
16	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
17	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
18	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
19	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
20	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
21	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
22	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
23	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
24	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
25	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
26	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
27	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
28	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
29	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
30	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
31	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
32	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
33	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
34	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
35	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
36	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
37	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
38	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
39	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
40	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
41	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
42	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
43	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
44	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
45	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
46	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm
47	10GBASE SR	MM	SumitomoElectric	SPP5101SR-J3	850 nm

**show chassis pic fpc-slot 0 pic-slot 1 (ACX2000 Universal Metro Router)**

```

user@host> show chassis pic fpc-slot 0 pic-slot 1
FPC slot 0, PIC slot 1 information:
  Type                8x 1GE(LAN) RJ45 Built-in
  State                Online
  Uptime               6 days, 2 hours, 51 minutes, 11 seconds

```

**show chassis pic FPC-slot 1 PIC-slot 0 (MX Routers with Media Services Blade [MSB])**

```

user@switch> show chassis pic fpc-slot 1 pic-slot 0
FPC slot 1, PIC slot 0 information:
  Type                AS-MSB
  State                Online
  PIC version          1.6
  Uptime               11 hours, 17 minutes, 56 seconds

```

**show chassis pic FPC slot 1, PIC slot 2 (MX Routers with Media Services Blade [MSB])**

```

user@switch> show chassis pic fpc-slot 1 pic-slot 2
  Type                AS-MXC
  State                Online
  PIC version          1.0
  Uptime               11 hours, 18 minutes, 3 seconds

```

**show chassis pic transport fpc-slot pic-slot (PTX Series Packet Transport Routers)**

```

user@host> show chassis pic transport fpc-slot 2 pic-slot 0
Administrative State: In Service
Operational State: Normal

```

**show chassis pic transport fpc-slot pic-slot (MX960 Router with MPC3E and 100-Gigabit DWDM OTN MIC)**

```

user@host> show chassis pic transport fpc-slot 3 pic-slot 0
Administrative State: In Service
Operational State: Normal

```

**show chassis pic fpc-slot 0 pic-slot 0 (ACX5096 Router)**

```

user@host> show chassis pic fpc-slot 0 pic-slot 0
FPC slot 0, PIC slot 0 information:
  Type                96x10G-8x40G
  State                Online
  PIC version          2.9
  Uptime               21 hours, 28 minutes, 13 seconds

```

**PIC port information:**

		Fiber		Xcvr vendor	Wave-	Xcvr
Port	Cable type	type	Xcvr vendor	part number	length	
Firmware						
0	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
1	10GBASE LR	SM	FINISAR CORP.	FTLX1471D3BCL-J1	1310 nm	0.0
3	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BNL-J1	850 nm	0.0

4	10GBASE SR	MM	SumitomoElectric	SPP5100SR-J3	850 nm	0.0
5	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BNL-J1	850 nm	0.0
6	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BNL-J1	850 nm	0.0
7	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BNL-J1	850 nm	0.0
8	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BNL-J1	850 nm	0.0
9	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BNL-J1	850 nm	0.0
10	10GBASE SR	MM	OPNEXT, INC.	TRS2001EN-0014	850 nm	0.0
11	10GBASE SR	MM	SumitomoElectric	SPP5100SR-J3	850 nm	0.0
12	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BNL-J1	850 nm	0.0
13	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
14	10GBASE SR	MM	SumitomoElectric	SPP5100SR-J3	850 nm	0.0
15	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BNL-J1	850 nm	0.0
16	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BNL-J1	850 nm	0.0
17	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BNL-J1	850 nm	0.0
18	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
19	10GBASE LR	SM	FINISAR CORP.	FTLX1471D3BCL-J1	1310 nm	0.0
20	10GBASE LR	SM	FINISAR CORP.	FTLX1471D3BNL-J1	1310 nm	0.0
21	10GBASE SR	MM	SumitomoElectric	SPP5100SR-J3	850 nm	0.0
22	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BNL-J1	850 nm	0.0
23	10GBASE SR	MM	SumitomoElectric	SPP5100SR-J3	850 nm	0.0
24	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
25	10GBASE USR	MM	FINISAR CORP.	FTLX8570D3BCL-J1	850 nm	0.0
26	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BNL-J1	850 nm	0.0
27	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
28	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BNL-J1	850 nm	0.0
29	GIGE 1000SX	MM	FINISAR CORP.	FTLF8519P3BNL-J1	850 nm	0.0
31	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BNL-J1	850 nm	0.0
32	10GBASE SR	MM	SumitomoElectric	SPP5100SR-J3	850 nm	0.0
33	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
34	10GBASE SR	MM	SumitomoElectric	SPP5100SR-J3	850 nm	0.0
35	10GBASE USR	MM	FINISAR CORP.	FTLX8570D3BCL-J1	850 nm	0.0

36	10GBASE USR	MM	FINISAR CORP.	FTLX8570D3BCL-J1	850 nm	0.0
37	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BNL-J1	850 nm	0.0
38	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
40	GIGE 1000LX10	SM	FINISAR CORP.	FTLF1318P2BTL-J1	1310 nm	0.0
41	10GBASE LR	SM	OPNEXT, INC	TRS5021EN-S201	1310 nm	0.0
42	10GBASE LR	SM	FINISAR CORP.	FTLX1471D3BCL-J1	1310 nm	0.0
43	10GBASE LR	SM	SumitomoElectric	SPP5100LR-J3	1310 nm	0.0
44	10GBASE LR	SM	SumitomoElectric	SPP5100LR-J3	1310 nm	0.0
45	10GBASE LR	SM	FINISAR CORP.	FTLX1471D3BCL-J1	1310 nm	0.0
46	10GBASE LR	SM	FINISAR CORP.	FTLX1471D3BCL-J1	1310 nm	0.0
47	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BNL-J1	850 nm	0.0
48	10GBASE SR	MM	SumitomoElectric	SPP5100SR-J3	850 nm	0.0
49	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BNL-J1	850 nm	0.0
50	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BNL-J1	850 nm	0.0
51	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
52	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
53	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
54	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
55	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
56	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
57	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
58	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
59	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
60	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
61	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
62	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
63	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
64	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
65	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
66	10GBASE SR	MM	SumitomoElectric	SPP5200SR-J6-M	850 nm	0.0

67	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
68	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
69	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
70	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
71	10GBASE LR	SM	FINISAR CORP.	FTLX1471D3BNL-J1	1310 nm	0.0
72	10GBASE LR	SM	FINISAR CORP.	FTLX1471D3BCL-J1	1310 nm	0.0
73	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
74	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
75	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
76	10GBASE SR	MM	SumitomoElectric	SPP5100SR-J3	850 nm	0.0
77	10GBASE USR	MM	OPNEXT, INC.	TRS20A0EN-0014	850 nm	0.0
78	10GBASE USR	MM	OPNEXT, INC.	TRS20A0EN-0014	850 nm	0.0
79	10GBASE LRM	MM	OPNEXT INC	TRS5001EN-0014	1310 nm	0.0
80	10GBASE LRM	MM	OPNEXT INC	TRS5001EN-0014	1310 nm	0.0
81	10GBASE USR	MM	OPNEXT, INC.	TRS20A0EN-0014	850 nm	0.0
82	10GBASE USR	MM	OPNEXT, INC.	TRS20A0EN-0014	850 nm	0.0
83	10GBASE USR	MM	OPNEXT, INC.	TRS20A0EN-0014	850 nm	0.0
84	10GBASE USR	MM	OPNEXT, INC.	TRS20A0EN-0014	850 nm	0.0
85	10GBASE LR	SM	OPNEXT, INC	TRS5021EN-S201	1310 nm	0.0
86	10GBASE ER	SM	OPNEXT, INC	TRS7050EN-S201	1550 nm	0.0
87	10GBASE LRM	MM	OPNEXT INC	TRS5001EN-0014	1310 nm	0.0
88	10GBASE LRM	MM	OPNEXT INC	TRS5001EN-0014	1310 nm	0.0
89	10GBASE LRM	MM	OPNEXT INC	TRS5001EN-0014	1310 nm	0.0
90	10GBASE LRM	MM	OPNEXT INC	TRS5001EN-0014	1310 nm	0.0
91	10GBASE USR	MM	FINISAR CORP.	FTLX8570D3BCL-J1	850 nm	0.0
92	10GBASE USR	MM	FINISAR CORP.	FTLX8570D3BCL-J1	850 nm	0.0
93	10GBASE LR	SM	SumitomoElectric	SPP5100LR-J3	1310 nm	0.0
94	10GBASE LR	SM	FINISAR CORP.	FTLX1471D3BNL-J1	1310 nm	0.0
95	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BNL-J1	850 nm	0.0
96	40GBASE SR4	MM	AVAGO	AFBR-79E4Z-D-JU1	850 nm	0.0
97	40GBASE SR4	MM	AVAGO	AFBR-79E4Z-D-JU1	850 nm	0.0

98	40GBASE SR4	MM	AVAGO	AFBR-79EQDZ-JU1	850 nm	0.0
99	40GBASE SR4	MM	AVAGO	AFBR-79EQDZ-JU1	850 nm	0.0
100	40GBASE CU 1M	n/a	Molex Inc.	1110409055	n/a	0.0
101	40GBASE CU 1M	n/a	Molex Inc.	1110409055	n/a	0.0
102	40GBASE CU 1M	n/a	Molex Inc.	1110409055	n/a	0.0
103	40GBASE CU 1M	n/a	Molex Inc.	1110409055	n/a	0.0

### show chassis pic fpc-slot 0 pic-slot 0 (ACX5048 Router)

```

user@host> show chassis pic fpc-slot 0 pic-slot 0
FPC slot 0, PIC slot 0 information:
  Type          96x10G-8x40G
  State          Online
  PIC version    2.9
  Uptime        1 day, 5 hours, 27 minutes, 25 seconds

PIC port information:

```

		Fiber		Xcvr vendor	Wave-	Xcvr
Port	Cable type	type	Xcvr vendor	part number	length	
0	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
10	GIGE 1000SX	MM	FINISAR CORP.	FTLF8519P3BNL-J1	850 nm	0.0
14	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BNL-J1	850 nm	0.0
20	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BCL-J1	850 nm	0.0
30	GIGE 1000SX	MM	FINISAR CORP.	FTLF8519P2BNL-J1	850 nm	0.0
41	10GBASE SR	MM	OPNEXT, INC.	TRS2001EN-0014	850 nm	0.0
46	GIGE 1000SX	MM	FINISAR CORP.	FTLF8519P2BNL-J1	850 nm	0.0
64	10GBASE SR	MM	FINISAR CORP.	FTLX8571D3BNL-J1	850 nm	0.0
78	GIGE 1000SX	MM	AVAGO	AFBR-5715PZ-JU2	850 nm	0.0
96	40GBASE SR4	MM	AVAGO	AFBR-79EQDZ-JU1	850 nm	0.0
99	40GBASE SR4	MM	AVAGO	AFBR-79EQDZ-JU1	850 nm	0.0
100	40GBASE SR4	MM	AVAGO	AFBR-79EQDZ-JU1	850 nm	0.0

### show chassis pic fpc-slot 0 pic-slot 0 (ACX500 Router)

```

user@host> show chassis pic fpc-slot 0 pic-slot 0
FPC slot 0, PIC slot 0 information:
  Type          2x 1GE(LAN) SFP Builtin
  State          Online
  Uptime        17 hours, 54 minutes, 45 seconds

```



**show chassis pic fpc-slot 0 pic-slot 1 (ACX500 Router)**

```

user@host> show chassis pic fpc-slot 0 pic-slot 1
FPC slot 0, PIC slot 1 information:
  Type                4x 1GE(LAN) RJ45, SFP Built-in
  State                Online
  Uptime               17 hours, 54 minutes, 45 seconds

```

**show chassis pic transport fpc-slot pic-slot (PTX Series Packet Transport Routers)**

```

user@host> show chassis pic transport fpc-slot 2 pic-slot 0
Administrative State: In Service
Operational State: Normal

```

**show chassis pic transport fpc-slot pic-slot (MX960 Router with MPC3E and 100-Gigabit DWDM OTN MIC)**

```

user@host> show chassis pic transport fpc-slot 3 pic-slot 0
Administrative State: In Service
Operational State: Normal

```

**show chassis pic fpc-slot 0 pic-slot 0 (EX9251 Switches)**

```

user@switch> show chassis pic fpc-slot 0 pic-slot 0
FPC slot 0, PIC slot 0 information:
  Type                4XQSFP28 PIC
  State                Online
  PIC version          0.0
  Uptime               1 day, 2 hours, 22 minutes, 3 seconds

PIC port information:

```

JNPR		Fiber	Xcvr vendor	Wave-	Xcvr
Port	Cable type	type	Xcvr vendor	part number	length
0	40GBASE CU 50CM REV 01	n/a	Amphenol	601100000	n/a
2	40GBASE SR4 REV 01	MM	AVAGO	AFBR-79EQDZ-JU2	850 nm

```

Port speed information:
  Port  PFE    Capable Port Speeds
  0      0      4x10GE, 40GE, 100GE
  1      0      4x10GE, 40GE, 100GE
  2      0      4x10GE, 40GE, 100GE
  3      0      4x10GE, 40GE, 100GE

```

**show chassis pic fpc-slot 0 pic-slot 0 (EX9253 Switches)**

```

user@switch> show chassis pic fpc-slot 0 pic-slot 0
FPC slot 0, PIC slot 0 information:
  Type                6xQSFP
  State                Online
  PIC version          0.0
  Uptime               1 day, 7 minutes, 11 seconds

PIC port information:

```

JNPR		Fiber	Xcvr vendor	Wave-	Xcvr
------	--	-------	-------------	-------	------

Port	Cable type	type	Xcvr vendor	part number	length
0	4X10GBASE SR	MM	AVAGO	AFBR-79EEPZ-JU2	850 nm
	REV 01				0.0

Port speed information:

Port	PFE	Capable Port Speeds
0	0	4x10GE, 40GE
1	0	4x10GE, 40GE
2	1	4x10GE, 40GE
3	1	4x10GE, 40GE
4	2	4x10GE, 40GE
5	2	4x10GE, 40GE

## show chassis routing-engine

**List of Syntax**    [Syntax on page 947](#)  
                           [Syntax \(ACX Series Universal Metro Routers\) on page 947](#)  
                           [Syntax \(EX Series Switches\) on page 947](#)  
                           [Syntax \(QFX Series\) on page 947](#)  
                           [Syntax \(MX Series Routers\) on page 947](#)  
                           [Syntax \(MX2010 Universal Routing Platforms\) on page 947](#)  
                           [Syntax \(MX2020 Universal Routing Platforms\) on page 947](#)  
                           [Syntax \(MX104 Universal Routing Platforms\) on page 948](#)  
                           [Syntax \(MX204 and MX10003 Universal Routing Platforms\) on page 948](#)  
                           [Syntax \(PTX Series Packet Transport Routers\) on page 948](#)  
                           [Syntax \(T Series Routers\) on page 948](#)  
                           [Syntax \(TX Matrix Routers\) on page 948](#)  
                           [Syntax \(TX Matrix Plus Routers\) on page 948](#)

**Syntax**    show chassis routing-engine  
                   <bios | *slot*>

**Syntax (ACX Series Universal Metro Routers)**    show chassis routing-engine

**Syntax (EX Series Switches)**    show chassis routing-engine  
   <*slot*>  
   <satellite [slot-id *slot-id* |device-alias *alias-name*]>

**Syntax (QFX Series)**    show chassis routing-engine  
                                   <interconnect-device *name*>  
                                   <node-device *name*>  
                                   <*slot*>  
                                   <*bios*>  
                                   <*errors*>

**Syntax (MX Series Routers)**    show chassis routing-engine  
   <all-members>  
   <bios | *slot*>  
   <local>  
   <member *member-id*>  
   <satellite [slot-id *slot-id* |device-alias *alias-name*]>

**Syntax (MX2010 Universal Routing Platforms)**    show chassis routing-engine  
   <bios | *slot*>

**Syntax (MX2020 Universal Routing Platforms)**    show chassis routing-engine  
   <bios | *slot*>

Syntax (MX104 Universal Routing Platforms)	show chassis routing-engine
Syntax (MX204 and MX10003 Universal Routing Platforms)	show chassis routing-engine <slot> <bios> <errors>
Syntax (PTX Series Packet Transport Routers)	show chassis routing-engine
Syntax (T Series Routers)	show chassis routing-engine <bios   slot>
Syntax (TX Matrix Routers)	show chassis routing-engine <bios   slot> <lcc number   scc>
Syntax (TX Matrix Plus Routers)	show chassis routing-engine <bios   slot> <lcc number   sfc number>
Release Information	<p>Command introduced before Junos OS Release 7.4.</p> <p>Command introduced in Junos OS Release 9.0 for EX Series switches.</p> <p><b>sfc</b> option introduced in Junos OS Release in 9.6 for the TX Matrix Plus router.</p> <p>Command introduced in Junos OS Release 11.1 for QFX Series.</p> <p><b>5 sec CPU Utilization, 1 min CPU Utilization, 5 min CPU Utilization, and 15 min CPU Utilization</b> output fields introduced in Junos OS Release 11.3R1.</p> <p>Command introduced in Junos OS Release 12.2 for ACX Series Universal Metro Routers.</p> <p>Command introduced in Junos OS Release 12.3 for MX2010 and MX2020 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 13.2 for MX104 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.</p> <p><b>satellite</b> option introduced in Junos OS Release 14.2R3.</p> <p>Command introduced in Junos OS Release 17.2 for PTX10008 Routers.</p> <p>Command introduced in Junos OS Release 17.3 for MX10003 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 17.4 for MX204 Universal Routing Platforms.</p> <p>Command introduced in Junos OS Release 18.1R1 for EX9251 switches.</p>
Description	Display the status of the Routing Engine.
Options	<b>none</b> —Display information about one or more Routing Engines. On a TX Matrix router, display information about all Routing Engines on the TX Matrix router and its attached T640 routers. On a TX Matrix Plus router, display information about all Routing Engines on the TX Matrix Plus router and its attached routers.

**all-members**—(MX Series routers only) (Optional) Display Routing Engine information for all members of the Virtual Chassis configuration.

**bios**—(Optional) Display the (BIOS) firmware version.

**errors**—(Optional) Display routing engine errors.

**interconnect-device *number***—(QFabric systems only) (Optional) Display Routing Engine information for a specified Interconnect device.

**lcc *number***—(TX Matrix and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display Routing Engine information for a specified T640 router (line-card chassis) that is connected to the TX Matrix router. On a TX Matrix Plus router, display Routing Engine information for a specified router (line-card chassis) that is connected to the TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(MX Series routers only) (Optional) Display Routing Engine information for the local Virtual Chassis member.

**member *member-id***—(MX Series routers only) (Optional) Display Routing Engine information for the specified member of the Virtual Chassis configuration. For an MX Series Virtual Chassis, replace *member-id* with a value of 0 or 1.

**node-device *number***—(QFabric systems only) (Optional) Display Routing Engine information for a specified Node device.

**satellite [*slot-id slot-id* | *device-alias alias-name*]**—(Junos Fusion only) (Optional) Display Routing Engine information for the specified satellite device in a Junos Fusion, or for all satellite devices in the Junos Fusion if no satellite devices are specified.

**scc**—(TX Matrix routers only) (Optional) Display Routing Engine information for the TX Matrix router (switch-card chassis).

**sfc *number***—(TX Matrix Plus routers only) (Optional) Display Routing Engine information for the TX Matrix Plus router (or switch-fabric chassis). Replace *number* with 0.

**slot**—(Systems with multiple Routing Engines) (Optional) Display information for an individual Routing Engine. Replace *slot* with 0 or 1. For QFX3500 switches, there is only one Routing Engine, so you do not need to specify the slot number.

**Required Privilege Level** view

**Related Documentation**

- [request chassis routing-engine master on page 139](#)
- [Configuring Routing Engine Redundancy](#)
- [Switching the Global Master and Backup Roles in a Virtual Chassis Configuration](#)

**List of Sample Output**

[show chassis routing-engine \(M5 Router\) on page 953](#)  
[show chassis routing-engine \(M10 Router\) on page 954](#)  
[show chassis routing-engine \(M20 Router\) on page 954](#)  
[show chassis routing-engine \(M40 Router\) on page 955](#)  
[show chassis routing-engine \(M120 Router\) on page 955](#)  
[show chassis routing-engine \(M160 Router\) on page 956](#)  
[show chassis routing-engine \(MX104 Router\) on page 957](#)  
[show chassis routing-engine \(MX240 Router\) on page 957](#)  
[show chassis routing-engine \(MX480 Router\) on page 958](#)  
[show chassis routing-engine \(MX960 Router\) on page 959](#)  
[show chassis routing-engine \(MX2010 Router\) on page 961](#)  
[show chassis routing-engine \(MX2020 Router\) on page 962](#)  
[show chassis routing-engine \(MX10003 Router\) on page 962](#)  
[show chassis routing-engine \(MX204 Router\) on page 963](#)  
[show chassis routing-engine \(T320 Router\) on page 964](#)  
[show chassis routing-engine \(T640 Router\) on page 965](#)  
[show chassis routing-engine \(T1600 Router\) on page 965](#)  
[show chassis routing-engine \(T4000 Router\) on page 966](#)  
[show chassis routing-engine \(TX Matrix Router\) on page 967](#)  
[show chassis routing-engine lcc \(TX Matrix Router\) on page 968](#)  
[show chassis routing-engine bios \(TX Matrix Router\) on page 969](#)  
[show chassis routing-engine \(TX Matrix Plus Router\) on page 969](#)  
[show chassis routing-engine lcc \(TX Matrix Plus Router\) on page 970](#)  
[show chassis routing-engine bios \(TX Matrix Plus Router\) on page 971](#)  
[show chassis routing-engine \(QFX Series\) on page 971](#)  
[show chassis routing-engine \(OCX Series\) on page 972](#)  
[show chassis routing-engine interconnect-device \(QFabric Systems\) on page 972](#)  
[show chassis routing-engine \(PTX Series Packet Transport Router\) on page 973](#)  
[show chassis routing-engine \(EX9200 Switch\) on page 973](#)  
[show chassis routing-engine \(EX9251 Switch\) on page 974](#)  
[show chassis routing-engine \(ACX2000 Universal Metro Router\) on page 975](#)  
[show chassis routing-engine \(ACX1000 Universal Metro Router\) on page 975](#)  
[show chassis routing-engine \(Displaying the guest reboot reason on PTX5000,MX240, MX480, MX960< MX2010, and MX2020\) on page 975](#)

**Output Fields** [Table 32 on page 951](#) lists the output fields for the **show chassis routing-engine** command. Output fields are listed in the approximate order in which they appear.

Table 32: show chassis routing-engine Output Fields

Field Name	Field Description
Slot	(Systems with single and multiple Routing Engines) Slot number.
Current state	(Systems with multiple Routing Engines) Current state of the Routing Engine: <b>Master</b> , <b>Backup</b> , or <b>Disabled</b> .
Election priority	(Systems with multiple Routing Engines) Election priority for the Routing Engine: <b>Master</b> or <b>Backup</b> .
Temperature	Temperature of the air flowing past the Routing Engine.
CPU Temperature	Temperature of the CPU.
DRAM	Total DRAM available to the Routing Engine's processor.  Starting with Junos OS Release 12.3R1, the DRAM field displays both available memory and installed memory.
Memory utilization	Percentage of Routing Engine memory being used.  <b>NOTE:</b> For platforms running Junos OS with upgraded FreeBSD, the way memory utilization is calculated has changed. Starting in Junos OS Release 15.1R1, inactive memory is no longer included in the calculation for memory utilization. Inactive memory is now considered as free. That is, the value for used memory decreases and results in more memory to be available for other processes. For platforms that run Junos OS with upgraded FreeBSD, see <i>Release Information for Junos OS with Upgraded FreeBSD</i> .
CPU utilization	Information about the Routing Engine's CPU utilization: <ul style="list-style-type: none"> <li>• <b>User</b>—Percentage of CPU time being used by user processes.</li> <li>• <b>Background</b>—Percentage of CPU time being used by background processes.</li> <li>• <b>Kernel</b>—Percentage of CPU time being used by kernel processes.</li> <li>• <b>Interrupt</b>—Percentage of CPU time being used by interrupts.</li> <li>• <b>Idle</b>—Percentage of CPU time that is idle.</li> </ul>
5 sec CPU Utilization	Information about the Routing Engine's CPU utilization in the past 5 seconds: <ul style="list-style-type: none"> <li>• <b>User</b>—Percentage of CPU time being used by user processes.</li> <li>• <b>Background</b>—Percentage of CPU time being used by background processes.</li> <li>• <b>Kernel</b>—Percentage of CPU time being used by kernel processes.</li> <li>• <b>Interrupt</b>—Percentage of CPU time being used by interrupts.</li> <li>• <b>Idle</b>—Percentage of CPU time that is idle.</li> </ul>
1 min CPU Utilization	Information about the Routing Engine's CPU utilization in the past 1 minute: <ul style="list-style-type: none"> <li>• <b>User</b>—Percentage of CPU time being used by user processes.</li> <li>• <b>Background</b>—Percentage of CPU time being used by background processes.</li> <li>• <b>Kernel</b>—Percentage of CPU time being used by kernel processes.</li> <li>• <b>Interrupt</b>—Percentage of CPU time being used by interrupts.</li> <li>• <b>Idle</b>—Percentage of CPU time that is idle.</li> </ul>

Table 32: show chassis routing-engine Output Fields (continued)

Field Name	Field Description
<b>5 min CPU Utilization</b>	Information about the Routing Engine's CPU utilization in the past 5 minutes: <ul style="list-style-type: none"> <li>• <b>User</b>—Percentage of CPU time being used by user processes.</li> <li>• <b>Background</b>—Percentage of CPU time being used by background processes.</li> <li>• <b>Kernel</b>—Percentage of CPU time being used by kernel processes.</li> <li>• <b>Interrupt</b>—Percentage of CPU time being used by interrupts.</li> <li>• <b>Idle</b>—Percentage of CPU time that is idle.</li> </ul>
<b>15 min CPU Utilization</b>	Information about the Routing Engine's CPU utilization in the past 15 minutes: <ul style="list-style-type: none"> <li>• <b>User</b>—Percentage of CPU time being used by user processes.</li> <li>• <b>Background</b>—Percentage of CPU time being used by background processes.</li> <li>• <b>Kernel</b>—Percentage of CPU time being used by kernel processes.</li> <li>• <b>Interrupt</b>—Percentage of CPU time being used by interrupts.</li> <li>• <b>Idle</b>—Percentage of CPU time that is idle.</li> </ul>
<b>Model</b>	Routing Engine model number.
<b>Serial ID</b>	(Systems with multiple Routing Engines) Identification number of the Routing Engine in this slot.
<b>Start time</b>	Time at which the Routing Engine started running.
<b>Uptime</b>	How long the Routing Engine has been running.
Routing Engine BIOS Version	BIOS version being run by the Routing Engine.



Table 32: show chassis routing-engine Output Fields (continued)

Field Name	Field Description
Last reboot reason	<p>Reason for last reboot, including:</p> <ul style="list-style-type: none"> <li><b>power cycle/failure</b>—Halt of the Routing Engine using the <b>halt</b> command, powering down using the power button on the chassis or any other method (such as removal of the control board or Routing Engine), and then powering back the Routing Engine. A halt of the operating system also occurs if you enter the <b>request system halt</b> command. You can enter this command to halt the system operations on the chassis or specific Routing Engines. To restart the software, press any key on the keyboard.</li> <li><b>watchdog</b>—Reboot due to a hardware watchdog. A watchdog is a hardware monitoring process that examines the health and performance of the router to enable the device to recover from failures. A watchdog checks for problems at certain intervals, and reboots the routing engine if a problem is encountered.</li> <li><b>reset-button reset</b>—(Not available on the EX Series switch) Reboot due to pressing of the reset button on the Routing Engine.</li> <li><b>power-button hard power off</b>—Reboot due to pressing of the power button on the chassis. A powering down of the software also occurs if you enter the <b>request system power-off</b> command. You can enter this command to power down the chassis or specific Routing Engines; you can then restart the software.</li> <li><b>misc hardware reason</b>—Reboot due to miscellaneous hardware reasons.</li> <li><b>thermal shutdown</b>—Reboot due to the router or switch reaching a critical temperature at which point it is unsafe to continue operations.</li> <li><b>hard disk failure</b>—Reboot due to a hard disk or solid-state drive (SSD) failure.</li> <li><b>reset from debugger</b>—Reboot due to reset from the debugger.</li> <li><b>chassis control reset</b>—Restart the chassis process that manages PICs, FPCs, and other hardware components. The chassis control module that runs the Routing Engine performs management and monitoring functions, and it provides a single access point for operational and maintenance functions. A reset of the chassis management process occurs when you enter the <b>restart chassis-control</b> command.</li> <li><b>bios auto recovery reset</b>—Reboot due to a BIOS auto-recovery reset.</li> <li><b>could not be determined</b>—Reboot due to an undetermined reason.</li> <li><b>Router rebooted after a normal shutdown</b>—Reboot due to a normal shutdown. This reason is displayed if the Routing Engine is powered down by pushing and holding the online/offline button on the Routing Engine faceplate for 30 seconds, and then powered back. A reboot of the software also occurs if you enter the <b>request system reboot</b> command. You can enter this command to reboot the chassis or specific Routing Engines.</li> <li><b>Hypervisor reboot</b>—When both Linux host and Junos OS is rebooted using the <b>request vmhost reboot</b> command.</li> <li><b>VJUNOS Reboot</b>—When Junos OS is rebooted using the <b>request system reboot</b> command.</li> </ul>
Load averages	Routing Engine load averages for the last 1, 5, and 15 minutes.

## Sample Output

### show chassis routing-engine (M5 Router)

```

user@host> show chassis routing-engine
Routing Engine status:
  Temperature           25 degrees C / 77 degrees F
  DRAM                  768 MB
  Memory utilization    21 percent
  CPU utilization:

```

```

User                0 percent
Background          0 percent
Kernel              0 percent
Interrupt            0 percent
Idle                100 percent
Model               RE-2.0
Serial ID            31000007349bf701
Start time           2003-12-04 09:42:17 PST
Uptime              26 days, 1 hour, 12 minutes, 27 seconds
Last reboot reason   Router rebooted after a normal shutdown
Load averages:       1 minute   5 minute   15 minute
                     0.00        0.01        0.00

```

### show chassis routing-engine (M10 Router)

```

user@host> show chassis routing-engine
Routing Engine status:
  Temperature        25 degrees C / 77 degrees F
  DRAM                768 MB
  Memory utilization  21 percent
  CPU utilization:
    User              0 percent
    Background        0 percent
    Kernel            0 percent
    Interrupt         0 percent
    Idle              100 percent
  Model              RE-2.0
  Serial ID           31000007349bf701
  Start time           2003-12-04 09:42:17 PST
  Uptime              26 days, 1 hour, 12 minutes, 27 seconds
  Last reboot reason   Router rebooted after a normal shutdown
  Load averages:     1 minute   5 minute   15 minute
                     0.00        0.01        0.00

```

### show chassis routing-engine (M20 Router)

```

user@host> show chassis routing-engine
Routing Engine status:
  Slot 0:
    Current state      Master
    Election priority   Master (default)
    Temperature        29 degrees C / 84 degrees F
    DRAM                768 MB
    Memory utilization  20 percent
    CPU utilization:
      User              1 percent
      Background        0 percent
      Kernel            2 percent
      Interrupt         0 percent
      Idle              97 percent
    Model              RE-2.0
    Serial ID           58000007348d9a01
    Start time           2003-12-30 07:05:47 PST
    Uptime              3 hours, 41 minutes, 14 seconds
    Last reboot reason   Router rebooted after a normal shutdown
    Load averages:     1 minute   5 minute   15 minute
                       0.00        0.02        0.00
  Routing Engine status:
    Slot 1:
      Current state      Backup

```

```

Election priority          Backup (default)
Temperature                29 degrees C / 84 degrees F
DRAM                      768 MB
Memory utilization        0 percent
CPU utilization:
  User                    0 percent
  Background              0 percent
  Kernel                  1 percent
  Interrupt               0 percent
  Idle                    99 percent
Model                     RE-2.0
Serial ID                  d800000734745701
Start time                 2003-06-17 16:37:33 PDT
Uptime                    195 days, 18 hours, 47 minutes, 9 seconds
Last reboot reason        Router rebooted after a normal shutdown

```

#### show chassis routing-engine (M40 Router)

```

user@host> show chassis routing-engine
Routing Engine status:
  Temperature              25 degrees C / 77 degrees F
  DRAM                     768 MB
  Memory utilization       21 percent
  CPU utilization:
    User                   0 percent
    Background             0 percent
    Kernel                 0 percent
    Interrupt              0 percent
    Idle                   100 percent
  Model                    RE-2.0
  Serial ID                31000007349bf701
  Start time               2003-12-04 09:42:17 PST
  Uptime                   26 days, 1 hour, 12 minutes, 27 seconds
  Last reboot reason       Router rebooted after a normal shutdown
  Load averages:          1 minute   5 minute   15 minute
                           0.00       0.01      0.00

```

#### show chassis routing-engine (M120 Router)

```

user@host> show chassis routing-engine
Routing Engine status:
Slot 0:
  Current state            Master
  Election priority        Master (default)
  Temperature              46 degrees C / 114 degrees F
  CPU temperature          44 degrees C / 111 degrees F
  DRAM                     2048 MB
  Memory utilization       18 percent
  CPU utilization:
    User                   0 percent
    Background             0 percent
    Kernel                 5 percent
    Interrupt              0 percent
    Idle                   95 percent
  Model                    RE-A-1000
  Serial ID                1000621154
  Start time               2006-10-31 17:10:05 PST
  Uptime                   14 minutes, 31 seconds
  Last reboot reason       Router rebooted after a normal shutdown
  Load averages:          1 minute   5 minute   15 minute

```

```

                                0.02      0.07      0.07
Routing Engine status:
Slot 1:
  Current state                Backup
  Election priority            Backup (default)
  Temperature                  45 degrees C / 113 degrees F
  CPU temperature              42 degrees C / 107 degrees F
  DRAM                        2048 MB
  Memory utilization           15 percent
  CPU utilization:
    User                      0 percent
    Background                0 percent
    Kernel                    0 percent
    Interrupt                 0 percent
    Idle                      100 percent
  Model                       RE-A-1000
  Serial ID                   1000621151
  Start time                  2006-10-31 17:10:04 PST
  Uptime                      14 minutes, 30 seconds
  Last reboot reason          Router rebooted after a normal shutdown

```

### show chassis routing-engine (M160 Router)

```

user@host> show chassis routing-engine
Routing Engine status:
Slot 0:
  Current state                Master
  Election priority            Master (default)
  Temperature                  43 degrees C / 109 degrees F
  DRAM                        2048 MB
  Memory utilization           11 percent
  CPU utilization:
    User                      1 percent
    Background                0 percent
    Kernel                    2 percent
    Interrupt                 0 percent
    Idle                      97 percent
  Model                       RE-3.0
  Serial ID                   210865700403
  Start time                  2003-12-23 12:25:55 PST
  Uptime                      6 days, 22 hours, 33 minutes, 24 seconds
  Last reboot reason          Router rebooted after a normal shutdown
  Load averages:             1 minute   5 minute   15 minute
                                0.24      0.13      0.04

Routing Engine status:
Slot 1:
  Current state                Backup
  Election priority            Backup (default)
  Temperature                  40 degrees C / 104 degrees F
  DRAM                        2048 MB
  Memory utilization           9 percent
  CPU utilization:
    User                      0 percent
    Background                0 percent
    Kernel                    0 percent
    Interrupt                 0 percent
    Idle                      100 percent
  Model                       RE-3.0
  Serial ID                   210865700332
  Start time                  2003-12-23 12:25:55 PST

```

Uptime	6 days, 22 hours, 33 minutes, 21 seconds
Last reboot reason	Router rebooted after a normal shutdown

### show chassis routing-engine (MX104 Router)

```
user@host> show chassis routing-engine
```

```
Routing Engine status:
```

```
Slot 0:
```

Current state	Master
Election priority	Master (default)
Temperature	32 degrees C / 89 degrees F
CPU temperature	42 degrees C / 107 degrees F
DRAM	3840 MB (3840 MB installed)
Memory utilization	18 percent
CPU utilization:	
User	0 percent
Background	0 percent
Kernel	3 percent
Interrupt	2 percent
Idle	94 percent
Model	RE-MX-104
Serial ID	CAAR5925
Start time	2013-06-05 13:17:08 IST
Uptime	1 hour, 15 minutes, 8 seconds
Last reboot reason	0x200:normal shutdown
Load averages:	1 minute    5 minute    15 minute
	0.87        0.90        0.41

```
Routing Engine status:
```

```
Slot 1:
```

Current state	Backup
Election priority	Backup (default)
Temperature	32 degrees C / 89 degrees F
CPU temperature	38 degrees C / 100 degrees F
DRAM	3840 MB (3840 MB installed)
Memory utilization	13 percent
CPU utilization:	
User	0 percent
Background	0 percent
Kernel	1 percent
Interrupt	2 percent
Idle	97 percent
Model	RE-MX-104
Serial ID	CAAM6369
Start time	2013-06-05 13:07:37 IST
Uptime	1 hour, 24 minutes, 34 seconds
Last reboot reason	0x200:normal shutdown
Load averages:	1 minute    5 minute    15 minute
	0.19        0.15        0.06

### show chassis routing-engine (MX240 Router)

```
user@host> show chassis routing-engine
```

```
Routing Engine status:
```

```
Slot 0:
```

Current state	Master
Election priority	Master (default)
Temperature	36 degrees C / 96 degrees F
CPU temperature	35 degrees C / 95 degrees F
DRAM	3314 MB (8192 MB installed)
Memory utilization	37 percent

```

5 sec CPU utilization:
  User          0 percent
  Background    0 percent
  Kernel        1 percent
  Interrupt     0 percent
  Idle          99 percent
1 min CPU utilization:
  User          0 percent
  Background    0 percent
  Kernel        1 percent
  Interrupt     0 percent
  Idle          99 percent
5 min CPU utilization:
  User          0 percent
  Background    0 percent
  Kernel        1 percent
  Interrupt     0 percent
  Idle          99 percent
15 min CPU utilization:
  User          0 percent
  Background    0 percent
  Kernel        1 percent
  Interrupt     0 percent
  Idle          99 percent
Model          RE-S-1800x4
Serial ID      9009074155
Start time     2014-10-13 00:35:41 PDT
Uptime        98 days, 2 hours, 6 minutes, 35 seconds
Last reboot reason Router rebooted after a normal shutdown.
Load averages: 1 minute  5 minute 15 minute
                  0.12      0.12      0.13

Routing Engine status:
Slot 1:
  Current state      Present

```

### show chassis routing-engine (MX480 Router)

```

user@host> show chassis routing-engine
Routing Engine status:
Slot 0:
  Current state      Backup
  Election priority  Master (default)
  Temperature        30 degrees C / 86 degrees F
  CPU temperature    32 degrees C / 89 degrees F
  DRAM               3314 MB (8192 MB installed)
  Memory utilization  51 percent
  5 sec CPU utilization:
    User          0 percent
    Background    0 percent
    Kernel        0 percent
    Interrupt     0 percent
    Idle          100 percent
  1 min CPU utilization:
    User          0 percent
    Background    0 percent
    Kernel        0 percent
    Interrupt     0 percent
    Idle          0 percent
  5 min CPU utilization:
    User          0 percent
    Background    0 percent

```

```

Kernel                                0 percent
Interrupt                             0 percent
Idle                                  0 percent
15 min CPU utilization:
  User                                0 percent
  Background                           0 percent
  Kernel                               0 percent
  Interrupt                             0 percent
  Idle                                  0 percent
Model                                  RE-S-1800x4
Serial ID                              9009079817
Start time                             2015-01-19 01:45:58 PST
Uptime                                 7 minutes, 23 seconds
Last reboot reason                      Router rebooted after a normal shutdown.
Load averages:                         1 minute   5 minute  15 minute
                                         0.16      0.16    0.09

Routing Engine status:
Slot 1:
  Current state                         Master
  Election priority                     Backup (default)
  Temperature                           31 degrees C / 87 degrees F
  CPU temperature                       32 degrees C / 89 degrees F
  DRAM                                  8144 MB (8192 MB installed)
  Memory utilization                     23 percent
  5 sec CPU utilization:
    User                                0 percent
    Background                           0 percent
    Kernel                               1 percent
    Interrupt                             0 percent
    Idle                                  99 percent
  1 min CPU utilization:
    User                                0 percent
    Background                           0 percent
    Kernel                               1 percent
    Interrupt                             0 percent
    Idle                                  98 percent
  5 min CPU utilization:
    User                                0 percent
    Background                           0 percent
    Kernel                               1 percent
    Interrupt                             0 percent
    Idle                                  98 percent
  15 min CPU utilization:
    User                                0 percent
    Background                           0 percent
    Kernel                               1 percent
    Interrupt                             0 percent
    Idle                                  98 percent
Model                                  RE-S-1800x4
Serial ID                              9009079838
Start time                             2015-01-09 10:52:20 PST
Uptime                                 9 days, 15 hours, 1 minute, 4 seconds
Last reboot reason                      Router rebooted after a normal shutdown.
Load averages:                         1 minute   5 minute  15 minute
                                         0.10      0.16    0.16

```

### show chassis routing-engine (MX960 Router)

```

user@host> show chassis routing-engine
Routing Engine status:
Slot 0:

```

```

Current state                Master
Election priority            Master (default)
Temperature                  37 degrees C / 98 degrees F
CPU temperature              34 degrees C / 93 degrees F
DRAM                        3313 MB (16384 MB installed)
Memory utilization          31 percent
5 sec CPU utilization:
  User                       0 percent
  Background                 0 percent
  Kernel                     3 percent
  Interrupt                  1 percent
  Idle                       96 percent
1 min CPU utilization:
  User                       0 percent
  Background                 0 percent
  Kernel                     4 percent
  Interrupt                  1 percent
  Idle                       96 percent
5 min CPU utilization:
  User                       0 percent
  Background                 0 percent
  Kernel                     4 percent
  Interrupt                  1 percent
  Idle                       95 percent
15 min CPU utilization:
  User                       0 percent
  Background                 0 percent
  Kernel                     4 percent
  Interrupt                  1 percent
  Idle                       95 percent
Model                       RE-S-1800x4
Serial ID                   9013043785
Start time                  2015-01-12 23:37:53 PST
Uptime                      6 days, 2 hours, 17 minutes, 3 seconds
Last reboot reason          Router rebooted after a normal shutdown.
Load averages:              1 minute 5 minute 15 minute
                           0.00      0.02      0.00

Routing Engine status:
Slot 1:
  Current state              Backup
  Election priority          Backup (default)
  Temperature                37 degrees C / 98 degrees F
  CPU temperature            34 degrees C / 93 degrees F
  DRAM                       3313 MB (16384 MB installed)
  Memory utilization         26 percent
  5 sec CPU utilization:
    User                     0 percent
    Background               0 percent
    Kernel                   0 percent
    Interrupt                0 percent
    Idle                     99 percent
  1 min CPU utilization:
    User                     0 percent
    Background               0 percent
    Kernel                   0 percent
    Interrupt                0 percent
    Idle                     0 percent
  5 min CPU utilization:
    User                     0 percent
    Background               0 percent
    Kernel                   0 percent

```



```

Interrupt          0 percent
Idle               0 percent
15 min CPU utilization:
User              0 percent
Background        0 percent
Kernel            0 percent
Interrupt         0 percent
Idle              0 percent
Model             RE-S-1800x4
Serial ID          9013037303
Start time         2015-01-12 23:25:29 PST
Uptime            6 days, 2 hours, 29 minutes, 21 seconds
Last reboot reason Router rebooted after a normal shutdown.
Load averages:     1 minute   5 minute   15 minute
                   0.00      0.00      0.00

```

### show chassis routing-engine (MX2010 Router)

```

user@host> show chassis routing-engine
Routing Engine status:
Slot 0:
  Current state          Master
  Election priority      Master (default)
  Temperature            41 degrees C / 105 degrees F
  CPU temperature        38 degrees C / 100 degrees F
  DRAM                   3313 MB (16384 MB installed)
  Memory utilization      37 percent
  5 sec CPU utilization:
    User                 0 percent
    Background           0 percent
    Kernel               2 percent
    Interrupt            2 percent
    Idle                 96 percent
  1 min CPU utilization:
    User                 0 percent
    Background           0 percent
    Kernel               2 percent
    Interrupt            2 percent
    Idle                 97 percent
  5 min CPU utilization:
    User                 0 percent
    Background           0 percent
    Kernel               2 percent
    Interrupt            2 percent
    Idle                 97 percent
  15 min CPU utilization:
    User                 0 percent
    Background           0 percent
    Kernel               2 percent
    Interrupt            2 percent
    Idle                 97 percent
  Model                 RE-S-1800x4
  Serial ID              9009146890
  Start time             2015-01-18 21:35:12 PST
  Uptime                 4 hours, 21 minutes, 34 seconds
  Last reboot reason     Router rebooted after a normal shutdown.
  Load averages:        1 minute   5 minute   15 minute
                       0.11      0.14      0.14

```

### show chassis routing-engine (MX2020 Router)

```
user@host> show chassis routing-engine
Routing Engine status:
Slot 0:
  Current state           Master
  Election priority       Master (default)
  Temperature             2 degrees C / 35 degrees F
  CPU temperature         32 degrees C / 89 degrees F
  DRAM                    32735 MB (32768 MB installed)
  Memory utilization      10 percent
  5 sec CPU utilization:
    User                  0 percent
    Background            0 percent
    Kernel                1 percent
    Interrupt             1 percent
    Idle                  98 percent
  1 min CPU utilization:
    User                  0 percent
    Background            0 percent
    Kernel                1 percent
    Interrupt             1 percent
    Idle                  99 percent
  5 min CPU utilization:
    User                  0 percent
    Background            0 percent
    Kernel                1 percent
    Interrupt             1 percent
    Idle                  99 percent
  15 min CPU utilization:
    User                  0 percent
    Background            0 percent
    Kernel                1 percent
    Interrupt             1 percent
    Idle                  99 percent
  Model                  RE-S-2X00x8
  Serial ID              CADN0309
  Start time             2015-01-08 16:31:15 PST
  Uptime                 4 days, 22 hours, 59 minutes, 3 seconds
  Last reboot reason     Router rebooted after a normal shutdown.
  Load averages:        1 minute   5 minute   15 minute
                        0.39       0.41       0.34
```

### show chassis routing-engine (MX10003 Router)

```
user@host> show chassis routing-engine

Routing Engine status:
Slot 0:
  Current state           Master
  Election priority       Master (default)
  Temperature             43 degrees C / 109 degrees F
  CPU temperature         40 degrees C / 104 degrees F
  DRAM                    49112 MB (49152 MB installed)
  Memory utilization      4 percent
  5 sec CPU utilization:
    User                  0 percent
    Background            0 percent
    Kernel                2 percent
    Interrupt             0 percent
```

```

Idle 98 percent
1 min CPU utilization:
  User 0 percent
  Background 0 percent
  Kernel 1 percent
  Interrupt 0 percent
  Idle 98 percent
5 min CPU utilization:
  User 0 percent
  Background 0 percent
  Kernel 1 percent
  Interrupt 0 percent
  Idle 98 percent
15 min CPU utilization:
  User 0 percent
  Background 0 percent
  Kernel 1 percent
  Interrupt 0 percent
  Idle 96 percent
Model RE-S-2X00x6
Start time 2017-08-08 23:13:16 PDT
Uptime 53 minutes, 38 seconds
Last reboot reason 0x1:power cycle/failure
Load averages: 1 minute 5 minute 15 minute
                0.23 0.28 0.25

Routing Engine status:
Slot 1:
  Current state Backup
  Election priority Backup (default)
  Temperature 38 degrees C / 100 degrees F
  CPU temperature 39 degrees C / 102 degrees F
  DRAM 49112 MB (49152 MB installed)
  Memory utilization 4 percent
  5 sec CPU utilization:
    User 0 percent
    Background 0 percent
    Kernel 1 percent
    Interrupt 0 percent
    Idle 99 percent
  Model RE-S-2X00x6
  Start time 2017-08-08 23:13:18 PDT
  Uptime 53 minutes, 25 seconds
  Last reboot reason 0x1:power cycle/failure
  Load averages: 1 minute 5 minute 15 minute
                  0.21 0.19 0.17

```

### show chassis routing-engine (MX204 Router)

```
user@host> show chassis routing-engine
```

```

Routing Engine status:
  Temperature 52 degrees C / 125 degrees F
  CPU temperature 52 degrees C / 125 degrees F
  DRAM 16341 MB (16384 MB installed)
  Memory utilization 11 percent
  5 sec CPU utilization:
    User 0 percent
    Background 0 percent
    Kernel 0 percent
    Interrupt 0 percent
    Idle 100 percent

```

```

1 min CPU utilization:
  User          0 percent
  Background    0 percent
  Kernel        0 percent
  Interrupt     0 percent
  Idle          100 percent
5 min CPU utilization:
  User          0 percent
  Background    0 percent
  Kernel        0 percent
  Interrupt     0 percent
  Idle          100 percent
15 min CPU utilization:
  User          0 percent
  Background    0 percent
  Kernel        0 percent
  Interrupt     0 percent
  Idle          100 percent
Model          RE-S-2X00x6
Start time     2017-11-04 00:30:31 PDT
Uptime        4 days, 7 hours, 17 minutes, 3 seconds
Last reboot reason 0x1:power cycle/failure
Load averages: 1 minute  5 minute  15 minute
                  0.17      0.12      0.13

```

### show chassis routing-engine (T320 Router)

```

user@host> show chassis routing-engine
Slot 0:
  Current state           Master
  Election priority       Master (default)
  Temperature             51 degrees C / 123 degrees F
  CPU temperature         55 degrees C / 131 degrees F
  DRAM                    3584 MB
  Memory utilization      11 percent
  CPU utilization:
    User                  0 percent
    Background            0 percent
    Kernel                2 percent
    Interrupt             0 percent
    Idle                  97 percent
  Model                   RE-A-2000
  Serial ID               9009010618
  Start time              2012-10-10 01:24:05 PDT
  Uptime                  5 days, 10 hours, 49 minutes, 23 seconds
  Last reboot reason      0x1:power cycle/failure
  Load averages:         1 minute  5 minute  15 minute
                          0.00      0.05      0.04

Routing Engine status:
Slot 1:
  Current state           Backup
  Election priority       Backup (default)
  Temperature             45 degrees C / 113 degrees F
  CPU temperature         48 degrees C / 118 degrees F
  DRAM                    3584 MB
  Memory utilization      9 percent
  CPU utilization:
    User                  0 percent
    Background            0 percent
    Kernel                0 percent
    Interrupt             0 percent

```

```

Idle 100 percent
Model RE-A-2000
Serial ID 9009003642
Start time 2012-10-10 01:24:04 PDT
Uptime 5 days, 10 hours, 49 minutes, 28 seconds
Last reboot reason 0x1:power cycle/failure

```

### show chassis routing-engine (T640 Router)

```

user@host> show chassis routing-engine
Routing Engine status:
Slot 0:
  Current state Master
  Election priority Master (default)
  Temperature 50 degrees C / 122 degrees F
  CPU temperature 58 degrees C / 136 degrees F
  DRAM 3584 MB
  Memory utilization 14 percent
  CPU utilization:
    User 1 percent
    Background 0 percent
    Kernel 4 percent
    Interrupt 1 percent
    Idle 95 percent
  Model RE-A-2000
  Serial ID 1000686556
  Start time 2012-10-10 01:24:02 PDT
  Uptime 5 days, 10 hours, 50 minutes, 27 seconds
  Last reboot reason 0x1:power cycle/failure
  Load averages: 1 minute 5 minute 15 minute
                  1.24 0.33 0.12
Routing Engine status:
Slot 1:
  Current state Backup
  Election priority Backup (default)
  Temperature 44 degrees C / 111 degrees F
  CPU temperature 49 degrees C / 120 degrees F
  DRAM 3584 MB
  Memory utilization 12 percent
  CPU utilization:
    User 0 percent
    Background 0 percent
    Kernel 0 percent
    Interrupt 1 percent
    Idle 99 percent
  Model RE-A-2000
  Serial ID 1000702739
  Start time 2012-10-10 01:24:02 PDT
  Uptime 5 days, 10 hours, 50 minutes, 26 seconds
  Last reboot reason 0x1:power cycle/failure

```

### show chassis routing-engine (T1600 Router)

```

user@host> show chassis routing-engine
Routing Engine status:
Slot 0:
  Current state Master
  Election priority Master (default)
  Temperature 48 degrees C / 118 degrees F
  CPU temperature 58 degrees C / 136 degrees F

```

```

DRAM                                     3584 MB
Memory utilization                       13 percent
CPU utilization:
  User                                  0 percent
  Background                           0 percent
  Kernel                               3 percent
  Interrupt                             1 percent
  Idle                                  96 percent
Model                                    RE-A-2000
Serial ID                               1000704521
Start time                              2012-10-10 01:23:41 PDT
Uptime                                  5 days, 10 hours, 46 minutes, 56 seconds
Last reboot reason                      0x1:power cycle/failure
Load averages:                          1 minute   5 minute   15 minute
                                         0.05       0.03       0.01

Routing Engine status:
Slot 1:
  Current state                         Backup
  Election priority                     Backup (default)
  Temperature                           44 degrees C / 111 degrees F
  CPU temperature                       48 degrees C / 118 degrees F
  DRAM                                  3584 MB
  Memory utilization                    12 percent
  CPU utilization:
    User                                0 percent
    Background                          0 percent
    Kernel                              0 percent
    Interrupt                           0 percent
    Idle                                100 percent
  Model                                 RE-A-2000
  Serial ID                             9009006579
  Start time                            2012-10-10 01:23:42 PDT
  Uptime                                5 days, 10 hours, 46 minutes, 54 seconds
  Last reboot reason                    0x1:power cycle/failure

```

#### show chassis routing-engine (T4000 Router)

```

user@host> show chassis routing-engine
Routing Engine status:
Slot 0:
  Current state                         Master
  Election priority                     Master (default)
  Temperature                           33 degrees C / 91 degrees F
  CPU temperature                       50 degrees C / 122 degrees F
  DRAM                                  8960 MB
  Memory utilization                    18 percent
  CPU utilization:
    User                                0 percent
    Background                          0 percent
    Kernel                              4 percent
    Interrupt                           1 percent
    Idle                                95 percent
  Model                                 RE-DUO-1800
  Serial ID                             P737F-002248
  Start time                            2012-02-09 22:49:53 PST
  Uptime                                2 hours, 21 minutes, 35 seconds
  Last reboot reason                    Router rebooted after a normal shutdown.
  Load averages:                       1 minute   5 minute   15 minute
                                         0.00       0.04       0.00

Routing Engine status:
Slot 1:

```

Current state	Backup
Election priority	Backup (default)
Temperature	32 degrees C / 89 degrees F
CPU temperature	46 degrees C / 114 degrees F
DRAM	8960 MB
Memory utilization	24 percent
CPU utilization:	
User	0 percent
Background	0 percent
Kernel	0 percent
Interrupt	0 percent
Idle	99 percent
Model	RE-DUO-1800
Serial ID	P737F-002653
Start time	2012-02-08 20:12:51 PST
Uptime	1 day, 4 hours, 58 minutes, 28 seconds
Last reboot reason	Router rebooted after a normal shutdown.

### show chassis routing-engine (TX Matrix Router)

```
user@host> show chassis routing-engine
scc-re0:
```

```
-----
Routing Engine status:
```

```
Slot 0:
```

Current state	Master
Election priority	Master (default)
Temperature	34 degrees C / 93 degrees F
CPU temperature	33 degrees C / 91 degrees F
DRAM	2048 MB
Memory utilization	12 percent
CPU utilization:	
User	0 percent
Background	0 percent
Kernel	2 percent
Interrupt	0 percent
Idle	98 percent
Model	RE-4.0
Serial ID	P11123900153
Start time	2004-08-05 18:42:05 PDT
Uptime	9 days, 22 hours, 49 minutes, 50 seconds
Last reboot reason	Router rebooted after a normal shutdown
Load averages:	1 minute    5 minute    15 minute
	0.00        0.08        0.07

```
lcc0-re0:
```

```
-----
Routing Engine status:
```

```
Slot 0:
```

Current state	Master
Election priority	Master (default)
Temperature	33 degrees C / 91 degrees F
CPU temperature	30 degrees C / 86 degrees F
DRAM	2048 MB
Memory utilization	12 percent
CPU utilization:	
User	0 percent
Background	0 percent
Kernel	1 percent
Interrupt	0 percent
Idle	98 percent

```

Model RE-3.0
Serial ID 210865700363
Start time 2004-08-05 18:42:05 PDT
Uptime 9 days, 22 hours, 48 minutes, 20 seconds
Last reboot reason Router rebooted after a normal shutdown
Load averages: 1 minute 5 minute 15 minute
                0.00      0.02      0.00

```

lcc2-re0:

-----  
Routing Engine status:

Slot 0:

```

Current state Master
Election priority Master (default)
Temperature 34 degrees C / 93 degrees F
CPU temperature 35 degrees C / 95 degrees F
DRAM 2048 MB
Memory utilization 12 percent
CPU utilization:
  User 0 percent
  Background 0 percent
  Kernel 2 percent
  Interrupt 0 percent
  Idle 98 percent
Model RE-4.0
Serial ID P11123900126
Start time 2004-08-05 18:42:05 PDT
Uptime 9 days, 22 hours, 49 minutes, 4 seconds
Last reboot reason Router rebooted after a normal shutdown
Load averages: 1 minute 5 minute 15 minute
                0.01      0.01      0.0

```

### show chassis routing-engine lcc (TX Matrix Router)

```
user@host> show chassis routing-engine 0 lcc 0
```

lcc0-re0:

-----  
Routing Engine status:

Slot 0:

```

Current state Master
Election priority Master (default)
Temperature 33 degrees C / 91 degrees F
CPU temperature 30 degrees C / 86 degrees F
DRAM 2048 MB
Memory utilization 12 percent
CPU utilization:
  User 0 percent
  Background 0 percent
  Kernel 1 percent
  Interrupt 0 percent
  Idle 98 percent
Model RE-3.0
Serial ID 210865700363
Start time 2004-08-05 18:42:05 PDT
Uptime 7 days, 22 hours, 49 minutes, 6 seconds
Last reboot reason Router rebooted after a normal shutdown
Load averages: 1 minute 5 minute 15 minute
                0.00      0.00      0.00

```



**show chassis routing-engine bios (TX Matrix Router)**

```
user@host> show chassis routing-engine bios
scc-re0:
```

```
-----
Routing Engine BIOS Version: V1.0.0
1cc0-re0:
```

```
-----
Routing Engine BIOS Version: V1.0.17
1cc2-re0:
```

```
-----
Routing Engine BIOS Version: V1.0.0
```

**show chassis routing-engine (TX Matrix Plus Router)**

```
user@host> show chassis routing-engine
sfc0-re0:
```

```
-----
Routing Engine status:
```

```
Slot 0:
```

Current state	Master
Election priority	Master (default)
Temperature	27 degrees C / 80 degrees F
CPU temperature	42 degrees C / 107 degrees F
DRAM	3327 MB
Memory utilization	12 percent
CPU utilization:	
User	0 percent
Background	0 percent
Kernel	2 percent
Interrupt	0 percent
Idle	98 percent
Model	RE-TXP-SFC
Serial ID	737A-1024
Start time	2009-05-11 17:39:49 PDT
Uptime	3 hours, 45 minutes, 25 seconds
Last reboot reason	Router rebooted after a normal shutdown.
Load averages:	1 minute    5 minute    15 minute
	0.00          0.00          0.00

```
Routing Engine status:
```

```
Slot 1:
```

Current state	Backup
Election priority	Backup (default)
Temperature	29 degrees C / 84 degrees F
CPU temperature	43 degrees C / 109 degrees F
DRAM	3327 MB
Memory utilization	11 percent
CPU utilization:	
User	0 percent
Background	0 percent
Kernel	0 percent
Interrupt	0 percent
Idle	100 percent
Model	RE-TXP-SFC
Serial ID	737A-1024
Start time	2009-05-11 17:08:54 PDT
Uptime	4 hours, 16 minutes, 52 seconds
Last reboot reason	0x1:power cycle/failure

```
1cc0-re0:
```

```

-----
Routing Engine status:
Slot 0:
  Current state           Master
  Election priority       Master (default)
  Temperature             30 degrees C / 86 degrees F
  CPU temperature         43 degrees C / 109 degrees F
  DRAM                   3327 MB
  Memory utilization      9 percent
  CPU utilization:
    User                  0 percent
    Background            0 percent
    Kernel                2 percent
    Interrupt             0 percent
    Idle                  98 percent
  Model                  RE-TXP-LCC
  Serial ID              737F-1024
  Start time             2009-05-11 17:40:32 PDT
  Uptime                 3 hours, 44 minutes, 51 seconds
  Last reboot reason     Router rebooted after a normal shutdown.
  Load averages:         1 minute   5 minute   15 minute
                        0.00       0.00       0.00

Routing Engine status:
Slot 1:
  Current state           Backup
  Election priority       Backup (default)
  Temperature             30 degrees C / 86 degrees F
  CPU temperature         43 degrees C / 109 degrees F
  DRAM                   3327 MB
  Memory utilization      9 percent
  CPU utilization:
    User                  0 percent
    Background            0 percent
    Kernel                0 percent
    Interrupt             0 percent
    Idle                  100 percent
  Model                  RE-TXP-LCC
  Serial ID              737F-1024
  Start time             2009-05-06 17:31:32 PDT
  Uptime                 5 days, 3 hours, 54 minutes, 19 seconds
  Last reboot reason     Router rebooted after a normal shutdown.

```

### show chassis routing-engine lcc (TX Matrix Plus Router)

```

user@host> show chassis routing-engine 0 lcc 0
lcc0-re0:
-----
Routing Engine status:
Slot 0:
  Current state           Master
  Election priority       Master (default)
  Temperature             30 degrees C / 86 degrees F
  CPU temperature         43 degrees C / 109 degrees F
  DRAM                   3327 MB
  Memory utilization      9 percent
  CPU utilization:
    User                  0 percent
    Background            0 percent
    Kernel                2 percent
    Interrupt             0 percent
    Idle                  98 percent

```

```

Model RE-TXP-LCC
Serial ID 737F-1024
Start time 2009-05-11 17:40:32 PDT
Uptime 3 hours, 45 minutes, 26 seconds
Last reboot reason Router rebooted after a normal shutdown.
Load averages: 1 minute 5 minute 15 minute
                0.00      0.00      0.00

Routing Engine status:
Slot 1:
  Current state Backup
  Election priority Backup (default)
  Temperature 30 degrees C / 86 degrees F
  CPU temperature 43 degrees C / 109 degrees F
  DRAM 3327 MB
  Memory utilization 9 percent
  CPU utilization:
    User 0 percent
    Background 0 percent
    Kernel 0 percent
    Interrupt 0 percent
    Idle 100 percent
  Model RE-TXP-LCC
  Serial ID 737F-1024
  Start time 2009-05-06 17:31:32 PDT
  Uptime 5 days, 3 hours, 54 minutes, 59 seconds
  Last reboot reason Router rebooted after a normal shutdown.

```

#### show chassis routing-engine bios (TX Matrix Plus Router)

```

user@host> show chassis routing-engine bios
sfc0-re0:

```

```

-----
Routing Engine BIOS Version: V0.0.Z

```

```

lcc0-re0:

```

```

-----
Routing Engine BIOS Version: V0.0.N

```

#### show chassis routing-engine (QFX Series)

```

user@switch> show chassis routing-engine
Routing Engine status:
Slot 0:
  Current state Master
  Election priority Master (default)
  DRAM 2820 MB
  Memory utilization 49 percent
  CPU utilization:
    User 1 percent
    Background 0 percent
    Kernel 1 percent
    Interrupt 0 percent
    Idle 97 percent
  Model QFX3500-48S4Q
  Serial ID S/N ED3709
  Uptime 3 days, 4 hours, 29 minutes, 42 seconds
  Last reboot reason 0x200:chassis control reset
  Load averages: 1 minute 5 minute 15 minute
                0.37 0.26 0.19

```

**show chassis routing-engine (OCX Series)**

```

user@switch> show chassis routing-engine
Routing Engine status:
Slot 0:
Current state Master
Election priority Master (default)
DRAM 2820 MB
Memory utilization 49 percent
CPU utilization:
User 1 percent
Background 0 percent
Kernel 1 percent
Interrupt 0 percent
Idle 97 percent
Model OCX-1100-48SX-AFI
Serial ID S/N ED3709
Uptime 3 days, 4 hours, 29 minutes, 42 seconds
Last reboot reason 0x200:chassis control reset
Load averages: 1 minute 5 minute 15 minute
0.37 0.26 0.19

```

**show chassis routing engine interconnect-device (QFabric Systems)**

```

user@switch> show chassis routing-engine
Routing Engine status:
Slot 0:
Current state Master
Election priority Master (default)
Temperature 48 degrees C / 118 degrees F
DRAM 3312 MB
Memory utilization 63 percent
CPU utilization:
User 14 percent
Background 0 percent
Kernel 5 percent
Interrupt 0 percent
Idle 81 percent
Model RE-QFXC08-CB4S
Serial ID BUILTIN
Start time 2011-07-06 13:26:15 UTC
Uptime 11 hours, 24 minutes, 57 seconds
Last reboot reason 0x4:reset-button reset
Load averages: 1 minute 5 minute 15 minute
2.62 2.31 2.28

Routing Engine status:
Slot 1:
Current state Backup
Election priority Backup (default)
Temperature 39 degrees C / 102 degrees F
DRAM 3312 MB
Memory utilization 59 percent
CPU utilization:
User 9 percent
Background 0 percent
Kernel 1 percent
Interrupt 0 percent
Idle 91 percent
Model RE-QFXC08-CB4S
Serial ID BUILTIN

```

```

Start time          2011-07-06 13:24:58 UTC
Uptime              11 hours, 26 minutes, 18 seconds
Last reboot reason   0x4:reset-button reset

```

### show chassis routing-engine (PTX Series Packet Transport Router)

```

user@switch> show chassis routing-engine
Routing Engine status:
Slot 0:
  Current state          Master
  Election priority      Master (default)
  Temperature            60 degrees C / 140 degrees F
  CPU temperature        76 degrees C / 168 degrees F
  DRAM                   17152 MB
  Memory utilization     11 percent
  CPU utilization:
    User                  0 percent
    Background            0 percent
    Kernel                4 percent
    Interrupt             0 percent
    Idle                  95 percent
  Model                  RE-DUO-2600
  Serial ID              P737A-002231
  Start time             2011-12-21 16:54:37 PST
  Uptime                 25 minutes, 44 seconds
  Last reboot reason      Router rebooted after a normal shutdown.
  Load averages:        1 minute   5 minute   15 minute
                        0.01        0.02        0.06

Routing Engine status:
Slot 1:
  Current state          Backup
  Election priority      Backup (default)
  Temperature            50 degrees C / 122 degrees F
  CPU temperature        64 degrees C / 147 degrees F
  DRAM                   17152 MB
  Memory utilization     10 percent
  CPU utilization:
    User                  0 percent
    Background            0 percent
    Kernel                0 percent
    Interrupt             0 percent
    Idle                  99 percent
  Model                  RE-DUO-2600
  Serial ID              P737A-002438
  Start time             2011-12-21 16:52:26 PST
  Uptime                 27 minutes, 49 seconds
  Last reboot reason      Router rebooted after a normal shutdown.

```

### show chassis routing-engine (EX9200 Switch)

```

user@switch> show chassis routing-engine
Routing Engine status:
Slot 0:
  Current state          Master
  Election priority      Master (default)
  Temperature            35 degrees C / 95 degrees F
  CPU temperature        33 degrees C / 91 degrees F
  DRAM                   8157 MB
  Installed Memory       8192 MB

```

```

Memory utilization          18 percent
CPU utilization:
  User                     1 percent
  Background               0 percent
  Kernel                   4 percent
  Interrupt                1 percent
  Idle                     94 percent
Model                      RE-S-EX9200-1800X4
Serial ID                  9009119555
Start time                 2014-03-12 14:58:05 UTC
Uptime                     1 hour, 41 minutes, 51 seconds
Last reboot reason         Router rebooted after a normal shutdown.
Load averages:             1 minute   5 minute  15 minute
                           0.02       0.02    0.00

Routing Engine status:
Slot 1:
  Current state             Backup
  Election priority         Backup (default)

[...Output truncated...]

```

### show chassis routing-engine (EX9251 Switch)

```

user@switch> show chassis routing-engine
Routing Engine status:
  Temperature              50 degrees C / 122 degrees F
  CPU temperature          50 degrees C / 122 degrees F
  DRAM                     16340 MB (16384 MB installed)
  Memory utilization       6 percent
  5 sec CPU utilization:
    User                   2 percent
    Background             0 percent
    Kernel                 19 percent
    Interrupt              0 percent
    Idle                   79 percent
  1 min CPU utilization:
    User                   2 percent
    Background             0 percent
    Kernel                 19 percent
    Interrupt              0 percent
    Idle                   79 percent
  5 min CPU utilization:
    User                   2 percent
    Background             0 percent
    Kernel                 19 percent
    Interrupt              0 percent
    Idle                   79 percent
  15 min CPU utilization:
    User                   2 percent
    Background             0 percent
    Kernel                 19 percent
    Interrupt              0 percent
    Idle                   79 percent
Model                      RE-S-2X00x6
Start time                 2018-03-08 05:11:33 PST
Uptime                     10 days, 18 hours, 59 minutes, 15 seconds
Last reboot reason         0x4000:VJUNOS reboot
Load averages:             1 minute   5 minute  15 minute
                           1.06       1.09    1.08

```

**show chassis routing-engine (ACX2000 Universal Metro Router)**

```

user@host> show chassis routing-engine
Routing Engine status:
  Temperature           53 degrees C / 127 degrees F
  DRAM                  1536 MB
  Memory utilization    25 percent
  CPU utilization:
    User                0 percent
    Background          0 percent
    Kernel              0 percent
    Interrupt           1 percent
    Idle                99 percent
  Model                 RE-ACX-2000
  Start time            2012-05-09 00:57:07 PDT
  Uptime                5 days, 3 hours, 16 minutes, 15 seconds
  Last reboot reason    Router rebooted after a normal shutdown.
  Load averages:       1 minute   5 minute   15 minute
                       0.00        0.03        0.05

```

**show chassis routing-engine (ACX1000 Universal Metro Router)**

```

user@host> show chassis routing-engine
Routing Engine status:
  Temperature           36 degrees C / 96 degrees F
  DRAM                  768 MB
  Memory utilization    50 percent
  CPU utilization:
    User                3 percent
    Background          0 percent
    Kernel              6 percent
    Interrupt           0 percent
    Idle                91 percent
  Model                 RE-ACX-1000
  Start time            2012-05-10 07:12:23 PDT
  Uptime                4 days, 10 hours, 46 minutes, 53 seconds
  Last reboot reason    Router rebooted after a normal shutdown.
  Load averages:       1 minute   5 minute   15 minute
                       0.00        0.00        0.00

```

**show chassis routing-engine (Displaying the guest reboot reason on PTX5000, MX240, MX480, MX960, MX2010, and MX2020)**

```

user@host> show chassis routing-engine re0 | match "Last reboot reason"
Last reboot reason 0x4000:VJUNOS reboot

```

## show chassis temperature-thresholds

---

<b>List of Syntax</b>	<a href="#">Syntax on page 976</a> <a href="#">Syntax (TX Matrix Routers) on page 976</a> <a href="#">Syntax (TX Matrix Plus Routers) on page 976</a> <a href="#">Syntax (MX Series Routers) on page 976</a> <a href="#">Syntax (MX104, MX204, MX2010, MX2020, MX10003, MX10008, and MX2008 Universal Routing Platforms) on page 976</a> <a href="#">Syntax (QFX Series) on page 976</a> <a href="#">Syntax (PTX Series) on page 976</a> <a href="#">Syntax (EX9251, EX9253 Switches) on page 976</a>
<b>Syntax</b>	<code>show chassis temperature-thresholds</code>
<b>Syntax (TX Matrix Routers)</b>	<code>show chassis temperature-thresholds</code> <code>&lt;lcc <i>number</i>   scc&gt;</code>
<b>Syntax (TX Matrix Plus Routers)</b>	<code>show chassis temperature-thresholds</code> <code>&lt;lcc <i>number</i>   sfc <i>number</i>&gt;</code>
<b>Syntax (MX Series Routers)</b>	<code>show chassis temperature-thresholds</code> <code>&lt;all-members&gt;</code> <code>&lt;local&gt;</code> <code>&lt;member <i>member-id</i>&gt;</code> <code>&lt;satellite [<i>slot-id slot-ID</i>   device-alias <i>alias-name</i>]&gt;</code>
<b>Syntax (MX104, MX204, MX2010, MX2020, MX10003, MX10008, and MX2008 Universal Routing Platforms)</b>	<code>show chassis temperature-thresholds</code>
<b>Syntax (QFX Series)</b>	<code>show chassis temperature-thresholds</code> <code>&lt;interconnect-device <i>name</i>&gt;</code> <code>&lt;node-device <i>name</i>&gt;</code>
<b>Syntax (PTX Series)</b>	<code>show chassis temperature-thresholds</code>
<b>Syntax (EX9251, EX9253 Switches)</b>	<code>show chassis temperature-thresholds</code>
<b>Release Information</b>	Command introduced in Junos OS Release 8.0. Command introduced in Junos OS Release 9.0 for EX Series switches. <b>sfc</b> command introduced in Junos OS Release 9.6 for the TX Matrix Plus router. Command introduced in Junos OS Release 11.1 for QFX Series. Command introduced in Junos OS Release 12.1 for T4000 Core Routers.



Command introduced in Junos OS Release 12.1X48 for PTX Series Packet Transport Routers.

Command introduced in Junos OS Release 12.3 for MX2010 and MX2020 Universal Routing Platforms.

Command introduced in Junos OS Release 13.2 for MX104 Universal Routing Platforms.

**satellite** option introduced in Junos OS Release 14.2R3.

Command introduced in Junos OS Release 17.2 for MX2008 Universal Routing Platforms.

Command introduced in Junos OS Release 17.2 for PTX10008 Routers.

Command introduced in Junos OS Release 17.3 for MX10003 Universal Routing Platforms.

Command introduced in Junos OS Release 17.3 for MX150 Router Appliance.

Command introduced in Junos OS Release 17.4 for MX204 Universal Routing Platforms.

Command introduced in Junos OS Release 18.1R1 for EX9251 switches.

Command introduced in Junos OS Release 18.2 for EX9253 Switches.

Command introduced in Junos OS Release 18.2R1 for MX10008 Routers.

**Description** Display chassis temperature threshold settings, in degrees Celsius.

**Options** **none**—Display the temperature threshold details.

**all-members**—(MX Series routers only) (Optional) Display the chassis temperature threshold settings of all member routers in the Virtual Chassis configuration.

**interconnect-device *name***—(QFabric systems only) (Optional) Display the chassis temperature threshold settings of the Interconnect device.

**lcc *number***—(TX Matrix and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display the temperature threshold details of a specified T640 router (line-card chassis) that is connected to a TX Matrix router. On a TX Matrix Plus router, display the temperature threshold details of a specified router (line-card chassis) that is connected to a TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(MX Series routers only) (Optional) Display the chassis temperature threshold settings of the local Virtual Chassis member.

**member *member-id***—(MX Series routers only) (Optional) Display the chassis temperature threshold settings of the specified member of the Virtual Chassis configuration. Replace *member-id* with a value of 0 or 1.

**node-device *name***—(QFabric systems only) (Optional) Display the chassis temperature threshold settings of the Node device.

**satellite [*slot-id slot-ID* | *device-alias alias-name*]**—(Junos Fusion only) (Optional)  
Display the chassis temperature threshold settings for the specified satellite device or devices in a Junos Fusion, or for all satellite devices if no satellite devices are specified.

**scc**—(TX Matrix routers only) (Optional) Display the temperature threshold details of the TX Matrix router (switch-card chassis).

**sfc *number***—(TX Matrix Plus routers only) (Optional) On TX Matrix Plus routers, display the temperature threshold details of the TX Matrix Plus router, which is the switch-fabric chassis. Replace *number* with 0.

**Required Privilege Level** view

**List of Sample Output**

- [show chassis temperature-thresholds on page 979](#)
- [show chassis temperature-thresholds \(MX150\) on page 980](#)
- [show chassis temperature-thresholds \(MX104 Router\) on page 980](#)
- [show chassis temperature-thresholds \(MX240, MX480, MX960 Routers with Application Services Modular Line Card\) on page 980](#)
- [show chassis temperature-thresholds \(MX480 Router with MPC4E\) on page 981](#)
- [show chassis temperature-thresholds \(MX2010 Router\) on page 981](#)
- [show chassis temperature-thresholds \(MX2020 Router\) on page 983](#)
- [show chassis temperature-thresholds \(MX2020 Router with MPC4E\) on page 986](#)
- [show chassis temperature-thresholds \(MX2008 Routers\) on page 988](#)
- [show chassis temperature-thresholds \(MX10003 Router\) on page 992](#)
- [show chassis temperature-thresholds \(MX10008 Router\) on page 994](#)
- [show chassis temperature-thresholds \(MX204 Router\) on page 1002](#)
- [show chassis temperature-thresholds \(PTX10008 Routers\) on page 1002](#)
- [show chassis temperature-thresholds \(T4000 Core Routers\) on page 1004](#)
- [show chassis temperature-thresholds \(TX Matrix Plus Router\) on page 1005](#)
- [show chassis temperature-thresholds lcc \(TX Matrix Plus Router\) on page 1006](#)
- [show chassis temperature-thresholds sfc \(TX Matrix Plus Router\) on page 1006](#)
- [show chassis temperature-thresholds \(TX Matrix Plus routers with 3D SIBs\) on page 1007](#)
- [show chassis temperature-thresholds \(QFX3500 Switch and QFX3600\) on page 1008](#)
- [show chassis temperature-thresholds interconnect-device \(QFabric System\) on page 1009](#)
- [show chassis temperature-thresholds \(PTX5000 Packet Transport Router\) on page 1009](#)
- [show chassis temperature-thresholds \(PTX1000 Packet Transport Router\) on page 1010](#)
- [show chassis temperature-thresholds \(MX Routers with Media Services Blade \[MSB\]\) on page 1011](#)
- [show chassis temperature-thresholds \(EX9251 Switches\) on page 1011](#)
- [show chassis temperature-thresholds \(EX9253 switches\) on page 1012](#)

**Output Fields** [Table 33 on page 979](#) lists the output fields for the **show chassis temperature-thresholds** command. Output fields are listed in the approximate order in which they appear.

Table 33: show chassis temperature-thresholds Output Fields

Field name	Field Description
Item	Chassis component. If per FRU per slot thresholds are configured, the components about which information is displayed include the chassis, the Routing Engines, FPCs, and FEBs. If per FRU per slot thresholds are not configured, the components about which information is displayed include the chassis and the Routing Engines.
Fan speed	<p><b>NOTE:</b> On the QFX3500 switch and QFX3600 switch, there are four fan speeds: <b>low</b>, <b>medium-low</b>, <b>medium-high</b>, and <b>high</b>. The fan speed changes at the threshold when going from a low speed to a higher speed. When the fan speed changes from a higher speed to a lower speed, the temperature changes two degrees below the threshold.</p> <p>Temperature threshold settings, in degrees Celsius, for the fans to operate at normal and high speeds.</p> <ul style="list-style-type: none"> <li>Normal—The fans operate at normal speed if the component is at or below this temperature and all the fans are present and functioning normally.</li> </ul> <p><b>NOTE:</b> On a TX Matrix Plus router with 3D SIBs, the threshold temperature at the XF junction is set to 70°C for <b>Normal</b> fan speed, which is less than or equal to 4800 RPM.</p> <ul style="list-style-type: none"> <li>High—The fans operate at high speed if the component has exceeded this temperature or a fan has failed or is missing.</li> </ul> <p><b>NOTE:</b> On a TX Matrix Plus router with 3D SIBs, the threshold temperature at the XF junction is set to 75°C for <b>High</b> fan speed, which is greater than or equal to 5000 RPM.</p> <p><b>NOTE:</b> For MX480 Routers, there are three fan speeds: Low, Medium, and High.</p> <p>An alarm is not triggered until the temperature exceeds the threshold settings for a yellow alarm or a red alarm.</p>
Yellow alarm	<p>Temperature threshold settings, in degrees Celsius, that trigger a yellow alarm.</p> <ul style="list-style-type: none"> <li>Normal—The temperature that must be exceeded on the component to trigger a yellow alarm when the fans are running at full speed.</li> <li>Bad fan—The temperature that must be exceeded on the component to trigger a yellow alarm when one or more fans have failed or are missing.</li> </ul>
Red alarm	<p>Temperature threshold settings, in degrees Celsius, that trigger a red alarm.</p> <ul style="list-style-type: none"> <li>Normal—The temperature that must be exceeded on the component to trigger a red alarm when the fans are running at full speed.</li> <li>Bad fan—The temperature that must be exceeded on the component to trigger a red alarm when one or more fans have failed or are missing.</li> </ul>
Fire Shutdown	(T4000 routers, TX Matrix Plus router with 3D SIBs, and PTX Series Packet Transport Routers only)—Temperature threshold settings, in degrees Celsius, for the network device to shut down.

## Sample Output

### show chassis temperature-thresholds

```
user@host> show chassis temperature-thresholds
```

Fan speed (degrees C)	Yellow alarm (degrees C)	Red alarm (degrees C)
--------------------------	-----------------------------	--------------------------

Item	Normal	High	Normal	Bad fan	Normal	Bad fan
Chassis default	48	54	65	55	75	65
Routing Engine 0	70	80	95	95	110	110
Routing Engine 1	70	80	95	95	110	110
FPC 0	55	60	75	65	90	80
FPC 1	55	60	75	65	90	80
FPC 2	55	60	75	65	90	80
FPC 3	55	60	75	65	90	80
FPC 4	55	60	75	65	90	80
FPC 5	55	60	75	65	90	80
FPC 6	55	60	75	65	90	80
FPC 7	55	60	75	65	90	80
FPC 8	55	60	75	65	90	80
FPC 9	55	60	75	65	90	80
FPC 10	55	60	75	65	90	80
FPC 11	55	60	75	65	90	80

#### show chassis temperature-thresholds (MX150)

```

user@host> show chassis temperature-thresholds
Fan speed      Yellow alarm      Red alarm      Fire Shutdown
(degrees C)    (degrees C)      (degrees C)    (degrees C)
(degrees C)
Item           Normal  High   Normal  Bad fan  Normal  Bad fan
Normal
FPC 0 Sensor 1 43     65    68     68       70     70
72
FPC 0 Sensor 2 43     65    68     68       70     70
72
FPC 0 Coretemp 78     94    100    100      105    105
110

```

#### show chassis temperature-thresholds (MX104 Router)

```

user@host> show chassis temperature-thresholds
Fan speed      Yellow alarm      Red alarm      Fire Shutdown
(degrees C)    (degrees C)      (degrees C)    (degrees C)
(degrees C)
Item           Normal  High   Normal  Bad fan  Normal  Bad fan
Normal
Chassis default 48     54    65     55       75     65
100
Routing Engine 0 55     80    95     95      105    100
108

```

#### show chassis temperature-thresholds (MX240, MX480, MX960 Routers with Application Services Modular Line Card)

```

user@host> show chassis temperature-thresholds
Fan speed      Yellow alarm      Red alarm      Fire Shutdown
(degrees C)    (degrees C)      (degrees C)    (degrees C)
(degrees C)
Item           Normal  High   Normal  Bad fan  Normal  Bad fan
Normal
Chassis default 48     54    65     55       75     65
100
Routing Engine 0 70     80    95     95      110    110
112
Routing Engine 1 70     80    95     95      110    110
112

```

```

FPC 0          55  60  75  65  90  80
95
FPC 1          55  60  75  65  90  80
95
FPC 2          55  60  75  65  90  80
95
FPC 4          55  60  75  65  90  80
95
FPC 5          55  60  75  65  90  80
95

```

#### show chassis temperature-thresholds (MX480 Router with MPC4E)

```

user@ host> show chassis temperature-thresholds
Fan speed      Yellow alarm    Red alarm      Fire Shutdown
(degrees C)    (degrees C)    (degrees C)    (degrees C)
Item           Normal High  Normal Bad fan Normal Bad fan
Normal
Chassis default 48  54   65   55   75   65
100
Routing Engine 0 70  80   95   95  110  110
112
Routing Engine 1 70  80   95   95  110  110
112
FPC 2          55  60   75   65   95   80
100
FPC 3          55  60   75   65   95   80
100
FPC 4          55  60   75   65   90   80
95

```

#### show chassis temperature-thresholds (MX2010 Router)

```

user@host> show chassis temperature-thresholds
Fan speed      Yellow alarm    Red alarm      Fire Shutdown
(degrees C)    (degrees C)    (degrees C)    (degrees C)
Item           Normal High  Normal Bad fan Normal Bad fan Normal
Routing Engine 0 70  80   95   95  110  110  112
Routing Engine 1 70  80   95   95  110  110  112
CB 0 IntakeA-Zone0 60  65   78   75   85   80   95
CB 0 IntakeB-Zone1 60  65   78   75   85   80   95
CB 0 IntakeC-Zone0 60  65   78   75   85   80   95
CB 0 ExhaustA-Zone0 60  65   78   75   85   80   95
CB 0 ExhaustB-Zone1 60  65   78   75   85   80   95
CB 0 TCBC-Zone0 60  65   78   75   85   80   95
CB 1 IntakeA-Zone0 60  65   78   75   85   80   95
CB 1 IntakeB-Zone1 60  65   78   75   85   80   95
CB 1 IntakeC-Zone0 60  65   78   75   85   80   95
CB 1 ExhaustA-Zone0 60  65   78   75   85   80   95
CB 1 ExhaustB-Zone1 60  65   78   75   85   80   95
CB 1 TCBC-Zone0 60  65   78   75   85   80   95
SPMB 0 Intake 56  62   75   63   83   76   95
SPMB 1 Intake 56  62   75   63   83   76   95
SFB 0 Intake-Zone0 56  62   75   63   82   70   87
SFB 0 Exhaust-Zone1 56  62   75   63   82   70   87
SFB 0 IntakeA-Zone0 56  62   75   63   82   70   87
SFB 0 IntakeB-Zone1 56  62   75   63   82   70   87
SFB 0 Exhaust-Zone0 56  62   75   63   82   70   87
SFB 0 SFB-XF2-Zone1 70  80   90   90  107  107  115

```

SFB 0 SFB-XF1-Zone0	70	80	90	90	107	107	115
SFB 0 SFB-XF0-Zone0	70	80	90	90	107	107	115
SFB 1 Intake-Zone0	56	62	75	63	82	70	87
SFB 1 Exhaust-Zone1	56	62	75	63	82	70	87
SFB 1 IntakeA-Zone0	56	62	75	63	82	70	87
SFB 1 IntakeB-Zone1	56	62	75	63	82	70	87
SFB 1 Exhaust-Zone0	56	62	75	63	82	70	87
SFB 1 SFB-XF2-Zone1	70	80	90	90	107	107	115
SFB 1 SFB-XF1-Zone0	70	80	90	90	107	107	115
SFB 1 SFB-XF0-Zone0	70	80	90	90	107	107	115
SFB 2 Intake-Zone0	56	62	75	63	82	70	87
SFB 2 Exhaust-Zone1	56	62	75	63	82	70	87
SFB 2 IntakeA-Zone0	56	62	75	63	82	70	87
SFB 2 IntakeB-Zone1	56	62	75	63	82	70	87
SFB 2 Exhaust-Zone0	56	62	75	63	82	70	87
SFB 2 SFB-XF2-Zone1	70	80	90	90	107	107	115
SFB 2 SFB-XF1-Zone0	70	80	90	90	107	107	115
SFB 2 SFB-XF0-Zone0	70	80	90	90	107	107	115
SFB 3 Intake-Zone0	56	62	75	63	82	70	87
SFB 3 Exhaust-Zone1	56	62	75	63	82	70	87
SFB 3 IntakeA-Zone0	56	62	75	63	82	70	87
SFB 3 IntakeB-Zone1	56	62	75	63	82	70	87
SFB 3 Exhaust-Zone0	56	62	75	63	82	70	87
SFB 3 SFB-XF2-Zone1	70	80	90	90	107	107	115
SFB 3 SFB-XF1-Zone0	70	80	90	90	107	107	115
SFB 3 SFB-XF0-Zone0	70	80	90	90	107	107	115
SFB 4 Intake-Zone0	56	62	75	63	82	70	87
SFB 4 Exhaust-Zone1	56	62	75	63	82	70	87
SFB 4 IntakeA-Zone0	56	62	75	63	82	70	87
SFB 4 IntakeB-Zone1	56	62	75	63	82	70	87
SFB 4 Exhaust-Zone0	56	62	75	63	82	70	87
SFB 4 SFB-XF2-Zone1	70	80	90	90	107	107	115
SFB 4 SFB-XF1-Zone0	70	80	90	90	107	107	115
SFB 4 SFB-XF0-Zone0	70	80	90	90	107	107	115
SFB 5 Intake-Zone0	56	62	75	63	82	70	87
SFB 5 Exhaust-Zone1	56	62	75	63	82	70	87
SFB 5 IntakeA-Zone0	56	62	75	63	82	70	87
SFB 5 IntakeB-Zone1	56	62	75	63	82	70	87
SFB 5 Exhaust-Zone0	56	62	75	63	82	70	87
SFB 5 SFB-XF2-Zone1	70	80	90	90	107	107	115
SFB 5 SFB-XF1-Zone0	70	80	90	90	107	107	115
SFB 5 SFB-XF0-Zone0	70	80	90	90	107	107	115
SFB 6 Intake-Zone0	56	62	75	63	82	70	87
SFB 6 Exhaust-Zone1	56	62	75	63	82	70	87
SFB 6 IntakeA-Zone0	56	62	75	63	82	70	87
SFB 6 IntakeB-Zone1	56	62	75	63	82	70	87
SFB 6 Exhaust-Zone0	56	62	75	63	82	70	87
SFB 6 SFB-XF2-Zone1	70	80	90	90	107	107	115
SFB 6 SFB-XF1-Zone0	70	80	90	90	107	107	115
SFB 6 SFB-XF0-Zone0	70	80	90	90	107	107	115
SFB 7 Intake-Zone0	56	62	75	63	82	70	87
SFB 7 Exhaust-Zone1	56	62	75	63	82	70	87
SFB 7 IntakeA-Zone0	56	62	75	63	82	70	87
SFB 7 IntakeB-Zone1	56	62	75	63	82	70	87
SFB 7 Exhaust-Zone0	56	62	75	63	82	70	87
SFB 7 SFB-XF2-Zone1	70	80	90	90	107	107	115
SFB 7 SFB-XF1-Zone0	70	80	90	90	107	107	115
SFB 7 SFB-XF0-Zone0	70	80	90	90	107	107	115
FPC 0	55	60	75	65	95	80	100
FPC 1	55	60	75	65	90	80	95
FPC 2	55	60	75	65	95	80	100

FPC 3	55	60	75	65	90	80	95
FPC 4	55	60	75	65	90	80	95
FPC 5	55	60	75	65	95	80	100
FPC 6	55	60	75	65	90	80	95
FPC 7	55	60	75	65	95	80	100
FPC 8	55	60	75	65	90	80	95
FPC 9	55	60	75	65	95	80	100
ADC 0 Intake	56	62	75	63	83	76	95
ADC 0 Exhaust	56	62	75	63	83	76	95
ADC 0 ADC-XF1	70	80	90	90	107	107	115
ADC 0 ADC-XF0	70	80	90	90	107	107	115
ADC 1 Intake	56	62	75	63	83	76	95
ADC 1 Exhaust	56	62	75	63	83	76	95
ADC 1 ADC-XF1	70	80	90	90	107	107	115
ADC 1 ADC-XF0	70	80	90	90	107	107	115
ADC 2 Intake	56	62	75	63	83	76	95
ADC 2 Exhaust	56	62	75	63	83	76	95
ADC 2 ADC-XF1	70	80	90	90	107	107	115
ADC 2 ADC-XF0	70	80	90	90	107	107	115
ADC 3 Intake	56	62	75	63	83	76	95
ADC 3 Exhaust	56	62	75	63	83	76	95
ADC 3 ADC-XF1	70	80	90	90	107	107	115
ADC 3 ADC-XF0	70	80	90	90	107	107	115
ADC 4 Intake	56	62	75	63	83	76	95
ADC 4 Exhaust	56	62	75	63	83	76	95
ADC 4 ADC-XF1	70	80	90	90	107	107	115
ADC 4 ADC-XF0	70	80	90	90	107	107	115
ADC 5 Intake	56	62	75	63	83	76	95
ADC 5 Exhaust	56	62	75	63	83	76	95
ADC 5 ADC-XF1	70	80	90	90	107	107	115
ADC 5 ADC-XF0	70	80	90	90	107	107	115
ADC 6 Intake	56	62	75	63	83	76	95
ADC 6 Exhaust	56	62	75	63	83	76	95
ADC 6 ADC-XF1	70	80	90	90	107	107	115
ADC 6 ADC-XF0	70	80	90	90	107	107	115
ADC 7 Intake	56	62	75	63	83	76	95
ADC 7 Exhaust	56	62	75	63	83	76	95
ADC 7 ADC-XF1	70	80	90	90	107	107	115
ADC 7 ADC-XF0	70	80	90	90	107	107	115
ADC 8 Intake	56	62	75	63	83	76	95
ADC 8 Exhaust	56	62	75	63	83	76	95
ADC 8 ADC-XF1	70	80	90	90	107	107	115
ADC 8 ADC-XF0	70	80	90	90	107	107	115
ADC 9 Intake	56	62	75	63	83	76	95
ADC 9 Exhaust	56	62	75	63	83	76	95
ADC 9 ADC-XF1	70	80	90	90	107	107	115
ADC 9 ADC-XF0	70	80	90	90	107	107	115

#### show chassis temperature-thresholds (MX2020 Router)

```
user@host> show chassis temperature-thresholds
```

	Fan speed		Yellow alarm		Red alarm		Fire Shutdown
	(degrees C)		(degrees C)		(degrees C)		(degrees C)
Item	Normal	High	Normal	Bad fan	Normal	Bad fan	Normal
Routing Engine 0	70	80	95	95	110	110	112
Routing Engine 1	70	80	95	95	110	110	112
CB 0 IntakeA-Zone0	60	65	78	75	85	80	95
CB 0 IntakeB-Zone1	60	65	78	75	85	80	95
CB 0 IntakeC-Zone0	60	65	78	75	85	80	95
CB 0 ExhaustA-Zone0	60	65	78	75	85	80	95

CB 0 ExhaustB-Zone1	60	65	78	75	85	80	95
CB 0 TCBC-Zone0	60	65	78	75	85	80	95
CB 1 IntakeA-Zone0	60	65	78	75	85	80	95
CB 1 IntakeB-Zone1	60	65	78	75	85	80	95
CB 1 IntakeC-Zone0	60	65	78	75	85	80	95
CB 1 ExhaustA-Zone0	60	65	78	75	85	80	95
CB 1 ExhaustB-Zone1	60	65	78	75	85	80	95
CB 1 TCBC-Zone0	60	65	78	75	85	80	95
SPMB 0 Intake	56	62	75	63	83	76	95
SPMB 1 Intake	56	62	75	63	83	76	95
SFB 0 Intake-Zone0	56	62	75	63	82	70	87
SFB 0 Exhaust-Zone1	56	62	75	63	82	70	87
SFB 0 IntakeA-Zone0	56	62	75	63	82	70	87
SFB 0 IntakeB-Zone1	56	62	75	63	82	70	87
SFB 0 Exhaust-Zone0	56	62	75	63	82	70	87
SFB 0 SFB-XF2-Zone1	70	80	90	90	107	107	115
SFB 0 SFB-XF1-Zone0	70	80	90	90	107	107	115
SFB 0 SFB-XF0-Zone0	70	80	90	90	107	107	115
SFB 1 Intake-Zone0	56	62	75	63	82	70	87
SFB 1 Exhaust-Zone1	56	62	75	63	82	70	87
SFB 1 IntakeA-Zone0	56	62	75	63	82	70	87
SFB 1 IntakeB-Zone1	56	62	75	63	82	70	87
SFB 1 Exhaust-Zone0	56	62	75	63	82	70	87
SFB 1 SFB-XF2-Zone1	70	80	90	90	107	107	115
SFB 1 SFB-XF1-Zone0	70	80	90	90	107	107	115
SFB 1 SFB-XF0-Zone0	70	80	90	90	107	107	115
SFB 2 Intake-Zone0	56	62	75	63	82	70	87
SFB 2 Exhaust-Zone1	56	62	75	63	82	70	87
SFB 2 IntakeA-Zone0	56	62	75	63	82	70	87
SFB 2 IntakeB-Zone1	56	62	75	63	82	70	87
SFB 2 Exhaust-Zone0	56	62	75	63	82	70	87
SFB 2 SFB-XF2-Zone1	70	80	90	90	107	107	115
SFB 2 SFB-XF1-Zone0	70	80	90	90	107	107	115
SFB 2 SFB-XF0-Zone0	70	80	90	90	107	107	115
SFB 3 Intake-Zone0	56	62	75	63	82	70	87
SFB 3 Exhaust-Zone1	56	62	75	63	82	70	87
SFB 3 IntakeA-Zone0	56	62	75	63	82	70	87
SFB 3 IntakeB-Zone1	56	62	75	63	82	70	87
SFB 3 Exhaust-Zone0	56	62	75	63	82	70	87
SFB 3 SFB-XF2-Zone1	70	80	90	90	107	107	115
SFB 3 SFB-XF1-Zone0	70	80	90	90	107	107	115
SFB 3 SFB-XF0-Zone0	70	80	90	90	107	107	115
SFB 4 Intake-Zone0	56	62	75	63	82	70	87
SFB 4 Exhaust-Zone1	56	62	75	63	82	70	87
SFB 4 IntakeA-Zone0	56	62	75	63	82	70	87
SFB 4 IntakeB-Zone1	56	62	75	63	82	70	87
SFB 4 Exhaust-Zone0	56	62	75	63	82	70	87
SFB 4 SFB-XF2-Zone1	70	80	90	90	107	107	115
SFB 4 SFB-XF1-Zone0	70	80	90	90	107	107	115
SFB 4 SFB-XF0-Zone0	70	80	90	90	107	107	115
SFB 5 Intake-Zone0	56	62	75	63	82	70	87
SFB 5 Exhaust-Zone1	56	62	75	63	82	70	87
SFB 5 IntakeA-Zone0	56	62	75	63	82	70	87
SFB 5 IntakeB-Zone1	56	62	75	63	82	70	87
SFB 5 Exhaust-Zone0	56	62	75	63	82	70	87
SFB 5 SFB-XF2-Zone1	70	80	90	90	107	107	115
SFB 5 SFB-XF1-Zone0	70	80	90	90	107	107	115
SFB 5 SFB-XF0-Zone0	70	80	90	90	107	107	115
SFB 6 Intake-Zone0	56	62	75	63	82	70	87
SFB 6 Exhaust-Zone1	56	62	75	63	82	70	87
SFB 6 IntakeA-Zone0	56	62	75	63	82	70	87



SFB 6 IntakeB-Zone1	56	62	75	63	82	70	87
SFB 6 Exhaust-Zone0	56	62	75	63	82	70	87
SFB 6 SFB-XF2-Zone1	70	80	90	90	107	107	115
SFB 6 SFB-XF1-Zone0	70	80	90	90	107	107	115
SFB 6 SFB-XF0-Zone0	70	80	90	90	107	107	115
SFB 7 Intake-Zone0	56	62	75	63	82	70	87
SFB 7 Exhaust-Zone1	56	62	75	63	82	70	87
SFB 7 IntakeA-Zone0	56	62	75	63	82	70	87
SFB 7 IntakeB-Zone1	56	62	75	63	82	70	87
SFB 7 Exhaust-Zone0	56	62	75	63	82	70	87
SFB 7 SFB-XF2-Zone1	70	80	90	90	107	107	115
SFB 7 SFB-XF1-Zone0	70	80	90	90	107	107	115
SFB 7 SFB-XF0-Zone0	70	80	90	90	107	107	115
FPC 0	55	60	75	65	90	80	95
FPC 1	55	60	75	65	90	80	95
FPC 2	55	60	75	65	90	80	95
FPC 3	55	60	75	65	90	80	95
FPC 4	55	60	75	65	90	80	95
FPC 5	55	60	75	65	90	80	95
FPC 6	55	60	75	65	90	80	95
FPC 7	55	60	75	65	90	80	95
FPC 8	55	60	75	65	90	80	95
FPC 9	55	60	75	65	90	80	95
FPC 10	55	60	75	65	90	80	95
FPC 11	55	60	75	65	90	80	95
FPC 12	55	60	75	65	90	80	95
FPC 13	55	60	75	65	90	80	95
FPC 14	55	60	75	65	90	80	95
FPC 15	55	60	75	65	90	80	95
FPC 16	55	60	75	65	90	80	95
FPC 17	55	60	75	65	90	80	95
FPC 18	55	60	75	65	90	80	95
FPC 19	55	60	75	65	90	80	95
ADC 0 Intake	56	62	75	63	83	76	95
ADC 0 Exhaust	56	62	75	63	83	76	95
ADC 0 ADC-XF1	70	80	90	90	107	107	115
ADC 0 ADC-XF0	70	80	90	90	107	107	115
ADC 1 Intake	56	62	75	63	83	76	95
ADC 1 Exhaust	56	62	75	63	83	76	95
ADC 1 ADC-XF1	70	80	90	90	107	107	115
ADC 1 ADC-XF0	70	80	90	90	107	107	115
ADC 2 Intake	56	62	75	63	83	76	95
ADC 2 Exhaust	56	62	75	63	83	76	95
ADC 2 ADC-XF1	70	80	90	90	107	107	115
ADC 2 ADC-XF0	70	80	90	90	107	107	115
ADC 3 Intake	56	62	75	63	83	76	95
ADC 3 Exhaust	56	62	75	63	83	76	95
ADC 3 ADC-XF1	70	80	90	90	107	107	115
ADC 3 ADC-XF0	70	80	90	90	107	107	115
ADC 4 Intake	56	62	75	63	83	76	95
ADC 4 Exhaust	56	62	75	63	83	76	95
ADC 4 ADC-XF1	70	80	90	90	107	107	115
ADC 4 ADC-XF0	70	80	90	90	107	107	115
ADC 5 Intake	56	62	75	63	83	76	95
ADC 5 Exhaust	56	62	75	63	83	76	95
ADC 5 ADC-XF1	70	80	90	90	107	107	115
ADC 5 ADC-XF0	70	80	90	90	107	107	115
ADC 6 Intake	56	62	75	63	83	76	95
ADC 6 Exhaust	56	62	75	63	83	76	95
ADC 6 ADC-XF1	70	80	90	90	107	107	115
ADC 6 ADC-XF0	70	80	90	90	107	107	115

ADC 7 Intake	56	62	75	63	83	76	95
ADC 7 Exhaust	56	62	75	63	83	76	95
ADC 7 ADC-XF1	70	80	90	90	107	107	115
ADC 7 ADC-XF0	70	80	90	90	107	107	115
ADC 8 Intake	56	62	75	63	83	76	95
ADC 8 Exhaust	56	62	75	63	83	76	95
ADC 8 ADC-XF1	70	80	90	90	107	107	115
ADC 8 ADC-XF0	70	80	90	90	107	107	115
ADC 9 Intake	56	62	75	63	83	76	95
ADC 9 Exhaust	56	62	75	63	83	76	95
ADC 9 ADC-XF1	70	80	90	90	107	107	115
ADC 9 ADC-XF0	70	80	90	90	107	107	115
ADC 10 Intake	56	62	75	63	83	76	95
ADC 10 Exhaust	56	62	75	63	83	76	95
ADC 10 ADC-XF1	70	80	90	90	107	107	115
ADC 10 ADC-XF0	70	80	90	90	107	107	115
ADC 11 Intake	56	62	75	63	83	76	95
ADC 11 Exhaust	56	62	75	63	83	76	95
ADC 11 ADC-XF1	70	80	90	90	107	107	115
ADC 11 ADC-XF0	70	80	90	90	107	107	115
ADC 12 Intake	56	62	75	63	83	76	95
ADC 12 Exhaust	56	62	75	63	83	76	95
ADC 12 ADC-XF1	70	80	90	90	107	107	115
ADC 12 ADC-XF0	70	80	90	90	107	107	115
ADC 13 Intake	56	62	75	63	83	76	95
ADC 13 Exhaust	56	62	75	63	83	76	95
ADC 13 ADC-XF1	70	80	90	90	107	107	115
ADC 13 ADC-XF0	70	80	90	90	107	107	115
ADC 14 Intake	56	62	75	63	83	76	95
ADC 14 Exhaust	56	62	75	63	83	76	95
ADC 14 ADC-XF1	70	80	90	90	107	107	115
ADC 14 ADC-XF0	70	80	90	90	107	107	115
ADC 15 Intake	56	62	75	63	83	76	95
ADC 15 Exhaust	56	62	75	63	83	76	95
ADC 15 ADC-XF1	70	80	90	90	107	107	115
ADC 15 ADC-XF0	70	80	90	90	107	107	115
ADC 16 Intake	56	62	75	63	83	76	95
ADC 16 Exhaust	56	62	75	63	83	76	95
ADC 16 ADC-XF1	70	80	90	90	107	107	115
ADC 16 ADC-XF0	70	80	90	90	107	107	115
ADC 17 Intake	56	62	75	63	83	76	95
ADC 17 Exhaust	56	62	75	63	83	76	95
ADC 17 ADC-XF1	70	80	90	90	107	107	115
ADC 17 ADC-XF0	70	80	90	90	107	107	115
ADC 18 Intake	56	62	75	63	83	76	95
ADC 18 Exhaust	56	62	75	63	83	76	95
ADC 18 ADC-XF1	70	80	90	90	107	107	115
ADC 18 ADC-XF0	70	80	90	90	107	107	115
ADC 19 Intake	56	62	75	63	83	76	95
ADC 19 Exhaust	56	62	75	63	83	76	95
ADC 19 ADC-XF1	70	80	90	90	107	107	115
ADC 19 ADC-XF0	70	80	90	90	107	107	115

## show chassis temperature-thresholds (MX2020 Router with MPC4E)

```

user@host> show chassis temperature-thresholds
Fan speed      Yellow alarm    Red alarm      Fire Shutdown
              (degrees C)    (degrees C)    (degrees C)    (degrees
C)
Item           Normal High  Normal Bad fan Normal Bad fan Normal
Routing Engine 0  70   80   95   95   110  110  112

```

Routing Engine 1	70	80	95	95	110	110	112
CB 0 IntakeA-Zone0	60	65	78	75	85	80	95
CB 0 IntakeB-Zone1	60	65	78	75	85	80	95
CB 0 IntakeC-Zone0	60	65	78	75	85	80	95
CB 0 ExhaustA-Zone0	60	65	78	75	85	80	95
CB 0 ExhaustB-Zone1	60	65	78	75	85	80	95
CB 0 TCBC-Zone0	60	65	78	75	85	80	95
CB 1 IntakeA-Zone0	60	65	78	75	85	80	95
CB 1 IntakeB-Zone1	60	65	78	75	85	80	95
CB 1 IntakeC-Zone0	60	65	78	75	85	80	95
CB 1 ExhaustA-Zone0	60	65	78	75	85	80	95
CB 1 ExhaustB-Zone1	60	65	78	75	85	80	95
CB 1 TCBC-Zone0	60	65	78	75	85	80	95
SPMB 0 Intake	56	62	75	63	83	76	95
SPMB 1 Intake	56	62	75	63	83	76	95
SFB 0 Intake-Zone0	56	62	70	70	85	85	89
SFB 0 Exhaust-Zone1	56	62	70	70	85	85	89
SFB 0 IntakeA-Zone0	56	62	70	70	85	85	89
SFB 0 IntakeB-Zone1	56	62	70	70	85	85	89
SFB 0 Exhaust-Zone0	56	62	70	70	85	85	89
SFB 0 SFB-XF2-Zone1	70	75	90	85	95	90	100
SFB 0 SFB-XF1-Zone0	70	75	90	85	95	90	100
SFB 0 SFB-XF0-Zone0	70	75	90	85	95	90	100
SFB 1 Intake-Zone0	56	62	70	70	85	85	89
SFB 1 Exhaust-Zone1	56	62	70	70	85	85	89
SFB 1 IntakeA-Zone0	56	62	70	70	85	85	89
SFB 1 IntakeB-Zone1	56	62	70	70	85	85	89
SFB 1 Exhaust-Zone0	56	62	70	70	85	85	89
SFB 1 SFB-XF2-Zone1	70	75	90	85	95	90	100
SFB 1 SFB-XF1-Zone0	70	75	90	85	95	90	100
SFB 1 SFB-XF0-Zone0	70	75	90	85	95	90	100
SFB 2 Intake-Zone0	56	62	70	70	85	85	89
SFB 2 Exhaust-Zone1	56	62	70	70	85	85	89
SFB 2 IntakeA-Zone0	56	62	70	70	85	85	89
SFB 2 IntakeB-Zone1	56	62	70	70	85	85	89
SFB 2 Exhaust-Zone0	56	62	70	70	85	85	89
SFB 2 SFB-XF2-Zone1	70	75	90	85	95	90	100
SFB 2 SFB-XF1-Zone0	70	75	90	85	95	90	100
SFB 2 SFB-XF0-Zone0	70	75	90	85	95	90	100
SFB 3 Intake-Zone0	56	62	70	70	85	85	89
SFB 3 Exhaust-Zone1	56	62	70	70	85	85	89
SFB 3 IntakeA-Zone0	56	62	70	70	85	85	89
SFB 3 IntakeB-Zone1	56	62	70	70	85	85	89
SFB 3 Exhaust-Zone0	56	62	70	70	85	85	89
SFB 3 SFB-XF2-Zone1	70	75	90	85	95	90	100
SFB 3 SFB-XF1-Zone0	70	75	90	85	95	90	100
SFB 3 SFB-XF0-Zone0	70	75	90	85	95	90	100
SFB 4 Intake-Zone0	56	62	70	70	85	85	89
SFB 4 Exhaust-Zone1	56	62	70	70	85	85	89
SFB 4 IntakeA-Zone0	56	62	70	70	85	85	89
SFB 4 IntakeB-Zone1	56	62	70	70	85	85	89
SFB 4 Exhaust-Zone0	56	62	70	70	85	85	89
SFB 4 SFB-XF2-Zone1	70	75	90	85	95	90	100
SFB 4 SFB-XF1-Zone0	70	75	90	85	95	90	100
SFB 4 SFB-XF0-Zone0	70	75	90	85	95	90	100
SFB 5 Intake-Zone0	56	62	70	70	85	85	89
SFB 5 Exhaust-Zone1	56	62	70	70	85	85	89
SFB 5 IntakeA-Zone0	56	62	70	70	85	85	89
SFB 5 IntakeB-Zone1	56	62	70	70	85	85	89
SFB 5 Exhaust-Zone0	56	62	70	70	85	85	89
SFB 5 SFB-XF2-Zone1	70	75	90	85	95	90	100

SFB 5 SFB-XF1-Zone0	70	75	90	85	95	90	100
SFB 5 SFB-XF0-Zone0	70	75	90	85	95	90	100
SFB 6 Intake-Zone0	56	62	70	70	85	85	89
SFB 6 Exhaust-Zone1	56	62	70	70	85	85	89
SFB 6 IntakeA-Zone0	56	62	70	70	85	85	89
SFB 6 IntakeB-Zone1	56	62	70	70	85	85	89
SFB 6 Exhaust-Zone0	56	62	70	70	85	85	89
SFB 6 SFB-XF2-Zone1	70	75	90	85	95	90	100
SFB 6 SFB-XF1-Zone0	70	75	90	85	95	90	100
SFB 6 SFB-XF0-Zone0	70	75	90	85	95	90	100
SFB 7 Intake-Zone0	56	62	70	70	85	85	89
SFB 7 Exhaust-Zone1	56	62	70	70	85	85	89
SFB 7 IntakeA-Zone0	56	62	70	70	85	85	89
SFB 7 IntakeB-Zone1	56	62	70	70	85	85	89
SFB 7 Exhaust-Zone0	56	62	70	70	85	85	89
SFB 7 SFB-XF2-Zone1	70	75	90	85	95	90	100
SFB 7 SFB-XF1-Zone0	70	75	90	85	95	90	100
SFB 7 SFB-XF0-Zone0	70	75	90	85	95	90	100
FPC 0	55	60	75	65	90	80	95
FPC 9	55	60	75	65	90	80	95
FPC 10	55	60	75	65	90	80	95
FPC 14	55	60	75	65	95	80	100
FPC 19	55	60	75	65	90	80	95
ADC 0 Intake	50	55	60	60	65	65	80
ADC 0 Exhaust	50	55	60	60	65	65	80
ADC 0 ADC-XF1	70	75	90	85	95	90	100
ADC 0 ADC-XF0	70	75	90	85	95	90	100
ADC 9 Intake	50	55	60	60	65	65	80
ADC 9 Exhaust	50	55	60	60	65	65	80
ADC 9 ADC-XF1	70	75	90	85	95	90	100
ADC 9 ADC-XF0	70	75	90	85	95	90	100
ADC 10 Intake	50	55	60	60	65	65	80
ADC 10 Exhaust	50	55	60	60	65	65	80
ADC 10 ADC-XF1	70	75	90	85	95	90	100
ADC 10 ADC-XF0	70	75	90	85	95	90	100
ADC 14 Intake	50	55	60	60	65	65	80
ADC 14 Exhaust	50	55	60	60	65	65	80
ADC 14 ADC-XF1	70	75	90	85	95	90	100
ADC 14 ADC-XF0	70	75	90	85	95	90	100
ADC 19 Intake	50	55	60	60	65	65	80
ADC 19 Exhaust	50	55	60	60	65	65	80
ADC 19 ADC-XF1	70	75	90	85	95	90	100
ADC 19 ADC-XF0	70	75	90	85	95	90	100

### show chassis temperature-thresholds (MX2008 Routers)

user@host> show chassis temperature-thresholds							
	Fan speed		Yellow alarm		Red alarm		Fire
Shutdown							
(degrees C)	(degrees C)		(degrees C)		(degrees C)		
Item	Normal	High	Normal	Bad fan	Normal	Bad fan	
Normal							
Routing Engine 0 CPU	58	63	78	75	93	90	
98							
Routing Engine 1 CPU	58	63	78	75	93	90	
98							
CB 0 Inlet1	55	60	65	62	75	72	
85							
CB 0 Inlet2	45	50	61	58	80	77	
90							

CB 0 Inlet3	57	62	68	65	80	77
90						
CB 0 Inlet4	55	60	80	77	90	87
95						
CB 0 Exhaust1	55	60	65	62	75	72
85						
CB 0 Exhaust2	50	55	60	57	80	77
90						
CB 0 Exhaust3	70	75	81	78	91	88
96						
CB 0 Exhaust4	75	80	90	87	100	97
105						
CB 1 Inlet1	55	60	65	62	75	72
85						
CB 1 Inlet2	45	50	61	58	80	77
90						
CB 1 Inlet3	57	62	68	65	80	77
90						
CB 1 Inlet4	55	60	80	77	90	87
95						
CB 1 Exhaust1	55	60	65	62	75	72
85						
CB 1 Exhaust2	50	55	60	57	80	77
90						
CB 1 Exhaust3	70	75	81	78	91	88
96						
CB 1 Exhaust4	75	80	90	87	100	97
105						
SFB 0 Inlet1	49	54	62	59	76	73
81						
SFB 0 Inlet2	65	70	71	68	83	80
88						
SFB 0 Exhaust1	45	50	61	58	75	72
80						
SFB 0 Exhaust2	60	65	69	66	80	77
85						
SFB 0 SFB2-PF-local	65	70	75	72	95	92
100						
SFB 0 SFB2-PF-die	88	93	98	95	118	115
120						
SFB 1 Inlet1	49	54	62	59	76	73
81						
SFB 1 Inlet2	65	70	71	68	83	80
88						
SFB 1 Exhaust1	45	50	61	58	75	72
80						
SFB 1 Exhaust2	60	65	69	66	80	77
85						
SFB 1 SFB2-PF-local	65	70	75	72	95	92
100						
SFB 1 SFB2-PF-die	88	93	98	95	118	115
120						
SFB 2 Inlet1	49	54	62	59	76	73
81						
SFB 2 Inlet2	65	70	71	68	83	80
88						
SFB 2 Exhaust1	45	50	61	58	75	72
80						
SFB 2 Exhaust2	60	65	69	66	80	77
85						
SFB 2 SFB2-PF-local	65	70	75	72	95	92

100						
SFB 2 SFB2-PF-die	88	93	98	95	118	115
120						
SFB 3 Inlet1	49	54	62	59	76	73
81						
SFB 3 Inlet2	65	70	71	68	83	80
88						
SFB 3 Exhaust1	45	50	61	58	75	72
80						
SFB 3 Exhaust2	60	65	69	66	80	77
85						
SFB 3 SFB2-PF-local	65	70	75	72	95	92
100						
SFB 3 SFB2-PF-die	88	93	98	95	118	115
120						
SFB 4 Inlet1	49	54	62	59	76	73
81						
SFB 4 Inlet2	65	70	71	68	83	80
88						
SFB 4 Exhaust1	45	50	61	58	75	72
80						
SFB 4 Exhaust2	60	65	69	66	80	77
85						
SFB 4 SFB2-PF-local	65	70	75	72	95	92
100						
SFB 4 SFB2-PF-die	88	93	98	95	118	115
120						
SFB 5 Inlet1	49	54	62	59	76	73
81						
SFB 5 Inlet2	65	70	71	68	83	80
88						
SFB 5 Exhaust1	45	50	61	58	75	72
80						
SFB 5 Exhaust2	60	65	69	66	80	77
85						
SFB 5 SFB2-PF-local	65	70	75	72	95	92
100						
SFB 5 SFB2-PF-die	88	93	98	95	118	115
120						
SFB 6 Inlet1	49	54	62	59	76	73
81						
SFB 6 Inlet2	65	70	71	68	83	80
88						
SFB 6 Exhaust1	45	50	61	58	75	72
80						
SFB 6 Exhaust2	60	65	69	66	80	77
85						
SFB 6 SFB2-PF-local	65	70	75	72	95	92
100						
SFB 6 SFB2-PF-die	88	93	98	95	118	115
120						
SFB 7 Inlet1	49	54	62	59	76	73
81						
SFB 7 Inlet2	65	70	71	68	83	80
88						
SFB 7 Exhaust1	45	50	61	58	75	72
80						
SFB 7 Exhaust2	60	65	69	66	80	77
85						
SFB 7 SFB2-PF-local	65	70	75	72	95	92
100						

SFB 7 SFB2-PF-die 120	88	93	98	95	118	115
FPC 0 95	55	60	75	65	90	80
FPC 3 110	55	60	75	65	105	80
FPC 5 110	55	60	75	65	105	80
FPC 7 95	55	60	75	65	90	80
FPC 9 Intake 95	60	65	75	75	85	85
FPC 9 Exhaust A 95	60	65	75	75	85	85
FPC 9 Exhaust B 95	60	65	75	75	85	85
FPC 9 XL 0 Chip 110	70	75	85	85	102	102
FPC 9 XL 0 XR2 0 Chip 115	75	80	90	90	105	105
FPC 9 XL 0 XR2 1 Chip 115	75	80	90	90	105	105
FPC 9 XL 1 Chip 110	70	75	85	85	102	102
FPC 9 XL 1 XR2 0 Chip 115	75	80	90	90	105	105
FPC 9 XL 1 XR2 1 Chip 115	75	80	90	90	105	105
FPC 9 XM 0 Chip 110	70	75	85	85	100	100
FPC 9 XM 1 Chip 110	70	75	85	85	100	100
FPC 9 XM 2 Chip 110	70	75	85	85	100	100
FPC 9 XM 3 Chip 110	70	75	85	85	100	100
FPC 9 PCIe Switch Chip 120	80	85	95	95	105	105
ADC 0 Intake 80	50	55	65	65	75	75
ADC 0 Exhaust 80	50	55	65	65	75	75
ADC 0 ADC-XF1 100	70	75	90	85	95	90
ADC 0 ADC-XF0 100	70	75	90	85	95	90
ADC 3 Intake 80	50	55	65	65	75	75
ADC 3 Exhaust 80	50	55	65	65	75	75
ADC 3 ADC-XF1 100	70	75	90	85	95	90
ADC 3 ADC-XF0 100	70	75	90	85	95	90
ADC 5 Intake 80	50	55	65	65	75	75
ADC 5 Exhaust 80	50	55	65	65	75	75
ADC 5 ADC-XF1 100	70	75	90	85	95	90
ADC 5 ADC-XF0	70	75	90	85	95	90

100						
ADC 7 Intake	50	55	65	65	75	75
80						
ADC 7 Exhaust	50	55	65	65	75	75
80						
ADC 7 ADC-XF1	70	75	90	85	95	90
100						
ADC 7 ADC-XF0	70	75	90	85	95	90
100						

### show chassis temperature-thresholds (MX10003 Router)

```
user@host> show chassis temperature-thresholds
```

Shutdown	Fan speed		Yellow alarm		Red alarm		Fire
(degrees C)	(degrees C)		(degrees C)		(degrees C)		
Item	Normal	High	Normal	Bad fan	Normal	Bad fan	
Normal							
Routing Engine 0	48	54	85	85	100	100	
102							
Routing Engine 1	48	54	85	85	100	100	
102							
CB 0 Exhaust Temp Sensor	60	65	75	75	85	85	
95							
CB 0 Inlet Temp Sensor	60	65	75	75	85	85	
95							
CB 0 CPU DIE Temp Sensor	83	90	98	98	105	105	
110							
CB 1 Exhaust Temp Sensor	60	65	75	75	85	85	
95							
CB 1 Inlet Temp Sensor	60	65	75	75	85	85	
95							
CB 1 CPU DIE Temp Sensor	83	90	98	98	105	105	
110							
FPC 0 Intake Temp Sensor	40	45	75	70	85	80	
95							
FPC 0 Exhaust-A Temp Sensor	55	60	85	80	90	90	
100							
FPC 0 Exhaust-B Temp Sensor	55	60	85	80	90	90	
100							
FPC 0 EA0 Chip	87	92	97	97	105	105	
110							
FPC 0 EA0-XR0 Chip	88	93	98	98	120	120	
125							
FPC 0 EA0-XR1 Chip	88	93	98	98	120	120	
125							
FPC 0 EA1 Chip	87	92	97	97	105	105	
110							
FPC 0 EA1-XR0 Chip	88	93	98	98	120	120	
125							
FPC 0 EA1-XR1 Chip	88	93	98	98	120	120	
125							
FPC 0 EA2 Chip	87	92	97	97	105	105	
110							
FPC 0 EA2-XR0 Chip	88	93	98	98	120	120	
125							
FPC 0 EA2-XR1 Chip	88	93	98	98	120	120	
125							
FPC 0 PF Chip	89	94	104	104	120	120	



120							
FPC 0 EA0_HMC0 Logic die	88	93	103	103	120	120	
125							
FPC 0 EA0_HMC0 DRAM botm	83	88	98	98	120	120	
125							
FPC 0 EA0_HMC1 Logic die	88	93	103	103	120	120	
125							
FPC 0 EA0_HMC1 DRAM botm	83	88	98	98	120	120	
125							
FPC 0 EA0_HMC2 Logic die	88	93	103	103	120	120	
125							
FPC 0 EA0_HMC2 DRAM botm	83	88	98	98	120	120	
125							
FPC 0 EA1_HMC0 Logic die	88	93	103	103	120	120	
125							
FPC 0 EA1_HMC0 DRAM botm	83	88	98	98	120	120	
125							
FPC 0 EA1_HMC1 Logic die	88	93	103	103	120	120	
125							
FPC 0 EA1_HMC1 DRAM botm	83	88	98	98	120	120	
125							
FPC 0 EA1_HMC2 Logic die	88	93	103	103	120	120	
125							
FPC 0 EA1_HMC2 DRAM botm	83	88	98	98	120	120	
125							
FPC 0 EA2_HMC0 Logic die	88	93	103	103	120	120	
125							
FPC 0 EA2_HMC0 DRAM botm	83	88	98	98	120	120	
125							
FPC 0 EA2_HMC1 Logic die	88	93	103	103	120	120	
125							
FPC 0 EA2_HMC1 DRAM botm	83	88	98	98	120	120	
125							
FPC 0 EA2_HMC2 Logic die	88	93	103	103	120	120	
125							
FPC 0 EA2_HMC2 DRAM botm	83	88	98	98	120	120	
125							
FPC 1 Intake Temp Sensor	40	45	75	70	85	80	
95							
FPC 1 Exhaust-A Temp Sensor	55	60	85	80	90	90	
100							
FPC 1 Exhaust-B Temp Sensor	55	60	85	80	90	90	
100							
FPC 1 EA0 Chip	87	92	97	97	105	105	
110							
FPC 1 EA0-XR0 Chip	88	93	98	98	120	120	
125							
FPC 1 EA0-XR1 Chip	88	93	98	98	120	120	
125							
FPC 1 EA1 Chip	87	92	97	97	105	105	
110							
FPC 1 EA1-XR0 Chip	88	93	98	98	120	120	
125							
FPC 1 EA1-XR1 Chip	88	93	98	98	120	120	
125							
FPC 1 EA2 Chip	87	92	97	97	105	105	
110							
FPC 1 EA2-XR0 Chip	88	93	98	98	120	120	
125							
FPC 1 EA2-XR1 Chip	88	93	98	98	120	120	
125							

FPC 1 PF Chip	89	94	104	104	120	120
120						
FPC 1 EA0_HMC0 Logic die	88	93	103	103	120	120
125						
FPC 1 EA0_HMC0 DRAM botm	83	88	98	98	120	120
125						
FPC 1 EA0_HMC1 Logic die	88	93	103	103	120	120
125						
FPC 1 EA0_HMC1 DRAM botm	83	88	98	98	120	120
125						
FPC 1 EA0_HMC2 Logic die	88	93	103	103	120	120
125						
FPC 1 EA0_HMC2 DRAM botm	83	88	98	98	120	120
125						
FPC 1 EA1_HMC0 Logic die	88	93	103	103	120	120
125						
FPC 1 EA1_HMC0 DRAM botm	83	88	98	98	120	120
125						
FPC 1 EA1_HMC1 Logic die	88	93	103	103	120	120
125						
FPC 1 EA1_HMC1 DRAM botm	83	88	98	98	120	120
125						
FPC 1 EA1_HMC2 Logic die	88	93	103	103	120	120
125						
FPC 1 EA1_HMC2 DRAM botm	83	88	98	98	120	120
125						
FPC 1 EA2_HMC0 Logic die	88	93	103	103	120	120
125						
FPC 1 EA2_HMC0 DRAM botm	83	88	98	98	120	120
125						
FPC 1 EA2_HMC1 Logic die	88	93	103	103	120	120
125						
FPC 1 EA2_HMC1 DRAM botm	83	88	98	98	120	120
125						
FPC 1 EA2_HMC2 Logic die	88	93	103	103	120	120
125						
FPC 1 EA2_HMC2 DRAM botm	83	88	98	98	120	120
125						

### show chassis temperature-thresholds (MX10008 Router)

user@host> show chassis temperature-thresholds		Fan speed		Yellow alarm		Red alarm
Fire Shutdown		(degrees C)		(degrees C)		(degrees
C)	(degrees C)	Normal	High	Normal	Bad fan	Normal
Item						
Bad fan	Normal					
Routing Engine 0		65	70	95	95	100
100	110					
Routing Engine 1		65	70	95	95	100
100	110					
CB 0 Intake A Temp Sensor		30	35	80	80	85
85	95					
CB 0 Intake B Temp Sensor		30	35	80	80	85
85	95					
CB 0 Exhaust A Temp Sensor		40	45	80	80	85
85	95					
CB 0 Exhaust B Temp Sensor		40	45	80	80	85
85	95					
CB 0 Middle Temp Sensor		40	45	80	80	85

85	95				
CB 1 Intake A Temp Sensor		30	35	80	80 85
85	95				
CB 1 Intake B Temp Sensor		30	35	80	80 85
85	95				
CB 1 Exhaust A Temp Sensor		40	45	80	80 85
85	95				
CB 1 Exhaust B Temp Sensor		40	45	80	80 85
85	95				
CB 1 Middle Temp Sensor		40	45	80	80 85
85	95				
FPC 0 Intake-A Temp Sensor		52	62	72	72 85
85	90				
FPC 0 Exhaust-A Temp Sensor		75	85	98	98 103
103	108				
FPC 0 Exhaust-B Temp Sensor		75	85	98	98 103
103	108				
FPC 0 EA0 Temp Sensor		62	72	90	90 100
100	105				
FPC 0 EA0_XR0 Temp Sensor		77	87	100	100 105
105	108				
FPC 0 EA0_XR1 Temp Sensor		77	87	100	100 105
105	108				
FPC 0 EA1 Temp Sensor		62	72	90	90 100
100	105				
FPC 0 EA1_XR0 Temp Sensor		77	87	100	100 105
105	108				
FPC 0 EA1_XR1 Temp Sensor		77	87	100	100 105
105	108				
FPC 0 EA2 Temp Sensor		62	72	90	90 100
100	105				
FPC 0 EA2_XR0 Temp Sensor		77	87	100	100 105
105	108				
FPC 0 EA2_XR1 Temp Sensor		77	87	100	100 105
105	108				
FPC 0 EA3 Temp Sensor		62	72	90	90 100
100	105				
FPC 0 EA3_XR0 Temp Sensor		77	87	100	100 105
105	108				
FPC 0 EA3_XR1 Temp Sensor		77	87	100	100 105
105	108				
FPC 0 EA4 Temp Sensor		62	72	90	90 100
100	105				
FPC 0 EA4_XR0 Temp Sensor		77	87	100	100 105
105	108				
FPC 0 EA4_XR1 Temp Sensor		77	87	100	100 105
105	108				
FPC 0 EA5 Temp Sensor		62	72	90	90 100
100	105				
FPC 0 EA5_XR0 Temp Sensor		77	87	100	100 105
105	108				
FPC 0 EA5_XR1 Temp Sensor		77	87	100	100 105
105	108				
FPC 0 EA0_HMC0 Logic die		79	89	103	103 110
110	115				
FPC 0 EA0_HMC0 DRAM botm		74	84	98	98 105
105	110				
FPC 0 EA0_HMC1 Logic die		79	89	103	103 110
110	115				
FPC 0 EA0_HMC1 DRAM botm		74	84	98	98 105
105	110				

FPC 0 EA0_HMC2 Logic die	79	89	103	103	110
110 115					
FPC 0 EA0_HMC2 DRAM botm	74	84	98	98	105
105 110					
FPC 0 EA1_HMC0 Logic die	79	89	103	103	110
110 115					
FPC 0 EA1_HMC0 DRAM botm	74	84	98	98	105
105 110					
FPC 0 EA1_HMC1 Logic die	79	89	103	103	110
110 115					
FPC 0 EA1_HMC1 DRAM botm	74	84	98	98	105
105 110					
FPC 0 EA1_HMC2 Logic die	79	89	103	103	110
110 115					
FPC 0 EA1_HMC2 DRAM botm	74	84	98	98	105
105 110					
FPC 0 EA2_HMC0 Logic die	79	89	103	103	110
110 115					
FPC 0 EA2_HMC0 DRAM botm	74	84	98	98	105
105 110					
FPC 0 EA2_HMC1 Logic die	79	89	103	103	110
110 115					
FPC 0 EA2_HMC1 DRAM botm	74	84	98	98	105
105 110					
FPC 0 EA2_HMC2 Logic die	79	89	103	103	110
110 115					
FPC 0 EA2_HMC2 DRAM botm	74	84	98	98	105
105 110					
FPC 0 EA3_HMC0 Logic die	79	89	103	103	110
110 115					
FPC 0 EA3_HMC0 DRAM botm	74	84	98	98	105
105 110					
FPC 0 EA3_HMC1 Logic die	79	89	103	103	110
110 115					
FPC 0 EA3_HMC1 DRAM botm	74	84	98	98	105
105 110					
FPC 0 EA3_HMC2 Logic die	79	89	103	103	110
110 115					
FPC 0 EA3_HMC2 DRAM botm	74	84	98	98	105
105 110					
FPC 0 EA4_HMC0 Logic die	79	89	103	103	110
110 115					
FPC 0 EA4_HMC0 DRAM botm	74	84	98	98	105
105 110					
FPC 0 EA4_HMC1 Logic die	79	89	103	103	110
110 115					
FPC 0 EA4_HMC1 DRAM botm	74	84	98	98	105
105 110					
FPC 0 EA4_HMC2 Logic die	79	89	103	103	110
110 115					
FPC 0 EA4_HMC2 DRAM botm	74	84	98	98	105
105 110					
FPC 0 EA5_HMC0 Logic die	79	89	103	103	110
110 115					
FPC 0 EA5_HMC0 DRAM botm	74	84	98	98	105
105 110					
FPC 0 EA5_HMC1 Logic die	79	89	103	103	110
110 115					
FPC 0 EA5_HMC1 DRAM botm	74	84	98	98	105
105 110					
FPC 0 EA5_HMC2 Logic die	79	89	103	103	110

110	115				
FPC 0 EA5_HMC2 DRAM botm		74	84	98	98 105
105	110				
FPC 2 Intake-A Temp Sensor		52	62	72	72 85
85	90				
FPC 2 Exhaust-A Temp Sensor		75	85	98	98 103
103	108				
FPC 2 Exhaust-B Temp Sensor		75	85	98	98 103
103	108				
FPC 2 EA0 Temp Sensor		62	72	90	90 100
100	105				
FPC 2 EA0_XR0 Temp Sensor		77	87	100	100 105
105	108				
FPC 2 EA0_XR1 Temp Sensor		77	87	100	100 105
105	108				
FPC 2 EA1 Temp Sensor		62	72	90	90 100
100	105				
FPC 2 EA1_XR0 Temp Sensor		77	87	100	100 105
105	108				
FPC 2 EA1_XR1 Temp Sensor		77	87	100	100 105
105	108				
FPC 2 EA2 Temp Sensor		62	72	90	90 100
100	105				
FPC 2 EA2_XR0 Temp Sensor		77	87	100	100 105
105	108				
FPC 2 EA2_XR1 Temp Sensor		77	87	100	100 105
105	108				
FPC 2 EA3 Temp Sensor		62	72	90	90 100
100	105				
FPC 2 EA3_XR0 Temp Sensor		77	87	100	100 105
105	108				
FPC 2 EA3_XR1 Temp Sensor		77	87	100	100 105
105	108				
FPC 2 EA4 Temp Sensor		62	72	90	90 100
100	105				
FPC 2 EA4_XR0 Temp Sensor		77	87	100	100 105
105	108				
FPC 2 EA4_XR1 Temp Sensor		77	87	100	100 105
105	108				
FPC 2 EA5 Temp Sensor		62	72	90	90 100
100	105				
FPC 2 EA5_XR0 Temp Sensor		77	87	100	100 105
105	108				
FPC 2 EA5_XR1 Temp Sensor		77	87	100	100 105
105	108				
FPC 2 EA0_HMC0 Logic die		79	89	103	103 110
110	115				
FPC 2 EA0_HMC0 DRAM botm		74	84	98	98 105
105	110				
FPC 2 EA0_HMC1 Logic die		79	89	103	103 110
110	115				
FPC 2 EA0_HMC1 DRAM botm		74	84	98	98 105
105	110				
FPC 2 EA0_HMC2 Logic die		79	89	103	103 110
110	115				
FPC 2 EA0_HMC2 DRAM botm		74	84	98	98 105
105	110				
FPC 2 EA1_HMC0 Logic die		79	89	103	103 110
110	115				
FPC 2 EA1_HMC0 DRAM botm		74	84	98	98 105
105	110				

FPC 2 EA1_HMC1 Logic die 110 115	79	89	103	103	110
FPC 2 EA1_HMC1 DRAM botm 105 110	74	84	98	98	105
FPC 2 EA1_HMC2 Logic die 110 115	79	89	103	103	110
FPC 2 EA1_HMC2 DRAM botm 105 110	74	84	98	98	105
FPC 2 EA2_HMC0 Logic die 110 115	79	89	103	103	110
FPC 2 EA2_HMC0 DRAM botm 105 110	74	84	98	98	105
FPC 2 EA2_HMC1 Logic die 110 115	79	89	103	103	110
FPC 2 EA2_HMC1 DRAM botm 105 110	74	84	98	98	105
FPC 2 EA2_HMC2 Logic die 110 115	79	89	103	103	110
FPC 2 EA2_HMC2 DRAM botm 105 110	74	84	98	98	105
FPC 2 EA3_HMC0 Logic die 110 115	79	89	103	103	110
FPC 2 EA3_HMC0 DRAM botm 105 110	74	84	98	98	105
FPC 2 EA3_HMC1 Logic die 110 115	79	89	103	103	110
FPC 2 EA3_HMC1 DRAM botm 105 110	74	84	98	98	105
FPC 2 EA3_HMC2 Logic die 110 115	79	89	103	103	110
FPC 2 EA3_HMC2 DRAM botm 105 110	74	84	98	98	105
FPC 2 EA4_HMC0 Logic die 110 115	79	89	103	103	110
FPC 2 EA4_HMC0 DRAM botm 105 110	74	84	98	98	105
FPC 2 EA4_HMC1 Logic die 110 115	79	89	103	103	110
FPC 2 EA4_HMC1 DRAM botm 105 110	74	84	98	98	105
FPC 2 EA4_HMC2 Logic die 110 115	79	89	103	103	110
FPC 2 EA4_HMC2 DRAM botm 105 110	74	84	98	98	105
FPC 2 EA5_HMC0 Logic die 110 115	79	89	103	103	110
FPC 2 EA5_HMC0 DRAM botm 105 110	74	84	98	98	105
FPC 2 EA5_HMC1 Logic die 110 115	79	89	103	103	110
FPC 2 EA5_HMC1 DRAM botm 105 110	74	84	98	98	105
FPC 2 EA5_HMC2 Logic die 110 115	79	89	103	103	110
FPC 2 EA5_HMC2 DRAM botm 105 110	74	84	98	98	105
FPC 3 Intake-A Temp Sensor 85 90	52	62	72	72	85
FPC 3 Exhaust-A Temp Sensor 103 108	75	85	98	98	103
FPC 3 Exhaust-B Temp Sensor	75	85	98	98	103

103	108				
FPC 3 EA0 Temp Sensor		62	72	90	90
100	105				
FPC 3 EA0_XR0 Temp Sensor		77	87	100	100
105	108				
FPC 3 EA0_XR1 Temp Sensor		77	87	100	100
105	108				
FPC 3 EA1 Temp Sensor		62	72	90	90
100	105				
FPC 3 EA1_XR0 Temp Sensor		77	87	100	100
105	108				
FPC 3 EA1_XR1 Temp Sensor		77	87	100	100
105	108				
FPC 3 EA2 Temp Sensor		62	72	90	90
100	105				
FPC 3 EA2_XR0 Temp Sensor		77	87	100	100
105	108				
FPC 3 EA2_XR1 Temp Sensor		77	87	100	100
105	108				
FPC 3 EA3 Temp Sensor		62	72	90	90
100	105				
FPC 3 EA3_XR0 Temp Sensor		77	87	100	100
105	108				
FPC 3 EA3_XR1 Temp Sensor		77	87	100	100
105	108				
FPC 3 EA4 Temp Sensor		62	72	90	90
100	105				
FPC 3 EA4_XR0 Temp Sensor		77	87	100	100
105	108				
FPC 3 EA4_XR1 Temp Sensor		77	87	100	100
105	108				
FPC 3 EA5 Temp Sensor		62	72	90	90
100	105				
FPC 3 EA5_XR0 Temp Sensor		77	87	100	100
105	108				
FPC 3 EA5_XR1 Temp Sensor		77	87	100	100
105	108				
FPC 3 EA0_HMC0 Logic die		79	89	103	103
110	115				
FPC 3 EA0_HMC0 DRAM botm		74	84	98	98
105	110				
FPC 3 EA0_HMC1 Logic die		79	89	103	103
110	115				
FPC 3 EA0_HMC1 DRAM botm		74	84	98	98
105	110				
FPC 3 EA0_HMC2 Logic die		79	89	103	103
110	115				
FPC 3 EA0_HMC2 DRAM botm		74	84	98	98
105	110				
FPC 3 EA1_HMC0 Logic die		79	89	103	103
110	115				
FPC 3 EA1_HMC0 DRAM botm		74	84	98	98
105	110				
FPC 3 EA1_HMC1 Logic die		79	89	103	103
110	115				
FPC 3 EA1_HMC1 DRAM botm		74	84	98	98
105	110				
FPC 3 EA1_HMC2 Logic die		79	89	103	103
110	115				
FPC 3 EA1_HMC2 DRAM botm		74	84	98	98
105	110				

FPC 3 EA2_HMC0 Logic die 110 115	79	89	103	103	110
FPC 3 EA2_HMC0 DRAM botm 105 110	74	84	98	98	105
FPC 3 EA2_HMC1 Logic die 110 115	79	89	103	103	110
FPC 3 EA2_HMC1 DRAM botm 105 110	74	84	98	98	105
FPC 3 EA2_HMC2 Logic die 110 115	79	89	103	103	110
FPC 3 EA2_HMC2 DRAM botm 105 110	74	84	98	98	105
FPC 3 EA3_HMC0 Logic die 110 115	79	89	103	103	110
FPC 3 EA3_HMC0 DRAM botm 105 110	74	84	98	98	105
FPC 3 EA3_HMC1 Logic die 110 115	79	89	103	103	110
FPC 3 EA3_HMC1 DRAM botm 105 110	74	84	98	98	105
FPC 3 EA3_HMC2 Logic die 110 115	79	89	103	103	110
FPC 3 EA3_HMC2 DRAM botm 105 110	74	84	98	98	105
FPC 3 EA4_HMC0 Logic die 110 115	79	89	103	103	110
FPC 3 EA4_HMC0 DRAM botm 105 110	74	84	98	98	105
FPC 3 EA4_HMC1 Logic die 110 115	79	89	103	103	110
FPC 3 EA4_HMC1 DRAM botm 105 110	74	84	98	98	105
FPC 3 EA4_HMC2 Logic die 110 115	79	89	103	103	110
FPC 3 EA4_HMC2 DRAM botm 105 110	74	84	98	98	105
FPC 3 EA5_HMC0 Logic die 110 115	79	89	103	103	110
FPC 3 EA5_HMC0 DRAM botm 105 110	74	84	98	98	105
FPC 3 EA5_HMC1 Logic die 110 115	79	89	103	103	110
FPC 3 EA5_HMC1 DRAM botm 105 110	74	84	98	98	105
FPC 3 EA5_HMC2 Logic die 110 115	79	89	103	103	110
FPC 3 EA5_HMC2 DRAM botm 105 110	74	84	98	98	105
SFB 0 Intake-A 95 105	65	75	85	85	95
SFB 0 Intake-B 95 105	65	75	85	85	95
SFB 0 Exhaust-A 95 105	75	85	95	95	95
SFB 0 Exhaust-B 95 105	75	85	95	95	95
SFB 0 PF0 105 115	65	75	100	100	105
SFB 0 PF1 105 115	65	75	100	100	105
SFB 1 Intake-A	65	75	85	85	95



95	105				
SFB 1 Intake-B		65	75	85	85 95
95	105				
SFB 1 Exhaust-A		75	85	95	95 95
95	105				
SFB 1 Exhaust-B		75	85	95	95 95
95	105				
SFB 1 PF0		65	75	100	100 105
105	115				
SFB 1 PF1		65	75	100	100 105
105	115				
SFB 2 Intake-A		65	75	85	85 95
95	105				
SFB 2 Intake-B		65	75	85	85 95
95	105				
SFB 2 Exhaust-A		75	85	95	95 95
95	105				
SFB 2 Exhaust-B		75	85	95	95 95
95	105				
SFB 2 PF0		65	75	100	100 105
105	115				
SFB 2 PF1		65	75	100	100 105
105	115				
SFB 3 Intake-A		65	75	85	85 95
95	105				
SFB 3 Intake-B		65	75	85	85 95
95	105				
SFB 3 Exhaust-A		75	85	95	95 95
95	105				
SFB 3 Exhaust-B		75	85	95	95 95
95	105				
SFB 3 PF0		65	75	100	100 105
105	115				
SFB 3 PF1		65	75	100	100 105
105	115				
SFB 4 Intake-A		65	75	85	85 95
95	105				
SFB 4 Intake-B		65	75	85	85 95
95	105				
SFB 4 Exhaust-A		75	85	95	95 95
95	105				
SFB 4 Exhaust-B		75	85	95	95 95
95	105				
SFB 4 PF0		65	75	100	100 105
105	115				
SFB 4 PF1		65	75	100	100 105
105	115				
SFB 5 Intake-A		65	75	85	85 95
95	105				
SFB 5 Intake-B		65	75	85	85 95
95	105				
SFB 5 Exhaust-A		75	85	95	95 95
95	105				
SFB 5 Exhaust-B		75	85	95	95 95
95	105				
SFB 5 PF0		65	75	100	100 105
105	115				
SFB 5 PF1		65	75	100	100 105
105	115				

## show chassis temperature-thresholds (MX204 Router)

user@host&gt; show chassis temperature-thresholds

Fire Shutdown		Fan speed		Yellow alarm		Red alarm
(degrees C)		(degrees C)		(degrees C)		(degrees
Item	Normal	Normal	High	Normal	Bad fan	Normal
Bad fan	100	102				
Routing Engine	48	54		85	85	100
CB Top Right Inlet Sensor	35	40		63	63	85
CB Top Left Inlet Sensor	40	45		65	65	85
CB Top Right Exhaust Sensor	45	50		68	68	85
CB Top Left Exhaust Sensor	65	70		78	78	85
CB CPU Core-0 Temp	65	70		80	80	90
CB CPU Core-1 Temp	65	70		80	80	90
CB CPU Core-2 Temp	65	70		80	80	90
CB CPU Core-3 Temp	65	70		80	80	90
CB CPU Core-4 Temp	65	70		80	80	90
CB CPU Core-5 Temp	65	70		80	80	90
CB CPU Core-6 Temp	65	70		80	80	90
CB CPU Core-7 Temp	65	70		80	80	90
FPC EA0_HMC0 Logic die	85	90		95	95	105
FPC EA0_HMC0 DRAM botm	80	85		90	90	105
FPC EA0_HMC1 Logic die	85	90		95	95	105
FPC EA0_HMC1 DRAM botm	80	85		90	90	105
FPC EA0 Chip	92	97		103	103	109
FPC EA0-XR0 Chip	85	90		98	98	103
FPC EA0-XR1 Chip	85	90		98	98	103

## show chassis temperature-thresholds (PTX10008 Routers)

user@host&gt; show chassis temperature-thresholds

Shutdown		Fan speed		Yellow alarm		Red alarm	Fire
(degrees C)		(degrees C)		(degrees C)		(degrees C)	
Item	Normal	Normal	High	Normal	Bad fan	Normal	Bad fan
Normal							

Routing Engine 0 102	48	54	85	85	100	100
Routing Engine 1 102	48	54	85	85	100	100
CB 0 Intake Temp Sensor 95	30	35	80	80	85	85
CB 0 Exhaust Temp Sensor 95	30	35	80	80	85	85
CB 0 CPU Die Temp Sensor 110	40	45	95	95	100	100
CB 1 Intake Temp Sensor 95	30	35	80	80	85	85
CB 1 Exhaust Temp Sensor 95	30	35	80	80	85	85
CB 1 CPU Die Temp Sensor 110	40	45	95	95	100	100
FPC 0 Intake-A Temp Sensor 95	30	35	80	80	85	85
FPC 0 Intake-B Temp Sensor 95	30	35	80	80	85	85
FPC 0 Exhaust-A Temp Sensor 95	30	35	80	80	85	85
FPC 0 Exhaust-B Temp Sensor 95	30	35	80	80	85	85
FPC 0 Exhaust-C Temp Sensor 95	30	35	80	80	85	85
FPC 0 PE0 Temp Sensor 115	40	45	100	100	105	105
FPC 0 PE1 Temp Sensor 115	40	45	100	100	105	105
FPC 0 PE2 Temp Sensor 115	40	45	100	100	105	105
FPC 0 LCPU Temp Sensor 110	40	45	95	95	100	100
FPC 5 Intake-A Temp Sensor 95	30	35	80	80	85	85
FPC 5 Intake-B Temp Sensor 95	30	35	80	80	85	85
FPC 5 Exhaust-A Temp Sensor 95	30	35	80	80	85	85
FPC 5 Exhaust-B Temp Sensor 95	30	35	80	80	85	85
FPC 5 Exhaust-C Temp Sensor 95	30	35	80	80	85	85
FPC 5 PE0 Temp Sensor 115	40	45	100	100	105	105
FPC 5 PE1 Temp Sensor 115	40	45	100	100	105	105
FPC 5 PE2 Temp Sensor 115	40	45	100	100	105	105
FPC 5 PE3 Temp Sensor 115	40	45	100	100	105	105
FPC 5 PE4 Temp Sensor 115	40	45	100	100	105	105
FPC 5 PE5 Temp Sensor 115	40	45	100	100	105	105
FPC 5 LCPU Temp Sensor 110	40	45	95	95	100	100
FPC 6 Intake-A Temp Sensor 95	30	35	80	80	85	85
FPC 6 Intake-B Temp Sensor	30	35	80	80	85	85

95							
FPC 6 Exhaust-A Temp Sensor	30	35	80	80	85	85	
95							
FPC 6 Exhaust-B Temp Sensor	30	35	80	80	85	85	
95							
FPC 6 Exhaust-C Temp Sensor	30	35	80	80	85	85	
95							
FPC 6 PE0 Temp Sensor	40	45	100	100	105	105	
115							
FPC 6 PE1 Temp Sensor	40	45	100	100	105	105	
115							
FPC 6 PE2 Temp Sensor	40	45	100	100	105	105	
115							
FPC 6 PE3 Temp Sensor	40	45	100	100	105	105	
115							
FPC 6 PE4 Temp Sensor	40	45	100	100	105	105	
115							
FPC 6 PE5 Temp Sensor	40	45	100	100	105	105	
115							
FPC 6 LCPU Temp Sensor	40	45	95	95	100	100	
110							
SIB 0 Intake-A Temp Sensor	40	45	90	90	95	95	
105							
SIB 0 Intake-B Temp Sensor	40	45	90	90	95	95	
105							
SIB 0 Exhaust-A Temp Sensor	40	45	90	90	95	95	
105							
SIB 0 Exhaust-B Temp Sensor	40	45	90	90	95	95	
105							
SIB 0 PF0 Temp Sensor	50	55	100	100	105	105	
115							
SIB 0 PF1 Temp Sensor	50	55	100	100	105	105	
115							
SIB 1 Intake-A Temp Sensor	40	45	90	90	95	95	
105							
SIB 1 Intake-B Temp Sensor	40	45	90	90	95	95	
105							
SIB 1 Exhaust-A Temp Sensor	40	45	90	90	95	95	
105							
SIB 1 Exhaust-B Temp Sensor	40	45	90	90	95	95	
105							
SIB 1 PF0 Temp Sensor	50	55	100	100	105	105	
115							
SIB 1 PF1 Temp Sensor	50	55	100	100	105	105	
115							

### show chassis temperature-thresholds (T4000 Core Routers)

```
user@host> show chassis temperature-thresholds
```

Item	Fan speed		Yellow alarm		Red alarm		Fire Shutdown
	(degrees C) Normal	High	(degrees C) Normal	Bad fan	(degrees C) Normal	Bad fan	(degrees C) Normal
Chassis default	48	54	65	55	75	65	100
Routing Engine 0	55	65	85	85	100	100	102
Routing Engine 1	55	65	85	85	100	100	102
FPC 0	63	68	75	70	90	83	95
FPC 3	63	68	75	70	90	83	95
FPC 5	56	62	75	63	83	76	95
FPC 6	63	68	75	70	90	83	95

SIB 0	64	70	76	72	87	84	95
SIB 1	64	70	76	72	87	84	95
SIB 2	64	70	76	72	87	84	95
SIB 3	64	70	76	72	87	84	95
SIB 4	64	70	76	72	87	84	95

### show chassis temperature-thresholds (TX Matrix Plus Router)

```
user@host> show chassis temperature-thresholds
sfc0-re0:
```

Item	Fan speed (degrees C)		Yellow alarm (degrees C)		Red alarm (degrees C)	
	Normal	High	Normal	Bad fan	Normal	Bad fan
Chassis default	48	54	65	55	75	65
Routing Engine 0	55	65	85	85	100	100
Routing Engine 1	55	65	85	85	100	100
SIB F13 0	64	70	76	72	90	84
SIB F13 3	64	70	76	72	90	84
SIB F13 6	64	70	76	72	90	84
SIB F13 8	64	70	76	72	90	84
SIB F13 11	64	70	76	72	90	84
SIB F13 12	64	70	76	72	90	84
SIB F2S 16	64	70	76	72	90	84
SIB F2S 17	64	70	76	72	90	84
SIB F2S 18	64	70	76	72	90	84
SIB F2S 19	64	70	76	72	90	84
SIB F2S 20	64	70	76	72	90	84
SIB F2S 21	64	70	76	72	90	84
SIB F2S 22	64	70	76	72	90	84
SIB F2S 23	64	70	76	72	90	84
SIB F2S 24	64	70	76	72	90	84
SIB F2S 25	64	70	76	72	90	84
SIB F2S 26	64	70	76	72	90	84
SIB F2S 27	64	70	76	72	90	84
SIB F2S 28	64	70	76	72	90	84
SIB F2S 29	64	70	76	72	90	84
SIB F2S 30	64	70	76	72	90	84
SIB F2S 31	64	70	76	72	90	84
SIB F2S 32	64	70	76	72	90	84
SIB F2S 33	64	70	76	72	90	84
SIB F2S 34	64	70	76	72	90	84
SIB F2S 35	64	70	76	72	90	84

```
1cc0-re0:
```

Item	Fan speed (degrees C)		Yellow alarm (degrees C)		Red alarm (degrees C)	
	Normal	High	Normal	Bad fan	Normal	Bad fan
Chassis default	48	54	65	55	75	65
Routing Engine 0	55	65	85	85	100	100
Routing Engine 1	55	65	85	85	100	100
FPC 1	56	62	75	63	83	76
FPC 3	56	62	75	63	83	76
FPC 4	56	62	75	63	83	76
FPC 6	56	62	75	63	83	76
FPC 7	56	62	75	63	83	76
SIB 0	48	54	65	60	80	75
SIB 1	48	54	65	60	80	75
SIB 2	48	54	65	60	80	75
SIB 3	48	54	65	60	80	75

```
SIB 4                48    54    65    60    80    75
```

```
lcc1-re0:
```

```
-----
Item                Fan speed      Yellow alarm      Red alarm
                   (degrees C)    (degrees C)      (degrees C)
                   Normal  High   Normal  Bad fan  Normal  Bad fan
Chassis default     48    54    65    55    75    65
Routing Engine 0    55    65    85    85   100   100
Routing Engine 1    55    65    85    85   100   100
FPC 1               56    62    75    63    83    76
FPC 3               56    62    75    63    83    76
FPC 4               56    62    75    63    83    76
FPC 6               56    62    75    63    83    76
...

```

#### show chassis temperature-thresholds lcc (TX Matrix Plus Router)

```
user@host> show chassis temperature-thresholds lcc 1
```

```
lcc1-re0:
```

```
-----
Item                Fan speed      Yellow alarm      Red alarm
                   (degrees C)    (degrees C)      (degrees C)
                   Normal  High   Normal  Bad fan  Normal  Bad fan
Chassis default     48    54    65    55    75    65
Routing Engine 0    55    65    85    85   100   100
Routing Engine 1    55    65    85    85   100   100
FPC 1               56    62    75    63    83    76
FPC 3               56    62    75    63    83    76
FPC 4               56    62    75    63    83    76
FPC 6               56    62    75    63    83    76
SIB 0               48    54    65    60    80    75
SIB 1               48    54    65    60    80    75
SIB 2               48    54    65    60    80    75
SIB 3               48    54    65    60    80    75
SIB 4               48    54    65    60    80    75

```

#### show chassis temperature-thresholds sfc (TX Matrix Plus Router)

```
user@host> show chassis temperature-thresholds sfc 0
```

```
sfc0-re0:
```

```
-----
Item                Fan speed      Yellow alarm      Red alarm
                   (degrees C)    (degrees C)      (degrees C)
                   Normal  High   Normal  Bad fan  Normal  Bad fan
Chassis default     48    54    65    55    75    65
Routing Engine 0    55    65    85    85   100   100
Routing Engine 1    55    65    85    85   100   100
SIB F13 0           64    70    76    72    90    84
SIB F13 3           64    70    76    72    90    84
SIB F13 6           64    70    76    72    90    84
SIB F13 8           64    70    76    72    90    84
SIB F13 11          64    70    76    72    90    84
SIB F13 12          64    70    76    72    90    84
SIB F2S 16          64    70    76    72    90    84
SIB F2S 17          64    70    76    72    90    84
SIB F2S 18          64    70    76    72    90    84
SIB F2S 19          64    70    76    72    90    84
SIB F2S 20          64    70    76    72    90    84
SIB F2S 21          64    70    76    72    90    84

```

SIB F2S 22	64	70	76	72	90	84
SIB F2S 23	64	70	76	72	90	84
SIB F2S 24	64	70	76	72	90	84
SIB F2S 25	64	70	76	72	90	84
SIB F2S 26	64	70	76	72	90	84
SIB F2S 27	64	70	76	72	90	84
SIB F2S 28	64	70	76	72	90	84
SIB F2S 29	64	70	76	72	90	84
SIB F2S 30	64	70	76	72	90	84
SIB F2S 31	64	70	76	72	90	84
SIB F2S 32	64	70	76	72	90	84
SIB F2S 33	64	70	76	72	90	84
SIB F2S 34	64	70	76	72	90	84
SIB F2S 35	64	70	76	72	90	84

### show chassis temperature-thresholds (TX Matrix Plus routers with 3D SIBs)

```
user@host> show chassis temperature-thresholds
sfc0-re0:
```

Shutdown	Fan speed		Yellow alarm		Red alarm		Fire
(degrees C)	(degrees C)		(degrees C)		(degrees C)		
Item	Normal	High	Normal	Bad fan	Normal	Bad fan	
Normal							
Chassis default	48	54	65	55	75	65	
100							
Routing Engine 0	70	75	90	87	102	97	
115							
Routing Engine 1	70	75	90	87	102	97	
115							
SIB F13 0 Board	60	65	78	75	85	80	
95							
SIB F13 0 XF Junction	70	75	82	74	105	100	
107							
SIB F13 4 Board	60	65	78	75	85	80	
95							
SIB F13 4 XF Junction	70	75	82	74	105	100	
107							
SIB F13 6 Board	60	65	78	75	85	80	
95							
SIB F13 6 XF Junction	70	75	82	74	105	100	
107							
SIB F2S 16 Board	60	65	78	75	85	80	
95							
SIB F2S 16 XF Junction	70	75	82	74	105	100	
107							
SIB F2S 17 Board	60	65	78	75	85	80	
95							
SIB F2S 17 XF Junction	70	75	82	74	105	100	
107							
SIB F2S 18 Board	60	65	78	75	85	80	
95							
SIB F2S 18 XF Junction	70	75	82	74	105	100	
107							
SIB F2S 19 Board	60	65	78	75	85	80	
95							
SIB F2S 19 XF Junction	70	75	82	74	105	100	
107							
SIB F2S 24 Board	60	65	78	75	85	80	

95						
SIB F2S 24 XF Junction	70	75	82	74	105	100
107						
SIB F2S 25 Board	60	65	78	75	85	80
95						
SIB F2S 25 XF Junction	70	75	82	74	105	100
107						
SIB F2S 26 Board	60	65	78	75	85	80
95						
SIB F2S 26 XF Junction	70	75	82	74	105	100
107						
SIB F2S 27 Board	60	65	78	75	85	80
95						
SIB F2S 27 XF Junction	70	75	82	74	105	100
107						

lcc0-re0:

Shutdown	Fan speed		Yellow alarm		Red alarm		Fire
(degrees C)	(degrees C)		(degrees C)		(degrees C)		
Item	Normal	High	Normal	Bad fan	Normal	Bad fan	
Normal							
Chassis default	48	54	65	55	75	65	
100							
Routing Engine 0	55	65	85	85	100	100	
102							
FPC 0	63	68	75	70	90	83	
95							
FPC 1	56	62	75	63	83	76	
95							
FPC 7	56	62	75	63	83	76	
95							
SIB 0	64	70	76	72	87	84	
95							
SIB 0 ASIC Junction	63	68	75	70	105	100	
107							
SIB 2	64	70	76	72	87	84	
95							
SIB 2 ASIC Junction	63	68	75	70	105	100	
107							
SIB 3	64	70	76	72	87	84	
95							
SIB 3 ASIC Junction	63	68	75	70	105	100	
107							

#### show chassis temperature-thresholds (QFX3500 Switch and QFX3600)

user@switch> show chassis temperature-thresholds

Item	Fan speed		Yellow alarm		Red alarm	
	(degrees C)		(degrees C)		(degrees C)	
	Normal	High	Normal	Bad fan	Normal	Bad fan
rmal						
FPC Sensor TopLeft I	48	56	53	43	56	46
FPC Sensor TopRight I	46	54	51	41	54	44
FPC Sensor TopLeft E	58	65	62	52	65	55
FPC Sensor TopRight E	56	64	61	51	64	54
FPC Sensor TopMiddle I	58	64	61	51	64	54
FPC Sensor TopMiddle E	67	74	71	61	74	64
FPC Sensor Bottom I	59	67	64	54	67	57



FPC Sensor Bottom E	66	73	70	60	73	63
FPC Sensor Die Temp	69	75	72	62	75	65
FPC Sensor Mgmt Brd I	46	54	51	41	54	44
FPC Sensor Switch I	56	63	60	50	63	53

#### show chassis temperature-thresholds interconnect-device (QFabric System)

```
user@switch> show chassis temperature-thresholds interconnect-device interconnect1
temperature-thresholds interconnect-device interconnect1
```

Item	Fan speed		Yellow alarm		Red alarm	
	Normal	High	Normal	Bad fan	Normal	Bad fan
Chassis default	48	54	65	55	75	65

#### show chassis temperature-thresholds (PTX5000 Packet Transport Router)

```
user@switch> show chassis temperature-thresholds
user@switch> show chassis temperature-thresholds
```

Shutdown Item (degrees C)	Fan speed (degrees C)		Yellow alarm (degrees C)		Red alarm (degrees C)		Fire
	Normal	High	Normal	Bad fan	Normal	Bad fan	
Routing Engine 0	80	90	95	85	105	95	
CB 0 Exhaust A	60	65	78	75	85	80	
CB 0 Exhaust B	60	65	78	75	85	80	
CB 1 Exhaust A	60	65	78	75	85	80	
CB 1 Exhaust B	60	65	78	75	85	80	
FPC 3 Exhaust A	80	90	95	85	105	95	
FPC 3 Exhaust B	80	90	95	85	105	95	
FPC 3 TL5	80	90	95	85	105	95	
FPC 3 TQ5	80	90	95	85	105	95	
FPC 3 TL6	80	90	95	85	105	95	
FPC 3 TQ6	80	90	95	85	105	95	
FPC 3 TL1	80	90	95	85	105	95	
FPC 3 TQ1	80	90	95	85	105	95	
FPC 3 TL2	80	90	95	85	105	95	
FPC 3 TQ2	80	90	95	85	105	95	
FPC 3 TL4	80	90	95	85	105	95	
FPC 3 TQ4	80	90	95	85	105	95	
FPC 3 TL7	80	90	95	85	105	95	

FPC 3 TQ7 115	80	90	95	85	105	95
FPC 3 TL0 115	80	90	95	85	105	95
FPC 3 TQ0 115	80	90	95	85	105	95
FPC 3 TL3 115	80	90	95	85	105	95
FPC 3 TQ3 115	80	90	95	85	105	95
SIB 0 Exhaust 95	60	65	78	75	85	80
SIB 0 Junction 115	75	80	90	85	105	95
SIB 1 Exhaust 95	60	65	78	75	85	80
SIB 1 Junction 115	75	80	90	85	105	95
SIB 2 Exhaust 95	60	65	78	75	85	80
SIB 2 Junction 115	75	80	90	85	105	95
SIB 3 Exhaust 95	60	65	78	75	85	80
SIB 3 Junction 115	75	80	90	85	105	95
SIB 4 Exhaust 95	60	65	78	75	85	80
SIB 4 Junction 115	75	80	90	85	105	95
SIB 5 Exhaust 95	60	65	78	75	85	80
SIB 5 Junction 115	75	80	90	85	105	95
SIB 6 Exhaust 95	60	65	78	75	85	80
SIB 6 Junction 115	75	80	90	85	105	95
SIB 7 Exhaust 95	60	65	78	75	85	80
SIB 7 Junction 115	75	80	90	85	105	95
SIB 8 Exhaust 95	60	65	78	75	85	80
SIB 8 Junction 115	75	80	90	85	105	95

### show chassis temperature-thresholds (PTX1000 Packet Transport Router)

```
user@host> show chassis temperature-thresholds
```

Shutdown (degrees C) Item	Fan speed		Yellow alarm		Red alarm		Fire
	Normal	High	Normal	Bad fan	Normal	Bad fan	
FPC 0 Intake Temp Sensor 75	30	65	65	65	70	70	

FPC 0 Exhaust Temp Sensor 75	30	65	65	65	70	70
FPC 0 Mezz Temp Sensor 0 75	30	65	65	65	70	70
FPC 0 Mezz Temp Sensor 1 75	30	65	65	65	70	70
FPC 0 PE2 Temp Sensor 103	50	90	90	90	100	100
FPC 0 PE1 Temp Sensor 103	50	90	90	90	100	100
FPC 0 PF0 Temp Sensor 103	50	90	90	90	100	100
FPC 0 PE0 Temp Sensor 103	50	90	90	90	100	100
FPC 0 PE5 Temp Sensor 103	50	90	90	90	100	100
FPC 0 PE4 Temp Sensor 103	50	90	90	90	100	100
FPC 0 PF1 Temp Sensor 103	50	90	90	90	100	100
FPC 0 PE3 Temp Sensor 103	50	90	90	90	100	100
FPC 0 CPU Die Temp Sensor 103	50	90	90	90	100	100
FPC 0 OCX0 Temp Sensor 103	50	90	90	90	100	100

#### show chassis temperature-thresholds (MX Routers with Media Services Blade [MSB])

```

user@switch> show chassis temperature-thresholds
  Fan speed      Yellow alarm      Red alarm      Fire Shutdown
                (degrees C)      (degrees C)      (degrees C)
(degrees C)
Item           Normal High Normal Bad fan Normal Bad fan
Normal
Chassis default 48  54  65  55  75  65
100
Routing Engine 0 70  80  95  95  110 110
112
Routing Engine 1 70  80  95  95  110 110
112
FPC 0           55  60  75  65  90  80
95
FPC 1           55  60  75  65  90  80
95
FPC 2           55  60  75  65  90  80
95
FPC 4           55  60  75  65  90  80
95
FPC 5           55  60  75  65  90  80
95

```

#### show chassis temperature-thresholds (EX9251 Switches)

```

user@switch> show chassis temperature-thresholds

Shutdown                Fan speed      Yellow alarm      Red alarm      Fire

```

(degrees C) Item Normal	(degrees C)		(degrees C)		(degrees C)	
	Normal	High	Normal	Bad fan	Normal	Bad fan
Routing Engine			48	54	85	100
100 102						
CB Top Right Inlet Sensor			35	40	63	85
85 95						
CB Top Left Inlet Sensor			40	45	65	85
85 95						
CB Top Right Exhaust Sensor			45	50	68	85
85 95						
CB Top Left Exhaust Sensor			65	70	78	85
85 95						
CB CPU Core-0 Temp			65	70	80	90
90 100						
CB CPU Core-1 Temp			65	70	80	90
90 100						
CB CPU Core-2 Temp			65	70	80	90
90 100						
CB CPU Core-3 Temp			65	70	80	90
90 100						
CB CPU Core-4 Temp			65	70	80	90
90 100						
CB CPU Core-5 Temp			65	70	80	90
90 100						
CB CPU Core-6 Temp			65	70	80	90
90 100						
CB CPU Core-7 Temp			65	70	80	90
90 100						
FPC EA0_HMC0 Logic die			85	90	95	105
105 110						
FPC EA0_HMC0 DRAM botm			80	85	90	105
105 110						
FPC EA0_HMC1 Logic die			85	90	95	105
105 110						
FPC EA0_HMC1 DRAM botm			80	85	90	105
105 110						
FPC EA0 Chip			92	97	103	109
109 115						
FPC EA0-XR0 Chip			85	90	98	103
103 110						
FPC EA0-XR1 Chip			85	90	98	103
103 110						

### show chassis temperature-thresholds (EX9253 witches)

```
user@switch> show chassis temperature-thresholds
```

Shutdown  (degrees C) Item Normal	Fan speed		Yellow alarm		Red alarm		Fire
	(degrees C)		(degrees C)		(degrees C)		
	Normal	High	Normal	Bad fan	Normal	Bad fan	
Routing Engine 0 100 102			48	54	85	85	100
CB 0 Exhaust Temp Sensor 85 95			60	65	75	75	85
CB 0 Inlet Temp Sensor 85 95			60	65	75	75	85

CB 0 CPU DIE Temp Sensor	83	90	98	98	105
105 110					
CB 1 Exhaust Temp Sensor	60	65	75	75	85
85 95					
CB 1 Inlet Temp Sensor	60	65	75	75	85
85 95					
CB 1 CPU DIE Temp Sensor	83	90	98	98	105
105 110					
FPC 0 Intake Temp Sensor	40	45	75	70	85
80 95					
FPC 0 Exhaust-A Temp Sensor	55	60	85	80	90
90 100					
FPC 0 Exhaust-B Temp Sensor	55	60	85	80	90
90 100					
FPC 0 EA0 Chip	87	92	97	97	105
105 110					
FPC 0 EA0-XR0 Chip	88	93	98	98	120
120 125					
FPC 0 EA0-XR1 Chip	88	93	98	98	120
120 125					
FPC 0 EA1 Chip	87	92	97	97	105
105 110					
FPC 0 EA1-XR0 Chip	88	93	98	98	120
120 125					
FPC 0 EA1-XR1 Chip	88	93	98	98	120
120 125					
FPC 0 EA2 Chip	87	92	97	97	105
105 110					
FPC 0 EA2-XR0 Chip	88	93	98	98	120
120 125					
FPC 0 EA2-XR1 Chip	88	93	98	98	120
120 125					
FPC 0 PF Chip	89	94	104	104	120
120 120					
FPC 0 EA0_HMC0 Logic die	88	93	103	103	120
120 125					
FPC 0 EA0_HMC0 DRAM botm	83	88	98	98	120
120 125					
FPC 0 EA0_HMC1 Logic die	88	93	103	103	120
120 125					
FPC 0 EA0_HMC1 DRAM botm	83	88	98	98	120
120 125					
FPC 0 EA0_HMC2 Logic die	88	93	103	103	120
120 125					
FPC 0 EA0_HMC2 DRAM botm	83	88	98	98	120
120 125					
FPC 0 EA1_HMC0 Logic die	88	93	103	103	120
120 125					
FPC 0 EA1_HMC0 DRAM botm	83	88	98	98	120
120 125					
FPC 0 EA1_HMC1 Logic die	88	93	103	103	120
120 125					
FPC 0 EA1_HMC1 DRAM botm	83	88	98	98	120
120 125					
FPC 0 EA1_HMC2 Logic die	88	93	103	103	120
120 125					
FPC 0 EA1_HMC2 DRAM botm	83	88	98	98	120
120 125					
FPC 0 EA2_HMC0 Logic die	88	93	103	103	120
120 125					
FPC 0 EA2_HMC0 DRAM botm	83	88	98	98	120

120	125				
FPC 0 EA2_HMC1 Logic die		88	93	103	103
120	125				
FPC 0 EA2_HMC1 DRAM botm		83	88	98	98
120	125				
FPC 0 EA2_HMC2 Logic die		88	93	103	103
120	125				
FPC 0 EA2_HMC2 DRAM botm		83	88	98	98
120	125				
FPC 1 Intake Temp Sensor		40	45	75	70
80	95				85
FPC 1 Exhaust-A Temp Sensor		55	60	85	80
90	100				90
FPC 1 Exhaust-B Temp Sensor		55	60	85	80
90	100				90
FPC 1 EA0 Chip		87	92	97	97
105	110				105
FPC 1 EA0-XR0 Chip		88	93	98	98
120	125				120
FPC 1 EA0-XR1 Chip		88	93	98	98
120	125				120
FPC 1 EA1 Chip		87	92	97	97
105	110				105
FPC 1 EA1-XR0 Chip		88	93	98	98
120	125				120
FPC 1 EA1-XR1 Chip		88	93	98	98
120	125				120
FPC 1 EA2 Chip		87	92	97	97
105	110				105
FPC 1 EA2-XR0 Chip		88	93	98	98
120	125				120
FPC 1 EA2-XR1 Chip		88	93	98	98
120	125				120
FPC 1 PF Chip		89	94	104	104
120	120				120
FPC 1 EA0_HMC0 Logic die		88	93	103	103
120	125				120
FPC 1 EA0_HMC0 DRAM botm		83	88	98	98
120	125				120
FPC 1 EA0_HMC1 Logic die		88	93	103	103
120	125				120
FPC 1 EA0_HMC1 DRAM botm		83	88	98	98
120	125				120
FPC 1 EA0_HMC2 Logic die		88	93	103	103
120	125				120
FPC 1 EA0_HMC2 DRAM botm		83	88	98	98
120	125				120
FPC 1 EA1_HMC0 Logic die		88	93	103	103
120	125				120
FPC 1 EA1_HMC0 DRAM botm		83	88	98	98
120	125				120
FPC 1 EA1_HMC1 Logic die		88	93	103	103
120	125				120
FPC 1 EA1_HMC1 DRAM botm		83	88	98	98
120	125				120
FPC 1 EA1_HMC2 Logic die		88	93	103	103
120	125				120
FPC 1 EA1_HMC2 DRAM botm		83	88	98	98
120	125				120
FPC 1 EA2_HMC0 Logic die		88	93	103	103
120	125				120

FPC 1 EA2_HMC0 DRAM botm	83	88	98	98	120
120 125					
FPC 1 EA2_HMC1 Logic die	88	93	103	103	120
120 125					
FPC 1 EA2_HMC1 DRAM botm	83	88	98	98	120
120 125					
FPC 1 EA2_HMC2 Logic die	88	93	103	103	120
120 125					
FPC 1 EA2_HMC2 DRAM botm	83	88	98	98	120
120 125					

## show chassis zones

---

<b>List of Syntax</b>	<a href="#">Syntax on page 1016</a> <a href="#">Syntax (MX Series Routers) on page 1016</a> <a href="#">Syntax (QFX Series) on page 1016</a>
<b>Syntax</b>	show chassis zones <detail>
<b>Syntax (MX Series Routers)</b>	show chassis zones <detail> <all-members> <local> <member <i>member-id</i> >
<b>Syntax (QFX Series)</b>	show chassis zones <detail> <interconnect-device <i>name</i> >
<b>Release Information</b>	Command introduced in Junos OS Release 11.3 for the QFX Series. Command introduced in Junos OS Release 12.3 for MX2020 Universal Routing Platforms. Command introduced in Junos OS Release 12.3 for MX2010 Universal Routing Platforms. <b>all-members</b> , <b>local</b> , and <b>member <i>member-id</i></b> options introduced in Junos OS Release 15.1 for MX2020 and MX2010 routers. Command introduced in Junos OS Release 17.2 for MX2008 Universal Routing Platforms.
<b>Description</b>	<p>(QFabric systems only) Display the status of the two cooling system zones on the Interconnect device. Zone 1 consists of eight (0 – 7) front cards, which are cooled by two fan trays. Zone 2 consists of two control boards and eight rear cards, which are cooled by eight (0 – 7) fan trays.</p> <p>(MX2010, MX2020, and MX2008 routers only) Display the status of the cooling system zones of the chassis. Zone 0 consists of the Control Board, ten (0–9) FPCs, and their respective PICs, Switch Fabric Boards, and Adapter Cards. Zone 1 consists of the Routing Engine, Control Board, and Switch Processor Mezzanine Boards.</p>
<b>Options</b>	<p><b>all-members</b>—(MX2010, MX2020, and MX2008 routers only) (Optional) Display the status of the cooling system zones in all members of the Virtual Chassis configuration.</p> <p><b>detail</b>—(MX2010, MX2020, and MX2008 routers only) (Optional) Display detailed status of the cooling system zones.</p> <p><b>detail <i>device-name</i></b>— (QFabric systems only) (Optional) Display detailed status of the two cooling systems on the Interconnect device.</p> <p><b>interconnect-device <i>name</i></b>— (QFabric systems only) (Optional) Display the status of the cooling zones on the Interconnect device.</p>



**local**—(MX2010, MX2020, and MX2008 routers only) (Optional) Display the status of the cooling system zones in the local member of the Virtual Chassis.

**member *member-id***—(MX2010, MX2020, and MX2008 routers only) (Optional) Display the status of the cooling system zones in the specified member of the Virtual Chassis. Replace *member-id* with the value 0 or 1.

**Required Privilege Level**

view

**Related Documentation**

- [show chassis fan on page 391](#)
- [show chassis temperature-thresholds on page 976](#)

**List of Sample Output**

[show chassis zones interconnect-device \(QFabric System\) on page 1018](#)  
[show chassis zones \(MX2010 Router\) on page 1018](#)  
[show chassis zones detail \(MX2010 Router\) on page 1018](#)  
[show chassis zones \(MX2020 Router\) on page 1019](#)  
[show chassis zones detail \(MX2020 Router\) on page 1020](#)  
[show chassis zones \(MX2008 Router\) on page 1021](#)  
[show chassis zones detail \(MX2008 Router\) on page 1021](#)  
[show chassis beacon interconnect-device \(QFabric System\) on page 1022](#)  
[show chassis beacon interconnect-device fpc \(QFabric System\) on page 1022](#)  
[show chassis beacon node-device \(QFabric System\) on page 1022](#)  
[show chassis beacon node-device fpc \(QFabric System\) on page 1022](#)

**Output Fields**

[Table 8 on page 187](#) lists the output fields for the **show chassis zones** command. Output fields are listed in the approximate order in which they appear.

*Table 34: show chassis zones Output Fields*

Field Name	Field Description
Slot	FPC slot number of the device whose content is being displayed. On QFX3500 standalone switches, the number is always 0.
Beacon State	Status of the beacon state: <ul style="list-style-type: none"> <li>• Off—The beacon is <b>OFF</b>.</li> <li>• On—The beacon is <b>ON</b>.</li> </ul>
show chassis zones command output fields for MX2020, MX2010, and MX2008 routers:	
Driving FRU	Field replaceable unit (FRU).
Temperature	Temperature of the specified FRU in degrees Celsius and degrees Fahrenheit.
Condition	Condition of the specified FRU. Condition can be <b>HIGH TEMP</b> , <b>WARM TEMP</b> , <b>OK</b> , and <b>Offline</b> .

Table 34: show chassis zones Output Fields (continued)

Field Name	Field Description
Num Fans Missing	Number of fans or fan trays missing.
Num Fans Failed	Number of fans or fan trays that have failed.
Fan Duty Cycle	Fan duty cycle value.
show chassis zones detail command output fields for MX2020, MX2010, and MX2008 routers:	
Item	Chassis component: <ul style="list-style-type: none"> <li>Information about the chassis, Routing Engines, Control Boards (CBs), Switch Fabric Boards (SFBs), PICs, Flexible PIC Concentrators (FPCs), and Adapter Cards (ADCs).</li> </ul>
Measurement	Fan tray speed utilization in percentage.
Status	Status of the specified item. Status can be OK, Absent, or Offline.

## Sample Output

### show chassis zones interconnect-device (QFabric System)

```
user@switch> show chassis zones interconnect-device interconnect1
Slot      Beacon State
FPC       0          OFF
```

### show chassis zones (MX2010 Router)

```
user@host> show chassis zones
ZONE 0 Status
  Driving FRU          FPC 6
  Temperature          81 degrees C / 177 degrees F
  Condition            HIGH TEMP
  Num Fans Missing     0
  Num Fans Failed      0
  Fan Duty Cycle       30

ZONE 1 Status
  Driving FRU          SFB 0 Exhaust-Zone1
  Temperature          71 degrees C / 159 degrees F
  Condition            WARM TEMP
  Num Fans Missing     0
  Num Fans Failed      0
  Fan Duty Cycle       30
```

### show chassis zones detail (MX2010 Router)

```
user@host > show chassis zones
ZONE 0 Status
Item      Status      Measurement
CB 0      WARM TEMP
CB 1      WARM TEMP
```

```

FPC 0          HIGH TEMP
FPC 1          HIGH TEMP
FPC 2          WARM TEMP
FPC 3          HIGH TEMP
FPC 4          HIGH TEMP
FPC 5          HIGH TEMP
FPC 6          HIGH TEMP
FPC 7          HIGH TEMP
FPC 8          HIGH TEMP
FPC 9          HIGH TEMP
ADC 0          WARM TEMP
ADC 1          WARM TEMP
ADC 2          WARM TEMP
ADC 3          WARM TEMP
ADC 4          WARM TEMP
ADC 5          WARM TEMP
ADC 6          WARM TEMP
ADC 7          WARM TEMP
ADC 8          WARM TEMP
ADC 9          WARM TEMP
SFB 0          WARM TEMP
SFB 1          WARM TEMP
SFB 2          WARM TEMP
SFB 3          Offline
SFB 4          HIGH TEMP
SFB 5          WARM TEMP
SFB 6          HIGH TEMP
SFB 7          WARM TEMP
Fan Tray 0     OK          Spinning at 98% fan tray speed
Fan Tray 1     OK          Spinning at 98% fan tray speed

ZONE 1 Status
Item           Status      Measurement
CB 0           WARM TEMP
CB 1           WARM TEMP
Routing Engine 0 OK
Routing Engine 1 OK
SFB 0          WARM TEMP
SFB 1          WARM TEMP
SFB 2          WARM TEMP
SFB 3          Offline
SFB 4          HIGH TEMP
SFB 5          WARM TEMP
SFB 6          HIGH TEMP
SFB 7          WARM TEMP
SPMB 0         OK
SPMB 1         OK
Fan Tray 2     OK          Spinning at 64% fan tray speed
Fan Tray 3     OK          Spinning at 64% fan tray speed

```

### show chassis zones (MX2020 Router)

```

user@host> show chassis zones
ZONE 0 Status
  Driving FRU      FPC 0
  Temperature      31 degrees C / 87 degrees F
  Condition        OK
  Num Fans Missing  0
  Num Fans Failed   0
  Fan Duty Cycle    30

```

```
ZONE 1 Status
  Driving FRU          FPC 19
  Temperature          32 degrees C / 89 degrees F
  Condition            OK
  Num Fans Missing     0
  Num Fans Failed      0
  Fan Duty Cycle       30
```

#### show chassis zones detail (MX2020 Router)

```
user@host> show chassis zones detail
```

```
ZONE 0 Status
Item              Status      Measurement
CB 0              OK
CB 1              OK
FPC 0             OK
FPC 1             OK
FPC 2             OK
FPC 3             OK
FPC 4             OK
FPC 5             OK
FPC 6             OK
FPC 7             OK
FPC 8             OK
FPC 9             OK
ADC 0             OK
ADC 1             OK
ADC 2             OK
ADC 3             OK
ADC 4             OK
ADC 5             OK
ADC 6             OK
ADC 7             OK
ADC 8             OK
ADC 9             OK
SFB 0             OK
SFB 1             OK
SFB 2             OK
SFB 3             OK
SFB 4             OK
SFB 5             OK
SFB 6             OK
SFB 7             OK
Fan Tray 0        OK           Spinning at 38% fan tray speed
Fan Tray 1        OK           Spinning at 37% fan tray speed
```

```
ZONE 1 Status
Item              Status      Measurement
CB 0              OK
CB 1              OK
Routing Engine 0  OK
Routing Engine 1  OK
FPC 10           OK
FPC 11           OK
FPC 12           OK
FPC 13           OK
FPC 14           OK
FPC 15           OK
FPC 16           OK
FPC 17           OK
FPC 18           OK
```

FPC 19	OK	
ADC 10	OK	
ADC 11	OK	
ADC 12	OK	
ADC 13	OK	
ADC 14	OK	
ADC 15	OK	
ADC 16	OK	
ADC 17	OK	
ADC 18	OK	
ADC 19	OK	
SFB 0	OK	
SFB 1	OK	
SFB 2	OK	
SFB 3	OK	
SFB 4	OK	
SFB 5	OK	
SFB 6	OK	
SFB 7	OK	
SPMB 0	OK	
SPMB 1	OK	
Fan Tray 2	OK	Spinning at 38% fan tray speed
Fan Tray 3	OK	Spinning at 38% fan tray speed

#### show chassis zones (MX2008 Router)

```
user@host> show chassis zones
```

ZONE 0 Status	
Driving FRU	Routing Engine 0
Temperature	67 degrees C / 152 degrees F
Condition	WARM TEMP
Num Fans Missing	0
Num Fans Failed	0
Fan Duty Cycle	27

#### show chassis zones detail (MX2008 Router)

```
user@host> show chassis zones detail
```

ZONE 0 Status		
Item	Status	Measurement
CB 0	OK	
CB 1	OK	
Routing Engine 0	OK	
Routing Engine 1	OK	
FPC 0	OK	
FPC 1	Absent	
FPC 2	Absent	
FPC 3	OK	
FPC 4	Absent	
FPC 5	OK	
FPC 6	Absent	
FPC 7	OK	
FPC 8	Absent	
FPC 9	OK	
ADC 0	OK	
ADC 1	Absent	
ADC 2	Absent	
ADC 3	OK	
ADC 4	Absent	

ADC 5	OK	
ADC 6	Absent	
ADC 7	OK	
ADC 8	Absent	
ADC 9	Absent	
SFB 0	OK	
SFB 1	OK	
SFB 2	OK	
SFB 3	OK	
SFB 4	OK	
SFB 5	OK	
SFB 6	OK	
SFB 7	OK	
SPMB 0	OK	
SPMB 1	OK	
Fan Tray 0	OK	Spinning at 60% fan tray speed
Fan Tray 1	OK	Spinning at 58% fan tray speed

#### show chassis beacon interconnect-device (QFabric System)

```
user@switch> show chassis beacon interconnect-device interconnect1
Chassis                OFF
CB 0                   OFF
CB 1                   OFF
FC 0 FPC 0             OFF
FC 1 FPC 1             OFF
RC 0 FPC 8             OFF
RC 1 FPC 9             OFF
```

#### show chassis beacon interconnect-device fpc (QFabric System)

```
user@switch> show chassis beacon interconnect-device interconnect1 fpc 0
FPC 0                  ON
```

#### show chassis beacon node-device (QFabric System)

```
user@switch> show chassis beacon node-device node1
node1                  ON
```

#### show chassis beacon node-device fpc (QFabric System)

```
user@switch> show chassis beacon node-device node1 fpc 0
FPC 0                  ON
```

## show host

---

<b>Syntax</b>	<code>show host <i>hostname</i></code>
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. Command introduced in Junos OS Release 9.0 for EX Series switches. Command introduced in Junos OS Release 11.1 for the QFX Series. Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Display Domain Name System (DNS) hostname information.
<b>Options</b>	<i>hostname</i> —Hostname or address.
<b>Additional Information</b>	The <code>show host</code> command displays the raw data received from the DNS server.
<b>Required Privilege Level</b>	view
<b>List of Sample Output</b>	<a href="#">show host on page 1023</a>

### Sample Output

#### show host

```
user@host> show host device
device.example.net has address 192.0.2.0

user@host> show host 192.0.2.0
Name: device.example.net
Address: 192.0.2.0
Aliases:
```

## show interfaces diagnostics optics

<b>Syntax</b>	<code>show interfaces diagnostics optics <i>interface-name</i></code>
<b>Release Information</b>	Command introduced in Junos OS Release 11.1 for the QFX Series.
<b>Description</b>	<p>Display diagnostics data and alarms for Gigabit Ethernet, 10-Gigabit Ethernet, and QSFP+ optical transceivers installed in a QFX Series product. The information provided by this command is known as digital optical monitoring (DOM) information.</p> <p>Thresholds that trigger a high alarm, low alarm, high warning, or low warning are set by the transponder vendors. Generally, a high alarm or low alarm indicates that the optics module is not operating properly. This information can be used to diagnose why a transceiver is not working.</p>
<b>Options</b>	<i>interface-name</i> —Name of the interface associated with the port in which the transceiver is installed.
<b>Required Privilege Level</b>	view
<b>Related Documentation</b>	<ul style="list-style-type: none"> <li>• <a href="#">Monitoring Interface Status and Traffic on page 51</a></li> <li>• <a href="#">Installing a Transceiver in a QFX Series Device</a></li> <li>• <a href="#">Removing a Transceiver from a QFX Series Device</a></li> <li>• <a href="#">Junos OS Network Interfaces Library for Routing Devices</a></li> </ul>
<b>List of Sample Output</b>	<a href="#">show interfaces diagnostics optics xe-0/0/1 (SFP+ Transceiver) on page 1028</a> <a href="#">show interfaces diagnostics optics node1:xe-0/0/1 (SFP+ Transceiver) on page 1029</a>
<b>Output Fields</b>	lists the output fields for the <code>show interfaces diagnostics optics</code> command. Output fields are listed in the approximate order in which they appear.

*Table 35: show interfaces diagnostics optics Output Fields*

Field Name	Field Description
Physical interface	Displays the name of the physical interface.
Laser bias current	Displays the magnitude of the laser bias power setting current, in milliamperes. The laser bias provides direct modulation of laser diodes and modulates currents.
Laser output power	Displays the laser output power, in milliwatts (mW) and decibels referred to 1.0 mW (dBm).
Module temperature	Displays the temperature, in Celsius and Fahrenheit.



Table 35: show interfaces diagnostics optics Output Fields (continued)

Field Name	Field Description
<b>Module voltage</b> (Not available for XFP transceivers)	Displays the voltage, in volts.
<b>Laser rx power</b> (Not available for SFP and SFP+ transceivers)	Displays the laser received optical power, in milliwatts (mW) and decibels referred to 1.0 mW (dBm).
<b>Receiver signal average optical power</b> (Not available for XFP transceivers)	Displays the receiver signal average optical power, in milliwatts (mW) and decibels referred to 1.0 mW (dBm).
<b>Laser bias current high alarm</b>	Displays whether the laser bias power setting high alarm is <b>On</b> or <b>Off</b> .
<b>Laser bias current low alarm</b>	Displays whether the laser bias power setting low alarm is <b>On</b> or <b>Off</b> .
<b>Laser bias current high warning</b>	Displays whether the laser bias power setting high warning is <b>On</b> or <b>Off</b> .
<b>Laser bias current low warning</b>	Displays whether the laser bias power setting low warning is <b>On</b> or <b>Off</b> .
<b>Laser output power high alarm</b>	Displays whether the laser output power high alarm is <b>On</b> or <b>Off</b> .
<b>Laser output power low alarm</b>	Displays whether the laser output power low alarm is <b>On</b> or <b>Off</b> .
<b>Laser output power high warning</b>	Displays whether the laser output power high warning is <b>On</b> or <b>Off</b> .
<b>Laser output power low warning</b>	Displays whether the laser output power low warning is <b>On</b> or <b>Off</b> .
<b>Module temperature high alarm</b>	Displays whether the module temperature high alarm is <b>On</b> or <b>Off</b> .
<b>Module temperature low alarm</b>	Displays whether the module temperature low alarm is <b>On</b> or <b>Off</b> .
<b>Module temperature high warning</b>	Displays whether the module temperature high warning is <b>On</b> or <b>Off</b> .
<b>Module temperature low warning</b>	Displays whether the module temperature low warning is <b>On</b> or <b>Off</b> .
<b>Module voltage high alarm</b> (Not available for XFP transceivers)	Displays whether the module voltage high alarm is <b>On</b> or <b>Off</b> .
<b>Module voltage low alarm</b> (Not available for XFP transceivers)	Displays whether the module voltage low alarm is <b>On</b> or <b>Off</b> .
<b>Module voltage high warning</b> (Not available for XFP transceivers)	Displays whether the module voltage high warning is <b>On</b> or <b>Off</b> .

Table 35: show interfaces diagnostics optics Output Fields (continued)

Field Name	Field Description
<b>Module voltage low warning</b> (Not available for XFP transceivers)	Displays whether the module voltage low warning is <b>On</b> or <b>Off</b> .
<b>Laser rx power high alarm</b>	Displays whether the receive laser power high alarm is <b>On</b> or <b>Off</b> .
<b>Laser rx power low alarm</b>	Displays whether the receive laser power low alarm is <b>On</b> or <b>Off</b> .
<b>Laser rx power high warning</b>	Displays whether the receive laser power high warning is <b>On</b> or <b>Off</b> .
<b>Laser rx power low warning</b>	Displays whether the receive laser power low warning is <b>On</b> or <b>Off</b> .
<b>Laser bias current high alarm threshold</b>	Displays the vendor-specified threshold for the laser bias current high alarm.
<b>Module not ready alarm</b> (Not available for SFP and SFP+ transceivers)	Displays whether the module not ready alarm is <b>On</b> or <b>Off</b> . When the output is <b>On</b> , the module has an operational fault.
<b>Module power down alarm</b> (Not available for SFP and SFP+ transceivers)	Displays whether the module power down alarm is <b>On</b> or <b>Off</b> . When the output is <b>On</b> , the module is in a limited power mode, low for normal operation.
<b>Tx data not ready alarm</b> (Not available for SFP and SFP+ transceivers)	Any condition leading to invalid data on the transmit path. Displays whether the Tx data not ready alarm is <b>On</b> or <b>Off</b> .
<b>Tx not ready alarm</b> (Not available for SFP and SFP+ transceivers)	Any condition leading to invalid data on the transmit path. Displays whether the Tx not ready alarm is <b>On</b> or <b>Off</b> .
<b>Tx laser fault alarm</b> (Not available for SFP and SFP+ transceivers)	Laser fault condition. Displays whether the Tx laser fault alarm is <b>On</b> or <b>Off</b> .
<b>Tx CDR loss of lock alarm</b> (Not available for SFP and SFP+ transceivers)	Transmit clock and data recovery (CDR) loss of lock. Loss of lock on the transmit side of the CDR. Displays whether the Tx CDR loss of lock alarm is <b>On</b> or <b>Off</b> .
<b>Rx not ready alarm</b> (Not available for SFP and SFP+ transceivers)	Any condition leading to invalid data on the receive path. Displays whether the Rx not ready alarm is <b>On</b> or <b>Off</b> .
<b>Rx loss of signal alarm</b> (Not available for SFP and SFP+ transceivers)	Receive loss of signal alarm. When <b>on</b> , indicates insufficient optical input power to the module. Displays whether the Rx loss of signal alarm is <b>On</b> or <b>Off</b> .
<b>Rx CDR loss of lock alarm</b> (Not available for SFP and SFP+ transceivers)	Receive CDR loss of lock. Loss of lock on the receive side of the CDR. Displays whether the Rx CDR loss of lock alarm is <b>On</b> or <b>Off</b> .

Table 35: show interfaces diagnostics optics Output Fields (continued)

Field Name	Field Description
Laser bias current low alarm threshold	Displays the vendor-specified threshold for the laser bias current low alarm.
Laser bias current high warning threshold	Displays the vendor-specified threshold for the laser bias current high warning.
Laser bias current low warning threshold	Displays the vendor-specified threshold for the laser bias current low warning.
Laser output power high alarm threshold	Displays the vendor-specified threshold for the laser output power high alarm.
Laser output power low alarm threshold	Displays the vendor-specified threshold for the laser output power low alarm.
Laser output power high warning threshold	Displays the vendor-specified threshold for the laser output power high warning.
Laser output power low warning threshold	Displays the vendor-specified threshold for the laser output power low warning.
Module temperature high alarm threshold	Displays the vendor-specified threshold for the module temperature high alarm.
Module temperature low alarm threshold	Displays the vendor-specified threshold for the module temperature low alarm.
Module temperature high warning threshold	Displays the vendor-specified threshold for the module temperature high warning.
Module temperature low warning threshold	Displays the vendor-specified threshold for the module temperature low warning.
Module voltage high alarm threshold (Not available for XFP transceivers)	Displays the vendor-specified threshold for the module voltage high alarm.
Module voltage low alarm threshold (Not available for XFP transceivers)	Displays the vendor-specified threshold for the module voltage low alarm.
Module voltage high warning threshold (Not available for XFP transceivers)	Displays the vendor-specified threshold for the module voltage high warning.
Module voltage low warning threshold (Not available for XFP transceivers)	Displays the vendor-specified threshold for the module voltage low warning.
Laser rx power high alarm threshold	Displays the vendor-specified threshold for the laser Rx power high alarm.

Table 35: show interfaces diagnostics optics Output Fields (continued)

Field Name	Field Description
Laser rx power low alarm threshold	Displays the vendor-specified threshold for the laser Rx power low alarm.
Laser rx power high warning threshold	Displays the vendor-specified threshold for the laser Rx power high warning.
Laser rx power low warning threshold	Displays the vendor-specified threshold for the laser Rx power low warning.

## Sample Output

### show interfaces diagnostics optics xe-0/0/1 (SFP+ Transceiver)

```

user@host> show interfaces diagnostics optics xe-0/0/1
Physical interface: xe-0/0/1
  Laser bias current           : 4.968 mA
  Laser output power          : 0.4940 mW / -3.06 dBm
  Module temperature          : 27 degrees C / 81 degrees F
  Module voltage              : 3.2310 V
  Receiver signal average optical power : 0.0000
  Laser bias current high alarm : Off
  Laser bias current low alarm  : Off
  Laser bias current high warning : Off
  Laser bias current low warning : Off
  Laser output power high alarm : Off
  Laser output power low alarm  : Off
  Laser output power high warning : Off
  Laser output power low warning : Off
  Module temperature high alarm : Off
  Module temperature low alarm  : Off
  Module temperature high warning : Off
  Module temperature low warning : Off
  Module voltage high alarm     : Off
  Module voltage low alarm      : Off
  Module voltage high warning   : Off
  Module voltage low warning    : Off
  Laser rx power high alarm     : Off
  Laser rx power low alarm      : On
  Laser rx power high warning   : Off
  Laser rx power low warning    : On
  Laser bias current high alarm threshold : 10.500 mA
  Laser bias current low alarm threshold : 2.000 mA
  Laser bias current high warning threshold : 9.000 mA
  Laser bias current low warning threshold : 2.500 mA
  Laser output power high alarm threshold : 1.4120 mW / 1.50 dBm
  Laser output power low alarm threshold : 0.0740 mW / -11.31 dBm
  Laser output power high warning threshold : 0.7070 mW / -1.51 dBm
  Laser output power low warning threshold : 0.1860 mW / -7.30 dBm
  Module temperature high alarm threshold : 75 degrees C / 167 degrees F
  Module temperature low alarm threshold : -5 degrees C / 23 degrees F
  Module temperature high warning threshold : 70 degrees C / 158 degrees F
  Module temperature low warning threshold : 0 degrees C / 32 degrees F
  Module voltage high alarm threshold : 3.630 V
  Module voltage low alarm threshold : 2.970 V
  Module voltage high warning threshold : 3.465 V

```

```

Module voltage low warning threshold      : 3.135 V
Laser rx power high alarm threshold      : 1.5849 mW / 2.00 dBm
Laser rx power low alarm threshold       : 0.0407 mW / -13.90 dBm
Laser rx power high warning threshold    : 0.7943 mW / -1.00 dBm
Laser rx power low warning threshold     : 0.1023 mW / -9.90 dBm

```

#### show interfaces diagnostics optics node1:xe-0/0/1 (SFP+ Transceiver)

```

user@host> show interfaces diagnostics optics node1:xe-0/0/1
Physical interface: node1:xe-0/0/1
  Laser bias current                : 4.968 mA
  Laser output power                : 0.4940 mW / -3.06 dBm
  Module temperature                : 27 degrees C / 81 degrees F
  Module voltage                    : 3.2310 V
  Receiver signal average optical power : 0.0000
  Laser bias current high alarm      : Off
  Laser bias current low alarm       : Off
  Laser bias current high warning    : Off
  Laser bias current low warning     : Off
  Laser output power high alarm      : Off
  Laser output power low alarm       : Off
  Laser output power high warning    : Off
  Laser output power low warning     : Off
  Module temperature high alarm      : Off
  Module temperature low alarm       : Off
  Module temperature high warning    : Off
  Module temperature low warning     : Off
  Module voltage high alarm          : Off
  Module voltage low alarm           : Off
  Module voltage high warning        : Off
  Module voltage low warning         : Off
  Laser rx power high alarm          : Off
  Laser rx power low alarm           : On
  Laser rx power high warning        : Off
  Laser rx power low warning         : On
  Laser bias current high alarm threshold : 10.500 mA
  Laser bias current low alarm threshold : 2.000 mA
  Laser bias current high warning threshold : 9.000 mA
  Laser bias current low warning threshold : 2.500 mA
  Laser output power high alarm threshold : 1.4120 mW / 1.50 dBm
  Laser output power low alarm threshold : 0.0740 mW / -11.31 dBm
  Laser output power high warning threshold : 0.7070 mW / -1.51 dBm
  Laser output power low warning threshold : 0.1860 mW / -7.30 dBm
  Module temperature high alarm threshold : 75 degrees C / 167 degrees F
  Module temperature low alarm threshold : -5 degrees C / 23 degrees F
  Module temperature high warning threshold : 70 degrees C / 158 degrees F
  Module temperature low warning threshold : 0 degrees C / 32 degrees F
  Module voltage high alarm threshold : 3.630 V
  Module voltage low alarm threshold : 2.970 V
  Module voltage high warning threshold : 3.465 V
  Module voltage low warning threshold : 3.135 V
  Laser rx power high alarm threshold : 1.5849 mW / 2.00 dBm
  Laser rx power low alarm threshold : 0.0407 mW / -13.90 dBm
  Laser rx power high warning threshold : 0.7943 mW / -1.00 dBm
  Laser rx power low warning threshold : 0.1023 mW / -9.90 dBm

```

## show subscribers

---

**Syntax**    show subscribers  
              <detail | extensive | terse>  
              <aci-interface-set-name *aci-interface-set-name*>  
              <address *address*>  
              <agent-circuit-identifier *agent-circuit-identifier*>  
              <client-type *client-type*>  
              <count>  
              <id *session-id* <accounting-statistics>>  
              <interface *interface* <accounting-statistics>>  
              <logical-system *logical-system*>  
              <mac-address *mac-address*>  
              <physical-interface *physical-interface-name*>  
              <profile-name *profile-name*>  
              <routing-instance *routing-instance*>  
              <stacked-vlan-id *stacked-vlan-id*>  
              <subscriber-state *subscriber-state*>  
              <user-name *user-name*>  
              <vci *vci-identifier*>  
              <vpi *vpi-identifier*>  
              <vlan-id *vlan-id*>

**Release Information**    Command introduced in Junos OS Release 9.3.  
                              Command introduced in Junos OS Release 9.3 for EX Series switches.  
                              **client-type**, **mac-address**, **subscriber-state**, and **extensive** options introduced in Junos OS Release 10.2.  
                              **count** option usage with other options introduced in Junos OS Release 10.2.  
                              Command introduced in Junos OS Release 11.1 for the QFX Series.  
                              Options **aci-interface-set-name** and **agent-circuit-identifier** introduced in Junos OS Release 12.2.  
                              The **physical-interface** and **user-name** options introduced in Junos OS Release 12.3.  
                              Options **vci** and **vpi** introduced in Junos OS Release 12.3R3 and supported in later 12.3Rx releases.  
                              Options **vci** and **vpi** supported in Junos OS Release 13.2 and later releases. (Not supported in Junos OS Release 13.1.)  
                              Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.  
                              Enhanced subscriber management supported in Junos OS Release 15.1R3 for the MX Series.  
                              **accounting-statistics** option added in Junos OS Release 15.1R3 and 17.4R1 for MX Series.

**Description**    Display information for active subscribers.

**Options**    **detail | extensive | terse**—(Optional) Display the specified level of output.

**aci-interface-set-name**—(Optional) Display all dynamic subscriber sessions that use the specified agent circuit identifier (ACI) interface set. Use the ACI interface set name generated by the router, such as aci-1003-ge-1/0/0.4001, and not the actual ACI value found in the DHCP or PPPoE control packets.

**address**—(Optional) Display subscribers whose IP address matches the specified address. You must specify the IPv4 or IPv6 address prefix without a netmask (for example, 192.0.2.0). If you specify the IP address as a prefix with a netmask (for example, 192.0.2.0/32), the router displays a message that the IP address is invalid, and rejects the command.

**agent-circuit-identifier**—(Optional) Display all dynamic subscriber sessions whose ACI value matches the specified string. You can specify either the complete ACI string or a substring. To specify a substring, you must enter characters that form the beginning of the string, followed by an asterisk (\*) as a wildcard to substitute for the remainder of the string. The wildcard can be used only at the end of the specified substring; for example:

```
user@host1> show subscribers agent-circuit-identifier substring*
```

Junos OS Release	Substring Support
Junos OS Release 13.3R1	You can specify a substring without a wildcard.
Starting in Junos OS Release 14.1R1	You must specify the complete ACI string; you cannot specify a wildcard.
Starting in Junos OS Release 15.1R7, 16.1R7, 16.2R3, 17.1R3, 17.2R3, 17.3R3, 17.4R2, 18.1R2, 18.2R1	You can specify a substring, but you must include the wildcard character at the end of the substring.

**client-type**—(Optional) Display subscribers whose client type matches one of the following client types:

- **dhcp**—DHCP clients only.
- **dotlx**—DotLx clients only.
- **essm**—ESSM clients only.
- **fwauth**—FwAuth (authenticated across a firewall) clients only.
- **l2tp**—L2TP clients only.
- **mlppp**—MLPPP clients only.
- **ppp**—PPP clients only.
- **pppoe**—PPPoE clients only.
- **static**—Static clients only.
- **vlan**—VLAN clients only.
- **vlan-oob**—VLAN out-of-band (ANCP-triggered) clients only.
- **vpls-pw**—VPLS pseudowire clients only.
- **xauth**—Xauth clients only.

**count**—(Optional) Display the count of total subscribers and active subscribers for any specified option. You can use the **count** option alone or with the **address**, **client-type**, **interface**, **logical-system**, **mac-address**, **profile-name**, **routing-instance**, **stacked-vlan-id**, **subscriber-state**, or **vlan-id** options.

**id session-id**—(Optional) Display a specific subscriber session whose session ID matches the specified subscriber ID. You can display subscriber IDs by using the **show subscribers extensive** or the **show subscribers interface extensive** commands.

**id session-id accounting-statistics**—(Optional) Display accurate subscriber accounting statistics for a subscriber session with the specified ID. Requires the **actual-transmit-statistics** statement to be configured in the dynamic profile for the dynamic logical interface.

**interface**—(Optional) Display subscribers whose interface matches the specified interface.

**interface accounting-statistics**—(Optional) Display subscriber accounting statistics for the specified interface. Requires the **actual-transmit-statistics** statement to be configured in the dynamic profile for the dynamic logical interface.

**logical-system**—(Optional) Display subscribers whose logical system matches the specified logical system.

**mac-address**—(Optional) Display subscribers whose MAC address matches the specified MAC address.

**physical-interface-name**—(M120, M320, and MX Series routers only) (Optional) Display subscribers whose physical interface matches the specified physical interface.

**profile-name**—(Optional) Display subscribers whose dynamic profile matches the specified profile name.

**routing-instance**—(Optional) Display subscribers whose routing instance matches the specified routing instance.

**stacked-vlan-id**—(Optional) Display subscribers whose stacked VLAN ID matches the specified stacked VLAN ID.

**subscriber-state**—(Optional) Display subscribers whose subscriber state matches the specified subscriber state (ACTIVE, CONFIGURED, INIT, TERMINATED, or TERMINATING).

**user-name**—(M120, M320, and MX Series routers only) (Optional) Display subscribers whose username matches the specified subscriber name.

**vci-identifier**—(MX Series routers with MPCs and ATM MICs with SFP only) (Optional) Display active ATM subscribers whose ATM virtual circuit identifier (VCI) matches the specified VCI identifier. The range of values is 0 through 255.

**vpi-identifier**—(MX Series routers with MPCs and ATM MICs with SFP only) (Optional) Display active ATM subscribers whose ATM virtual path identifier (VPI) matches the specified VPI identifier. The range of values is 0 through 65,535.



**vlan-id**—(Optional) Display subscribers whose VLAN ID matches the specified VLAN ID, regardless of whether the subscriber uses a single-tagged or double-tagged VLAN. For subscribers using a double-tagged VLAN, this option displays subscribers where the inner VLAN tag matches the specified VLAN ID. To display only subscribers where the specified value matches only double-tagged VLANs, use the **stacked-vlan-id** option to match the outer VLAN tag.



**NOTE:** Because of display limitations, logical system and routing instance output values are truncated when necessary.

**Required Privilege Level**

view

**Related Documentation**

- [show subscribers summary](#)
- [Verifying and Managing Agent Circuit Identifier-Based Dynamic VLAN Configuration](#)
- [Verifying and Managing Configurations for Dynamic VLANs Based on Access-Line Identifiers](#)
- [Verifying and Managing Junos OS Enhanced Subscriber Management](#)

**List of Sample Output**

[show subscribers \(IPv4\) on page 1040](#)  
[show subscribers \(IPv6\) on page 1040](#)  
[show subscribers \(IPv4 and IPv6 Dual Stack\) on page 1040](#)  
[show subscribers \(Single Session DHCP Dual Stack\) on page 1041](#)  
[show subscribers \(Single Session DHCP Dual Stack detail\) on page 1041](#)  
[show subscribers \(LNS on MX Series Routers\) on page 1041](#)  
[show subscribers \(L2TP Switched Tunnels\) on page 1041](#)  
[show subscribers client-type dhcp detail on page 1042](#)  
[show subscribers client-type dhcp detail \(DHCPv6\) on page 1042](#)  
[show subscribers client-type dhcp extensive on page 1043](#)  
[show subscribers client-type vlan-oob detail on page 1043](#)  
[show subscribers count on page 1044](#)  
[show subscribers address detail \(IPv6\) on page 1044](#)  
[show subscribers detail \(IPv4\) on page 1044](#)  
[show subscribers detail \(IPv6\) on page 1045](#)  
[show subscribers detail \(pseudowire Interface for GRE Tunnel\) on page 1045](#)  
[show subscribers detail \(IPv6 Static Demux Interface\) on page 1045](#)  
[show subscribers detail \(L2TP LNS Subscribers on MX Series Routers\) on page 1045](#)  
[show subscribers detail \(L2TP Switched Tunnels\) on page 1046](#)  
[show subscribers detail \(Tunneled Subscriber\) on page 1046](#)  
[show subscribers detail \(IPv4 and IPv6 Dual Stack\) on page 1047](#)  
[show subscribers detail \(ACI Interface Set Session\) on page 1047](#)  
[show subscribers detail \(PPPoE Subscriber Session with ACI Interface Set\) on page 1048](#)  
[show subscribers extensive on page 1048](#)

[show subscribers extensive \(Passive Optical Network Circuit Interface Set\) on page 1048](#)  
[show subscribers extensive \(DNS Addresses from Access Profile or Global Configuration\) on page 1049](#)  
[show subscribers extensive \(DNS Addresses from RADIUS\) on page 1049](#)  
[show subscribers extensive \(IPv4 DNS Addresses from RADIUS, IPv6 from Access Profile or Global Configuration\) on page 1050](#)  
[show subscribers extensive \(RPF Check Fail Filter\) on page 1050](#)  
[show subscribers extensive \(L2TP LNS Subscribers on MX Series Routers\) on page 1051](#)  
[show subscribers extensive \(IPv4 and IPv6 Dual Stack\) on page 1051](#)  
[show subscribers extensive \(ADF Rules \) on page 1052](#)  
[show subscribers extensive \(Effective Shaping-Rate\) on page 1052](#)  
[show subscribers extensive \(PPPoE Subscriber Access Line Rates on page 1052](#)  
[show subscribers extensive \(Subscriber Session Using PCEF Profile\) on page 1054](#)  
[show subscribers aci-interface-set-name detail \(Subscriber Sessions Using Specified ACI Interface Set\) on page 1055](#)  
[show subscribers agent-circuit-identifier detail \(Subscriber Sessions Using Specified ACI Substring\) on page 1055](#)  
[show subscribers id accounting-statistics on page 1056](#)  
[show subscribers interface accounting-statistics on page 1056](#)  
[show subscribers interface extensive on page 1057](#)  
[show subscribers logical-system terse on page 1057](#)  
[show subscribers physical-interface count on page 1058](#)  
[show subscribers routing-instance inst1 count on page 1058](#)  
[show subscribers stacked-vlan-id detail on page 1058](#)  
[show subscribers stacked-vlan-id vlan-id detail \(Combined Output\) on page 1058](#)  
[show subscribers stacked-vlan-id vlan-id interface detail \(Combined Output for a Specific Interface\) on page 1058](#)  
[show subscribers user-name detail on page 1058](#)  
[show subscribers vlan-id on page 1059](#)  
[show subscribers vlan-id detail on page 1059](#)  
[show subscribers vpi vci extensive \(PPPoE-over-ATM Subscriber Session\) on page 1059](#)  
[show subscribers address detail \(Enhanced Subscriber Management\) on page 1060](#)

**Output Fields** [Table 36 on page 1034](#) lists the output fields for the **show subscribers** command. Output fields are listed in the approximate order in which they appear.

*Table 36: show subscribers Output Fields*

Field Name	Field Description
<b>Interface</b>	<p>Interface associated with the subscriber. The router or switch displays subscribers whose interface matches or begins with the specified interface.</p> <p>The * character indicates a continuation of addresses for the same session.</p>
<b>IP Address/VLAN ID</b>	<p>Subscriber IP address or VLAN ID associated with the subscriber in the form <i>tpid.vlan-id</i></p> <p>No IP address or VLAN ID is assigned to an L2TP tunnel-switched session. For these subscriber sessions the value is <b>Tunnel-switched</b>.</p>
<b>User Name</b>	Name of subscriber.

Table 36: show subscribers Output Fields (continued)

Field Name	Field Description
<b>LS:RI</b>	Logical system and routing instance associated with the subscriber.
<b>Type</b>	Subscriber client type (DHCP, GRE, L2TP, PPP, PPPoE, STATIC-INTERFACE, VLAN).
<b>IP Address</b>	Subscriber IPv4 address.
<b>IP Netmask</b>	Subscriber IP netmask.  (MX Series) This field displays 255.255.255.255 by default. For tunneled or terminated PPP subscribers only, this field displays the actual value of Framed-IP-Netmask when the SDB_FRAMED_PROTOCOL attribute in the session database is equal to AUTHD_FRAMED_PROTOCOL_PPP. This occurs in the use case where the LNS generates access-internal routes when it receives Framed-IP-Netmask from RADIUS during authorization. When it receives Framed-Pool from RADIUS, the pool mask is ignored and the default /32 mask is used.
<b>Primary DNS Address</b>	IP address of primary DNS server.  This field is displayed with the <b>extensive</b> option only when the address is provided by RADIUS.
<b>Secondary DNS Address</b>	IP address of secondary DNS server.  This field is displayed with the <b>extensive</b> option only when the address is provided by RADIUS.
<b>IPv6 Primary DNS Address</b>	IPv6 address of primary DNS server.  This field is displayed with the <b>extensive</b> option only when the address is provided by RADIUS.
<b>IPv6 Secondary DNS Address</b>	IPv6 address of secondary DNS server.  This field is displayed with the <b>extensive</b> option only when the address is provided by RADIUS.
<b>Domain name server inet</b>	IP addresses for the DNS server, displayed in order of configuration.  This field is displayed with the <b>extensive</b> option only when the addresses are derived from the access profile or the global access configuration.
<b>Domain name server inet6</b>	IPv6 addresses for the DNS server, displayed in order of configuration.  This field is displayed with the <b>extensive</b> option only when the addresses are derived from the access profile or the global access configuration.
<b>Primary WINS Address</b>	IP address of primary WINS server.
<b>Secondary WINS Address</b>	IP address of secondary WINS server.
<b>IPv6 Address</b>	Subscriber IPv6 address, or multiple addresses.
<b>IPv6 Prefix</b>	Subscriber IPv6 prefix. If you are using DHCPv6 prefix delegation, this is the delegated prefix.
<b>IPv6 User Prefix</b>	IPv6 prefix obtained through NDRA.

Table 36: show subscribers Output Fields (continued)

Field Name	Field Description
IPv6 Address Pool	Subscriber IPv6 address pool. The IPv6 address pool is used to allocate IPv6 prefixes to the DHCPv6 clients.
IPv6 Network Prefix Length	Length of the network portion of the IPv6 address.
IPv6 Prefix Length	Length of the subscriber IPv6 prefix.
Logical System	Logical system associated with the subscriber.
Routing Instance	Routing instance associated with the subscriber.
Interface	(Enhanced subscriber management for MX Series routers) Name of the enhanced subscriber management logical interface, in the form <b>demux0.nnnn</b> (for example, <b>demux0.3221225472</b> ), to which access-internal and framed subscriber routes are mapped.
Interface Type	Whether the subscriber interface is <b>Static</b> or <b>Dynamic</b> .
Interface Set	<p>Internally generated name of the dynamic ACI or ALI interface set used by the subscriber session. The prefix of the name indicates the string received in DHCP or PPPoE control packets on which the interface set is based. For ALI interface sets, the prefix indicates that the value is configured as a trusted option to identify the subscriber line.</p> <p>The name of the interface set uses one of the following prefixes:</p> <ul style="list-style-type: none"> <li>• <b>aci</b>—ACI; for example, <b>aci-1033-demux0.3221225524</b>. This is the only prefix allowed for ACI interface sets.</li> <li>• <b>ari</b>—ARI; for example, <b>ari-1033-demux0.3221225524</b>.</li> <li>• <b>aci+ari</b>—Both the ACI and ARI; for example, <b>aci+ari-1033-demux0.3221225524</b>.</li> <li>• <b>noids</b>—Neither the ACI nor the ARI were received; for example, <b>noids-1033-demux0.3221225524</b>.</li> </ul> <p><b>NOTE:</b> ACI interface sets are configured with the <b>agent-circuit-identifier</b> autoconfiguration stanza. ALI interface sets are configured with the <b>line-identity</b> autoconfiguration stanza.</p> <p>Besides dynamic ACI and ALI interface sets, this field can be an interface set based on a substring of the ARI string. This occurs when the dynamic profile includes the predefined variable <code>\$junos-pon-id-interface-set-name</code>, and the profile is applied for a passive optical network (PON). The ARI string is inserted by the optical line terminal (OLT). The final substring in the string, unique for the PON, identifies individual subscriber circuits, and is used as the name of the interface set.</p>
Interface Set Type	Interface type of the ACI interface set: <b>Dynamic</b> . This is the only ACI interface set type currently supported.
Interface Set Session ID	Identifier of the dynamic ACI interface set entry in the session database.
Underlying Interface	Name of the underlying interface for the subscriber session.
Dynamic Profile Name	Dynamic profile used for the subscriber.
Dynamic Profile Version	Version number of the dynamic profile used for the subscriber.

Table 36: show subscribers Output Fields (continued)

Field Name	Field Description
MAC Address	MAC address associated with the subscriber.
State	Current state of the subscriber session ( <b>Init</b> , <b>Configured</b> , <b>Active</b> , <b>Terminating</b> , <b>Tunneled</b> ).
L2TP State	Current state of the L2TP session, <b>Tunneled</b> or <b>Tunnel-switched</b> . When the value is <b>Tunnel-switched</b> , two entries are displayed for the subscriber; the first entry is at the LNS interface on the LTS and the second entry is at the LAC interface on the LTS.
Tunnel switch Profile Name	Name of the L2TP tunnel switch profile that initiates tunnel switching.
Local IP Address	IP address of the local gateway (LAC).
Remote IP Address	IP address of the remote peer (LNS).
VLAN Id	VLAN ID associated with the subscriber in the form <i>tpid.vlan-id</i> .
Stacked VLAN Id	Stacked VLAN ID associated with the subscriber in the form <i>tpid.vlan-id</i> .
RADIUS Accounting ID	RADIUS accounting ID associated with the subscriber.
Agent Circuit ID	<p>For the <b>dhcp</b> client type, option 82 agent circuit ID associated with the subscriber. The ID is displayed as an ASCII string unless the value has nonprintable characters, in which case it is displayed in hexadecimal format.</p> <p>For the <b>vlan-oob</b> client type, the agent circuit ID or access-loop circuit identifier that identifies the subscriber line based on the subscriber-facing DSLAM interface on which the subscriber request originates.</p>
Agent Remote ID	<p>For the <b>dhcp</b> client type, option 82 agent remote ID associated with the subscriber. The ID is displayed as an ASCII string unless the value has nonprintable characters, in which case it is displayed in hexadecimal format.</p> <p>For the <b>vlan-oob</b> client type, the agent remote ID or access-loop remote identifier that identifies the subscriber line based on the NAS-facing DSLAM interface on which the subscriber request originates.</p>
Accounting Statistics	Actual transmitted subscriber accounting statistics by session ID or interface. Service accounting statistics are not included. These statistics do not include overhead bytes or dropped packets; they are the accurate statistics used by RADIUS. The statistics are counted when the <b>actual-transmit-statistics</b> statement is included in the dynamic profile.
DHCP Relay IP Address	IP address used by the DHCP relay agent.
ATM VPI	(MX Series routers with MPCs and ATM MICs with SFP only) ATM virtual path identifier (VPI) on the subscriber's physical interface.
ATM VCI	(MX Series routers with MPCs and ATM MICs with SFP only) ATM virtual circuit identifier (VCI) for each VPI configured on the subscriber interface.
Login Time	Date and time at which the subscriber logged in.

Table 36: show subscribers Output Fields (continued)

Field Name	Field Description
DHCPV6 Options	len = number of hex values in the message. The hex values specify the type, length, value (TLV) for DHCPv6 options.
Server DHCP Options	len = number of hex values in the message. The hex values specify the type, length, value (TLV) for DHCP options.
Server DHCPV6 Options	len = number of hex values in the message. The hex values specify the type, length, value (TLV) for DHCPv6 options.
DHCPV6 Header	len = number of hex values in the message. The hex values specify the type, length, value (TLV) for DHCPv6 options.
Effective shaping-rate	Actual downstream traffic shaping rate for the subscriber, in kilobits per second.
IPv4 Input Service Set	Input service set in access dynamic profile.
IPv4 Output Service Set	Output service set in access dynamic profile.
PCEF Profile	PCEF profile in access dynamic profile.
PCEF Rule/Rulebase	PCC rule or rulebase used in dynamic profile.
Dynamic configuration	Values for variables that are passed into the dynamic profile from RADIUS.
Service activation time	Time at which the first family in this service became active.
IPv4 rpf-check Fail Filter Name	Name of the filter applied by the dynamic profile to IPv4 packets that fail the RPF check.
IPv6 rpf-check Fail Filter Name	Name of the filter applied by the dynamic profile to IPv6 packets that fail the RPF check.
DHCP Options	len = number of hex values in the message. The hex values specify the type, length, value (TLV) for DHCP options, as defined in RFC 2132.
Session ID	ID number for a subscriber session.
Underlying Session ID	For DHCPv6 subscribers on a PPPoE network, displays the session ID of the underlying PPPoE interface.
Service Sessions	Number of service sessions (that is, a service activated using RADIUS CoA) associated with the subscribers.
Service Session ID	ID number for a subscriber service session.
Service Session Name	Service session profile name.
Session Timeout (seconds)	Number of seconds of access provided to the subscriber before the session is automatically terminated.

Table 36: show subscribers Output Fields (continued)

Field Name	Field Description
Idle Timeout (seconds)	Number of seconds subscriber can be idle before the session is automatically terminated.
IPv6 Delegated Address Pool	Name of the pool used for DHCPv6 prefix delegation.
IPv6 Delegated Network Prefix Length	Length of the prefix configured for the IPv6 delegated address pool.
IPv6 Interface Address	Address assigned by the Framed-Ipv6-Prefix AAA attribute. This field is displayed only when the predefined variable \$junos-ipv6-address is used in the dynamic profile.
IPv6 Framed Interface Id	Interface ID assigned by the Framed-Interface-Id AAA attribute.
ADF IPv4 Input Filter Name	Name assigned to the Ascend-Data-Filter (ADF) interface IPv4 input filter (client or service session). The filter name is followed by the rules (in hexadecimal format) associated with the ADF filter and the decoded rule in Junos OS filter style.
ADF IPv4 Output Filter Name	Name assigned to the Ascend-Data-Filter (ADF) interface IPv4 output filter (client or service session). The filter name is followed by the rules (in hexadecimal format) associated with the ADF filter and the decoded rule in Junos OS filter style.
ADF IPv6 Input Filter Name	Name assigned to the Ascend-Data-Filter (ADF) interface IPv6 input filter (client or service session). The filter name is followed by the rules (in hexadecimal format) associated with the ADF filter and the decoded rule in Junos OS filter style.
ADF IPv6 Output Filter Name	Name assigned to the Ascend-Data-Filter (ADF) interface IPv6 output filter (client or service session). The filter name is followed by the rules (in hexadecimal format) associated with the ADF filter and the decoded rule in Junos OS filter style.
IPv4 Input Filter Name	Name assigned to the IPv4 input filter (client or service session).
IPv4 Output Filter Name	Name assigned to the IPv4 output filter (client or service session).
IPv6 Input Filter Name	Name assigned to the IPv6 input filter (client or service session).
IPv6 Output Filter Name	Name assigned to the IPv6 output filter (client or service session).
IFL Input Filter Name	Name assigned to the logical interface input filter (client or service session).
IFL Output Filter Name	Name assigned to the logical interface output filter (client or service session).
DSL type	PPPoE subscriber's access line type reported by the PPPoE intermediate agent in a PADI or PADO packet in the Vendor-Specific-Tags TLV in subattribute DSL-Type (0x0091). The DSL type is one of the following types: <b>ADSL</b> , <b>ADSL2</b> , <b>ADSL2+</b> , <b>OTHER</b> , <b>SDSL</b> , <b>VDSL</b> , or <b>VDSL2</b> .

Table 36: show subscribers Output Fields (continued)

Field Name	Field Description
<b>Frame/Cell Mode</b>	<p>Mode type of the PPPoE subscriber's access line determined by the PPPoE daemon based on the received subattribute DSL-Type (0x0091):</p> <ul style="list-style-type: none"> <li>• <b>Cell</b>—When the DSL line type is one of the following: ADSL, ADSL2, or ADSL2+.</li> <li>• <b>Frame</b>—When the DSL line type is one of the following: OTHER, SDSL, VDSL, or VDSL2.</li> </ul> <p>The value is stored in the subscriber session database.</p>
<b>Overhead accounting bytes</b>	<p>Number of bytes added to or subtracted from the actual downstream cell or frame overhead to account for the technology overhead of the DSL line type. The value is determined by the PPPoE daemon based on the received subattribute DSL-Type (0x0091). The value is stored in the subscriber session database.</p>
<b>Actual upstream data rate</b>	<p>Unadjusted upstream data rate for the PPPoE subscriber's access line reported by the PPPoE intermediate agent in a PADI or PADO packet in the Vendor-Specific-Tags TLV in subattribute Actual-Net-Data-Rate-Upstream (0x0081).</p>
<b>Actual downstream data rate</b>	<p>Unadjusted downstream data rate for the PPPoE subscriber's access line reported by the PPPoE intermediate agent in a PADI or PADO packet in the Vendor-Specific-Tags TLV in subattribute Actual-Net-Data-Rate-Downstream (0x0082).</p>
<b>Adjusted downstream data rate</b>	<p>Adjusted downstream data rate for the PPPoE subscriber's access line, calculated by the PPPoE daemon and stored in the subscriber session database.</p>
<b>Adjusted upstream data rate</b>	<p>Adjusted upstream data rate for the PPPoE subscriber's access line, calculated by the PPPoE daemon and stored in the subscriber session database.</p>

## Sample Output

### show subscribers (IPv4)

```

user@host> show subscribers
Interface      IP Address/VLAN ID  User Name      LS:RI
ge-1/3/0.1073741824  10                  default:default
demux0.1073741824    203.0.113.10        WHOLESALE-CLIENT default:default
demux0.1073741825    203.0.113.3         RETAILER1-CLIENT test1:retailer1
demux0.1073741826    203.0.113.3         RETAILER2-CLIENT test1:retailer2

```

### show subscribers (IPv6)

```

user@host> show subscribers
Interface      IP Address/VLAN ID  User Name      LS:RI
ge-1/0/0.0      2001:db8:c0:0:0:0/74 WHOLESALE-CLIENT default:default
*               2001:db8:1/128      subscriber-25   default:default

```

### show subscribers (IPv4 and IPv6 Dual Stack)

```

user@host> show subscribers
Interface      IP Address/VLAN ID  User Name
LS:RI
demux0.1073741834  0x8100.1002 0x8100.1
default:default

```



```

demux0.1073741835 0x8100.1001 0x8100.1
default:default
pp0.1073741836 203.0.113.13 dualstackuser1@example1.com
default:ASP-1
* 2001:db8:1::/48
* 2001:db8:1:1::/64
pp0.1073741837 203.0.113.33 dualstackuser2@example1.com
default:ASP-1
* 2001:db8:1:2:5::/64

```

### show subscribers (Single Session DHCP Dual Stack)

user@host> show subscribers

Interface	IP Address/VLAN ID	User Name	LS:RI
demux0.1073741364	192.168.10.10	dual-stack-retail35	default:default
	2001:db8::100:0:0:0/74		default:default
	2001:db8:3ffe:0:4::/64		

### show subscribers (Single Session DHCP Dual Stack detail)

```

user@host> show subscribers id 27 detail
Type: DHCP
User Name: dual-stack-retail33
IP Address: 10.10.0.53
IPv6 Address: 2001:db8:3000:0:0:8003::2
IPv6 Prefix: 2001:db8:3ffe:0:4::/64
Logical System: default
Routing Instance: default
Interface: ae0.3221225472
Interface type: Static
Underlying Interface: ae0.3221225472
Dynamic Profile Name: dhcp-retail-18
MAC Address: 00:00:5E:00:53:02
State: Active
DHCP Relay IP Address: 10.10.0.1
Radius Accounting ID: 27
Session ID: 27
PFE Flow ID: 2
Stacked VLAN Id: 2000
VLAN Id: 1
Login Time: 2014-05-15 10:12:10 PDT
DHCP Options: len 60
00 08 00 02 00 00 00 01 00 0a 00 03 00 01 00 00 64 01 01 02
00 06 00 04 00 03 00 19 00 03 00 0c 00 00 00 00 00 00 00 00
00 00 00 00 00 19 00 0c 00 00 00 00 00 00 00 00 00 00 00 00

```

### show subscribers (LNS on MX Series Routers)

```

user@host> show subscribers
Interface      IP Address/VLAN ID  User Name      LS:RI
si-4/0/0.1    192.0.2.0           user@example.com default:default

```

### show subscribers (L2TP Switched Tunnels)

```

user@host> show subscribers
Interface      IP Address/VLAN ID  User Name      LS:RI
si-2/1/0.1073741842 Tunnel-switched    user@example.com default:default

```

```
si-2/1/0.1073741843 Tunnel-switched      user@example.com      default:default
```

### show subscribers client-type dhcp detail

```
user@host> show subscribers client-type dhcp detail
Type: DHCP
IP Address: 203.0.113.29
IP Netmask: 255.255.0.0
Logical System: default
Routing Instance: default
Interface: demux0.1073744127
Interface type: Dynamic
Dynamic Profile Name: dhcp-demux
MAC Address: 00:00:5e:00:53:98
State: Active
Radius Accounting ID: user :2304
Login Time: 2009-08-25 14:43:52 PDT

Type: DHCP
IP Address: 203.0.113.27
IP Netmask: 255.255.0.0
Logical System: default
Routing Instance: default
Interface: demux0.1073744383
Interface type: Dynamic
Dynamic Profile Name: dhcp-demux-prof
MAC Address: 00:00:5e:00:53:f3
State: Active
Radius Accounting ID: 1234 :2560
Login Time: 2009-08-25 14:43:56 PDT
```

### show subscribers client-type dhcp detail (DHCPv6)

```
user@host> show subscribers client-type dhcp detail
Type: DHCP
User Name: DEFAULTUSER
IPv6 Address: 2001:db8::2
IPv6 Prefix: 2001:db8:1::/64
Logical System: default
Routing Instance: default
Interface: demux0.3221225602
Interface type: Static
Underlying Interface: demux0.3221225602
Dynamic Profile Name: client-profile
MAC Address: 00:00:5E:00:53:01
State: Active
Radius Accounting ID: 142
Session ID: 142
PFE Flow ID: 148
Stacked VLAN Id: 1
VLAN Id: 1
Login Time: 2018-03-29 12:27:38 EDT
DHCP Options: len 56
00 08 00 02 00 00 00 01 00 0e 00 01 00 01 22 4f d0 33 00 11
01 00 00 01 00 03 00 0c 00 00 00 0a 00 04 9d 40 00 07 62 00
00 19 00 0c 00 00 00 0b 00 04 9d 40 00 07 62 00
Server DHCPV6 Options: len 94
```

```

00 0a 00 06 11 22 33 44 55 66 00 11 00 09 00 00 0c 4c 00 02
00 01 aa 00 11 00 20 00 00 0a 4c 00 02 00 02 32 33 00 03 00
03 34 35 36 00 05 00 06 31 32 33 34 35 36 00 06 00 01 31 00
11 00 09 00 00 0b 4c 00 02 00 01 bb 00 11 00 12 00 00 0d e9
00 01 00 03 aa bb cc 00 02 00 03 dd ee cc
DHCPV6 Header: len 4
01 fc e4 96

```

### show subscribers client-type dhcp extensive

```

user@host> show subscribers client-type dhcp extensive
Type: DHCP
User Name: user
IP Address: 192.0.2.4
IP Netmask: 255.0.0.0
IPv6 Address: 2001:db8:3::103
IPv6 Prefix: 2001:db8::/68
Domain name server inet6: 2001:db8:1 abcd::2
Logical System: default
Routing Instance: default
Interface: ge-0/0/0.0
Interface type: Static
Underlying Interface: ge-0/0/0.0
MAC Address: 00:00:5e:00:53:01
State: Configured
Radius Accounting ID: 10
Session ID: 10
PFE Flow ID: 2
VLAN Id: 100
Agent Circuit ID: ge-0/0/0:100
Agent Remote ID: ge-0/0/0:100
Login Time: 2017-05-23 12:52:22 IST
DHCPV6 Options: len 69
00 01 00 0e 00 01 00 01 59 23 e3 31 00 10 94 00 00 01 00 08
00 02 00 00 00 19 00 29 00 00 00 00 00 04 9d 40 00 07 62 00
00 1a 00 19 00 09 3a 80 00 27 8d 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00
Server DHCP Options: len 13
3a 04 00 00 00 ff 00 3b 04 00 00 0f 00
Server DHCPV6 Options: len 8
00 0a 00 04 ab cd ef ab
DHCPV6 Header: len 4
01 00 00 04
IP Address Pool: a1_pool30
IPv6 Address Pool: ia_na_pool
IPv6 Delegated Address Pool: prefix_delegate_pool

```

### show subscribers client-type vlan-oob detail

```

user@host> show subscribers client-type vlan-oob detail
Type: VLAN-00B
User Name: L2WS.line-aci-1.line-ari-1
Logical System: default
Routing Instance: ISP1
Interface: demux0.1073744127
Interface type: Dynamic
Underlying Interface: ge-1/0/0
Dynamic Profile Name: Prof_L2WS
Dynamic Profile Version: 1
State: Active

```

Radius Accounting ID: 1234  
Session ID: 77  
**VLAN Id: 126**  
Core-Facing Interface: ge-2/1/1  
VLAN Map Id: 6  
Inner VLAN Map Id: 2001  
**Agent Circuit ID: line-aci-1**  
**Agent Remote ID: line-ari-1**  
Login Time: 2013-10-29 14:43:52 EDT

#### show subscribers count

```
user@host> show subscribers count
Total Subscribers: 188, Active Subscribers: 188
```

#### show subscribers address detail (IPv6)

```
user@host> show subscribers address 203.0.113.137 detail
Type: PPPoE
User Name: pppoeTerV6User1Svc
IP Address: 203.0.113.137
IP Netmask: 255.0.0.0
IPv6 User Prefix: 2001:db8:0:c88::/32
Logical System: default
Routing Instance: default
Interface: pp0.1073745151
Interface type: Dynamic
Underlying Interface: demux0.8201
Dynamic Profile Name: pppoe-client-profile
MAC Address: 00:00:5e:00:53:53
Session Timeout (seconds): 31622400
Idle Timeout (seconds): 86400
State: Active
Radius Accounting ID: example demux0.8201:6544
Session ID: 6544
Agent Circuit ID: if13720
Agent Remote ID: if13720
Login Time: 2012-05-21 13:37:27 PDT
Service Sessions: 1
```

#### show subscribers detail (IPv4)

```
user@host> show subscribers detail
Type: DHCP
IP Address: 203.0.113.29
IP Netmask: 255.255.0.0
Primary DNS Address: 192.0.2.0
Secondary DNS Address: 192.0.2.1
Primary WINS Address: 192.0.2.3
Secondary WINS Address: 192.0.2.4
Logical System: default
Routing Instance: default
Interface: demux0.1073744127
Interface type: Dynamic
Dynamic Profile Name: dhcp-demux-prof
MAC Address: 00:00:5e:00:53:98
State: Active
Radius Accounting ID: example :2304
Idle Timeout (seconds): 600
Login Time: 2009-08-25 14:43:52 PDT
```

```

DHCP Options: len 52
35 01 01 39 02 02 40 3d 07 01 00 10 94 00 00 08 33 04 00 00
00 3c 0c 15 63 6c 69 65 6e 74 5f 50 6f 72 74 20 2f 2f 36 2f
33 2d 37 2d 30 37 05 01 06 0f 21 2c
Service Sessions: 2

```

#### show subscribers detail (IPv6)

```

user@host> show subscribers detail
Type: DHCP
User Name: pd-user1
IPv6 Prefix: 2001:db8:ffff:1::/32
Logical System: default
Routing Instance: default
Interface: ge-3/1/3.2
Interface type: Static
MAC Address: 00:00:5e:00:53:03
State: Active
Radius Accounting ID: 1
Session ID: 1
Login Time: 2011-08-25 12:12:26 PDT
DHCP Options: len 42
00 08 00 02 00 00 00 01 00 0a 00 03 00 01 00 51 ff ff 00 03
00 06 00 02 00 19 00 19 00 0c 00 00 00 00 00 00 00 00 00
00 00

```

#### show subscribers detail (pseudowire Interface for GRE Tunnel)

```

user@host> show subscribers detail
Interface          IP Address/VLAN ID      User Name      LS:RI
ps0.3221225484     192.0.2.2
ps0.3221225485     192.0.2.3
demux0.3221225486   1                        default:default
demux0.3221225487   1                        default:default
demux0.3221225488   198.51.0.1              default:default
demux0.3221225489   198.51.0.2              default:default

```

#### show subscribers detail (IPv6 Static Demux Interface)

```

user@host> show subscribers detail
Type: STATIC-INTERFACE
User Name: user@example.com
IPv6 Prefix: 2001:db8:3:4:5:6:7:aa/32
Logical System: default
Routing Instance: default
Interface: demux0.1
Interface type: Static
Dynamic Profile Name: junos-default-profile
State: Active
Radius Accounting ID: 185
Login Time: 2010-05-18 14:33:56 EDT

```

#### show subscribers detail (L2TP LNS Subscribers on MX Series Routers)

```

user@host> show subscribers detail

```

```
Type: L2TP
User Name: user@example.com
IP Address: 203.0.113.58
IP Netmask: 255.255.0.0
Logical System: default
Routing Instance: default
Interface: si-5/2/0.1073749824
Interface type: Dynamic
Dynamic Profile Name: dyn-lns-profile2
Dynamic Profile Version: 1
State: Active
Radius Accounting ID: 8001
Session ID: 8001
Login Time: 2011-04-25 20:27:50 IST
```

#### show subscribers detail (L2TP Switched Tunnels)

```
user@host> show subscribers detail
Type: L2TP
User Name: user@example.com
Logical System: default
Routing Instance: default
Interface: si-2/1/0.1073741842
Interface type: Dynamic
Dynamic Profile Name: dyn-lts-profile
State: Active
L2TP State: Tunnel-switched
Tunnel switch Profile Name: ce-lts-profile
Local IP Address: 203.0.113.51
Remote IP Address: 192.0.2.0
Radius Accounting ID: 21
Session ID: 21
Login Time: 2013-01-18 03:01:11 PST
```

```
Type: L2TP
User Name: user@example.com
Logical System: default
Routing Instance: default
Interface: si-2/1/0.1073741843
Interface type: Dynamic
Dynamic Profile Name: dyn-lts-profile
State: Active
L2TP State: Tunnel-switched
Tunnel switch Profile Name: ce-lts-profile
Local IP Address: 203.0.113.31
Remote IP Address: 192.0.2.1
Session ID: 22
Login Time: 2013-01-18 03:01:14 PST
```

#### show subscribers detail (Tunneled Subscriber)

```
user@host> show subscribers detail
Type: PPPoE
User Name: user1@example.com
Logical System: default
Routing Instance: default
Interface: pp0.1
State: Active, Tunneled
Radius Accounting ID: 512
```

**show subscribers detail (IPv4 and IPv6 Dual Stack)**

```

user@host> show subscribers detail
Type: VLAN
Logical System: default
Routing Instance: default
Interface: demux0.1073741824
Interface type: Dynamic
Dynamic Profile Name: svlanProfile
State: Active
Session ID: 1
Stacked VLAN Id: 0x8100.1001
VLAN Id: 0x8100.1
Login Time: 2011-11-30 00:18:04 PST

Type: PPPoE
User Name: dualstackuser1@example1.com
IP Address: 203.0.113.13
IPv6 Prefix: 2001:db8:1::/32
IPv6 User Prefix: 2001:db8:1:1::/32
Logical System: default
Routing Instance: ASP-1
Interface: pp0.1073741825
Interface type: Dynamic
Dynamic Profile Name: dualStack-Profile1
MAC Address: 00:00:5e:00:53:02
State: Active
Radius Accounting ID: 2
Session ID: 2
Login Time: 2011-11-30 00:18:05 PST

Type: DHCP
IPv6 Prefix: 2001:db8:1::/32
Logical System: default
Routing Instance: ASP-1
Interface: pp0.1073741825
Interface type: Static
MAC Address: 00:00:5e:00:53:02
State: Active
Radius Accounting ID: test :3
Session ID: 3
Underlying Session ID: 2
Login Time: 2011-11-30 00:18:35 PST
DHCP Options: len 42
00 08 00 02 0b b8 00 01 00 0a 00 03 00 01 00 00 64 03 01 02
00 06 00 02 00 19 00 19 00 0c 00 00 00 00 00 00 00 00 00 00
00 00

```

**show subscribers detail (ACI Interface Set Session)**

```

user@host> show subscribers detail
Type: VLAN
Logical System: default
Routing Instance: default
Interface: ge-1/0/0
Interface Set: aci-1001-ge-1/0/0.2800
Interface Set Session ID: 0
Underlying Interface: ge-1/0/0.2800
Dynamic Profile Name: aci-vlan-set-profile-2

```

```
Dynamic Profile Version: 1
State: Active
Session ID: 1
Agent Circuit ID: aci-ppp-dhcp-20
Login Time: 2012-05-26 01:54:08 PDT
```

#### show subscribers detail (PPPoE Subscriber Session with ACI Interface Set)

```
user@host> show subscribers detail
Type: PPPoE
User Name: ppphint2
IP Address: 203.0.113.15
Logical System: default
Routing Instance: default
Interface: pp0.1073741825
Interface type: Dynamic
Interface Set: aci-1001-demux0.1073741824
Interface Set Type: Dynamic
Interface Set Session ID: 2
Underlying Interface: demux0.1073741824
Dynamic Profile Name: aci-vlan-pppoe-profile
Dynamic Profile Version: 1
MAC Address: 00:00:5e:00:53:02
State: Active
Radius Accounting ID: 3
Session ID: 3
Agent Circuit ID: aci-ppp-dhcp-dvlan-50
Login Time: 2012-03-07 13:46:53 PST
```

#### show subscribers extensive

```
user@host> show subscribers extensive
Type: DHCP
User Name: pd-user1
IPv6 Prefix: 2001:db8:ffff:1::/32
Logical System: default
Routing Instance: default
Interface: ge-3/1/3.2
Interface type: Static
MAC Address: 00:00:5e:00:53:03
State: Active
Radius Accounting ID: 1
Session ID: 1
Login Time: 2011-08-25 12:12:26 PDT
DHCP Options: len 42
00 08 00 02 00 00 00 01 00 0a 00 03 00 01 00 51 ff ff 00 03
00 06 00 02 00 19 00 19 00 0c 00 00 00 00 00 00 00 00 00
00 00
IPv6 Address Pool: pd_pool
IPv6 Network Prefix Length: 48
```

#### show subscribers extensive (Passive Optical Network Circuit Interface Set)

```
user@host> show subscribers client-type dhcp extensive
Type: DHCP
IP Address: 192.0.2.136
IP Netmask: 255.255.0.0
Logical System: default
Routing Instance: default
Interface: demux0.1073741842
```



```

Interface type: Dynamic
Interface Set: ot101.xyz101-202
Underlying Interface: demux0.1073741841
Dynamic Profile Name: dhcp-profile
MAC Address: 00:00:5e:00:53:02
State: Active
Radius Accounting ID: user :19
Session ID: 19
VLAN Id: 1100
Agent Remote ID: ABCD01234|100M|AAAA01234|ot101.xyz101-202

Login Time: 2017-03-29 10:30:46 PDT
DHCP Options: len 97
35 01 01 39 02 02 40 3d 07 01 00 10 94 00 00 02 33 04 00 00
17 70 0c 15 63 6c 69 65 6e 74 5f 50 6f 72 74 20 2f 2f 32 2f
32 2d 31 2d 31 37 05 01 06 0f 21 2c 52 2b 02 29 41 42 43 44
30 31 32 33 34 7c 31 30 30 4d 7c 41 41 41 41 30 31 32 33 34
7c 6f 74 6c 30 31 2e 78 79 7a 31 30 31 2d 32 30 32
IP Address Pool: POOL-V4

```

#### show subscribers extensive (DNS Addresses from Access Profile or Global Configuration)

```

user@host> show subscribers extensive
Type: DHCP
User Name: test-user@example-com
IP Address: 192.0.2.119
IP Netmask: 255.255.255.255
Domain name server inet: 198.51.100.1 198.51.100.2
IPv6 Address: 2001:db8::1:11
Domain name server inet6: 2001:db8:5001::12 2001:db8:3001::12
Logical System: default
Routing Instance: default
Interface: ge-2/0/3.0
Interface type: Static
Underlying Interface: ge-2/0/3.0
MAC Address: 00:00:5E:00:53:00
State: Active
Radius Accounting ID: 5
Session ID: 5
Login Time: 2017-01-31 11:16:21 IST
DHCP Options: len 53
35 01 01 39 02 02 40 3d 07 01 00 10 94 00 00 03 33 04 00 00
00 3c 0c 16 63 6c 69 65 6e 74 5f 50 6f 72 74 20 2f 2f 35 2f
31 32 2d 30 2d 30 37 05 01 06 0f 21 2c
IP Address Pool: v4-pool

```

#### show subscribers extensive (DNS Addresses from RADIUS)

```

user@host> show subscribers extensive
Type: DHCP
User Name: test-user@example-com
IP Address: 192.0.2.119
IP Netmask: 255.255.255.255
Primary DNS Address: 198.51.100.1
Secondary DNS Address: 198.51.100.2
IPv6 Address: 2001:db8::1:11
IPv6 Primary DNS Address: 2001:db8:5001::12
IPv6 Secondary DNS Address: 2001:db8:3001::12
Logical System: default
Routing Instance: default

```

```
Interface: ge-2/0/3.0
Interface type: Static
Underlying Interface: ge-2/0/3.0
MAC Address: 00:00:5E:00:53:00
State: Active
Radius Accounting ID: 5
Session ID: 5
Login Time: 2017-01-31 11:16:21 IST
DHCP Options: len 53
35 01 01 39 02 02 40 3d 07 01 00 10 94 00 00 03 33 04 00 00
00 3c 0c 16 63 6c 69 65 6e 74 5f 50 6f 72 74 20 2f 2f 35 2f
31 32 2d 30 2d 30 37 05 01 06 0f 21 2c
IP Address Pool: v4-pool
```

#### show subscribers extensive (IPv4 DNS Addresses from RADIUS, IPv6 from Access Profile or Global Configuration)

```
user@host> show subscribers extensive
Type: DHCP
User Name: test-user@example-com
IP Address: 192.0.2.119
IP Netmask: 255.255.255.255
Primary DNS Address: 198.51.100.1
Secondary DNS Address: 198.51.100.2
IPv6 Address: 2001:db8::1:11
Domain name server inet6: 2001:db8:5001::12 2001:db8:3001::12
Logical System: default
Routing Instance: default
Interface: ge-2/0/3.0
Interface type: Static
Underlying Interface: ge-2/0/3.0
MAC Address: 00:00:5E:00:53:00
State: Active
Radius Accounting ID: 5
Session ID: 5
Login Time: 2017-01-31 11:16:21 IST
DHCP Options: len 53
35 01 01 39 02 02 40 3d 07 01 00 10 94 00 00 03 33 04 00 00
00 3c 0c 16 63 6c 69 65 6e 74 5f 50 6f 72 74 20 2f 2f 35 2f
31 32 2d 30 2d 30 37 05 01 06 0f 21 2c
IP Address Pool: v4-pool
```

#### show subscribers extensive (RPF Check Fail Filter)

```
user@host> show subscribers extensive
...
Type: VLAN
Logical System: default
Routing Instance: default
Interface: ae0.1073741824
Interface type: Dynamic
Dynamic Profile Name: vlan-prof
State: Active
Session ID: 9
VLAN Id: 100
Login Time: 2011-08-26 08:17:00 PDT
IPv4 rpf-check Fail Filter Name: rpf-allow-dhcp
IPv6 rpf-check Fail Filter Name: rpf-allow-dhcpv6
...
```

**show subscribers extensive (L2TP LNS Subscribers on MX Series Routers)**

```

user@host> show subscribers extensive
Type: L2TP
User Name: user@example.com
IP Address: 203.0.113.58
IP Netmask: 255.255.0.0
Logical System: default
Routing Instance: default
Interface: si-5/2/0.1073749824
Interface type: Dynamic
Dynamic Profile Name: dyn-lns-profile2
Dynamic Profile Version: 1
State: Active
Radius Accounting ID: 8001
Session ID: 8001
Login Time: 2011-04-25 20:27:50 IST
IPv4 Input Filter Name: classify-si-5/2/0.1073749824-in
IPv4 Output Filter Name: classify-si-5/2/0.1073749824-out

```

**show subscribers extensive (IPv4 and IPv6 Dual Stack)**

```

user@host> show subscribers extensive
Type: VLAN
Logical System: default
Routing Instance: default
Interface: demux0.1073741824
Interface type: Dynamic
Dynamic Profile Name: svlanProfile
State: Active
Session ID: 1
Stacked VLAN Id: 0x8100.1001
VLAN Id: 0x8100.1
Login Time: 2011-11-30 00:18:04 PST

Type: PPPoE
User Name: dualstackuser1@example1.com
IP Address: 203.0.113.13
IPv6 Prefix: 2001:db8:1::/32
IPv6 User Prefix: 2001:db8:1:1::/32
Logical System: default
Routing Instance: ASP-1
Interface: pp0.1073741825
Interface type: Dynamic
Dynamic Profile Name: dualStack-Profile1
MAC Address: 00:00:5e:00:53:02
State: Active
Radius Accounting ID: 2
Session ID: 2
Login Time: 2011-11-30 00:18:05 PST
IPv6 Delegated Network Prefix Length: 48
IPv6 Interface Address: 2001:db8:2016:1:1::1/64
IPv6 Framed Interface Id: 1:1:2:2
IPv4 Input Filter Name: FILTER-IN-pp0.1073741825-in
IPv4 Output Filter Name: FILTER-OUT-pp0.1073741825-out
IPv6 Input Filter Name: FILTER-IN6-pp0.1073741825-in
IPv6 Output Filter Name: FILTER-OUT6-pp0.1073741825-out

Type: DHCP
IPv6 Prefix: 2001:db8:1::/32

```

```
Logical System: default
Routing Instance: ASP-1
Interface: pp0.1073741825
Interface type: Static
MAC Address: 00:00:5e:00:53:02
State: Active
Radius Accounting ID: test :3
Session ID: 3
Underlying Session ID: 2
Login Time: 2011-11-30 00:18:35 PST
DHCP Options: len 42
00 08 00 02 0b b8 00 01 00 0a 00 03 00 01 00 00 64 03 01 02
00 06 00 02 00 19 00 19 00 0c 00 00 00 00 00 00 00 00 00 00
00 00
IPv6 Delegated Network Prefix Length: 48
```

#### show subscribers extensive (ADF Rules )

```
user@host> show subscribers extensive
...
Service Session ID: 12
Service Session Name: SERVICE-PROFILE
State: Active
Family: inet
  ADF IPv4 Input Filter Name: __junos_adf_12-demux0.3221225474-inet-in
    Rule 0: 010101000b0101020b020200201811
      from {
        source-address 203.0.113.232;
        destination-address 198.51.100.0/24;
        protocol 17;
      }
      then {
        accept;
      }
```

#### show subscribers extensive (Effective Shaping-Rate)

```
user@host> show subscribers extensive
Type: VLAN
Logical System: default
Routing Instance: default
Interface: demux0.1073741837
Interface type: Dynamic
Interface Set: ifset-1
Underlying Interface: ae1
Dynamic Profile Name: svlan-dhcp-test
State: Active
Session ID: 1
Stacked VLAN Id: 0x8100.201
VLAN Id: 0x8100.201
Login Time: 2011-11-30 00:18:04 PST
Effective shaping-rate: 31000000k
...
```

#### show subscribers extensive (PPPoE Subscriber Access Line Rates)

```
user@host> show subscribers extensive
Type: PPPoE
IP Address: 198.51.100.1
```

IP Netmask: 255.255.255.255  
 Logical System: default  
 Routing Instance: default  
 Interface: pp0.3221225475  
 Interface type: Dynamic  
 Underlying Interface: demux0.3221225474  
 Dynamic Profile Name: pppoe-client-profile-with-cos  
 MAC Address: 00:00:5e:00:53:02  
 State: Active  
 Radius Accounting ID: 4  
 Session ID: 4  
 PFE Flow ID: 14  
 Stacked VLAN Id: 40  
 VLAN Id: 1  
 Agent Circuit ID: circuit0  
 Agent Remote ID: remote0  
 Login Time: 2017-04-06 15:52:32 PDT

User Name: DAVE-L2BSA-SERVICE  
 Logical System: default  
 Routing Instance: isp-1-subscriber  
 Interface: ge-1/2/4.3221225472  
 Interface type: Dynamic  
 Interface Set: ge-1/2/4  
 Underlying Interface: ge-1/2/4  
 Core IFL Name: ge-1/3/4.0  
 Dynamic Profile Name: L2BSA-88a8-400LL1300V0  
 State: Active  
 Radius Accounting ID: 1  
 Session ID: 1  
 PFE Flow ID: 14  
 VLAN Id: 13  
 VLAN Map Id: 102  
 Inner VLAN Map Id: 1  
 Agent Circuit ID: circuit-aci-3  
 Agent Remote ID: remote49-3  
 Login Time: 2017-04-05 16:59:29 EDT  
 Service Sessions: 4  
 IFL Input Filter Name: L2BSA-CP-400LL1300V0-ge-1/2/4.3221225472-in  
 IFL Output Filter Name: L2BSA-CP-400LL1300V0-ge-1/2/4.3221225472-out  
 Accounting interval: 900  
**DSL type: VDSL**  
**Frame/Cell Mode: Frame**  
**Overhead accounting bytes: -10**  
**Actual upstream data rate: 1024 kbps**  
**Actual downstream data rate: 4096 kbps**  
**Adjusted downstream data rate: 3686 kbps**  
**Adjusted upstream data rate: 922 kbps**  
 Dynamic configuration:  
   junos-vlan-map-id: 102  
   Service Session ID: 5  
   Service Session Name: SRL-L1  
   State: Active  
   Family: inet, inet6  
   IFL Input Filter Name: L2BSA-FWF-in-10048-ge-1/2/4.3221225472-in  
   IFL Output Filter Name: L2BSA-FWF-out-25088-ge-1/2/4.3221225472-out  
   Service Activation time: 2017-04-05 16:59:30 EDT  
 Dynamic configuration:  
   l2bsa-fwf-in: L2BSA-FWF-in-10048  
   l2bsa-fwf-out: L2BSA-FWF-out-25088

```
rldown: 25088
rllup: 10048
```

### show subscribers extensive (Subscriber Session Using PCEF Profile)

```
user@host> show subscribers extensive
Type: VLAN
Logical System: default
Routing Instance: default
Interface: demux0.3221225517
Interface type: Dynamic
Underlying Interface: ge-1/0/3
Dynamic Profile Name: svlan-dhcp
State: Active
Session ID: 59
PFE Flow ID: 71
Stacked VLAN Id: 0x8100.1
VLAN Id: 0x8100.2
Login Time: 2017-03-28 08:23:08 PDT

Type: DHCP
User Name: pcefuser
IP Address: 192.0.2.26
IP Netmask: 255.0.0.0
Logical System: default
Routing Instance: default
Interface: demux0.3221225518
Interface type: Dynamic
Underlying Interface: demux0.3221225517
Dynamic Profile Name: dhcp-client-prof
MAC Address: 00:00:5e:00:53:01
State: Active
Radius Accounting ID: 60
Session ID: 60
PFE Flow ID: 73
Stacked VLAN Id: 1
VLAN Id: 2
Login Time: 2017-03-28 08:23:08 PDT
Service Sessions: 1
DHCP Options: len 9
35 01 01 37 04 01 03 3a 3b
IP Address Pool: pool-ipv4
IPv4 Input Service Set: tdf-service-set
IPv4 Output Service Set: tdf-service-set
PCEF Profile: pcef-prof-1
PCEF Rule/Rulebase: default
Dynamic configuration:
  junos-input-service-filter: svc-filt-1
  junos-input-service-set: tdf-service-set
  junos-output-service-filter: svc-filt-1
  junos-output-service-set: tdf-service-set
  junos-pcef-profile: pcef-prof-1
  junos-pcef-rule: default

Service Session ID: 61
Service Session Name: pcef-serv-prof
State: Active
Family: inet
IPv4 Input Service Set: tdf-service-set
IPv4 Output Service Set: tdf-service-set
PCEF Profile: pcef-prof-1
```

```

PCEF Rule/Rulebase: limit-fb
Service Activation time: 2017-03-28 08:31:19 PDT
Dynamic configuration:
  pcef-prof: pcef-prof-1
  pcef-rule1: limit-fb
  svc-filt: svc-filt-1
  svc-set: tdf-service-set

```

#### show subscribers aci-interface-set-name detail (Subscriber Sessions Using Specified ACI Interface Set)

```

user@host> show subscribers aci-interface-set-name aci-1003-ge-1/0/0.4001 detail
Type: VLAN
Logical System: default
Routing Instance: default
Interface: ge-1/0/0.
Underlying Interface: ge-1/0/0.4001
Dynamic Profile Name: aci-vlan-set-profile
Dynamic Profile Version: 1
State: Active
Session ID: 13
Agent Circuit ID: aci-ppp-vlan-10
Login Time: 2012-03-12 10:41:56 PDT

Type: PPPoE
User Name: ppphint2
IP Address: 203.0.113.17
Logical System: default
Routing Instance: default
Interface: pp0.1073741834
Interface type: Dynamic
Interface Set: aci-1003-ge-1/0/0.4001
Interface Set Type: Dynamic
Interface Set Session ID: 13
Underlying Interface: ge-1/0/0.4001
Dynamic Profile Name: aci-vlan-pppoe-profile
Dynamic Profile Version: 1
MAC Address:
State: Active
Radius Accounting ID: 14
Session ID: 14
Agent Circuit ID: aci-ppp-vlan-10
Login Time: 2012-03-12 10:41:57 PDT

```

#### show subscribers agent-circuit-identifier detail (Subscriber Sessions Using Specified ACI Substring)

```

user@host> show subscribers agent-circuit-identifier aci-ppp-vlan detail
Type: VLAN
Logical System: default
Routing Instance: default
Interface: ge-1/0/0.
Underlying Interface: ge-1/0/0.4001
Dynamic Profile Name: aci-vlan-set-profile
Dynamic Profile Version: 1
State: Active
Session ID: 13
Agent Circuit ID: aci-ppp-vlan-10
Login Time: 2012-03-12 10:41:56 PDT

Type: PPPoE
User Name: ppphint2

```

```
IP Address: 203.0.113.17
Logical System: default
Routing Instance: default
Interface: pp0.1073741834
Interface type: Dynamic
Interface Set: aci-1003-ge-1/0/0.4001
Interface Set Type: Dynamic
Interface Set Session ID: 13
Underlying Interface: ge-1/0/0.4001
Dynamic Profile Name: aci-vlan-pppoe-profile
Dynamic Profile Version: 1
MAC Address: 00:00:5e:00:53:52
State: Active
Radius Accounting ID: 14
Session ID: 14
Agent Circuit ID: aci-ppp-vlan-10
Login Time: 2012-03-12 10:41:57 PDT
```

#### show subscribers id accounting-statistics

```
user@host> show subscribers id 601 accounting-statistics
Session ID: 601
Accounting Statistics:
Input bytes : 199994
Output bytes : 121034
Input packets: 5263
Output packets: 5263
IPv6:
Input bytes : 0
Output bytes : 0
Input packets: 0
Output packets: 0
```

#### show subscribers interface accounting-statistics

```
user@host> show subscribers interface pp0.3221226949 accounting-statistics
Session ID: 501
Accounting Statistics:
Input bytes : 199994
Output bytes : 121034
Input packets: 5263
Output packets: 5263
IPv6:
Input bytes : 0
Output bytes : 0
Input packets: 0
Output packets: 0

Session ID: 502
Accounting Statistics:
Input bytes : 87654
Output bytes : 72108
Input packets: 3322
Output packets: 3322
IPv6:
Input bytes : 0
Output bytes : 0
Input packets: 0
Output packets: 0
```



```

Session ID: 503
Accounting Statistics:
Input bytes : 156528
Output bytes : 123865
Input packets: 7448
Output packets: 7448
IPv6:
Input bytes : 0
Output bytes : 0
Input packets: 0
Output packets: 0

```

### show subscribers interface extensive

```

user@host> show subscribers interface demux0.1073741826 extensive
Type: VLAN
User Name: user@test.example.com
Logical System: default
Routing Instance: testnet
Interface: demux0.1073741826
Interface type: Dynamic
Dynamic Profile Name: profile-vdemux-relay-23qos
MAC Address: 00:00:5e:00:53:04
State: Active
Radius Accounting ID: 12
Session ID: 12
Stacked VLAN Id: 0x8100.1500
VLAN Id: 0x8100.2902
Login Time: 2011-10-20 16:21:59 EST

Type: DHCP
User Name: user@test.example.com
IP Address: 192.0.2.0
IP Netmask: 255.255.255.0
Logical System: default
Routing Instance: testnet
Interface: demux0.1073741826
Interface type: Static
MAC Address: 00:00:5e:00:53:04
State: Active
Radius Accounting ID: 21
Session ID: 21
Login Time: 2011-10-20 16:24:33 EST
Service Sessions: 2

Service Session ID: 25
Service Session Name: SUB-QOS
State: Active

Service Session ID: 26
Service Session Name: service-cb-content
State: Active
IPv4 Input Filter Name: content-cb-in-demux0.1073741826-in
IPv4 Output Filter Name: content-cb-out-demux0.1073741826-out

```

### show subscribers logical-system terse

```

user@host> show subscribers logical-system test1 terse

```

Interface	IP Address/VLAN ID	User Name	LS:RI
demux0.1073741825	203.0.113.3	RETAILER1-CLIENT	test1:retailer1
demux0.1073741826	203.0.113.4	RETAILER2-CLIENT	test1:retailer2

#### show subscribers physical-interface count

```
user@host> show subscribers physical-interface ge-1/0/0 count
Total subscribers: 3998, Active Subscribers: 3998
```

#### show subscribers routing-instance inst1 count

```
user@host> show subscribers routing-instance inst1 count
Total Subscribers: 188, Active Subscribers: 183
```

#### show subscribers stacked-vlan-id detail

```
user@host> show subscribers stacked-vlan-id 101 detail
Type: VLAN
Interface: ge-1/2/0.1073741824
Interface type: Dynamic
Dynamic Profile Name: svlan-prof
State: Active
Stacked VLAN Id: 0x8100.101
VLAN Id: 0x8100.100
Login Time: 2009-03-27 11:57:19 PDT
```

#### show subscribers stacked-vlan-id vlan-id detail (Combined Output)

```
user@host> show subscribers stacked-vlan-id 101 vlan-id 100 detail
Type: VLAN
Interface: ge-1/2/0.1073741824
Interface type: Dynamic
Dynamic Profile Name: svlan-prof
State: Active
Stacked VLAN Id: 0x8100.101
VLAN Id: 0x8100.100
Login Time: 2009-03-27 11:57:19 PDT
```

#### show subscribers stacked-vlan-id vlan-id interface detail (Combined Output for a Specific Interface)

```
user@host> show subscribers stacked-vlan-id 101 vlan-id 100 interface ge-1/2/0.* detail
Type: VLAN
Interface: ge-1/2/0.1073741824
Interface type: Dynamic
Dynamic Profile Name: svlan-prof
State: Active
Stacked VLAN Id: 0x8100.101
VLAN Id: 0x8100.100
Login Time: 2009-03-27 11:57:19 PDT
```

#### show subscribers user-name detail

```
user@host> show subscribers user-name larry1 detail
Type: DHCP
User Name: larry1
IP Address: 203.0.113.37
IP Netmask: 255.255.0.0
Logical System: default
Routing Instance: default
```

```

Interface: ge-1/0/0.1
Interface type: Static
Dynamic Profile Name: foo
MAC Address: 00:00:5e:00:53:01
State: Active
Radius Accounting ID: 1
Session ID: 1
Login Time: 2011-11-07 08:25:59 PST
DHCP Options: len 52
35 01 01 39 02 02 40 3d 07 01 00 10 94 00 00 01 33 04 00 00
00 3c 0c 15 63 6c 69 65 6e 74 5f 50 6f 72 74 20 2f 2f 32 2f
37 2d 30 2d 30 37 05 01 06 0f 21 2c

```

### show subscribers vlan-id

```

user@host> show subscribers vlan-id 100
Interface          IP Address          User Name
ge-1/0/0.1073741824
ge-1/2/0.1073741825

```

### show subscribers vlan-id detail

```

user@host> show subscribers vlan-id 100 detail
Type: VLAN
Interface: ge-1/0/0.1073741824
Interface type: Dynamic
Dynamic Profile Name: vlan-prof-tpid
State: Active
VLAN Id: 100
Login Time: 2009-03-11 06:48:54 PDT

Type: VLAN
Interface: ge-1/2/0.1073741825
Interface type: Dynamic
Dynamic Profile Name: vlan-prof-tpid
State: Active
VLAN Id: 100
Login Time: 2009-03-11 06:48:54 PDT

```

### show subscribers vpi vci extensive (PPPoE-over-ATM Subscriber Session)

```

user@host> show subscribers vpi 40 vci 50 extensive
Type: PPPoE
User Name: testuser
IP Address: 203.0.113.2
IP Netmask: 255.255.0.0
Logical System: default
Routing Instance: default
Interface: pp0.0
Interface type: Static
MAC Address: 00:00:5e:00:53:02
State: Active
Radius Accounting ID: 2
Session ID: 2
ATM VPI: 40
ATM VCI: 50
Login Time: 2012-12-03 07:49:26 PST
IP Address Pool: pool_1
IPv6 Framed Interface Id: 200:65ff:fe23:102

```

### show subscribers address detail (Enhanced Subscriber Management)

```
user@host> show subscribers address 203.0.113.111 detail
Type: DHCP
User Name: simple_filters_service
IP Address: 203.0.113.111
IP Netmask: 255.0.0.0
Logical System: default
Routing Instance: default
Interface: demux0.3221225482
Interface type: Dynamic
Underlying Interface: demux0.3221225472
Dynamic Profile Name: dhcp-demux-prof
MAC Address: 00:00:5e:00:53:0f
State: Active
Radius Accounting ID: 11
Session ID: 11
PFE Flow ID: 15
Stacked VLAN Id: 210
VLAN Id: 209
Login Time: 2014-03-24 12:53:48 PDT
Service Sessions: 1
DHCP Options: len 3
35 01 01
```

## show system alarms

**Syntax**    show system alarms

**Release Information**    Command introduced before Junos OS Release 7.4.  
 Command introduced in Junos OS Release 9.0 for EX Series switches.  
 Command introduced in Junos OS Release 11.1 for the QFX Series.  
 Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

**Description**    Display active system alarms.

**Options**    This command has no options.

**Additional Information**    System alarms are preset. You cannot modify them, although you can configure them to appear automatically in the J-Web user interface or CLI. They include a *configuration* alarm that appears when no rescue configuration alarm is set and a *license* alarm that appears when a software feature is configured and no valid license is configured for the feature. You can also determine when a license will expire from syslog messages that appear starting from four weeks before expiry of the license. On EX6200 switches, an alarm can be triggered by an internal link error.

The logic for multiple feature licenses is based on the highest validity among the licenses. Also, for capacity non-cumulative, exclusive type licenses (such as for scale), the logic is based on the highest validity of the license.



**NOTE:** As of Junos OS Release 17.3R1, the logic for multiple capacity type licenses and when their expiry raises alarms was changed. Before, the behavior had alarms and syslog messages for expiring licenses raised based on the highest validity, which would mislead users in the case of a license expiring earlier than the highest validity license. The newer behavior has the about-to-expire logic based on the first expiring license.

For more information about system alarms, see the *Junos OS Administration Library*.

In Junos OS release 11.1 and later, alarms for fans also show the slot number of the malfunctioning fans in the CLI output.

Starting with Junos OS Release 13.2, you can view degraded fabric alarms on a routing matrix based on TX Matrix Plus router with 3D SIBs. The alarm indicates that the source FPC is running with a degraded fabric condition. This alarm is an early warning of a possible fabric black-hole condition. When the degraded fabric alarm is raised on the source FPC, you can take remedial action to avoid a fabric black-hole condition. The degraded fabric alarm is raised on the source FPC if both the following conditions are met:

- The active Packet Forwarding Engine destinations are reachable on one or no active switching planes.

- At least one of the inactive switching planes has a fault that causes the destination Packet Forwarding Engine to become unreachable.

**Required Privilege Level** view

**Related Documentation** • [show chassis alarms on page 167](#)

**List of Sample Output** [show system alarms on page 1062](#)  
[show system alarms \(Fan Tray\) on page 1062](#)  
[show system alarms \(QFX Series and OCX Series\) on page 1062](#)  
[show system alarms \(EX6200\) on page 1063](#)  
[show system alarms \(TX Matrix Plus router with 3D SIBs\) on page 1063](#)

**Output Fields** Table 37 on page 1062 lists the output fields for the **show system alarms** command. Output fields are listed in the approximate order in which they appear.

*Table 37: show system alarms Output Fields*

Field Name	Field Description
Alarm time	Date and time the alarm was first recorded.
Class	Severity class for this alarm: <b>Minor</b> or <b>Major</b> .
Description	Information about the alarm.

## Sample Output

### show system alarms

```
user@host> show system alarms
2 alarms currently active
Alarm time           Class    Description
2005-02-24 17:29:34 UTC  Minor    IPsec VPN tunneling usage requires a
license
2005-02-24 17:29:34 UTC  Minor    Rescue configuration is not sent
```

### show system alarms (Fan Tray)

```
user@host> show system alarms
4 alarms currently active
Alarm time           Class    Description
2010-11-11 20:27:38 UTC  Major    Side Fan Tray 7 Failure
2010-11-11 20:27:13 UTC  Minor    Side Fan Tray 7 Overspeed
2010-11-11 20:27:13 UTC  Major    Side Fan Tray 5 Failure
2010-11-11 20:27:13 UTC  Major    Side Fan Tray 0 Failure
```

### show system alarms (QFX Series and OCX Series)

```
user@switch> show system alarms
```

```

2 alarms currently active
Alarm time Class Description
2005-02-24 17:29:34 UTC Minor Rescue configuration is not sent

```

#### show system alarms (EX6200)

```

user@switch> show system alarms
2 alarms currently active
Alarm time      Class  Description
2013-04-05 16:51:41 PDT  Major  FPC 8 internal link errors detected
2013-04-04 18:05:35 PDT  Minor  Rescue configuration is not set

```

#### show system alarms (TX Matrix Plus router with 3D SIBs)

```

user@router> show system alarms

sfc0-re0:
-----
2 alarms currently active
Alarm time      Class  Description
2013-05-08 18:13:58 UTC  Major  LCC 0 Major Errors
2013-05-08 17:48:46 UTC  Major  LCC 7 Major Errors

lcc0-re1:
-----
1 alarm currently active
Alarm time      Class  Description
2013-05-08 18:19:24 UTC  Major  FPC 1 degraded fabric condition detected

lcc7-re0:
-----
1 alarm currently active
Alarm time      Class  Description
2013-05-08 18:19:24 UTC  Major  FPC 7 degraded fabric condition detected

```

## show system audit

---

<b>List of Syntax</b>	<a href="#">Syntax on page 1064</a> <a href="#">Syntax (EX Series Switch and MX Series Router) on page 1064</a> <a href="#">Syntax (TX Matrix Router) on page 1064</a> <a href="#">Syntax (TX Matrix Plus Router) on page 1064</a> <a href="#">Syntax (QFX Series) on page 1064</a> <a href="#">Syntax (OCX Series) on page 1064</a>
<b>Syntax</b>	show system audit <root-only>
<b>Syntax (EX Series Switch and MX Series Router)</b>	show system audit <all-members> <local> <member <i>member-id</i> > <root-only>
<b>Syntax (TX Matrix Router)</b>	show system audit <all-lcc   lcc <i>number</i>   scc> <root-only>
<b>Syntax (TX Matrix Plus Router)</b>	show system audit <all-chassis   all-lcc   lcc <i>number</i>   sfc <i>number</i> > <root-only>
<b>Syntax (QFX Series)</b>	show system audit <infrastructure <i>name</i>   interconnect-device <i>name</i>   node-group <i>name</i>   root-only>
<b>Syntax (OCX Series)</b>	show system audit <root-only>
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. Command introduced in Junos OS Release 9.0 for EX Series switches. <b>sfc</b> option introduced for the TX Matrix Plus router in Junos OS Release 9.6. Command introduced in Junos OS Release 11.1 for the QFX Series. Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Display the state and checksum values for file systems.
<b>Options</b>	<b>none</b> —Display the state and checksum values for all file systems.  <b>all-chassis</b> —(TX Matrix routers and TX Matrix Plus routers only) (Optional) Display file system MD5 hash and permissions information for all of the chassis.  <b>all-lcc</b> —(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display file system MD5 hash and permissions information for all T640 routers connected to the TX Matrix router. On a TX Matrix Plus router, display file system



MD5 hash and permissions information for all T1600 or T4000 routers connected to the TX Matrix Plus router.

**all-members**—(EX4200 switch, QFX Series, and MX Series routers only) (Optional) Display file system MD5 hash and permissions information on all members of the Virtual Chassis configuration.

**lcc *number***—(TX Matrix and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display file system MD5 hash and permissions information for a specific T640 router that is connected to the TX Matrix router. On a TX Matrix Plus router, display file system MD5 hash and permissions information for a specific router that is connected to the TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**infrastructure *name***—(QFabric systems only) (Optional) Display file system MD5 hash and permissions information for a fabric control Routing Engine or a fabric control Routing Engine.

**interconnect-device *name***—(QFabric systems only) (Optional) Display file system MD5 hash and permissions information for the Interconnect device.

**local**—(EX4200 switch, QFX Series, and MX Series routers only) (Optional) Display file system MD5 hash and permissions information on the local Virtual Chassis member.

**member *member-id***—(EX4200 switch, QFX Series, and MX Series routers only) (Optional) Display file system MD5 hash and permissions information on the specified member of the Virtual Chassis configuration. For EX4200 switches, replace *member-id* with a value from 0 through 9. For an MX Series Virtual Chassis, replace *member-id* with a value of 0 or 1.

**node-group *name***—(QFabric systems only) (Optional) Display file system MD5 hash and permissions information for the Node group

**root-only**—(Optional) Check only the root (/) file system. On a QFabric system, you can check the root (/) file system on the infrastructure (fabric manager Routing Engine and fabric control Routing Engine), Interconnect device, or Node group.

**scc**—(TX Matrix routers only) (Optional) Display file system MD5 hash and permissions information for the TX Matrix router (or switch-card chassis).

**sfc number**—(TX Matrix Plus routers only) (Optional) Display file system MD5 hash and permissions information for the TX Matrix Plus router (or switch-fabric chassis). Replace *number* with 0.

**Additional Information** To redirect the output to a file, issue the following command:

```
ssh device-name 'show system audit root-only' > output-file
```

If you save the output of the **show system audit root-only** command to a file, you can compare it to subsequent output from the command to determine whether anything has changed.

By default, when you issue the **show system audit** command on the master Routing Engine of a TX Matrix router or a TX Matrix Plus router, the command is broadcast to all the master Routing Engines of the LCCs connected to it in the routing matrix. Likewise, if you issue the same command on the backup Routing Engine of a TX Matrix or a TX Matrix Plus router, the command is broadcast to all backup Routing Engines of the LCCs that are connected to it in the routing matrix.

**Required Privilege Level** admin

**List of Sample Output** [show system audit root-only on page 1066](#)  
[show system audit lcc \(TX Matrix Router\) on page 1067](#)  
[show system audit lcc \(TX Matrix Plus Router\) on page 1069](#)  
[show system audit root-only \(QFX3500 Switch\) on page 1070](#)

## Sample Output

### show system audit root-only

```
user@host> show system audit root-only
#          user: root
#          machine: host
#          tree: /
date: Fri Feb 11 21:21:46 2000

# .
/set type=file uid=0 gid=0 mode=0755 nlink=1
.          type=dir nlink=23 size=1024 time=950252640.0
.cshrc     uid=3 gid=7 mode=0644 size=177 time=939182975.0 \
           md5digest=f414e06fea6bd646244b98e13d6e6226
.kernel.jkernel.backup \
           mode=0744 size=1934552 time=944688902.0 \
           md5digest=2c343cf0bd9fea8f04f78604feed7aa4
.profile   uid=3 gid=7 mode=0644 nlink=2 size=173 time=939182975.0 \
           md5digest=55a1e3c6c67789c9d3a1cce1ea39f670
COPYRIGHT  uid=3 gid=7 mode=0444 size=3425 time=939182975.0 \
           md5digest=7df8bc77dcee71382ea73eb0ec6a9243
boot.config mode=0644 size=3 time=945902618.0 \
           md5digest=93d722493ed38477338a1405d7dcbb40
boot.help  uid=3 gid=7 mode=0444 size=411 time=939182876.0 \
           md5digest=9b7126385734bcae753f4179ab59d8e5
compat     type=link mode=0777 size=11 time=915149058.0 \
           link=/usr/compat
```

```

kernel      mode=0444 size=1947607 time=950230892.0 \
             md5digest=1a2a8aff2fec678a918ba0d6bf063980
kernel.avr  uid=1112 size=1947642 time=950252597.0 \
             md5digest=82e1637682d58ec28964dfee7fccb62e
kernel.config \
             mode=0644 size=0 time=915149058.0 \
             md5digest=d41d8cd98f00b204e9800998ecf8427e
sys         type=link mode=0777 size=11 time=915149029.0 \
             link=usr/src/sys

```

### show system audit lcc (TX Matrix Router)

```

user@host> show system audit lcc 2
lcc2-re0:
-----
#          user: root
#          machine: test-lcc2
#          tree: /
#          date: Mon Sep 13 11:55:33 2004

# .
/set type=file uid=0 gid=0 mode=0555 nlink=1 flags=none
.      type=dir nlink=20 size=512 time=1094982121.0
  COPYRIGHT mode=0644 size=4735 time=986012708.0 \
            md5digest=78396df1404ad742e6eb1be28f0cd63b
    kernel  type=link mode=0700 size=17 time=1090266262.0 \
            link=/packages/jkernel

# ./altconfig
altconfig  type=dir nlink=2 size=512 time=1089801320.0
# ./altconfig
..

# ./altroot
altroot    type=dir nlink=2 size=512 time=1089801320.0
# ./altroot
..

# ./b
b          type=dir mode=0755 nlink=2 size=512 time=1093961429.0
# ./b
..

# ./bin
/set type=file uid=0 gid=0 mode=0700 nlink=1 flags=none
bin        type=dir mode=0755 nlink=2 size=512 time=1089843059.0
  [        type=link size=28 time=1090266270.0 \
            link=/packages/mnt/jbase/bin/test
  cat      type=link size=27 time=1090266270.0 \
            link=/packages/mnt/jbase/bin/cat
  chmod    type=link size=29 time=1090266270.0 \
            link=/packages/mnt/jbase/bin/chmod
  cp       type=link size=26 time=1090266270.0 \
            link=/packages/mnt/jbase/bin/cp
  csh      type=link size=27 time=1090266270.0 \
            link=/packages/mnt/jbase/bin/csh
  date     type=link size=28 time=1090266270.0 \
            link=/packages/mnt/jbase/bin/date
  dd       type=link size=26 time=1090266270.0 \

```

```

link=/packages/mnt/jbase/bin/dd
df      type=link size=26 time=1090266270.0 \
link=/packages/mnt/jbase/bin/df
echo    type=link size=28 time=1090266270.0 \
link=/packages/mnt/jbase/bin/echo
ed      type=link size=26 time=1090266270.0 \
link=/packages/mnt/jbase/bin/ed
expr    type=link size=28 time=1090266270.0 \
link=/packages/mnt/jbase/bin/expr
hostname type=link size=32 time=1090266270.0 \
link=/packages/mnt/jbase/bin/hostname
kill    type=link size=28 time=1090266270.0 \
link=/packages/mnt/jbase/bin/kill
ln      type=link size=26 time=1090266270.0 \
link=/packages/mnt/jbase/bin/ln
ls      type=link size=26 time=1090266270.0 \
link=/packages/mnt/jbase/bin/ls
mkdir   type=link size=29 time=1090266270.0 \
link=/packages/mnt/jbase/bin/mkdir
mv      type=link size=26 time=1090266270.0 \
link=/packages/mnt/jbase/bin/mv
ps      type=link size=26 time=1090266270.0 \
link=/packages/mnt/jbase/bin/ps
pwd     type=link size=27 time=1090266270.0 \
link=/packages/mnt/jbase/bin/pwd
rcp     type=link size=27 time=1090266270.0 \
link=/packages/mnt/jbase/bin/rcp
red     type=link size=26 time=1090266270.0 \
link=/packages/mnt/jbase/bin/ed
rm      type=link size=26 time=1090266270.0 \
link=/packages/mnt/jbase/bin/rm
rmdir   type=link size=29 time=1090266270.0 \
link=/packages/mnt/jbase/bin/rmdir
sh      type=link size=26 time=1090266270.0 \
link=/packages/mnt/jbase/bin/sh
sleep   type=link size=29 time=1090266270.0 \
link=/packages/mnt/jbase/bin/sleep
stty    type=link size=28 time=1090266270.0 \
link=/packages/mnt/jbase/bin/stty
sync    type=link size=28 time=1090266270.0 \
link=/packages/mnt/jbase/bin/sync
tcsh    type=link size=27 time=1090266270.0 \
link=/packages/mnt/jbase/bin/csh
test    type=link size=28 time=1090266270.0 \
link=/packages/mnt/jbase/bin/test
# ./bin
..

# ./boot
/set type=file uid=0 gid=0 mode=0444 nlink=1 flags=none
boot    type=dir mode=0555 nlink=3 size=512 time=1095069935.0
boot0   size=512 time=1094978286.0 \
md5digest=6f780822dd4ae482a20462b66e542cca
boot1   mode=0555 size=512 time=1094978294.0 \
md5digest=8d112b09df342cd0b60fdb9bdcde8e07
boot2   mode=0555 size=7680 time=1094978294.0 \
md5digest=28eb58c4068c6b85717e1484f9e028e4
cdboot  mode=0555 size=165888 time=1094978298.0 \
md5digest=1474c6b800dfc82ba552d7c36116d07d
kgzldr.o size=5996 time=1094982121.0 \

```

```

loader      md5digest=c53dc948eb07e2ea4eb0413e4c4634a3
            mode=0555 size=163840 time=1094978298.0 \
loader.4th  md5digest=82d9dc2d31033476bfb61bb7264c4fed
            size=9237 time=986013631.0 \
            md5digest=43144391465ad50267d31e0a320be1de
...

```

### show system audit lcc (TX Matrix Plus Router)

```
user@host> show system audit all-chassis
```

```
sfc0-re0:
```

```

-----
#          user: root
#          machine: test
#          tree: /
#          date: Mon May 18 00:13:16 2009

# .
/set type=file uid=0 gid=0 mode=0755 nlink=1 flags=none
.
  COPYRIGHT  type=dir nlink=23 size=512 time=1242347096.0
             mode=0644 size=6196 time=1168587741.0 \
             md5digest=bbad415e1c29bbdd9b383537100412c
kernel      type=link size=17 time=1242347011.0 link=/packages/jkernel
staging     type=link mode=0777 size=8 time=1242346935.0 link=/var/tmp

# ./snap
.snap       type=dir mode=0775 nlink=2 size=512 time=1242346922.0
# ./snap
..

# ./altconfig
altconfig   type=dir mode=0500 nlink=2 size=512 time=1242319843.0
# ./altconfig
..

# ./altroot
altroot     type=dir mode=0500 nlink=2 size=512 time=1242319843.0
# ./altroot
..

# ./bin
bin         type=dir nlink=2 size=512 time=1242346944.0
  \133      type=link size=28 time=1242346942.0 \
            link=/packages/mnt/jbase/bin/test
  cat       type=link size=27 time=1242346941.0 \
            link=/packages/mnt/jbase/bin/cat
  chflags   type=link size=31 time=1242346941.0 \
            link=/packages/mnt/jbase/bin/chflags
  chmod     type=link size=29 time=1242346941.0 \
            link=/packages/mnt/jbase/bin/chmod
  cp        type=link size=26 time=1242346941.0 \
            link=/packages/mnt/jbase/bin/cp
  csh       type=link size=27 time=1242346941.0 \
            link=/packages/mnt/jbase/bin/csh
  date      type=link size=28 time=1242346941.0 \
            link=/packages/mnt/jbase/bin/date
  dd        type=link size=26 time=1242346941.0 \

```

```

df          link=/packages/mnt/jbase/bin/dd
            type=link size=26 time=1242346941.0 \
            link=/packages/mnt/jbase/bin/df
echo        type=link size=28 time=1242346941.0 \
            link=/packages/mnt/jbase/bin/echo
ed          type=link size=26 time=1242346941.0 \
            link=/packages/mnt/jbase/bin/ed
expr        type=link size=28 time=1242346941.0 \
            link=/packages/mnt/jbase/bin/expr
hostname    type=link size=32 time=1242346941.0 \
            link=/packages/mnt/jbase/bin/hostname
kill        type=link size=28 time=1242346941.0 \
            link=/packages/mnt/jbase/bin/kill
ln          type=link size=26 time=1242346941.0 \
            link=/packages/mnt/jbase/bin/ln
ls          type=link size=26 time=1242346941.0 \
            link=/packages/mnt/jbase/bin/ls
mkdir       type=link size=29 time=1242346941.0 \
            link=/packages/mnt/jbase/bin/mkdir
mv          type=link size=26 time=1242346941.0 \
            link=/packages/mnt/jbase/bin/mv
pax         type=link size=27 time=1242346944.0 \
            link=/packages/mnt/jbase/bin/pax
ps          type=link size=26 time=1242346941.0 \
            link=/packages/mnt/jbase/bin/ps
pwd         type=link size=27 time=1242346941.0 \
            link=/packages/mnt/jbase/bin/pwd
rcp         type=link size=27 time=1242346942.0 \
            link=/packages/mnt/jbase/bin/rcp
red         type=link size=26 time=1242346941.0 \
            link=/packages/mnt/jbase/bin/ed
rm          type=link size=26 time=1242346942.0 \
            link=/packages/mnt/jbase/bin/rm
rmdir       type=link size=29 time=1242346942.0 \
            link=/packages/mnt/jbase/bin/rmdir
sh          type=link size=26 time=1242346942.0 \
            link=/packages/mnt/jbase/bin/sh
sleep       type=link size=29 time=1242346942.0 \
            link=/packages/mnt/jbase/bin/sleep
stty        type=link size=28 time=1242346942.0 \
            link=/packages/mnt/jbase/bin/stty
sync        type=link size=28 time=1242346942.0 \
            link=/packages/mnt/jbase/bin/sync
tcsh        type=link size=27 time=1242346941.0 \
            link=/packages/mnt/jbase/bin/csh
test        type=link size=28 time=1242346942.0 \
            link=/packages/mnt/jbase/bin/test
# ./bin
...
```

### show system audit root-only (QFX3500 Switch)

```

user@switch> show system audit root-only
#          user: root
#          machine: test
#          tree: /
date: Fri Feb 11 21:21:46 2000

# .
/set type=file uid=0 gid=0 mode=0755 nlink=1
.          type=dir nlink=23 size=1024 time=950252640.0
```

```

.cshrc      uid=3 gid=7 mode=0644 size=177 time=939182975.0 \
            md5digest=f414e06fea6bd646244b98e13d6e6226
.kernel.jkernel.backup \
            mode=0744 size=1934552 time=944688902.0 \
            md5digest=2c343cf0bd9fea8f04f78604feed7aa4
.profile    uid=3 gid=7 mode=0644 nlink=2 size=173 time=939182975.0 \
            md5digest=55a1e3c6c67789c9d3a1cce1ea39f670
COPYRIGHT   uid=3 gid=7 mode=0444 size=3425 time=939182975.0 \
            md5digest=7df8bc77dcee71382ea73eb0ec6a9243
boot.config mode=0644 size=3 time=945902618.0 \
            md5digest=93d722493ed38477338a1405d7dcbb40
boot.help   uid=3 gid=7 mode=0444 size=411 time=939182876.0 \
            md5digest=9b7126385734bcae753f4179ab59d8e5
compat      type=link mode=0777 size=11 time=915149058.0 \
            link=/usr/compat
kernel      mode=0444 size=1947607 time=950230892.0 \
            md5digest=1a2a8aff2fec678a918ba0d6bf063980
kernel.avr  uid=1112 size=1947642 time=950252597.0 \
            md5digest=82e1637682d58ec28964dfec7fccb62e
kernel.config \
            mode=0644 size=0 time=915149058.0 \
            md5digest=d41d8cd98f00b204e9800998ecf8427e
sys         type=link mode=0777 size=11 time=915149029.0 \
            link=usr/src/sys

```

## show system buffers

---

<b>List of Syntax</b>	<a href="#">Syntax on page 1072</a> <a href="#">Syntax (EX Series) on page 1072</a> <a href="#">Syntax (TX Matrix Router) on page 1072</a> <a href="#">Syntax (TX Matrix Plus Router) on page 1072</a> <a href="#">Syntax (MX Series Router) on page 1072</a> <a href="#">Syntax (QFX Series) on page 1072</a>
<b>Syntax</b>	show system buffers
<b>Syntax (EX Series)</b>	show system buffers <all-members> <local> <member <i>member-id</i> >
<b>Syntax (TX Matrix Router)</b>	show system buffers <all-chassis   all-lcc   lcc <i>number</i>   scc>
<b>Syntax (TX Matrix Plus Router)</b>	show system buffers <all-chassis   all-lcc   lcc <i>number</i>   sfc <i>number</i> >
<b>Syntax (MX Series Router)</b>	show system buffers <all-members> <local> <member <i>member-id</i> >
<b>Syntax (QFX Series)</b>	show system buffers <infrastructure <i>name</i>   interconnect-device <i>name</i>   node-group <i>name</i>   root-only (infrastructure <i>name</i>   interconnect-device <i>name</i>   node-group <i>name</i> )>
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. Command introduced in Junos OS Release 9.0 for EX Series switches. <b>sfc</b> option introduced for the TX Matrix Plus router in Junos OS Release 9.6. Command introduced in Junos OS Release 11.1 for the QFX Series. Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Display information about the buffer pool that the Routing Engine uses for local traffic. Local traffic is the routing and management traffic that is exchanged between the Routing Engine and the Packet Forwarding Engine within the router or switch, as well as the routing and management traffic from IP (that is, from OSPF, BGP, SNMP, ping operations, and so on).
<b>Options</b>	<b>none</b> —Show all buffer statistics.  <b>all-lcc</b> —(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, show buffer statistics for all T640 routers connected to the TX Matrix router.



On a TX Matrix Plus router, show buffer statistics for all routers connected to the TX Matrix Plus router.

**all-chassis**—(TX Matrix routers and TX Matrix Plus routers only) (Optional) Show buffer statistics for all of the chassis.

**all-members**—(EX4200 switches and MX Series routers only) (Optional) Show buffer statistics for all members of the Virtual Chassis configuration.

**infrastructure *name***—(QFabric systems only) (Optional) Show buffer statistics for a fabric control Routing Engine or a fabric control Routing Engine.

**interconnect-device *name***—(QFabric systems only) (Optional) Show buffer statistics for the Interconnect device.

**lcc *number***—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, show buffer statistics for a specific T640 router (or line-card chassis) that is connected to the TX Matrix router. On a TX Matrix Plus router, show buffer statistics for a specific router (line-card chassis) that is connected to the TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(EX4200 switches and MX Series routers only) (Optional) Show buffer statistics for the local Virtual Chassis member.

**member *member-id***—(EX4200 switches and MX Series routers only) (Optional) Show buffer statistics for the specified member of the Virtual Chassis configuration. For EX4200 switches, replace *member-id* with a value from 0 through 9. For an MX Series Virtual Chassis, replace *member-id* with a value of 0 or 1.

**node-group *name***—(QFabric systems only) (Optional) Show buffer statistics for the Node group

**sfc**—(TX Matrix Plus routers only) (Optional) Show buffer statistics for the TX Matrix Plus router. Replace *number* with 0.

**Additional Information** By default, when you issue the **show system buffers** command on the master Routing Engine of a TX Matrix router or a TX Matrix Plus router, the command is broadcast to all the master Routing Engines of the LCCs connected to it in the routing matrix. Likewise,

if you issue the same command on the backup Routing Engine of a TX Matrix or a TX Matrix Plus router, the command is broadcast to all backup Routing Engines of the LCCs that are connected to it in the routing matrix.

A special type of memory buffer called a *cluster* is 2 KB in size. For more information, see *The Design and Implementation of the 4.4BSD Operation System* by McKusic, Bostic, Karels, and Quarterman.

**Required Privilege Level**

view

**Related Documentation**

- [Routing Matrix with a TX Matrix Plus Router Solutions Page](#)

**List of Sample Output**

[show system buffers on page 1075](#)  
[show system buffers scc \(TX Matrix Router\) on page 1076](#)  
[show system buffers sfc \(TX Matrix Plus Router\) on page 1076](#)  
[show system buffers all-chassis \(TX Matrix Plus Router\) on page 1076](#)  
[show system buffers node-group \(QFabric System\) on page 1077](#)

**Output Fields**

[Table 38 on page 1075](#) describes the output fields for the **show system buffers** command. Output fields are listed in the approximate order in which they appear.

Table 38: show system buffers Output Fields

Field Name	Field Description
<b>mbufs in use</b>	Memory buffers (mbufs) are 128-byte buffers that are used for various purposes inside the kernel. Each memory buffer has a type, and the output itemizes the amount allocated for each type. Types with no memory buffers allocated are not displayed.
<b>mbufs allocated to packet headers</b>	Number of memory buffers currently holding packet headers
<b>mbufs allocated to control blocks</b>	Number of memory buffers currently holding the state for sockets.
<b>mbufs allocated to send data</b>	Number of memory buffers currently holding socket send data.
<b>mbufs allocated to pfe refill data</b>	Number of memory buffers currently holding Packet Forwarding Engine refill data.
<b>mbufs allocated to fxp data</b>	Number of memory buffers currently holding fxp data.
<b>mbufs allocated to socket names and addresses</b>	Number of memory buffers currently holding addresses for sockets.
<b>mbuf clusters in use</b>	Allocation statistics for memory buffer clusters.
<b>allocated to network</b>	Total amount of memory in use by the networking and interprocess communication (IPC) code.
<b>requests for memory denied</b>	Number of times a memory allocation request within the IPC and networking code failed.
<b>requests for memory delayed</b>	Number of times a memory allocation request within the IPC and networking code was postponed.
<b>calls to protocol drain routines</b>	Number of times a memory allocation request within the IPC and networking code triggered a memory reclamation attempt.

## Sample Output

### show system buffers

```

user@host> show system buffers
397/893/1290 mbufs in use (current/cache/total)
395/331/726/30000 mbuf clusters in use (current/cache/total/max)
384/256 mbuf+clusters out of packet secondary zone in use (current/cache)
0/0/0/0 4k (page size) jumbo clusters in use (current/cache/total/max)
0/0/0/0 9k jumbo clusters in use (current/cache/total/max)
0/0/0/0 16k jumbo clusters in use (current/cache/total/max)
889K/885K/1774K bytes allocated to network (current/cache/total)
0/0/0 requests for mbufs denied (mbufs/clusters/mbuf+clusters)
0/0/0 requests for jumbo clusters denied (4k/9k/16k)

```

```
0/5/1024 sfbufs in use (current/peak/max)
0 requests for sfbufs denied
0 requests for sfbufs delayed
0 requests for I/O initiated by sendfile
0 calls to protocol drain routines
```

#### show system buffers scc (TX Matrix Router)

```
user@host> show system buffers scc
213 mbufs in use:
    11 mbufs allocated to packet headers
    26 mbufs allocated to socket names and addresses
    2 mbufs allocated to socket options
    17 mbufs allocated to socket send data
    2 mbufs allocated to pfe data
    155 mbufs allocated to fxp data (rx)
    511 mbufs allocated to <mbuf type 86>
    256 mbufs allocated to <mbuf type 92>
924/1162 mbuf clusters in use
2788 Kbytes allocated to network (75% in use)
0 requests for memory denied
0 requests for memory delayed
0 calls to protocol drain routines
```

#### show system buffers sfc (TX Matrix Plus Router)

```
user@host> show system buffers sfc 0

sfc0-re0:
-----
4363/2807/7170 mbufs in use (current/cache/total)
4358/1968/6326/30000 mbuf clusters in use (current/cache/total/max)
256/128 mbuf+clusters out of packet secondary zone in use (current/cache)
0/0/0/0 4k (page size) jumbo clusters in use (current/cache/total/max)
0/0/0/0 9k jumbo clusters in use (current/cache/total/max)
0/0/0/0 16k jumbo clusters in use (current/cache/total/max)
9806K/4637K/14444K bytes allocated to network (current/cache/total)
0/0/0 requests for mbufs denied (mbufs/clusters/mbuf+clusters)
0/0/0 requests for jumbo clusters denied (4k/9k/16k)
0/10/1024 sfbufs in use (current/peak/max)
0 requests for sfbufs denied
0 requests for sfbufs delayed
0 requests for I/O initiated by sendfile
0 calls to protocol drain routines
```

#### show system buffers all-chassis (TX Matrix Plus Router)

```
user@host> show system buffers all-chassis

sfc0-re0:
-----
4363/2807/7170 mbufs in use (current/cache/total)
4358/1968/6326/30000 mbuf clusters in use (current/cache/total/max)
256/128 mbuf+clusters out of packet secondary zone in use (current/cache)
0/0/0/0 4k (page size) jumbo clusters in use (current/cache/total/max)
0/0/0/0 9k jumbo clusters in use (current/cache/total/max)
0/0/0/0 16k jumbo clusters in use (current/cache/total/max)
9806K/4637K/14444K bytes allocated to network (current/cache/total)
0/0/0 requests for mbufs denied (mbufs/clusters/mbuf+clusters)
0/0/0 requests for jumbo clusters denied (4k/9k/16k)
```

```

0/10/1024 sfbufs in use (current/peak/max)
0 requests for sfbufs denied
0 requests for sfbufs delayed
0 requests for I/O initiated by sendfile
0 calls to protocol drain routines

```

```
lcc0-re0:
```

```

-----
772/2558/3330 mbufs in use (current/cache/total)
772/598/1370/30000 mbuf clusters in use (current/cache/total/max)
768/512 mbuf+clusters out of packet secondary zone in use (current/cache)
0/0/0/0 4k (page size) jumbo clusters in use (current/cache/total/max)
0/0/0/0 9k jumbo clusters in use (current/cache/total/max)
0/0/0/0 16k jumbo clusters in use (current/cache/total/max)
1737K/1835K/3572K bytes allocated to network (current/cache/total)
0/0/0 requests for mbufs denied (mbufs/clusters/mbuf+clusters)
0/0/0 requests for jumbo clusters denied (4k/9k/16k)
0/4/1024 sfbufs in use (current/peak/max)
0 requests for sfbufs denied
0 requests for sfbufs delayed
0 requests for I/O initiated by sendfile
0 calls to protocol drain routines

```

```
lcc1-re0:
```

```

-----
773/2437/3210 mbufs in use (current/cache/total)
773/453/1226/30000 mbuf clusters in use (current/cache/total/max)
768/384 mbuf+clusters out of packet secondary zone in use (current/cache)
0/0/0/0 4k (page size) jumbo clusters in use (current/cache/total/max)
0/0/0/0 9k jumbo clusters in use (current/cache/total/max)
0/0/0/0 16k jumbo clusters in use (current/cache/total/max)
1739K/1515K/3254K bytes allocated to network (current/cache/total)
0/0/0 requests for mbufs denied (mbufs/clusters/mbuf+clusters)
0/0/0 requests for jumbo clusters denied (4k/9k/16k)
0/7/1024 sfbufs in use (current/peak/max)
0 requests for sfbufs denied
0 requests for sfbufs delayed
0 requests for I/O initiated by sendfile
0 calls to protocol drain routines

```

```
lcc2-re0:
```

```

-----
816/2514/3330 mbufs in use (current/cache/total)
816/554/1370/30000 mbuf clusters in use (current/cache/total/max)
768/512 mbuf+clusters out of packet secondary zone in use (current/cache)
0/0/0/0 4k (page size) jumbo clusters in use (current/cache/total/max)
0/0/0/0 9k jumbo clusters in use (current/cache/total/max)
0/0/0/0 16k jumbo clusters in use (current/cache/total/max)
1836K/1736K/3572K bytes allocated to network (current/cache/total)
0/0/0 requests for mbufs denied (mbufs/clusters/mbuf+clusters)
0/0/0 requests for jumbo clusters denied (4k/9k/16k)
0/4/1024 sfbufs in use (current/peak/max)
0 requests for sfbufs denied
0 requests for sfbufs delayed
0 requests for I/O initiated by sendfile

```

### show system buffers node-group (QFabric System)

```

user@switch> show system buffers node-group node1
node-group node1:

```

```
2/2698/2700 mbufs in use (current/cache/total)
2/1520/1522/30000 mbuf clusters in use (current/cache/total/max)
0/1280 mbuf+clusters out of packet secondary zone in use (current/cache)
0/0/0/0 4k (page size) jumbo clusters in use (current/cache/total/max)
0/0/0/0 9k jumbo clusters in use (current/cache/total/max)
0/0/0/0 16k jumbo clusters in use (current/cache/total/max)
4K/3714K/3719K bytes allocated to network (current/cache/total)
0/0/0 requests for mbufs denied (mbufs/clusters/mbuf+clusters)
0/0/0 requests for jumbo clusters denied (4k/9k/16k)
0/6/6656 sbufs in use (current/peak/max)
0 requests for sbufs denied
0 requests for sbufs delayed
0 requests for I/O initiated by sendfile
0 calls to protocol drain routines
```

re0:

```
-----
516/639/1155 mbufs in use (current/cache/total)
515/147/662/30000 mbuf clusters in use (current/cache/total/max)
512/128 mbuf+clusters out of packet secondary zone in use (current/cache)
0/0/0/0 4k (page size) jumbo clusters in use (current/cache/total/max)
0/0/0/0 9k jumbo clusters in use (current/cache/total/max)
0/0/0/0 16k jumbo clusters in use (current/cache/total/max)
1159K/453K/1612K bytes allocated to network (current/cache/total)
0/0/0 requests for mbufs denied (mbufs/clusters/mbuf+clusters)
0/0/0 requests for jumbo clusters denied (4k/9k/16k)
0/4/1024 sbufs in use (current/peak/max)
0 requests for sbufs denied
0 requests for sbufs delayed
0 requests for I/O initiated by sendfile
0 calls to protocol drain routines
```

re1:

```
-----
519/771/1290 mbufs in use (current/cache/total)
518/176/694/30000 mbuf clusters in use (current/cache/total/max)
512/128 mbuf+clusters out of packet secondary zone in use (current/cache)
0/0/0/0 4k (page size) jumbo clusters in use (current/cache/total/max)
0/0/0/0 9k jumbo clusters in use (current/cache/total/max)
0/0/0/0 16k jumbo clusters in use (current/cache/total/max)
1165K/544K/1710K bytes allocated to network (current/cache/total)
0/0/0 requests for mbufs denied (mbufs/clusters/mbuf+clusters)
0/0/0 requests for jumbo clusters denied (4k/9k/16k)
0/4/1024 sbufs in use (current/peak/max)
0 requests for sbufs denied
0 requests for sbufs delayed
0 requests for I/O initiated by sendfile
0 calls to protocol drain routines
```

## show system certificate

<b>Syntax</b>	<code>show system certificate</code> <code>&lt;certificate-id&gt;</code>
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. Command introduced in Junos OS Release 11.1 for the QFX Series. Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	(Encryption interface on M Series, T Series routers, QFX Series, and OCX Series switches only) Display installed certificates signed by the Juniper Networks certificate authority.
<b>Options</b>	<b>none</b> —Display all installed certificates signed by the Juniper Networks certificate authority.  <b>certificate-id</b> —(Optional) Display the details of a particular certificate.
<b>Required Privilege Level</b>	maintenance
<b>List of Sample Output</b>	<a href="#">show system certificate on page 1080</a> <a href="#">show system certificate (QFX Series) on page 1080</a>
<b>Output Fields</b>	<a href="#">Table 39 on page 1079</a> lists the output fields for the <b>show system certificate</b> command. Output fields are listed in the approximate order in which they appear.

*Table 39: show system certificate Output Fields*

Field Name	Field Description
<b>Certificate identifier</b>	Unique identifier associated with a certificate. The certificate identifier is the common name of the subject.
<b>Issuer</b> <b>Subject</b>	Information about the certificate issuer and the distinguished name (DN) of the issuer, respectively: <ul style="list-style-type: none"> <li>• <b>Organization</b>—Name of the owner's organization.</li> <li>• <b>Organizational unit</b>—Name of the owner's department.</li> <li>• <b>Country</b>—Two-character country code in which the owner's system is located.</li> <li>• <b>State</b>—State in the USA in which the owner is using the certificate.</li> <li>• <b>Locality</b>—City in which the owner's system is located.</li> <li>• <b>Common name</b>—Name of the owner of the certificate.</li> <li>• <b>E-mail address</b>—E-mail address of the owner of the certificate.</li> </ul>
<b>Validity</b>	When a certificate is valid.
<b>Signature algorithm</b>	Encryption algorithm applied to the installed certificate.
<b>Public key algorithm</b>	Encryption algorithm applied to the public key.

## Sample Output

### show system certificate

```
user@host> show system certificate
Certificate identifier: Dallas-v3
  Issuer:
    Organization: Juniper Networks, Organizational unit: Juniper CA,
    Country: US, State: CA, Locality: Sunnyvale, Common name: Dallas CA,
    E-mail address:ca@example.com
  Subject:
    Organization: Juniper Networks, Organizational unit: Juniper CA,
    Country: US, State: CA, Locality: Sunnyvale, Common name: Dallas-v3,
    E-mail address:ca@example.com
  Validity:
    Not before: Mar 13 03:23:25 2004 GMT
    Not after: Mar 24 03:23:25 2014 GMT
  Signature algorithm: sha1WithRSAEncryption
  Public key algorithm: dsaEncryption
```

### show system certificate (QFX Series)

```
user@host> show system certificate
Certificate identifier: Dallas-v3
  Issuer:
    Organization: Juniper Networks, Organizational unit: Juniper CA,
    Country: US, State: CA, Locality: Sunnyvale, Common name: Dallas CA,
    E-mail address:ca@example.com
  Subject:
    Organization: Juniper Networks, Organizational unit: Juniper CA,
    Country: US, State: CA, Locality: Sunnyvale, Common name: Dallas-v3,
    E-mail address:ca@example.com
  Validity:
    Not before: Mar 13 03:23:25 2004 GMT
    Not after: Mar 24 03:23:25 2014 GMT
  Signature algorithm: sha1WithRSAEncryption
  Public key algorithm: dsaEncryption
```



## show system commit


<b>Syntax</b>	show system commit <revision> <server>
<b>Release Information</b>	<p>Command introduced before Junos OS Release 7.4.</p> <p>Command introduced in Junos OS Release 9.0 for EX Series switches.</p> <p>Command introduced in Junos OS Release 11.1 for the QFX Series.</p> <p>Option <b>server</b> introduced in Junos OS Release 12.1 for the PTX Series router.</p> <p>Option <b>revision</b> introduced in Junos OS Release 14.1.</p> <p>Command introduced in Junos OS Release 14.1X53-D20 for OCX Series switches.</p>
<b>Description</b>	Display the system commit history and any pending commit operation.
<b>Options</b>	<p><b>none</b>—Display the last 50 commit operations listed, most recent to first.</p> <p><b>revision</b>—(Optional) Display the revision number of the active configuration of the Routing Engine(s).</p> <p><b>server</b>— (Optional) Display commit server status.</p>
<div>  <p><b>NOTE:</b> By default, the status of the commit server is “Not running”. The commit server starts running only when a commit job is added to the batch.</p> </div>	
<b>Required Privilege Level</b>	view
<b>Related Documentation</b>	<ul style="list-style-type: none"> <li>• <a href="#">clear system commit on page 113</a></li> <li>• <a href="#">show system commit revision</a></li> </ul>
<b>List of Sample Output</b>	<p><a href="#">show system commit on page 1083</a></p> <p><a href="#">show system commit (At a Particular Time) on page 1083</a></p> <p><a href="#">show system commit (At the Next Reboot) on page 1083</a></p> <p><a href="#">show system commit (Rollback Pending) on page 1083</a></p> <p><a href="#">show system commit (QFX Series) on page 1083</a></p>
<b>Output Fields</b>	<p><a href="#">Table 40 on page 1082</a> describes the output fields for the <b>show system commit</b> command. Output fields are listed in the approximate order in which they appear.</p>

Table 40: show system commit Output Fields

Field Name	Field Description	Level of Output
<b>&lt;number&gt;</b>	Displays the last 50 commit operations listed, most recent to first. The identifier <b>&lt;number&gt;</b> designates a configuration created for recovery using the <b>request system configuration rescue save</b> command.	<b>none</b>
<b>&lt;time-stamp&gt;</b>	Date and time of the commit operation.	<b>none</b>
<b>&lt;root&gt;/&lt;username&gt;</b>	User who executed the commit operation.	<b>none</b>
<b>&lt;method&gt;</b>	Method used to execute the commit operation: <ul style="list-style-type: none"> <li>• <b>CLI</b>—CLI interactive user performed the commit operation.</li> <li>• <b>Junos XML protocol</b>—Junos XML protocol client performed the commit operation.</li> <li>• <b>synchronize</b>—The <b>commit synchronize</b> command was performed on the other Routing Engine.</li> <li>• <b>snmp</b>—An SNMP <b>set</b> request caused the commit operation.</li> <li>• <b>button</b>—A button on the router or switch was pressed to commit a rescue configuration for recovery.</li> <li>• <b>autoinstall</b>—A configuration obtained through autoinstallation was committed.</li> <li>• <b>other</b>—When there is no login name associated with the session, the values for user and client default to root and other. For example, during a reboot after package installation, mgd commits the configuration as a system commit, and there is no login associated with the commit.</li> </ul>	<b>none</b>

## Sample Output

### show system commit

```
user@host> show system commit
0   2003-07-28 19:14:04 PDT by root via other
1   2003-07-25 22:01:36 PDT by user via cli
2   2003-07-25 22:01:32 PDT by user via cli
3   2003-07-25 21:30:13 PDT by root via button
4   2003-07-25 13:46:48 PDT by user via cli
5   2003-07-25 05:33:21 PDT by root via autoinstall
...
rescue 2002-05-10 15:32:03 PDT by root via other
```

### show system commit (At a Particular Time)

```
user@host> show system commit
commit requested by root via cli at Tue May  7 15:59:00 2002
```

### show system commit (At the Next Reboot)

```
user@host> show system commit
commit requested by root via cli at reboot
```

### show system commit (Rollback Pending)

```
user@host> show system commit
0 2005-01-05 15:00:37 PST by root via cli commit confirmed, rollback in 3mins
```

### show system commit (QFX Series)

```
user@switch> show system commit
0 2011-11-25 19:17:49 PST by root via cli
```

## show system connections

---

**List of Syntax**    [Syntax on page 1084](#)  
                          [Syntax \(EX Series\) on page 1084](#)  
                          [Syntax \(TX Matrix Router\) on page 1084](#)  
                          [Syntax \(TX Matrix Plus Router\) on page 1084](#)  
                          [Syntax \(MX Series Router\) on page 1084](#)  
                          [Syntax \(QFX Series\) on page 1084](#)  
                          [Syntax \(OCX Series\) on page 1085](#)

**Syntax**    `show system connections`  
              `<extensive>`  
              `<all-chassis | all-lcc | lcc number | scc>`  
              `<inet | inet6>`  
              `<show-routing-instances>`

**Syntax (EX Series)**    `show system connections`  
                          `<extensive>`  
                          `<all-members>`  
                          `<inet | inet6>`  
                          `<local>`  
                          `<member member-id>`  
                          `<show-routing-instances>`

**Syntax (TX Matrix Router)**    `show system connections`  
                                      `<extensive>`  
                                      `<all-chassis | all-lcc | lcc number | scc>`  
                                      `<inet | inet6>`  
                                      `<show-routing-instances>`

**Syntax (TX Matrix Plus Router)**    `show system connections`  
  `<extensive>`  
  `<all-chassis | all-lcc | lcc number | sfc number>`  
  `<inet | inet6>`  
  `<show-routing-instances>`

**Syntax (MX Series Router)**    `show system connections`  
                                      `<extensive>`  
                                      `<all-members>`  
                                      `<inet | inet6>`  
                                      `<local>`  
                                      `<member member-id>`  
                                      `<show-routing-instances>`

**Syntax (QFX Series)**    `show system connections`  
                              `<extensive>`  
                              `<inet>`  
                              `<infrastructure name>`  
                              `<interconnect-device name>`  
                              `<node-group name>`

<show-routing-instances>

**Syntax (OCX Series)** show system connections  
 <extensive>  
 <inet>  
 <show-routing-instances>

**Release Information** Command introduced before Junos OS Release 7.4.  
 Command introduced in Junos OS Release 9.0 for EX Series switches.  
**sfc** option introduced for the TX Matrix Plus router in Junos OS Release 9.6.  
 Command introduced in Junos OS Release 11.1 for the QFX Series.  
 Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

**Description** Display information about the active IP sockets on the Routing Engine. Use this command to verify which servers are active on a system and what connections are currently in progress.

**Options** **none**—Display information about all active IP sockets on the Routing Engine.

**extensive**—(Optional) Display exhaustive system process information, which, for TCP connections, includes the TCP control block. This option is useful for debugging TCP connections.

**all-chassis**—(TX Matrix routers and TX Matrix Plus routers only) (Optional) Display system connection activity for all the routers in the chassis.

**all-lcc**—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display system connection activity for all T640 routers connected to the TX Matrix router. On a TX Matrix Plus router, display system connection activity for all connected T1600 or T4000 LCCs

**all-members**—(EX4200 switches and MX Series routers only) (Optional) Display system connection activity for all members of the Virtual Chassis configuration.

**inet | inet6**—(Optional) Display IPv4 connections or IPv6 connections, respectively.

**infrastructure *name***—(QFabric systems only) (Optional) Display system connection activity for the fabric control Routing Engines or fabric manager Routing Engines.

**interconnect-device *name***—(QFabric systems only) (Optional) Display system connection activity for the Interconnect device.

**lcc *number***—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display system connection activity for a specific T640 router that is connected to the TX Matrix router. On a TX Matrix Plus router, display system connection activity for a specific router that is connected to the TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(EX4200 switches and MX Series routers only) (Optional) Display system connection activity for the local Virtual Chassis member.

**member *member-id***—(EX4200 switches and MX Series routers only) (Optional) Display system connection activity for the specified member of the Virtual Chassis configuration. For EX4200 switches, replace *member-id* with a value from 0 through 9. For an MX Series Virtual Chassis, replace *member-id* with a value of 0 or 1.

**node-group *name***—(QFabric systems only) (Optional) Display system connection activity for the Node group.

**scc**—(TX Matrix routers only) (Optional) Display system connection activity for the TX Matrix router (or switch-card chassis).

**sfc**—(TX Matrix routers only) (Optional) Display system connection activity for the TX Matrix Plus router.

**show-routing-instances**—(Optional) Display routing instances.

**Additional Information** By default, when you issue the **show system connections** command on the master Routing Engine of a TX Matrix router or a TX Matrix Plus router, the command is broadcast to all the master Routing Engines of the LCCs connected to it in the routing matrix. Likewise, if you issue the same command on the backup Routing Engine of a TX Matrix or a TX Matrix Plus router, the command is broadcast to all backup Routing Engines of the LCCs that are connected to it in the routing matrix.

**Required Privilege Level** view

**Related Documentation**

- [Routing Matrix with a TX Matrix Plus Router Solutions Page](#)

**List of Sample Output** [show system connections on page 1087](#)  
[show system connections extensive on page 1088](#)  
[show system connections lcc \(TX Matrix Router\) on page 1089](#)  
[show system connections show-routing-instances on page 1089](#)

[show system connections \(TX Matrix Plus Router\) on page 1090](#)

[show system connections sfc \(TX Matrix Plus Router\) on page 1093](#)

[show system connections show-routing-instances \(TX Matrix Plus Router\) on page 1095](#)

**Output Fields** Table 41 on page 1087 describes the output fields for the **show system connections** command. Output fields are listed in the approximate order in which they appear.

*Table 41: show system connections Output Fields*

Field Name	Field Description
<b>Proto</b>	Protocol of the socket: <b>IP</b> , <b>TCP</b> , or <b>UDP</b> for IPv4 or IPv6.
<b>Recv-Q</b>	Number of input packets received by the protocol and waiting to be processed by the application.
<b>Send-Q</b>	Number of output packets sent by the application and waiting to be processed by the protocol.
<b>Local Address</b>	Local address and port of the socket, separated by a period. An asterisk (*) indicates that the bound address is the wildcard address. Server sockets typically have the wildcard address and a well-known port bound to them.
<b>Foreign Address</b>	Foreign address and port of the socket, separated by a period. An asterisk (*) indicates that the address or port is a wildcard.
<b>Routing Instance</b>	(Displayed only when the <b>show-routing-instance</b> option is used.) Routing instances associated with active IP sockets on the Routing Engine.
<b>(state)</b>	For TCP, the protocol state of the socket.

## Sample Output

### show system connections

```

user@host> show system connections
Active Internet connections (including servers)
Proto Recv-Q Send-Q Local Address          Foreign Address         (state)
tcp    0      2 192.0.2.16.513         192.0.2.254.894        ESTABLISHED
tcp    0      0 192.0.2.16.513         192.0.2.195.945        ESTABLISHED
tcp    0      0 *.23                   *.*                      LISTEN
tcp    0      0 *.22                   *.*                      LISTEN
tcp    0      0 *.513                  *.*                      LISTEN
tcp00 *.514                *.*                      LISTEN
tcp 0 0*.21                   *.*                      LISTEN
tcp00 *.79                *.*                      LISTEN
tcp 00 *.1023                *.*                      LISTEN
tcp 00 *.111                 *.*                      LISTEN
udp00192.192.0.2.1634    192.0.2.249.2049
udp00192.192.0.2.1627    192.0.2.254.2049
udp00192.192.0.2.1371    192.0.2.195.2049
udp00*.*.               *.*
udp00*.9999              *.*
```

```

udp00 *.161      *.*
udp00192.192.0.2.1039  192.0.2.16.1023
udp00192.192.0.2.1038  192.0.2.16.1023
udp 00 192.0.2.16.1037  192.0.2.16.1023
udp00 192.0.2.16.1036  192.0.2.16.1023
udp00*.1022      *.*
udp00*.1023      *.*
udp00*.111       *.*
udp00*.          *.*

```

### show system connections extensive

```
user@host> show system connections extensive
```

```

Active Internet connections (including servers)
Proto Recv-Q Send-Q Local Address Foreign Address
      (state)
tcp4      0      6 192.0.2.15.23 192.0.2.138.3013
      ESTABLISHED
      sndsbcc:          6 sndsbmbcnt:        256 sndsbmbmax: 272000
      sndsblowat:      2048 sndsbhiwat:        34000
      rcvsbcc:         0 rcvsbmbcnt:         0 rcvsbmbmax: 533120
      rcvsblowat:      1 rcvsbhiwat:        66640
      proc id:         0 proc name:
      iss: 2566994072   sndup: 2566994491
      snduna: 2566994491 sndnxt: 2566994494   sndwnd: 64094
      sndmax: 2566994494 sndcwnd: 6589 sndssthresh: 2720
      irs: 236981199   rcvup: 236981325
      rcvnxt: 236981327 rcvadv: 237046862   rcvwnd: 66640
      rtt: 140058623   srtt: 15519   rttv: 908
      rxtcur: 1200   rxtshift: 0   rtseq: 2566994491
      rttmin: 1000   mss: 1360
      flags: SACK_PERMIT [0x2000200]
tcp4      0      0 10.255.165.93.179 10.255.165.203.65141
      ESTABLISHED
      sndsbcc:          0 sndsbmbcnt:         0 sndsbmbmax: 131072
      sndsblowat:      2048 sndsbhiwat:        16384
      rcvsbcc:         0 rcvsbmbcnt:         0 rcvsbmbmax: 131072
      rcvsblowat:      1 rcvsbhiwat:        16384
      proc id:         0 proc name:
      iss: 2555961065   sndup: 2555995917
      snduna: 2555995917 sndnxt: 2555995917   sndwnd: 16384
      sndmax: 2555995917 sndcwnd: 1000 sndssthresh: 1073725440
      irs: 2123825753   rcvup: 2123860681
      rcvnxt: 2123860681 rcvadv: 2123877065   rcvwnd: 16384
      rtt: 0   srtt: 3309   rttv: 72
      rxtcur: 1200   rxtshift: 0   rtseq: 2555995898
      rttmin: 1000   mss: 500
      flags: REQ_SCALE RCVD_SCALE REQ_TSTMP RCVD_TSTMP SACK_PERMIT [0x3e0]
tcp4      0      0 10.255.165.93.179 10.255.165.203.65141
      ESTABLISHED
      sndsbcc:          0 sndsbmbcnt:         0 sndsbmbmax: 131072
      sndsblowat:      2048 sndsbhiwat:        16384
      rcvsbcc:         0 rcvsbmbcnt:         0 rcvsbmbmax: 131072
      rcvsblowat:      1 rcvsbhiwat:        16384
      proc id:         5022 proc name: rpd
      iss: 2123825753   sndup: 2123860662
      snduna: 2123860681 sndnxt: 2123860681   sndwnd: 16384
      sndmax: 2123860681 sndcwnd: 1000 sndssthresh: 1073725440
      irs: 2555961065   rcvup: 2555995917
      rcvnxt: 2555995917 rcvadv: 2556012301   rcvwnd: 16384

```



```

      rtt:          0      srtt:          3279      rttv:          22
    rxtcur:        1200    rxtshift:        0      rtseq: 2123860662
    rttmin:        1000    mss:           500
    flags: REQ_SCALE RCVD_SCALE REQ_TSTMP RCVD_TSTMP SACK_PERMIT [0x100003e0]
tcp4      0      0 10.255.165.203.179
10.255.165.113.52404 ESTABLISHED
    sndsbcc:        0    sndsbmbcnt:        0    sndsbmbmax:    131072
    sndsblowat:      2048    sndsbhiwat:    16384
    rcvsbcc:        0    rcvsbmbcnt:        0    rcvsbmbmax:    131072
    rcvsblowat:      1    rcvsbhiwat:    16384
    proc id:        0    proc name:
      iss: 1109297190    sndup: 1109332099
    snduna: 1109332118    sndnxt: 1109332118    sndwnd:    16384
    sndmax: 1109332118    sndcwnd:    1000    sndssthresh: 1073725440
    irs: 1476831634    rcvup: 1476866449
    rcvnxt: 1476866449    rcvadv: 1476882833    rcvwnd:    16384
    rtt:          0      srtt:          3235      rttv:          18
    rxtcur:        1200    rxtshift:        0      rtseq: 1109332099
    rttmin:        1000    mss:           500
    flags: REQ_SCALE RCVD_SCALE REQ_TSTMP RCVD_TSTMP SACK_PERMIT [0x3e0]

```

### show system connections lcc (TX Matrix Router)

```
user@host> show system connections lcc 2
```

```
lcc2-re0:
```

```

-----
Active Internet connections (including servers)
Proto Recv-Q Send-Q Local Address      Foreign Address    (state)
tcp4      0      0 192.0.2.131.1342  192.0.2.130.23    ESTABLISHED
tcp4      0      0 192.0.2.131.2059  192.0.2.130.23    ESTABLISHED
tcp4      0      0 192.0.2.131.4571  192.0.2.130.23    ESTABLISHED
tcp4      0      0 192.0.2.131.2496  192.0.2.130.23    ESTABLISHED
tcp4      0      0 *.3221            *.*                LISTEN
tcp4      0      0 *.23              *.*                LISTEN
tcp4      0      0 *.22              *.*                LISTEN
tcp4      0      0 *.514             *.*                LISTEN
tcp4      0      0 *.513             *.*                LISTEN
tcp4      0      0 *.21              *.*                LISTEN
tcp4      0      0 *.79              *.*                LISTEN
tcp4      0      0 *.6234            *.*                LISTEN
udp4      0      0 *.514             *.*
udp4      0      0 *.6333            *.*
```

### show system connections show-routing-instances

```

user@host> show system connections show-routing-instances
Active Internet connections (including servers) (including routing-instances)
Proto Recv-Q Send-Q Local Address      Foreign Address    Routing Instance
(state)
tcp4      0      0 192.0.2.204.23    192.0.2.19.4267   default
ESTABLISHED
tcp4      0      0 192.0.2.204.58540 10.209.7.138.23   default
ESTABLISHED
tcp4      0      0 192.0.2.204.23    192.0.2.19.1098   default
ESTABLISHED
tcp4      0      0 192.0.2.1.57668    192.0.2.1.179     default
ESTABLISHED
tcp4      0      0 192.0.2.1.179     192.0.2.1.49209   default
ESTABLISHED

```

```

tcp4      0      0 192.0.2.1.6234      192.0.2.17.1024
__juniper_private1__ ESTABLISHED
tcp4      0      0 192.0.2.4.9000      192.0.24.59103
__juniper_private1__ ESTABLISHED
tcp4      0      0 1192.0.2.4.59103    192.0.2.4.9000
__juniper_private1__ ESTABLISHED
tcp4      0      0 *.32012             *.*
__juniper_private1__ LISTEN
tcp4      0      0 *.9000              *.*
__juniper_private1__ LISTEN
tcp4      0      0 *.33007             *.*
__juniper_private2__ LISTEN
tcp46     0      0 *.179               *.*
LISTEN
tcp4      0      0 *.179               *.*
LISTEN
tcp4      0      0 *.6154              *.*
__juniper_private1__ LISTEN
tcp4      0      0 *.6153              *.*
__juniper_private1__ LISTEN
tcp4      0      0 *.7000              *.*
__juniper_private1__ LISTEN
tcp4      0      0 *.6152              *.*
__juniper_private1__ LISTEN
tcp4      0      0 *.6156              *.*
__juniper_private1__ LISTEN
tcp4      0      0 *.33005             *.*
__juniper_private2__ LISTEN
tcp4      0      0 *.31343             *.*
__juniper_private1__ LISTEN
tcp4      0      0 *.31341             *.*
__juniper_private1__ LISTEN
tcp4      0      0 *.32003             *.*
__juniper_private2__ LISTEN
tcp4      0      0 *.666               *.*
__juniper_private1__ LISTEN
tcp4      0      0 *.38                *.*
__juniper_private1__ LISTEN
tcp4      0      0 *.3221              *.*
LISTEN

```

default

default

default

### show system connections (TX Matrix Plus Router)

```

user@host> show system connections
sfc0-re0:
-
Active Internet connections (including servers)
Proto Recv-Q Send-Q Local Address           Foreign Address
      (state)
tcp4      0      3 192.0.2.11.23           192.0.2.19.3565
      ESTABLISHED
tcp4      0      0 192.0.2.11.23           192.0.2.204.62719
      ESTABLISHED
tcp4      0      0 192.0.2.11.23           1192.0.2.199.51255
      ESTABLISHED
tcp4      0      0 1192.0.2.11.23          1192.0.2.227.42860
      ESTABLISHED
tcp4      0      0 *.6156                  *.*
      LISTEN
tcp4      0      0 192.0.2.4.32012         192.0.2.5.58935
      ESTABLISHED

```

tcp4	0	0 *.32012		*,*
			LISTEN	
tcp4	0	0 *.33007		*,*
			LISTEN	
tcp4	0	0 *.666		*,*
			LISTEN	
tcp4	0	0 192.0.2.4.6161		192.0.2.5.62026
			ESTABLISHED	
tcp4	0	0 *.33005		*,*
			LISTEN	
tcp4	0	0 192.0.2.4.9000		192.0.2.4.51611
			ESTABLISHED	
tcp4	0	0 192.0.2.4.51611		192.0.2.4.9000
			ESTABLISHED	
tcp4	0	0 *.6151		*,*
			LISTEN	
tcp4	0	0 *.6154		*,*
			LISTEN	
tcp4	0	0 *.6153		*,*
			LISTEN	
tcp4	0	0 *.31343		*,*
			LISTEN	
tcp4	0	0 *.31341		*,*
			LISTEN	
tcp4	0	0 *.9000		*,*
			LISTEN	
tcp4	0	0 *.6152		*,*
			LISTEN	
tcp4	0	0 *.32003		*,*
			LISTEN	
tcp4	0	0 *.33009		*,*
			LISTEN	
tcp4	0	0 *.3221		*,*
			LISTEN	
tcp4	0	0 *.23		*,*
			LISTEN	
tcp4	0	0 *.22		*,*
			LISTEN	
tcp4	0	0 *.514		*,*
			LISTEN	
tcp4	0	0 *.513		*,*
			LISTEN	
tcp4	0	0 *.21		*,*
			LISTEN	
tcp4	0	0 *.79		*,*
			LISTEN	
tcp4	0	0 *.514		*,*
			LISTEN	
tcp4	0	0 *.513		*,*
			LISTEN	
tcp4	0	0 *.6234		*,*
			LISTEN	
udp4	0	0 192.0.2.1.123		*,*
udp4	0	0 10.255.178.11.123		*,*
udp4	0	0 *.123		*,*
udp46	0	0 *.514		*,*
udp4	0	0 *.514		*,*
udp46	0	0 *.62027		*,*
udp4	0	0 *.59363		*,*
udp4	0	0 *.31342		*,*
udp46	0	0 *.161		*,*

```

udp4      0      0 *.161      *.*
udp4      0      0 *.31340    *.*
udp4      0      0 *.31340    *.*
udp46     0      0 *.49152    *.*
udp46     0      0 *.4784     *.*
udp46     0      0 *.3784     *.*
udp4      0      0 *.49152    *.*
udp4      0      0 *.4784     *.*
udp4      0      0 *.3784     *.*
udp4      0      0 *.6333     *.*
ip4       0      0 *.*        *.*
ip4       0      0 *.*        *.*

```

lcc0-re0:

-

Active Internet connections (including servers)

Proto	Recv-Q	Send-Q	Local Address	Foreign Address
			(state)	
tcp4	0	0	192.0.2.3.23	192.0.2.227.50399
			ESTABLISHED	
tcp4	0	0	*.6234	*.*
			LISTEN	
tcp4	0	0	*.7000	*.*
			LISTEN	
tcp4	0	0	*.9000	*.*
			LISTEN	
tcp4	0	0	*.33009	*.*
			LISTEN	
tcp4	0	0	*.3221	*.*
			LISTEN	
tcp4	0	0	*.23	*.*
			LISTEN	
tcp4	0	0	*.22	*.*
			LISTEN	
tcp4	0	0	*.514	*.*
			LISTEN	
tcp4	0	0	*.513	*.*
			LISTEN	
tcp4	0	0	*.21	*.*
			LISTEN	
tcp4	0	0	*.79	*.*
			LISTEN	
tcp4	0	0	*.514	*.*
			LISTEN	
tcp4	0	0	*.513	*.*
			LISTEN	
udp46	0	0	*.514	*.*
udp4	0	0	*.514	*.*
udp46	0	0	*.59924	*.*
udp4	0	0	*.59412	*.*
udp46	0	0	*.161	*.*
udp4	0	0	*.161	*.*
udp4	0	0	*.31342	*.*
udp4	0	0	*.6333	*.*

lcc1-re0:

-

Active Internet connections (including servers)

Proto	Recv-Q	Send-Q	Local Address	Foreign Address
			(state)	
tcp4	0	0	*.6234	*.*

```

tcp4      0      0 *.7000    LISTEN      *. *
tcp4      0      0 *.9000    LISTEN      *. *
tcp4      0      0 *.3221    LISTEN      *. *
tcp4      0      0 *.23      LISTEN      *. *
tcp4      0      0 *.22      LISTEN      *. *
tcp4      0      0 *.514     LISTEN      *. *
tcp4      0      0 *.513     LISTEN      *. *
tcp4      0      0 *.21      LISTEN      *. *
tcp4      0      0 *.79      LISTEN      *. *
tcp4      0      0 *.514     LISTEN      *. *
tcp4      0      0 *.513     LISTEN      *. *
tcp4      0      0 *.33009   LISTEN      *. *
udp46     0      0 *.514     LISTEN      *. *
udp4      0      0 *.514     LISTEN      *. *
udp46     0      0 *.59924   LISTEN      *. *
udp4      0      0 *.59412   LISTEN      *. *
udp4      0      0 *.31342   LISTEN      *. *
udp46     0      0 *.161     LISTEN      *. *
udp4      0      0 *.161     LISTEN      *. *
udp4      0      0 *.6333    LISTEN      *. *

lcc2-re0:
-
Active Internet connections (including servers)
Proto Recv-Q Send-Q Local Address           Foreign Address
      (state)
tcp4      0      0 *.6234    LISTEN      *. *
tcp4      0      0 *.7000    LISTEN      *. *
tcp4      0      0 *.9000    LISTEN      *. *
tcp4      0      0 *.33009   LISTEN      *. *
tcp4      0      0 *.3221    LISTEN      *. *
tcp4      0      0 *.23      LISTEN      *. *
tcp4      0      0 *.22      LISTEN      *. *
tcp4      0      0 *.514     LISTEN      *. *
...

```

#### show system connections sfc (TX Matrix Plus Router)

```

user@host> show system connections sfc 0
sfc0-re0:
-

```

Active Internet connections (including servers)					Foreign Address
Proto	Recv-Q	Send-Q	Local Address (state)		
tcp4	0	0	192.0.2.4.514 TIME_WAIT	192.0.2.4.952	
tcp4	0	0	1192.0.2.4.514 TIME_WAIT	192.0.2.4.694	
tcp4	0	0	192.0.2.4.514 TIME_WAIT	192.0.2.4.860	
tcp4	0	0	192.0.2.4.514 TIME_WAIT	192.0.2.4.716	
tcp4	0	0	192.0.2.4.996 TIME_WAIT	192.0.2.4.514	
tcp4	0	0	192.0.2.4.798 TIME_WAIT	192.0.2.4.514	
tcp4	0	0	192.0.2.4.995 TIME_WAIT	192.0.2.4.514	
tcp4	0	0	192.0.2.4.895 TIME_WAIT	192.0.2.4.514	
tcp4	0	0	192.0.2.11.21 TIME_WAIT	192.0.2.64662	
tcp4	0	0	192.0.2.178.11.21 TIME_WAIT		
192.0.2.204.51612					
tcp4	0	0	*.6156 LISTEN	*,*	
tcp4	0	0	*.9000 LISTEN	*,*	
tcp4	0	0	*.666 LISTEN	*,*	
tcp4	0	2	192.0.2.11.23 ESTABLISHED	192.0.2.19.3565	
tcp4	0	0	192.0.2.11.23 ESTABLISHED	192.0.2.204.62719	
tcp4	0	0	192.0.2.11.23 ESTABLISHED	192.0.2.199.51255	
tcp4	0	0	192.0.2.11.23 ESTABLISHED	1192.0.227.42860	
tcp4	0	0	192.0.2.4.32012 ESTABLISHED	192.0.2.5.58935	
tcp4	0	0	*.32012 LISTEN	*,*	
tcp4	0	0	*.33007 LISTEN	*,*	
tcp4	0	1432	192.0.2.4.6161 ESTABLISHED	192.0.2.5.62026	
tcp4	0	0	*.33005 LISTEN	*,*	
tcp4	0	0	192.0.2.4.9000 FIN_WAIT_2	192.0.2.4.51611	
tcp4	0	0	192.0.2.4.51611 CLOSE_WAIT	192.0.2.4.9000	
tcp4	0	0	*.6151 LISTEN	*,*	
tcp4	0	0	*.6154 LISTEN	*,*	
tcp4	0	0	*.6153 LISTEN	*,*	
tcp4	0	0	*.31343 LISTEN	*,*	
tcp4	0	0	*.31341 LISTEN	*,*	

```

tcp4      0      0 *.6152          *.*
          LISTEN
tcp4      0      0 *.32003         *.*
          LISTEN
tcp4      0      0 *.33009         *.*
          LISTEN
tcp4      0      0 *.3221          *.*
          LISTEN
tcp4      0      0 *.23            *.*
          LISTEN
tcp4      0      0 *.22            *.*
          LISTEN
tcp4      0      0 *.514           *.*
          LISTEN
tcp4      0      0 *.513           *.*
          LISTEN
tcp4      0      0 *.21            *.*
          LISTEN
tcp4      0      0 *.79            *.*
          LISTEN
tcp4      0      0 *.514           *.*
          LISTEN
tcp4      0      0 *.513           *.*
          LISTEN
tcp4      0      0 *.6234          *.*
          LISTEN
udp4      0      0 127.0.0.1.123   *.*
udp4      0      0 10.255.178.11.123 *.*
udp4      0      0 *.123           *.*
udp46     0      0 *.514           *.*
udp4      0      0 *.514           *.*
udp46     0      0 *.50895         *.*
udp4      0      0 *.50794         *.*
udp4      0      0 *.31342         *.*
udp46     0      0 *.161           *.*
udp4      0      0 *.161           *.*
udp4      0      0 *.31340         *.*
udp4      0      0 *.31340         *.*
udp46     0      0 *.49152         *.*
udp46     0      0 *.4784          *.*
udp46     0      0 *.3784          *.*
udp4      0      0 *.49152         *.*
udp4      0      0 *.4784          *.*
udp4      0      0 *.3784          *.*
udp4      0      0 *.6333          *.*
ip4       104    0 *.*             *.*
ip4       0      0 *.*             *.*
ip4       0      0 *.*             *.*

```

#### show system connections show-routing-instances (TX Matrix Plus Router)

```

user@host> show system connections show-routing-instances
sfc0-re0:
-
Active Internet connections (including servers) (including routing-instances)
Proto Recv-Q Send-Q Local Address           Routing Instance      (state) Foreign Address
tcp4      0      0 *.6152                  __juniper_private1__  LISTEN   *.*
tcp4      0      0 *.9000                  __juniper_private1__  LISTEN   *.*

```

tcp4	0	0	*.666			*. *
				__juniper_private1__	LISTEN	
tcp4	0	2	192.168.178.11.23			
172.17.28.19.3565				default		ESTABLISHED
tcp4	0	0	192.168.178.11.23			
172.17.28.204.62719				default		ESTABLISHED
tcp4	0	0	192.168.178.11.23			
192.168.69.199.51255				default		ESTABLISHED
tcp4	0	0	192.168.178.11.23			
172.24.26.227.42860				default		ESTABLISHED
tcp4	0	0	162.0.0.4.32012			162.0.0.5.58935
				__juniper_private1__	ESTABLISHED	
tcp4	0	0	*.32012			*. *
				__juniper_private1__	LISTEN	
tcp4	0	0	*.33007			*. *
				__juniper_private2__	LISTEN	
tcp4	0	0	162.0.0.4.6161			162.0.0.5.62026
				__juniper_private1__	ESTABLISHED	
tcp4	0	0	*.33005			*. *
				__juniper_private2__	LISTEN	
tcp4	0	0	162.0.0.4.9000			162.0.0.4.51611
				__juniper_private1__	FIN_WAIT_2	
tcp4	0	0	162.0.0.4.51611			162.0.0.4.9000
				__juniper_private1__	CLOSE_WAIT	
tcp4	0	0	*.6151			*. *
				__juniper_private1__	LISTEN	
tcp4	0	0	*.6154			*. *
				__juniper_private1__	LISTEN	
tcp4	0	0	*.6153			*. *
				__juniper_private1__	LISTEN	
tcp4	0	0	*.31343			*. *
				__juniper_private1__	LISTEN	
tcp4	0	0	*.31341			*. *
				__juniper_private1__	LISTEN	
tcp4	0	0	*.6152			*. *
				__juniper_private1__	LISTEN	
tcp4	0	0	*.32003			*. *
				__juniper_private2__	LISTEN	
tcp4	0	0	*.33009			*. *
				__juniper_private2__	LISTEN	
tcp4	0	0	*.3221			*. *
				default	LISTEN	
tcp4	0	0	*.23			*. *
				default	LISTEN	
tcp4	0	0	*.22			*. *
				default	LISTEN	
tcp4	0	0	*.514			*. *
				default	LISTEN	
tcp4	0	0	*.513			*. *
				default	LISTEN	
tcp4	0	0	*.21			*. *
				default	LISTEN	
tcp4	0	0	*.79			*. *
				default	LISTEN	
tcp4	0	0	*.514			*. *
				__juniper_private1__	LISTEN	
tcp4	0	0	*.513			*. *
				__juniper_private1__	LISTEN	
tcp4	0	0	*.6234			*. *
				__juniper_private1__	LISTEN	
udp4	0	0	127.0.0.1.123			*. *



```

                                default
udp4      0      0 10.255.178.11.123             *. *
                                default
udp4      0      0 *.123                         *. *
                                default
udp46     0      0 *.514                         *. *
                                default
udp4      0      0 *.514                         *. *
                                default
udp46     0      0 *.50895                       *. *
                                default
udp4      0      0 *.50794                       *. *
                                default
udp4      0      0 *.31342                       *. *
                                __juniper_private1__
udp46     0      0 *.161                         *. *
                                default
udp4      0      0 *.161                         *. *
                                default
udp4      0      0 *.31340                       *. *
                                __juniper_private2__
udp4      0      0 *.31340                       *. *
                                __juniper_private1__
udp46     0      0 *.49152                       *. *
                                default
udp46     0      0 *.4784                        *. *
                                default
udp46     0      0 *.3784                        *. *
                                default
udp4      0      0 *.49152                       *. *
                                default
udp4      0      0 *.4784                        *. *
                                default
udp4      0      0 *.3784                        *. *
                                default
udp4      0      0 *.6333                        *. *
                                __juniper_private1__
ip4       0      0 *. *                          *. *
                                default
ip4       0      0 *. *                          *. *
                                default
ip4       0      0 *. *                          *. *
                                default

```

lcc0-re0:

-

Active Internet connections (including servers) (including routing-instances)

Proto	Recv-Q	Send-Q	Local Address	Routing Instance	(state)	Foreign Address
tcp4	0	0	*.7000			*. *
				__juniper_private1__	LISTEN	
tcp4	0	0	192.0.2.3.23			192.0.2.227.50399
			default		ESTABLISHED	
tcp4	0	0	*.6234			*. *
				__juniper_private1__	LISTEN	
tcp4	0	0	*.9000			*. *
				__juniper_private1__	LISTEN	
tcp4	0	0	*.33009			*. *
				__juniper_private2__	LISTEN	
tcp4	0	0	*.3221			*. *
				default	LISTEN	

tcp4	0	0	*.23	default	LISTEN	*.*
tcp4	0	0	*.22	default	LISTEN	*.*
tcp4	0	0	*.514	default	LISTEN	*.*
tcp4	0	0	*.513	default	LISTEN	*.*
tcp4	0	0	*.21	default	LISTEN	*.*
tcp4	0	0	*.79	default	LISTEN	*.*
tcp4	0	0	*.514	__juniper_private1__	LISTEN	*.*
tcp4	0	0	*.513	__juniper_private1__	LISTEN	*.*
udp46	0	0	*.514	default		*.*
udp4	0	0	*.514	default		*.*
udp46	0	0	*.59924	default		*.*
udp4	0	0	*.59412	default		*.*
udp46	0	0	*.161	default		*.*
udp4	0	0	*.161	default		*.*
udp4	0	0	*.31342	__juniper_private1__		*.*
udp4	0	0	*.6333	__juniper_private1__		*.*

lcc1-re0:

-

Active Internet connections (including servers) (including routing-instances)

Proto	Recv-Q	Send-Q	Local Address	Routing Instance	(state)	Foreign Address
tcp4	0	0	*.7000	__juniper_private1__	LISTEN	*.*
tcp4	0	0	*.6234	__juniper_private1__	LISTEN	*.*
tcp4	0	0	*.9000	__juniper_private1__	LISTEN	*.*
tcp4	0	0	*.3221	default	LISTEN	*.*
tcp4	0	0	*.23	default	LISTEN	*.*
tcp4	0	0	*.22	default	LISTEN	*.*
tcp4	0	0	*.514	default	LISTEN	*.*
tcp4	0	0	*.513	default	LISTEN	*.*
tcp4	0	0	*.21	default	LISTEN	*.*
tcp4	0	0	*.79	default	LISTEN	*.*
tcp4	0	0	*.514	__juniper_private1__	LISTEN	*.*
tcp4	0	0	*.513			*.*

```

tcp4      0      0 *.33009    __juniper_private1__ LISTEN      *.*
udp46     0      0 *.514      __juniper_private2__ LISTEN      *.*
udp4      0      0 *.514      default        *.*
udp46     0      0 *.59924    default        *.*
udp4      0      0 *.59412    default        *.*
udp4      0      0 *.31342    default        *.*
udp46     0      0 *.161      __juniper_private1__ *.*
udp4      0      0 *.161      default        *.*
udp4      0      0 *.6333     default        *.*
          0      0          __juniper_private1__

```

lcc2-re0:

-

Active Internet connections (including servers) (including routing-instances)

Proto	Recv-Q	Send-Q	Local Address	Routing Instance	(state)	Foreign Address
tcp4	0	0	*.7000			*.*
tcp4	0	0	*.6234	__juniper_private1__	LISTEN	*.*
tcp4	0	0	*.9000	__juniper_private1__	LISTEN	*.*
tcp4	0	0	*.33009	__juniper_private1__	LISTEN	*.*
tcp4	0	0	*.3221	__juniper_private2__	LISTEN	*.*
tcp4	0	0	*.23	default	LISTEN	*.*
tcp4	0	0	*.22	default	LISTEN	*.*
tcp4	0	0	*.514	default	LISTEN	*.*
tcp4	0	0	*.513	default	LISTEN	*.*
tcp4	0	0	*.21	default	LISTEN	*.*
tcp4	0	0	*.79	default	LISTEN	*.*
tcp4	0	0	*.514	__juniper_private1__	LISTEN	*.*
tcp4	0	0	*.513	__juniper_private1__	LISTEN	*.*
udp46	0	0	*.514	__juniper_private1__	LISTEN	*.*
udp4	0	0	*.514	default		*.*
udp4	0	0	*.31342	default		*.*
udp46	0	0	*.62103	__juniper_private1__		*.*
udp4	0	0	*.59924	default		*.*
				default		

```

udp46      0      0 *.161
                        default
udp4        0      0 *.161
                        default
udp4        0      0 *.6333
                        __juniper_private1__

lcc3-re0:
-
Active Internet connections (including servers) (including routing-instances)
Proto Recv-Q Send-Q Local Address           Routing Instance      (state)      Foreign Address
tcp4        0      0 *.7000
                        __juniper_private1__ LISTEN
tcp4        0      0 *.6234
                        __juniper_private1__ LISTEN
tcp4        0      0 *.9000
                        __juniper_private1__ LISTEN
tcp4        0      0 *.33009
                        __juniper_private2__ LISTEN
tcp4        0      0 *.3221
                        default      LISTEN
tcp4        0      0 *.23
                        default      LISTEN
tcp4        0      0 *.22
                        default      LISTEN
tcp4        0      0 *.514
                        default      LISTEN
tcp4        0      0 *.513
                        default      LISTEN
tcp4        0      0 *.21
                        default      LISTEN
tcp4        0      0 *.79
                        default      LISTEN
tcp4        0      0 *.514
                        __juniper_private1__ LISTEN
tcp4        0      0 *.513
                        __juniper_private1__ LISTEN
udp46       0      0 *.514
                        default
udp4        0      0 *.514
                        default
udp46       0      0 *.62103
                        default
udp4        0      0 *.59924
                        default
udp4        0      0 *.31342
                        __juniper_private1__
udp46       0      0 *.161
                        default
udp4        0      0 *.161
                        default
udp4        0      0 *.6333
                        __juniper_private1__

```

## show system core-dumps

<b>List of Syntax</b>	<a href="#">Syntax on page 1101</a> <a href="#">Syntax (EX Series Switches) on page 1101</a> <a href="#">Syntax (TX Matrix Router) on page 1101</a> <a href="#">Syntax (TX Matrix Plus Router) on page 1101</a> <a href="#">Syntax (QFX Series and OCX Series) on page 1101</a>
<b>Syntax</b>	<pre>show system core-dumps &lt;re0&gt; &lt;re1&gt; &lt;routing-engine&gt; &lt;satellite [<i>fpc-slot-id</i>   <i>device-alias alias-name</i>]&gt;</pre>
<b>Syntax (EX Series Switches)</b>	<pre>show system core-dumps &lt;all-members&gt; &lt;local&gt; &lt;member <i>member-id</i>&gt;</pre>
<b>Syntax (TX Matrix Router)</b>	<pre>show system core-dumps &lt;all-chassis   all-lcc   lcc <i>number</i>   scc&gt;</pre>
<b>Syntax (TX Matrix Plus Router)</b>	<pre>show system core-dumps &lt;all-chassis   all-lcc   lcc <i>number</i>   sfc <i>number</i>&gt;</pre>
<b>Syntax (QFX Series and OCX Series)</b>	<pre>show system core-dumps &lt;component (<i>UUID</i>   <i>serial number</i>   all)&gt; &lt;display-period (<i>hours</i>   <i>minutes</i>   <i>seconds</i>)&gt; &lt;display-order&gt; &lt;kernel-crashinfo component (<i>UUID</i>   <i>serial number</i>)&gt; &lt;repository (core   log)&gt;</pre>
<b>Release Information</b>	<p>Command introduced before Junos OS Release 8.5.</p> <p>Command introduced in Junos OS Release 9.0 for EX Series switches.</p> <p><b>sfc</b> option introduced in Junos OS Release 9.6 for the TX Matrix Plus router.</p> <p>Command introduced in Junos OS Release 11.1 for the QFX Series.</p> <p><b>re0</b>, <b>re1</b>, and <b>routing-engine</b> options introduced for dual Routing Engines in Junos OS Release 13.1.</p> <p>Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.</p> <p><b>satellite</b> option introduced in Junos OS Release 14.2R3.</p> <p><b>core-file-info</b> option is deprecated in Junos OS Release 16.1R3.</p>
<b>Description</b>	<p>Show core files on all routers or switches running Junos OS. You can use the <b>show system core-dumps</b> command to show a list of system core files created when the router or switch has failed. This command can be useful for diagnostic purposes. Each list item includes the file permissions, number of links, owner, group, size, modification date, and path and filename. If dual Routing Engines are present, you can view core-dump files for either routing engine or both routing engines together. On a QFabric system, you can view</p>

core-dump files on individual QFabric system devices as well as on the entire QFabric system.

**Options**    **none**—Display a list of all existing core-dump files.



**NOTE:** If dual Routing Engines are present, then only the core-dump files for the active Routing Engine are listed.

**all-chassis**—(TX Matrix and TX Matrix Plus routers only) (Optional) On a routing matrix based on a TX Matrix router, display system core files for the TX Matrix router switch-card chassis [SCC] and all the T640 routers [LCCs] connected to the TX Matrix router.

On a routing matrix based on a TX Matrix Plus router, display system core files for the TX Matrix Plus router (switch-fabric chassis [SFC]) and all the T1600 routers [LCCs] connected to the TX Matrix Plus router.

**<all-lcc | lcc number>**—(TX Matrix and TX Matrix Plus routers only) (Optional) On a routing matrix based on the TX Matrix router, display core dump files for all T640 routers (line-card chassis [LCCs]) or a specific T640 router [LCC] connected to the TX Matrix router.

On a routing matrix based on the TX Matrix Plus router, display logging information for all T1600 routers (line-card chassis [LCCs]) or a specific T1600 router (LCC) connected to the TX Matrix Plus router. When using the **lcc number** option, replace **number** with a value from 0 through 3.



**NOTE:** The **all-chassis** option displays system core files for the SCC or SFC and the LCCs connected to the SCC or SFC in the routing matrix while the **all-lcc** option only displays system core files for the LCCs in the routing matrix.

**all-members**—(EX4200 switches) (Optional) Display system core files on all members of the Virtual Chassis configuration.

**component (UUID | serial number | all)**—(QFabric systems only) (Optional) Display a list of core-dump files located on individual QFabric system device or on the entire QFabric system.

**display-order (timestamp-sort | alphanumeric-sort)**—(QFabric systems only) (Optional) Display list of debug artifacts generated within the specified period—for example, within the last hour, within the last 20 minutes, or within the last 32 seconds—or according to their filename.

**display-period** (*hours* | *minutes* | *seconds*)—(QFabric systems only) (Optional) Display core-dump files generated within the specified period—for example, within the last hour, within the last 20 minutes, or within the last 32 seconds.

**kernel-crashinfo component** (*UUID* | *serial number*)—(QFabric systems only) (Optional) Display kernel crash information from the EEPROM on a QFabric system device.

**local**—(EX4200 switches only) (Optional) Display system core files on the local Virtual Chassis member.

**member** *member-id*—(EX4200 switches only) (Optional) Display system core files on the specified member of the Virtual Chassis configuration. Replace *member-id* with a value from 0 through 9.

**re0**—(Dual Routing Engines only) Display the core-dump files on re0.

**re1**—(Dual Routing Engines only) Display the coredump files on re1.

**repository** (*core* | *log*)—(QFabric systems only) (Optional) Specify either the core or log repository in which to view core-dump files.

**routing-engine** (*backup* | *both* | *local* | *master* | *other*)—(Dual routing engines only) Display a list of core-dump files for either the backup, local, master, or other routing engine or both routing engines.

**satellite** [*fpc-slot-id* | *device-alias* *alias-name*]—(Junos Fusion only) (Optional) Display system core files for the specified satellite device in a Junos Fusion, or for all satellite devices in the Junos Fusion if no satellite devices are specified.

**scc**—(TX Matrix routers only) (Optional) Display system core files on the TX Matrix router (or switch-card chassis).

**sfc**—(TX Matrix Plus routers only) (Optional) Display system core files on the TX Matrix Plus router (or switch-fabric chassis).

**Required Privilege Level**

view

**List of Sample Output**

[show system core-dumps on page 1105](#)  
[show system core-dumps on page 1105](#)  
[show system core-dumps routing-engine both on page 1106](#)  
[show system core-dumps \(TX Matrix Plus Router\) on page 1106](#)  
[show system core-dumps \(QFX3500 Switch\) on page 1108](#)  
[show system core-dumps \(QFabric Systems\) on page 1108](#)  
[show system core-dumps component serial number display-order alphanumeric-sort repository core \(QFabric Systems\) on page 1109](#)  
[show system core-dumps display-period \(QFabric Systems\) on page 1109](#)  
[show system core-dumps kernel-crashinfo component serial number \(QFabric Systems\) on page 1111](#)  
[show system core-dumps repository core \(QFabric Systems\) on page 1112](#)  
[show system core-dumps repository log \(QFabric Systems\) on page 1113](#)

**Output Fields** Table 42 on page 1104 describes the output fields for the **show system core-dumps** command. Output fields are listed in the approximate order in which they appear.

*Table 42: show system core-dumps Output Fields*

Field Name	Field Description
<i>Permissions</i>	Read/write permissions for the file named.
<i>Links</i>	Number of links to the file.
<i>Owner</i>	Name of the file owner.
<i>Group</i>	Name of the group with file access.
<i>File size</i>	File size in bytes.
<i>Modified</i>	Last file modification date and time.
<i>Path/filename</i>	File path where the file resides and the filename.  (MX Series routers only) When you display the core files for an MX Series Virtual Chassis, the <b>show system core-dumps</b> command does not display information about files pertaining to the relayd process.
<b>Repository scope:</b>	Repository where core-dump files and log files are stored. The core-dump files are located in the <b>core</b> repository, and the log files are located in the <b>log</b> repository. The default <b>Repository scope</b> is shared since both the <b>core</b> and <b>log</b> repositories are shared by all of the QFabric system devices.
<b>Repository head:</b>	Path to the top-level repository location.
<b>Repository name:</b>	Name of the repository: <b>core</b> or <b>log</b> .
<b>List of nodes for core repository:</b>	List of core-dump files associated with a particular QFabric system device located in the core repository.
<b>Node Group</b>	Name of the QFabric system device.
<b>Node Identifier</b>	UUID or serial number of the QFabric system device.
<b>Num</b>	Number of core-dump and log files.
<b>Model</b>	Model number of the QFabric system device.
<b>Usage</b>	Usage of the repository in megabytes.
<b>Total usage of core repository:</b>	Total usage of core-dump files associated with a particular QFabric system device located in the core repository. Usage is specified in megabytes and as a percentage.



Table 42: show system core-dumps Output Fields (continued)

Field Name	Field Description
<b>Total usage of log repository:</b>	Total usage of log files associated with a particular QFabric system device located in the log repository. Usage is specified in megabytes and as a percentage.
<b>List of nodes for core repository:</b>	List of core-dump files associated with a particular QFabric system device located in the core repository.
<b>List of nodes for log repository:</b>	List of log files associated with a particular QFabric system device located in the log repository.
<b>Filename</b>	Name of the core-dump file.
<b>Date</b>	Last core-dump file modification date and time.
<b>Size</b>	Size of the core-dump file.
<b>Core filename</b>	Filename of the core-dump file.
<b>Process name</b>	Name of the process that is generating a core-dump file or log file.
<b>Release</b>	Junos OS release.
<b>Build server</b>	Junos OS build server.
<b>Build date</b>	Junos OS build date.
<b>Stack trace</b>	Stack trace of the core-dump file.

## Sample Output

### show system core-dumps

This example shows the command output if core files exist.

```
user@host> show system core-dumps
-rw----- 1 root wheel 268369920 Jun 18 17:59 /var/crash/vmcore.0
-rw-rw---- 1 root field 3371008 Jun 18 17:53 /var/tmp/rpd.core.0
-rw-r--r-- 1 root wheel 27775914 Jun 18 17:59 /var/crash/kernel.0
```

### show system core-dumps

This example shows the command output if core files do not exist.

```
user@host> show system core-dumps
/var/crash/*core*: No such file or directory
/var/tmp/*core*: No such file or directory
/var/tmp/pics/*core*: No such file or directory
/var/crash/kernel.*: No such file or directory
```

### show system core-dumps routing-engine both

This example shows the command output if dual Routing Engines are present.

```
user@host> show system core-dumps routing-engine both
re0:
-----
/var/crash/*core*: No such file or directory
/var/tmp/pics/*core*: No such file or directory
/var/crash/kernel.*: No such file or directory

/var/tmp/cores:
total blocks: 496776
-rw-rw---- 1 root field 11910589 Nov 8 13:20 chassisd.core.0.201311081320
...

-rw-rw---- 1 root field 11737227 Oct 28 14:21
rpd.core-tarball.4.tgz.201310281421.3458162
total files: 10

re1:
-----
/var/crash/*core*: No such file or directory
/var/tmp/pics/*core*: No such file or directory
/var/crash/kernel.*: No such file or directory

/var/tmp/cores:
total blocks: 3178420
-rw-rw---- 1 root field 19039721 Nov 8 14:29
chassisd.core.0.201311081429.3485600.gz
-rw-rw---- 1 root field 19039793 Nov 8 14:37
chassisd.core.1.201311081437.3485599.gz
..

-rw-rw---- 1 root field 11710113 Oct 17 15:26
rpd.core-tarball.1.1.tgz.201310171526.3430028
```

### show system core-dumps (TX Matrix Plus Router)

```
user@host> show system core-dumps
sfc0-re0:
-----
/var/crash/kernel.*: No such file or directory
/tftpboot/corefiles/*core*: No such file or directory

/var/crash/cores:
total 8

/var/tmp/cores:
total 1627592
-rw-r--r-- 1 root field 535346090 May 15 07:36
rpd.core-tarball.0.090515.0736.tgz
-rw-r--r-- 1 root field 105632057 May 15 07:37
rpd.core-tarball.1.090515.0737.tgz
-rw-r--r-- 1 root field 101981681 May 15 07:38
rpd.core-tarball.2.090515.0738.tgz
-rw-r--r-- 1 root field 85854573 May 15 07:40
rpd.core-tarball.3.090515.0740.tgz
-rw-r--r-- 1 root field 4157845 May 15 08:18
rpd.core-tarball.4.090515.0818.tgz
```

```

lcc0-re0:
-----
/var/crash/kernel.*: No such file or directory
/tftpboot/corefiles/*core*: No such file or directory

/var/crash/cores:
total 8

/var/tmp/cores:
total 12

lcc1-re0:
-----
/var/crash/kernel.*: No such file or directory
/tftpboot/corefiles/*core*: No such file or directory

/var/crash/cores:
total 8

/var/tmp/cores:
total 10024
-rw-r--r-- 1 root field 1875794 Apr 22 15:47
chassisd.core-tarball.0.090422.1547.tgz
-rw-r--r-- 1 root field 1894183 Apr 22 19:02
chassisd.core-tarball.0.090422.1902.tgz
-rw-r--r-- 1 root field 1290240 Apr 26 16:01 ksyncd_1558.core.0.090426.1601

lcc2-re0:
-----
/var/crash/kernel.*: No such file or directory
/tftpboot/corefiles/*core*: No such file or directory

/var/crash/cores:
total 21124008
-rw-r--r-- 1 root wheel 1022376528 May 2 06:43
core-LCC2-EGFPC7.core.0.090502.0643
-rw-r--r-- 1 root wheel 1022376528 May 2 08:13
core-LCC2-EGFPC7.core.0.090502.0813
-rw-r--r-- 1 root wheel 1022376544 May 5 06:15
core-LCC2-EGFPC7.core.0.090505.0615
-rw-r--r-- 1 root wheel 1022376544 May 6 10:59
core-LCC2-EGFPC7.core.0.090506.1059
-rw-r--r-- 1 root wheel 1022376528 May 2 06:58
core-LCC2-EGFPC7.core.1.090502.0658
-rw-r--r-- 1 root wheel 754271232 May 5 06:33
core-LCC2-EGFPC7.core.1.090505.0633
-rw-r--r-- 1 root wheel 264897536 May 6 11:12
core-LCC2-EGFPC7.core.1.090506.1112
-rw-r--r-- 1 root wheel 1022376528 May 2 07:22
core-LCC2-EGFPC7.core.2.090502.0722
-rw-r--r-- 1 root wheel 163633152 May 5 06:52
core-LCC2-EGFPC7.core.2.090505.0652
-rw-r--r-- 1 root wheel 171312128 May 6 12:13
core-LCC2-EGFPC7.core.2.090506.1213
-rw-r--r-- 1 root wheel 1022376528 May 2 07:39
core-LCC2-EGFPC7.core.3.090502.0739
-rw-r--r-- 1 root wheel 1022376528 May 2 07:55
core-LCC2-EGFPC7.core.4.090502.0755
-rw-r--r-- 1 root wheel 427277312 May 7 04:47
core-LCC2-STFPC4.core.0.090507.0447

```

```

-rw-r--r-- 1 root wheel 419609600 May 7 04:47
core-LCC2-STFPC5.core.0.090507.0447
-rw-r--r-- 1 root wheel 432356352 May 7 04:47
core-LCC2-STFPC6.core.0.090507.0447

/var/tmp/cores:
total 2568
-rw-r--r-- 1 root field 1290240 May 14 14:26 ksyncd_1540.core.0.090514.1426
...

```

### show system core-dumps (QFX3500 Switch)

```

user@switch> show system core-dumps
/var/crash/*core*: No such file or directory
-rw-rw---- 1 root field 1545143 Jun 4 2012 /var/tmp/pafxpc.core.0.gz
-rw-rw---- 1 root field 1545146 Jun 4 2012 /var/tmp/pafxpc.core.1.gz
-rw-rw---- 1 root field 1545141 Jun 4 2012 /var/tmp/pafxpc.core.2.gz
-rw-rw---- 1 root field 1545146 Jun 4 2012 /var/tmp/pafxpc.core.3.gz
-rw-rw---- 1 root field 1545142 Jun 5 2012 /var/tmp/pafxpc.core.4.gz
/var/tmp/pics/*core*: No such file or directory
/var/crash/kernel.*: No such file or directory
/tftpboot/corefiles/*core*: No such file or directory
total 5

```

### show system core-dumps (QFabric Systems)

```

user@switch> show system core-dumps
Repository scope: shared
Repository head: /pbdata/export
List of nodes for core repository: /pbdata/export/rdumps/

```

Node Group	Node Identifier	Num	Model	Usage
DG-0	BCF7208D-E44F-E011-802F-4171BAAC781D	0	qfx3100	OM
FM-0	73747cd8-0710-11e1-b6a4-00e081c5297e	0	fx-jvre	OM
DRE-0	77116f18-0710-11e1-a2a0-00e081c5297e	0	fx-jvre	OM
NW-NG-0	BBAK0394	0	qfx3500	OM
NW-NG-0	cd78871a-0710-11e1-878e-00e081c5297e	0	fx-jvre	OM
NW-NG-0	d0afda1e-0710-11e1-a1d0-00e081c5297e	0	fx-jvre	OM
FC-0	d31ab7a6-0710-11e1-ad1b-00e081c5297e	0	fx-jvre	OM
FC-1	d4d0f254-0710-11e1-90c3-00e081c5297e	0	fx-jvre	OM
IC-WS001	WS001	0	-	-
IC-WS001	WS001/YW3803	0	qfxc08-3008	OM
IC-WS001	WS001/YN5999	0	qfxc08-3008	OM
node-device1	BBAK0372	0	qfx3500	OM
node-device1	EE3093	0	qfx3500	OM

Total usage of core repository: 0M of 70000M (0.0%)

```

List of nodes for log repository: /pbdata/export/rlogs/

```

Node Group	Node Identifier	Num	Model	Usage
DG-0	BCF7208D-E44F-E011-802F-4171BAAC781D	0	qfx3100	OM
FM-0	73747cd8-0710-11e1-b6a4-00e081c5297e	1	fx-jvre	OM
DRE-0	77116f18-0710-11e1-a2a0-00e081c5297e	1	fx-jvre	OM
NW-NG-0	BBAK0394	1	qfx3500	OM
NW-NG-0	cd78871a-0710-11e1-878e-00e081c5297e	1	fx-jvre	OM
NW-NG-0	d0afda1e-0710-11e1-a1d0-00e081c5297e	3	fx-jvre	OM
FC-0	d31ab7a6-0710-11e1-ad1b-00e081c5297e	1	fx-jvre	OM
FC-1	d4d0f254-0710-11e1-90c3-00e081c5297e	1	fx-jvre	OM
IC-WS001	WS001	0	-	-
IC-WS001	WS001/YN5999	1	qfxc08-3008	OM

IC-WS001	WS001/YW3803	1	qfxc08-3008	OM
node-device1	BBAK0372	1	qfx3500	OM
node-device1	EE3093	1	qfx3500	OM

Total usage of log repository:OM of 70000M (0.0%)

### show system core-dumps component serial number display-order alphanumeric-sort repository core (QFabric Systems)

```
user@switch> show system core-dumps component BBAK8891 display-order alphanumeric-sort repository core
Repository scope: shared
Repository head: /pbdata/export
Repository name: core
List of core dumps for component BBAK8891
Repository location: /pbdata/export/rdumps/BBAK8891
```

Filename	Date	Size
eswd.core.0.1361.11172011214257.gz	Nov 17 21:43:10 2011	4779553
eswd.core.1.80267.11172011214514.gz	Nov 17 21:45:19 2011	3541648
eswd.core.2.80682.11172011214535.gz	Nov 17 21:45:43 2011	2156683
vccpd.core.0.1195.11182011151131.gz	Nov 18 15:11:35 2011	375617

Number of core dumps in repository:4

### show system core-dumps display-period (QFabric Systems)

```
user@switch> show system core-dumps display-period 24h
show system core-dumps display-period 24h
Repository scope: shared
Repository head: /pbdata/export
List of core dumps at repository: /pbdata/export/rdumps
Delta timespec: Last 24h
Component: BBAK8273
```

Filename	Size	Date
vccpd.core.0.1195.11182011151131.gz	Nov 18 15:11:35 2011	375794

Component: cedb7b0e-0025-11e1-9a5f-00e081c52990

Filename	Size	Date
vccpd.core.0.1461.11182011151131.gz	Nov 18 15:11:31 2011	120951

Component: ee19c4f8-0025-11e1-aef6-00e081c52990

Filename	Size	Date
vccpd.core.0.1462.11182011151131.gz	Nov 18 15:11:31 2011	109420

Component: BBAK8281

Filename	Size	Date
vccpd.core.0.1196.11182011151131.gz	Nov 18 15:11:36 2011	375373

Component: BBAK8891

Filename	Size	Date
vccpd.core.0.1195.11182011151131.gz	Nov 18 15:11:35 2011	375617

Component: BBAK8276

Filename	Size	Date
vccpd.core.0.1196.11182011151131.gz	Nov 18 15:11:35 2011	375350

Component: BBAK8868

Filename	Size	Date
vccpd.core.0.1196.11182011151130.gz	Nov 18 15:11:34 2011	376211

Component: BBAK8835

Filename	Size	Date
vccpd.core.0.1195.11182011151130.gz Component: BBAK8283	Nov 18 15:11:35 2011	375700
Filename	Size	Date
vccpd.core.0.1195.11182011151131.gz Component: YW3781/YW3781	Nov 18 15:11:36 2011	368298
Filename	Size	Date
vccpd.core.0.1220.11182011151131.gz Component: 09726be2-0026-11e1-82d9-00e081c52990	Nov 18 15:11:38 2011	380002
Filename	Size	Date
vccpd.core.0.1461.11182011151130.gz Component: BBAK8309	Nov 18 15:11:31 2011	119965
Filename	Size	Date
vccpd.core.0.1196.11182011151131.gz Component: 303d476a-0026-11e1-abf4-00e081c52990	Nov 18 15:11:36 2011	378930
Filename	Size	Date
vccpd.core.0.1460.11182011151131.gz Component: YW3798/YW3798	Nov 18 15:11:31 2011	118385
Filename	Size	Date
vccpd.core.0.1219.11182011151131.gz List of log dumps at repository: /pbdata/export/rlogs Delta timespec: Last 24h Component: BBAK8273	Nov 18 15:11:36 2011	380455
Filename	Size	Date
vccpd.tarball.0.1195.11182011151138.tgz Component: cedb7b0e-0025-11e1-9a5f-00e081c52990	Nov 18 15:11:39 2011	20415
Filename	Size	Date
vccpd.tarball.0.1461.11182011151131.tgz Component: ee19c4f8-0025-11e1-aef6-00e081c52990	Nov 18 15:11:33 2011	19651
Filename	Size	Date
vccpd.tarball.0.1462.11182011151133.tgz Component: BBAK8281	Nov 18 15:11:36 2011	24650
Filename	Size	Date
vccpd.tarball.0.1196.11182011151137.tgz Component: BBAK8891	Nov 18 15:11:41 2011	19445
Filename	Size	Date
vccpd.tarball.0.1195.11182011151138.tgz Component: BBAK8276	Nov 18 15:11:41 2011	21916
Filename	Size	Date
vccpd.tarball.0.1196.11182011151137.tgz Component: BBAK8868	Nov 18 15:11:39 2011	20461
Filename	Size	Date
vccpd.tarball.0.1196.11182011151137.tgz Component: BBAK8835	Nov 18 15:11:41 2011	21924
Filename	Size	Date
vccpd.tarball.0.1195.11182011151137.tgz	Nov 18 15:11:39 2011	19424

Component: BBAK8283	Filename	Size	Date
vccpd.tarball.0.1195.11182011151138.tgz	Nov 18 15:11:42 2011	31186	
Component: YW3781/YW3781	Filename	Size	Date
vccpd.tarball.0.1220.11182011151141.tgz	Nov 18 15:11:45 2011	27565	
Component: 09726be2-0026-11e1-82d9-00e081c52990	Filename	Size	Date
vccpd.tarball.0.1461.11182011151130.tgz	Nov 18 15:11:34 2011	19613	
Component: BBAK8309	Filename	Size	Date
vccpd.tarball.0.1196.11182011151138.tgz	Nov 18 15:11:46 2011	50362	
Component: 303d476a-0026-11e1-abf4-00e081c52990	Filename	Size	Date
vccpd.tarball.0.1460.11182011151133.tgz	Nov 18 15:11:33 2011	19360	
Component: YW3798/YW3798	Filename	Size	Date
vccpd.tarball.0.1219.11182011151140.tgz	Nov 18 15:11:49 2011	24473	

#### show system core-dumps kernel-crashinfo component serial number (QFabric Systems)

```

user@switch> show system core-dumps kernel-crashinfo component A0001/YA0197
Node: A0001/YA0197

Information about previous kernel crash:

-- Kernel panic data --

Panic string: kdb_sysctl_panic
System uptime: 3 day 20 hr 59 min 40 sec Kernel crash time: 2011-11-15 Wed 15:25:17
Kernel build linkstamp: JUNOS 11.3I #0: 2011-11-10 20:42:27 UTC

-- Stacktrace of panicing context --
Processor 1 (crash monarch):
savectx+0x0 (c9552800,80214efc,802a7fbc,c88ad05c) ra 801b93a8 sz 0
kdm_kcore_save_crashinfo+0x254 (c9552800,0,802a7fbc,c88ad05c) ra 801b9f44 sz 784
kdm_kcore_kern_panic_event_handler+0x4b0 (c9552800,0,802a7fbc,c88ad05c) ra
8022a9b8 sz 88
panic+0x1d0 (c9552800,0,4,77fed534) ra 802540c0 sz 56
kdb_sysctl_panic+0x70 (c9552800,0,4,77fed534) ra 80237e58 sz 40 sysctl_root+0x12c
(c9552800,0,4,e8bc5cf8) ra 80238e50 sz 48
userland_sysctl+0x164 (c9552800,0,4,e8bc5cf8) ra 8023956c sz 104
__sysctl+0xe4 (c9552800,0,4,e8bc5cf8) ra 806d62e8 sz 160
trap+0xe1c (c9552800,0,4,e8bc5cf8) ra 80896e68 sz 128
MipsUserGenException+0x1a4 (c9552800,0,4,405cd12c) ra 0 sz 0
pid 82340, process: sysctl

Processor 0:
restoreintr+0x14 (1,81bca820,3,0) ra 806cdc3c sz 0
spinlock_exit+0x30 (1,81bca820,3,0) ra 8025d354 sz 24
sleepq_release+0x64 (1,81bca820,3,0) ra 8025e670 sz 24
sleepq_timeout+0x224 (1,81bca820,3,0) ra 80240294 sz 48
softclock+0x434 (1,81bca820,3,0) ra 802067f8 sz 80
ithread_loop+0x244 (1,81bca820,3,0) ra 80200e28 sz 64 fork_exit+0xc0
(1,81bca820,3,0) ra 80897c28 sz 48

```

```

MipsNMIException+0x34 (1,81bca820,3,0) ra 0 sz 0
pid 82340, process: sysctl

Processor 2:
cpu_idle+0x20 (80960000,51bbc,2031df,81bca1b8) ra 80204948 sz 24 idle_proc+0x130
(80960000,51bbc,2031df,81bca1b8) ra 80200e28 sz 56 fork_exit+0xc0
(80960000,51bbc,2031df,81bca1b8) ra 80897c28 sz 48
MipsNMIException+0x34 (80960000,51bbc,2031df,81bca1b8) ra 0 sz 0
pid 82340, process: sysctl

Processor 3:
cpu_idle+0x20 (80960000,51bbc,2038df,81bca300) ra 80204948 sz 24 idle_proc+0x130
(80960000,51bbc,2038df,81bca300) ra 80200e28 sz 56 fork_exit+0xc0
(80960000,51bbc,2038df,81bca300) ra 80897c28 sz 48
MipsNMIException+0x34 (80960000,51bbc,2038df,81bca300) ra 0 sz 0
pid 82340, process: sysctl

Processor 4:
cpu_idle+0x20 (80960000,51bbc,2037df,81bca448) ra 80204948 sz 24 idle_proc+0x130
(80960000,51bbc,2037df,81bca448) ra 80200e28 sz 56 fork_exit+0xc0
(80960000,51bbc,2037df,81bca448) ra 80897c28 sz 48
MipsNMIException+0x34 (80960000,51bbc,2037df,81bca448) ra 0 sz 0
pid 82340, process: sysctl

Processor 5:
restoreintr+0x14 (1,51bbc,203edf,81bca590) ra 806cdc3c sz 0
spinlock_exit+0x30 (1,51bbc,203edf,81bca590) ra 80204a34 sz 24 idle_proc+0x21c
(1,51bbc,203edf,81bca590) ra 80200e28 sz 56 fork_exit+0xc0
(1,51bbc,203edf,81bca590) ra 80897c28 sz 48
MipsNMIException+0x34 (1,51bbc,203edf,81bca590) ra 0 sz 0
pid 82340, process: sysctl

Processor 6:
cpu_idle+0x20 (80960000,51bbc,205cdf,81bca6d8) ra 80204948 sz 24 idle_proc+0x130
(80960000,51bbc,205cdf,81bca6d8) ra 80200e28 sz 56 fork_exit+0xc0
(80960000,51bbc,205cdf,81bca6d8) ra 80897c28 sz 48
MipsNMIException+0x34 (80960000,51bbc,205cdf,81bca6d8) ra 0 sz 0
pid 82340, process: sysctl

Processor 7:
lockmgr+0x5ac (c97e8484,c8dd9800,0,c8dd9800) ra 8c11c81c sz 48
sal_sem_take+0x134 (c97e8484,c8dd9800,0,c8dd9800) ra 8c351108 sz 56
_bcm_esw_linkscan_thread+0x45c (c97e8484,c8dd9800,0,c8dd9800) ra 8c11cdb4 sz 104
sal_thread_start_wrap+0x74 (c97e8484,c8dd9800,0,c8dd9800) ra 80200e28 sz 32
fork_exit+0xc0 (c97e8484,c8dd9800,0,c8dd9800) ra 80897c28 sz 48
MipsNMIException+0x34 (c97e8484,c8dd9800,0,c8dd9800) ra 0 sz 0
pid 82340, process: sysctl
-- End of stacktrace --

```

### show system core-dumps repository core (QFabric Systems)

```

user@switch> show system core-dumps repository core
Repository scope: shared
Repository head: /pbdata/export
Repository name: core
List of nodes for core repository: /pbdata/export/rdumps/

```

Node Group	Node Identifier	Num	Model	Usage
DG-0	BCF7208D-E44F-E011-802F-4171BAAC781D	0	qfx3100	0M
FM-0	73747cd8-0710-11e1-b6a4-00e081c5297e	0	fx-jvre	0M
DRE-0	77116f18-0710-11e1-a2a0-00e081c5297e	0	fx-jvre	0M



```

NW-NG-0      BBAK0394      0      qfx3500      0M
NW-NG-0      cd78871a-0710-11e1-878e-00e081c5297e  0      fx-jvre      0M
NW-NG-0      d0afda1e-0710-11e1-a1d0-00e081c5297e  0      fx-jvre      0M
FC-0         d31ab7a6-0710-11e1-ad1b-00e081c5297e  0      fx-jvre      0M
FC-1         d4d0f254-0710-11e1-90c3-00e081c5297e  0      fx-jvre      0M
IC-WS001     WS001        0      -            -
IC-WS001     WS001/YW3803  0      qfxc08-3008  0M
IC-WS001     WS001/YN5999  0      qfxc08-3008  0M
node-device1 BBAK0372      0      qfx3500      0M
node-device1 EE3093      0      qfx3500      0M
Total usage of core repository:0M of 70000M (0.0%)

```

#### show system core-dumps repository log (QFabric Systems)

```

user@switch> show system core-dumps repository log
Repository scope: shared
Repository head: /pbdata/export
Repository name: log
List of nodes for log repository: /pbdata/export/rlogs/
Node Group      Node Identifier      Num  Model      Usage
-----
DG-0            BCF7208D-E44F-E011-802F-4171BAAC781D  0    qfx3100    0M
FM-0            73747cd8-0710-11e1-b6a4-00e081c5297e  1    fx-jvre    0M
DRE-0           77116f18-0710-11e1-a2a0-00e081c5297e  1    fx-jvre    0M
NW-NG-0         BBAK0394              1    qfx3500    0M
NW-NG-0         cd78871a-0710-11e1-878e-00e081c5297e  1    fx-jvre    0M
NW-NG-0         d0afda1e-0710-11e1-a1d0-00e081c5297e  3    fx-jvre    0M
FC-0            d31ab7a6-0710-11e1-ad1b-00e081c5297e  1    fx-jvre    0M
FC-1            d4d0f254-0710-11e1-90c3-00e081c5297e  1    fx-jvre    0M
IC-WS001        WS001                 0    -          -
IC-WS001        WS001/YN5999          1    qfxc08-3008 0M
IC-WS001        WS001/YW3803          1    qfxc08-3008 0M
node-device1    BBAK0372              1    qfx3500    0M
node-device1    EE3093                1    qfx3500    0M
Total usage of log repository:0M of 70000M (0.0%)

```

## show system directory-usage

---

<b>List of Syntax</b>	<a href="#">Syntax on page 1114</a> <a href="#">Syntax (EX Series) on page 1114</a> <a href="#">Syntax (TX Matrix Router) on page 1114</a> <a href="#">Syntax (TX Matrix Plus Router) on page 1114</a> <a href="#">Syntax (MX Series Router) on page 1114</a> <a href="#">Syntax (QFX Series and OCX Series) on page 1114</a>
<b>Syntax</b>	<code>show system directory-usage</code> <code>&lt;depth <i>number</i>&gt;</code> <code>&lt;path&gt;</code>
<b>Syntax (EX Series)</b>	<code>show system directory-usage</code> <code>&lt;all-members&gt;</code> <code>&lt;depth <i>number</i>&gt;</code> <code>&lt;local&gt;</code> <code>&lt;member <i>member-id</i>&gt;</code> <code>&lt;path&gt;</code>
<b>Syntax (TX Matrix Router)</b>	<code>show system directory-usage</code> <code>&lt;all-chassis   all-lcc   lcc <i>number</i>   scc&gt;</code> <code>&lt;depth <i>number</i>&gt;</code> <code>&lt;path&gt;</code>
<b>Syntax (TX Matrix Plus Router)</b>	<code>show system directory-usage</code> <code>&lt;all-chassis   all-lcc   lcc <i>number</i>   sfc <i>number</i>&gt;</code> <code>&lt;depth <i>number</i>&gt;</code> <code>&lt;path&gt;</code>
<b>Syntax (MX Series Router)</b>	<code>show system directory-usage</code> <code>&lt;all-members&gt;</code> <code>&lt;depth <i>number</i>&gt;</code> <code>&lt;local&gt;</code> <code>&lt;member <i>member-id</i>&gt;</code> <code>&lt;path&gt;</code>
<b>Syntax (QFX Series and OCX Series)</b>	<code>show system directory-usage</code> <code>&lt;depth <i>number</i>&gt;</code> <code>&lt;path&gt;</code> <code>&lt;infrastructure <i>name</i>&gt;</code> <code>&lt;interconnect-device <i>name</i>&gt;</code> <code>&lt;node-group <i>name</i>&gt;</code>
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. Command introduced in Junos OS Release 9.0 for EX Series switches. <b>sfc</b> option introduced for the TX Matrix Plus router in Junos OS Release 9.6. Command introduced in Junos OS Release 11.1 for the QFX Series. Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

**Description** Display directory usage information.

**Options** **none**—Display all directory usage information.

**all-chassis**—(TX Matrix routers and TX Matrix Plus routers only) (Optional) Display directory usage information about all the T640 routers (in a routing matrix based on a TX Matrix router). Display directory usage information about all the T1600 or T4000 routers (in a routing matrix based on a TX Matrix Plus router) in the chassis.

**all-lcc**—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display directory information for all T640 routers (or line-card chassis) connected to the TX Matrix router. On a TX Matrix Plus router, display directory information for all connected T1600 or T4000 LCCs.

**all-members**—(EX4200 switches and MX Series routers only) (Optional) Display directory information for all members of the Virtual Chassis configuration.

**depth *number***—(Optional) Depth of the directory to traverse. This option is useful when you want to limit the output shown for a large file system.

**infrastructure *name***— (QFabric systems only) (Optional) Display directory information for the fabric control Routing Engines and fabric manager Routing Engines.

**interconnect-device *name***— (QFabric systems only) (Optional) Display directory information for the Interconnect device.

**node-group *name***— (QFabric systems only) (Optional) Display directory information for the Node group.

**lcc *number***—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display directory information for a specific T640 router that is connected to the TX Matrix router. On a TX Matrix Plus router, display directory information for a specific router that is connected to the TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(EX4200 switches and MX Series routers only) (Optional) Display directory information for the local Virtual Chassis member.

**member *member-id***—(EX4200 switches and MX Series routers only) (Optional) Display directory information for the specified member of the Virtual Chassis configuration.

For EX4200 switches, replace *member-id* with a value from 0 through 9. For an MX Series Virtual Chassis, replace *member-id* with a value of 0 or 1.

**path**—(Optional) Path or root directory to traverse.

**scc**—(TX Matrix router only) (Optional) Display directory information for the TX Matrix router (or switch-card chassis).

**sfc number**—(TX Matrix Plus routers only) (Optional) Display directory information for the TX Matrix Plus router. Replace *number* with 0.

**Required Privilege Level** view

**Related Documentation** • [Routing Matrix with a TX Matrix Plus Router Solutions Page](#)

**List of Sample Output** [show system directory-usage scc \(TX Matrix Router\) on page 1117](#)  
[show system directory-usage sfc \(TX Matrix Plus Router\) on page 1117](#)  
[show system directory-usage \(QFX Series and OCX Series\) on page 1117](#)

**Output Fields** [Table 43 on page 1116](#) describes the output fields for the **show system directory-usage** command. Output fields are listed in the approximate order in which they appear.

*Table 43: show system directory-usage Output Fields*

Field Name	Field Description
<i>bytes</i>	Number of bytes used by files in a directory.
<i>directory-name</i>	Name of the directory.

## Sample Output

### show system directory-usage scc (TX Matrix Router)

```

user@host> show system directory-usage /var/tmp scc
/var/tmp
1.0K    /var/tmp/vi.recover
2.0K    /var/tmp/instmp.tPMk8u
1.0K    /var/tmp/install
        /var/tmp/instmp.GUMpur
4.8M    /var/tmp/instmp.GUMpur/packages
6.4M    /var/tmp/troy1
297M    /var/tmp/dsw
        /var/tmp/pkg_tmp.2073
83K     /var/tmp/pkg_tmp.2073/bin
        /var/tmp/instmp.oMIDb1
89K     /var/tmp/instmp.oMIDb1/bin
        /var/tmp/instmp.byhMjR
4.6M    /var/tmp/instmp.byhMjR/packages
        /var/tmp/instmp.6fqHf3
1.7M    /var/tmp/instmp.6fqHf3/packages
        /var/tmp/instmp.mljECe
4.6M    /var/tmp/instmp.mljECe/packages

```

### show system directory-usage sfc (TX Matrix Plus Router)

```

user@switch> show system directory-usage /var/tmp sfc 0
sfc0-re0:
-----
/var/tmp
46K     /var/tmp/gres-tp
        /var/tmp/sec-download
2.0K    /var/tmp/sec-download/sub-download
2.0K    /var/tmp/vi.recover
2.0K    /var/tmp/install
795M    /var/tmp/cores
766K    /var/tmp/pr440594

```

### show system directory-usage (QFX Series and OCX Series)

```

user@switch> show system directory-usage
/var/tmp
30K     /var/tmp/gres-tp
2.0K    /var/tmp/rtsdb
2.0K    /var/tmp/vi.recover
2.0K    /var/tmp/install
2.0K    /var/tmp/pics

```

## show system firmware

<b>Syntax</b>	<code>show system firmware</code> <code>&lt;compatibility&gt;</code>
<b>Release Information</b>	Command introduced in Junos OS Release 7.4. Command introduced in Junos OS Release 9.4 for EX Series switches. Command introduced in Junos OS Release 15.1X53-D30 for QFX Series switches. Command introduced in Junos OS Release 15.1F6 for MX Series Routers and PTX Series Routers.
<b>Description</b>	(J Series routers, MX240, MX480, MX960, MX2010, and MX2020 routers, PTX3000 and PTX5000 routers, EX8200 switches, QFX10008 switches only) Display firmware information.
<b>Options</b>	<b>compatibility</b> —(Optional) Display firmware compatibility information.
<b>Required Privilege Level</b>	view
<b>List of Sample Output</b>	<a href="#">show system firmware on page 1119</a> <a href="#">show system firmware compatibility on page 1119</a> <a href="#">show system firmware (QFX10008 Switch) on page 1119</a> <a href="#">show system firmware (MX Series Routers with MIC3-100G-DWDM) on page 1119</a> <a href="#">show system firmware (MX Series Routers with MIC3-100G-DWDM) on page 1119</a>
<b>Output Fields</b>	<a href="#">Table 44 on page 1118</a> lists the output fields for the <b>show system firmware</b> command. Output fields are listed in the approximate order in which they appear.

*Table 44: show system firmware Output Fields*

Field Name	Field Description
<b>Part</b>	Physical part on the router or switch affected by the firmware.
<b>Type</b>	Type of firmware on the router or switch.
<b>Tag</b>	Location of the firmware on the interface.
<b>Current version</b>	Firmware version on the affected router or switch parts.
<b>Available version</b>	New versions of firmware for upgrading or downgrading.
<b>Status</b>	Firmware condition on the router or switch.
<b>Action</b>	Whether you can upgrade or downgrade, or if no action is available ( <b>none</b> ). This field is displayed only if the <b>show system firmware</b> command is used with the <b>compatibility</b> option.

## Sample Output

### show system firmware

```
user@host> show system firmware
```

Part	Type	Tag	Current version	Available version	Status
FPC 0	ROM Monitor	0	0	6.4.10	OK
Routing Engine 0	RE BIOS	0	0		OK

### show system firmware compatibility

```
user@host> show system firmware compatibility
```

Part	Type	Tag	Current version	Available version	Action
FPC 0	ROM Monitor	0	0	6.4.10	None
Routing Engine 0	RE BIOS	0	0		None

### show system firmware (QFX10008 Switch)

```
user@host> show system firmware
```

Part	Type	Status
CB 0	FPGA	OK
FPC 0	U-Boot	OK
CTRL	FPGA	PROGRAMMING
PORT	FPGA	PROGRAMMING
FPM	FPGA	OK
FTC 0	FPGA	OK
FTC 1	FPGA	OK
SIB 0	FPGA	OK
SIB 1	FPGA	OK
SIB 2	FPGA	OK
SIB 3	FPGA	OK
SIB 4	FPGA	OK
SIB 5	FPGA	OK

### show system firmware (MX Series Routers with MIC3-100G-DWDM)

```
user@host> show system firmware
```

Part	Type	Tag	Current version	Available version	Status
FPC 0	ROM Monitor	0	0	10.4.1	OK
FPC 1	ROM Monitor	0	0	10.4.1	OK
FPC 2	ROM Monitor	0	0	10.4.1	OK
PIC 0	CMIC LTC 2/0	1	.0	1.0	OK
FPC 3	ROM Monitor	0	0	10.4.1	OK
FPC 4	ROM Monitor	0	0	13.3.1	OK
FPC 4	MPCS(0)	2	0.24.0		OK
Routing Engine 0	RE BIOS	0	1.18		OK
Routing Engine 1		0	1.18		OK

The current firmware version .0 does not match the available version 1.0. This output displays the status before the firmware upgrade.

### show system firmware (MX Series Routers with MIC3-100G-DWDM)

```
user@host> show system firmware
```

Part	Type	Tag	Current	Available	Status
		version	version		
FPC 0	ROM Monitor	0	0	10.4.1	OK
FPC 1	ROM Monitor	0	0	10.4.1	OK
FPC 2	ROM Monitor	0	0	10.4.1	OK
PIC 0	CMIC LTC 2/0	1	1.0	1.0	UPGRADED SUCCESSFULLY
FPC 3	ROM Monitor	0	0	10.4.1	OK
FPC 4	ROM Monitor	0	0	13.3.1	OK
FPC 4	MPCS(0)	2	0.24.0		OK
Routing Engine 0	RE BIOS	0	1.18		OK
Routing Engine 1		0	1.18		OK

The current firmware version **1.0** matches the available version **1.0**. This output displays the status after the firmware upgrade.



## show system reboot

<b>List of Syntax</b>	<a href="#">Syntax on page 1121</a> <a href="#">Syntax (EX Series Switches) on page 1121</a> <a href="#">Syntax (TX Matrix Router) on page 1121</a> <a href="#">Syntax (TX Matrix Plus Router) on page 1121</a> <a href="#">Syntax (MX Series Router) on page 1121</a> <a href="#">Syntax (QFX Series and OCX Series) on page 1121</a>
<b>Syntax</b>	<pre>show system reboot &lt;both-routing-engines&gt;</pre>
<b>Syntax (EX Series Switches)</b>	<pre>show system reboot &lt;all-members&gt; &lt;both-routing-engines&gt; &lt;local&gt; &lt;member <i>member-id</i>&gt;</pre>
<b>Syntax (TX Matrix Router)</b>	<pre>show system reboot &lt;all-chassis   all-lcc   lcc <i>number</i>   scc&gt; &lt;both-routing-engines&gt;</pre>
<b>Syntax (TX Matrix Plus Router)</b>	<pre>show system reboot &lt;all-chassis   all-lcc   lcc <i>number</i>   sfc <i>number</i>&gt; &lt;both-routing-engines&gt;</pre>
<b>Syntax (MX Series Router)</b>	<pre>show system reboot &lt;all-members&gt; &lt;both-routing-engines&gt; &lt;local&gt; &lt;member <i>member-id</i>&gt;</pre>
<b>Syntax (QFX Series and OCX Series)</b>	<pre>show system reboot &lt;both-routing-engines&gt; &lt;infrastructure <i>name</i>&gt; &lt;interconnect-device <i>name</i>&gt; &lt;node-device <i>name</i>&gt;</pre>
<b>Release Information</b>	<p>Command introduced before Junos OS Release 7.4.</p> <p>Command introduced in Junos OS Release 9.0 for EX Series switches.</p> <p><b>sfc</b> option introduced for the TX Matrix Plus router in Junos OS Release 9.6.</p> <p>Command introduced in Junos OS Release 11.1 for the QFX Series.</p> <p>Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.</p>
<b>Description</b>	Display pending system reboots or halts.
<b>Options</b>	<b>none</b> —Display pending reboots or halts on the active Routing Engine.

**all-chassis**—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display halt or reboot request information for all the T640 routers in the chassis that are connected to the TX Matrix router. On a TX Matrix Plus router, display halt or reboot request information for all the T1600 or T4000 routers in the chassis that are connected to the TX Matrix Plus router.

**all-members**—(EX4200 switches and MX Series routers only) (Optional) Display halt or reboot request information for all members of the Virtual Chassis configuration.

**all-lcc**—(TX Matrix routers and TX Matrix Plus router only) (Optional) On a TX Matrix router, display system halt or reboot request information for all T640 routers connected to the TX Matrix router. On a TX Matrix Plus router, display halt or reboot request information for all connected T1600 or T4000 LCCs.

**both-routing-engines**—(Systems with multiple Routing Engines) (Optional) Display halt or reboot request information on both Routing Engines.

**infrastructure *name***—(QFabric systems only) (Optional) Display reboot request information on the fabric manager Routing Engines and fabric control Routing Engines.

**interconnect-device *name***—(QFabric systems only) (Optional) Display reboot request information on the Interconnect device.

**lcc *number***—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display halt or reboot request information for a specific T640 router that is connected to the TX Matrix router. On a TX Matrix Plus router, display halt or reboot request information for a specific router that is connected to the TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(EX4200 switches and MX Series routers only) (Optional) Display halt or reboot request information for the local Virtual Chassis member.

**member *member-id***—(EX4200 switches and MX Series routers only) (Optional) Display halt or reboot request information for the specified member of the Virtual Chassis configuration. For EX4200 switches, replace *member-id* with a value from 0 through 9. For an MX Series Virtual Chassis, replace *member-id* with a value of 0 or 1.

**node-group *name***—(QFabric systems only) (Optional) Display reboot request information on the Node group.

**scc**—(TX Matrix router only) (Optional) Display halt or reboot request information for the TX Matrix router (or switch-card chassis).

**sfc**—(TX Matrix Plus router only) (Optional) Display halt or reboot request information for the TX Matrix Plus router.

**Additional Information** By default, when you issue the **show system reboot** command on a TX Matrix or TX Matrix Plus master Routing Engine, the command is broadcast to all the T640 (in a routing matrix based on the TX Matrix router) or T1600 (in a routing matrix based on the TX Matrix Plus router) master Routing Engines connected to it. Likewise, if you issue the same command on the TX Matrix or TX Matrix Plus backup Routing Engine, the command is broadcast to all the T640 (in a routing matrix based on the TX Matrix router) or T1600 (in a routing matrix based on the TX Matrix Plus router) backup Routing Engines that are connected to it.

**Required Privilege Level** maintenance

**Related Documentation**

- [Routing Matrix with a TX Matrix Plus Router Solutions Page](#)

**List of Sample Output**

- [show system reboot on page 1123](#)
- [show system reboot all-lcc \(TX Matrix Router\) on page 1123](#)
- [show system reboot sfc \(TX Matrix Plus Router\) on page 1123](#)
- [show system reboot \(QFX3500 Switch\) on page 1124](#)

## Sample Output

### show system reboot

```
user@host> show system reboot
reboot requested by root at Wed Feb 10 17:40:46 1999
[process id 17885]
```

### show system reboot all-lcc (TX Matrix Router)

```
user@host> show system reboot all-lcc
lcc0-re0:
-----
No shutdown/reboot scheduled.

lcc2-re0:
-----
No shutdown/reboot scheduled.
```

### show system reboot sfc (TX Matrix Plus Router)

```
user@host> show system sfc 0
No shutdown/reboot scheduled.
```

### show system reboot (QFX3500 Switch)

```
user@switch> show system reboot
No shutdown/reboot scheduled.
```

## show system software

<b>List of Syntax</b>	<a href="#">Syntax on page 1125</a> <a href="#">Syntax (EX Series Switches) on page 1125</a> <a href="#">Syntax (TX Matrix Router) on page 1125</a> <a href="#">Syntax (TX Matrix Plus Router) on page 1125</a> <a href="#">Syntax (QFX Series) on page 1125</a>
<b>Syntax</b>	show system software <detail>
<b>Syntax (EX Series Switches)</b>	show system software <all-members> <detail> <local> <member <i>member-id</i> >
<b>Syntax (TX Matrix Router)</b>	show system software <all-chassis   all-lcc   lcc <i>number</i>   scc> <detail>
<b>Syntax (TX Matrix Plus Router)</b>	show system software <all-chassis   all-lcc   lcc <i>number</i>   sfc <i>number</i> > <detail>
<b>Syntax (QFX Series)</b>	show system software <detail> <infrastructure <i>name</i> > <interconnect-device <i>name</i> > <node-group <i>name</i> >
<b>Release Information</b>	<p>Command introduced before Junos OS Release 7.4.</p> <p>Command introduced in Junos OS Release 9.0 for EX Series switches.</p> <p><b>sfc</b> option introduced for the TX Matrix Plus router in Junos OS Release 9.6.</p> <p>Command introduced in Junos OS Release 11.1 for the QFX Series.</p> <p>Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.</p>
<b>Description</b>	Display the Junos OS extensions loaded on your router or switch.
<b>Options</b>	<p><b>none</b>—Display standard information about all loaded Junos OS extensions.</p> <p><b>all-chassis</b>—(TX Matrix routers and TX Matrix Plus routers only) (Optional) Display system software information for all the T640 routers (TX Matrix Router) or all the routers (TX Matrix Plus Router) in the chassis.</p> <p><b>all-lcc</b>—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display system software information for all T640 routers connected to the</p>

TX Matrix router. On a TX Matrix Plus router, display system software information for all connected T1600 or T4000 LCCs.

**all-members**—(EX4200 switches only) (Optional) Display the system software running on all members of the Virtual Chassis configuration.

**detail**—(Optional) Display detailed information about available Junos OS extensions.

**infrastructure name**—(QFabric systems only) (Optional) Display the system software running on the fabric control Routing Engine and the fabric manager Routing Engine.

**interconnect-device name**—(QFabric systems only) (Optional) Display the system software running on the Interconnect device.

**lcc number**—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display system software information for a specific T640 router that is connected to the TX Matrix router. On a TX Matrix Plus router, display system software information for a specific router that is connected to the TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(EX4200 switches only) (Optional) Display the system software running on the local Virtual Chassis member.

**member member-id**—(EX4200 switches only) (Optional) Display the system software running on the specified member of the Virtual Chassis configuration. Replace *member-id* with a value from 0 through 9.

**node-group name**—(QFabric systems only) (Optional) Display the system software running on the Node group.

**scc**—(Routing matrix only) (Optional) Display the system software running on a TX Matrix router (or switch-card chassis).

**sfc**—(TX Matrix Plus routers only) (Optional) Display system software information for the TX Matrix Plus router.

**Required Privilege Level**    maintenance

## Related Documentation

- [Routing Matrix with a TX Matrix Plus Router Solutions Page](#)

## List of Sample Output

[show system software on page 1127](#)  
[show system software \(TX Matrix Plus Router\) on page 1127](#)  
[show system software \(QFX Series\) on page 1131](#)

## Output Fields

When you enter this command, you are provided a list of Junos OS packages installed on the router and their corresponding Junos OS release number.

## Sample Output

### show system software

```
user@host> show system software
Information for jbase:
```

```
Comment:
JUNOS Base OS Software Suite [7.2R1.7]
```

```
Information for jcrypto:
```

```
Comment:
JUNOS Crypto Software Suite [7.2R1.7]
Information for jdocs:
```

```
Comment:
JUNOS Online Documentation [7.2R1.7]
```

```
Information for jkernel:
```

```
Comment:
JUNOS Kernel Software Suite [7.2R1.7]
```

```
Information for jpfe:
```

```
Comment:
JUNOS Packet Forwarding Engine Support (M20/M40) [7.2R1.7]
```

```
Information for jroute:
```

```
Comment:
JUNOS Routing Software Suite [7.2R1.7]
```

```
Information for junos:
```

```
Comment:
JUNOS Base OS boot [7.2R1.7]
```

### show system software (TX Matrix Plus Router)

```
user@host> show system software
```

sfc0-re0:

-----  
Information for jbase:

Comment:

JUNOS Base OS Software Suite [9.6-20090515.0]

Information for jcrypto:

Comment:

JUNOS Crypto Software Suite [9.6-20090515.0]

Information for jdocs:

Comment:

JUNOS Online Documentation [9.6-20090515.0]

Information for jkernel:

Comment:

JUNOS Kernel Software Suite [9.6-20090515.0]

Information for jpfe:

Comment:

JUNOS Packet Forwarding Engine Support (T-Series) [9.6-20090515.0]

Information for jpfe-common:

Comment:

JUNOS Packet Forwarding Engine Support (M/T Common) [9.6-20090515.0]

Information for jroute:Comment:

JUNOS Routing Software Suite [9.6-20090515.0]

Information for jservices-aacl:

Comment:

JUNOS Services ACL Container package [9.6-20090515.0]

Information for jservices-appid:

Comment:

JUNOS AppId Services [9.6-20090515.0]

Information for jservices-bgf:



Comment:  
JUNOS Border Gateway Function package [9.6-20090515.0]  
Information for jservices-idp:

Comment:  
JUNOS IDP Services [9.6-20090515.0]

Information for jservices-llpdf:

Comment:  
JUNOS Services LL-PDF Container package [9.6-20090515.0]

Information for jservices-sfw:

Comment:  
JUNOS Services Stateful Firewall [9.6-20090515.0]  
Information for jservices-voice:

Comment:  
JUNOS Voice Services Container package [9.6-20090515.0]

Information for junos:

Comment:  
JUNOS Base OS boot [9.6-20090515.0]  
...  
lcc0-re0:

-----  
Information for jbase:

Comment:  
JUNOS Base OS Software Suite [9.6-20090515.0]

Information for jcrypto:

Comment:  
JUNOS Crypto Software Suite [9.6-20090515.0]

Information for jdocs:

Comment:  
JUNOS Online Documentation [9.6-20090515.0]

Information for jkernel:

Comment:  
JUNOS Kernel Software Suite [9.6-20090515.0]

Information for jpfe:

Comment:

JUNOS Packet Forwarding Engine Support (T-Series) [9.6-20090515.0]

Information for jpfe-common:

Comment:

JUNOS Packet Forwarding Engine Support (M/T Common) [9.6-20090515.0]

Information for jroute:

Comment:

JUNOS Routing Software Suite [9.6-20090515.0]

Information for jservices-aacl:

Comment:

JUNOS Services ACL Container package [9.6-20090515.0]

Information for jservices-appid:

Comment:

JUNOS AppId Services [9.6-20090515.0]

Information for jservices-bgf:

Comment:

JUNOS Border Gateway Function package [9.6-20090515.0]

Information for jservices-idp:

Comment:

JUNOS IDP Services [9.6-20090515.0]

Information for jservices-llpdf:

Comment:

JUNOS Services LL-PDF Container package [9.6-20090515.0]

Information for jservices-sfw:

Comment:

JUNOS Services Stateful Firewall [9.6-20090515.0]

Information for jservices-voice:

Comment:

JUNOS Voice Services Container package [9.6-20090515.0]

Information for junos:

Comment:

JUNOS Base OS boot [9.6-20090515.0]

lcc1-re0:

-----  
Information for jbase:

Comment:

JUNOS Base OS Software Suite [9.6-20090515.0]

Information for jcrypto:

Comment:

JUNOS Crypto Software Suite [9.6-20090515.0]

...

### show system software (QFX Series)

user@switch> **show system software**

Information for jbase:

Comment:

JUNOS Base OS Software Suite [11.3-20110730.0]

Information for jcrypto:

Comment:

JUNOS Crypto Software Suite [11.3-20110730.0]

Information for jdocs:

Comment:

JUNOS Online Documentation [11.3-20110730.0]

Information for jkernel:

Comment:

JUNOS Kernel Software Suite [11.3-20110730.0]

Information for jpfe:

Comment:

JUNOS Packet Forwarding Engine Support (QFX) [11.3-20110730.0]

Information for jroute:

Comment:

JUNOS Routing Software Suite [11.3-20110730.0]

Information for jswitch:

Comment:

JUNOS Enterprise Software Suite [11.3-20110730.0]

Information for junos:

Comment:

JUNOS Base OS boot [11.3-20110730.0]

Information for jweb:

Comment:

JUNOS Web Management [11.3-20110730.0]

## show system statistics

<b>List of Syntax</b>	<a href="#">Syntax on page 1133</a> <a href="#">Syntax (EX Series Switches) on page 1133</a> <a href="#">Syntax (TX Matrix Router) on page 1133</a> <a href="#">Syntax (TX Matrix Plus Router) on page 1133</a> <a href="#">Syntax (MX Series Router) on page 1133</a> <a href="#">Syntax (QFX Series) on page 1133</a>
<b>Syntax</b>	show system statistics
<b>Syntax (EX Series Switches)</b>	show system statistics <all-members> <local> <member <i>member-id</i> >
<b>Syntax (TX Matrix Router)</b>	show system statistics <all-chassis   all-lcc   lcc <i>number</i>   scc>
<b>Syntax (TX Matrix Plus Router)</b>	show system statistics <all-chassis   all-lcc   lcc <i>number</i>   sfc <i>number</i> >
<b>Syntax (MX Series Router)</b>	show system statistics <all-members> <local> <member <i>member-id</i> > <extended <ipv4   ipv6>>
<b>Syntax (QFX Series)</b>	show system statistics
<b>Release Information</b>	Command introduced before JUNOS Release 7.4. Command introduced in Junos OS Release 9.0 for EX Series switches. <b>sfc</b> option introduced for the TX Matrix Plus router in JUNOS Release 9.6. Command introduced in Junos OS Release 11.1 for the QFX Series. Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Display system-wide protocol-related statistics.
<b>Options</b>	<b>none</b> —Display system statistics for all the following protocols: <ul style="list-style-type: none"> <li>• <b>arp</b>—Address Resolution Protocol</li> <li>• <b>bridge</b>—IEEE 802.1 Bridging</li> <li>• <b>clns</b>—Connectionless Network Service</li> <li>• <b>esis</b>—End System-to-Intermediate System</li> <li>• <b>ethoamcfm</b>—Ethernet OAM protocol for connectivity fault management</li> </ul>

- **ethoamlfm**—Ethernet OAM protocol for link fault management
- **extended**—System statistics for IPv4 and IPv6 traffic
- **icmp**—Internet Control Message Protocol
- **icmp6**—Internet Control Message Protocol version 6
- **igmp**—Internet Group Management Protocol
- **ip**—Internet Protocol version 4
- **ip6**—Internet Protocol version 6
- **jsr**—Juniper Socket Replication
- **mpls**—Multiprotocol Label Switching
- **rdp**—Reliable Datagram Protocol
- **tcp**—Transmission Control Protocol
- **tnp**—Trivial Network Protocol
- **ttp**—TNP Tunneling Protocol
- **tudp**—Trivial User Datagram Protocol
- **udp**—User Datagram Protocol
- **vpls**—Virtual Private LAN Service

**all-chassis**—(TX Matrix and TX Matrix Plus routers only) (Optional) Display system statistics for a protocol for all the routers in the chassis.

**all-lcc**—(TX Matrix and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display system statistics for a protocol for all T640 routers (or line-card chassis) connected to the TX Matrix router. On a TX Matrix Plus router, display system statistics for a protocol for all routers (line-card chassis) connected to the TX Matrix Plus router

**all-members**—(EX4200 switches and MX Series routers only) (Optional) Display system statistics for a protocol for all members of the Virtual Chassis configuration.

**lcc number**—(TX Matrix and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display system statistics for a protocol for a specific T640 router that is connected to the TX Matrix router. On a TX Matrix Plus router, display system statistics for a protocol for a specific router that is connected to the TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.

- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(EX4200 switches and MX Series routers only) (Optional) Display system statistics for a protocol for the local Virtual Chassis member.

**member *member-id***—(EX4200 switches and MX Series routers only) (Optional) Display system statistics for a protocol for the specified member of the Virtual Chassis configuration. For EX4200 switches, replace ***member-id*** with a value from 0 through 9. For an MX Series Virtual Chassis, replace ***member-id*** with a value of 0 or 1.

**scc**—(TX Matrix routers only) (Optional) Display system statistics for a protocol for the TX Matrix router (or switch-card chassis).

**sfc *number***—(TX Matrix Plus routers only) (Optional) Display system statistics for a protocol for the TX Matrix Plus router (or switch-fabric chassis). Replace ***number*** with 0.

**Additional Information** By default, when you issue the **show system statistics** command on a TX Matrix or TX Matrix Plus master Routing Engine, the command is broadcast to all the T640 (in a routing matrix based on the TX Matrix router) or T1600 (in a routing matrix based on the TX Matrix Plus router) master Routing Engines connected to it. Likewise, if you issue the same command on the TX Matrix or TX Matrix Plus backup Routing Engine, the command is broadcast to all the T640 (in a routing matrix based on the TX Matrix router) or T1600 (in a routing matrix based on the TX Matrix Plus router) backup Routing Engines that are connected to it.

**Required Privilege Level** view

**List of Sample Output** [show system statistics on page 1135](#)  
[show system statistics \(EX Series Switches\) on page 1145](#)  
[show system statistics \(TX Matrix Router\) on page 1154](#)  
[show system statistics \(QFX Series\) on page 1161](#)  
[show system statistics extended \(MX Series\) on page 1170](#)

## Sample Output

### show system statistics

```
user@host> show system statistics
ip:
    3682087 total packets received
    0 bad header checksums
    0 with size smaller than minimum
    0 with data size < data length
    0 with header length < data size
    0 with data length < header length
```

```
0 with incorrect version number
0 packets destined to dead next hop
0 fragments received
0 fragments dropped (dup or out of space)
0 fragments dropped (queue overflow)
0 fragments dropped after timeout
0 fragments dropped due to over limit
0 packets reassembled ok
3664774 packets for this host
17316 packets for unknown/unsupported protocol
0 packets forwarded
0 packets not forwardable
0 redirects sent
6528 packets sent from this host
0 packets sent with fabricated ip header
0 output packets dropped due to no bufs
0 output packets discarded due to no route
0 output datagrams fragmented
0 fragments created
0 datagrams that can't be fragmented
0 packets with bad options
1123 packets with options handled without error
0 strict source and record route options
0 loose source and record route options
0 record route options
0 timestamp options
0 timestamp and address options
0 timestamp and prespecified address options
0 option packets dropped due to rate limit
1123 router alert options
0 multicast packets dropped (no iflist)
0 packets dropped (src and int don't match)
icmp:
0 drops due to rate limit
0 calls to icmp_error
0 errors not generated because old message was icmp
Output histogram:
    echo reply: 75
0 messages with bad code fields
0 messages less than the minimum length
0 messages with bad checksum
0 messages with bad source address
0 messages with bad length
0 echo drops with broadcast or multicast destination address
0 timestamp drops with broadcast or multicast destination address
Input histogram:
    echo: 75
    router advertisement: 130
75 message responses generated
tcp:
3844 packets sent
    3618 data packets (1055596 bytes)
    0 data packets (0 bytes) retransmitted
    0 resends initiated by MTU discovery
    205 ack-only packets (148 packets delayed)
    0 URG only packets
    0 window probe packets
    0 window update packets
    1079 control packets
5815 packets received
    3377 acks (for 1055657 bytes)
```



```

    24 duplicate acks
    0 acks for unsent data
    2655 packets (15004 bytes) received in-sequence
    1 completely duplicate packet (0 bytes)
    0 old duplicate packets
    0 packets with some dup. data (0 bytes duped)
    0 out-of-order packets (0 bytes)
    0 packets (0 bytes) of data after window
    0 window probes
    7 window update packets
    0 packets received after close
    0 discarded for bad checksums
    0 discarded for bad header offset fields
    0 discarded because packet too short
1 connection request
32 connection accepts
0 bad connection attempts
0 listen queue overflows
33 connections established (including accepts)
30 connections closed (including 0 drops)
    27 connections updated cached RTT on close
    27 connections updated cached RTT variance on close
    0 connections updated cached ssthresh on close
0 embryonic connections dropped
3374 segments updated rtt (of 3220 attempts)
0 retransmit timeouts
    0 connections dropped by rexmit timeout
0 persist timeouts
    0 connections dropped by persist timeout
344 keepalive timeouts
    0 keepalive probes sent
    0 connections dropped by keepalive
1096 correct ACK header predictions
1314 correct data packet header predictions
32 syncache entries added
    0 retransmitted
    0 dupsyn
    0 dropped
    32 completed
    0 bucket overflow
    0 cache overflow
    0 reset
    0 stale
    0 aborted
    0 badack
    0 unreach
    0 zone failures
0 cookies sent
0 cookies received
0 ACKs sent in response to in-window but not exact RSTs
0 ACKs sent in response to in-window SYNs on established connections
0 rcv packets dropped by TCP due to bad address
0 out-of-sequence segment drops due to insufficient memory
1058 RST packets
0 ICMP packets ignored by TCP
0 send packets dropped by TCP due to auth errors
0 rcv packets dropped by TCP due to auth errors
udp:
3658884 datagrams received
0 with incomplete header
0 with bad data length field

```

```
0 with bad checksum
3657342 dropped due to no socket
3657342 broadcast/multicast datagrams dropped due to no socket
0 dropped due to full socket buffers
0 not for hashed pcb
4291311496 delivered
1551 datagrams output

ipsec:
0 inbound packets processed successfully
0 inbound packets violated process security policy
0 inbound packets with no SA available
0 invalid inbound packets
0 inbound packets failed due to insufficient memory
0 inbound packets failed getting SPI
0 inbound packets failed on AH replay check
0 inbound packets failed on ESP replay check
0 inbound AH packets considered authentic
0 inbound AH packets failed on authentication
0 inbound ESP packets considered authentic
0 inbound ESP packets failed on authentication
0 outbound packets processed successfully
0 outbound packets violated process security policy
0 outbound packets with no SA available
0 invalid outbound packets
0 outbound packets failed due to insufficient memory
0 outbound packets with no route

igmp:
17186 messages received
0 messages received with too few bytes
0 messages received with bad checksum
0 membership queries received
0 membership queries received with invalid field(s)
0 membership reports received
0 membership reports received with invalid field(s)
0 membership reports received for groups to which we belong
0 membership reports sent

arp:
44181302 datagrams received
2 ARP requests received
2028 ARP replies received
3156 resolution requests received
0 unrestricted proxy requests
0 received proxy requests
0 proxy requests not proxied
0 with bogus interface
787 with incorrect length
712 for non-IP protocol
0 with unsupported op code
0 with bad protocol address length
0 with bad hardware address length
0 with multicast source address
7611 with multicast target address
0 with my own hardware address
14241699 for an address not on the interface
0 with a broadcast source address
0 with source address duplicate to mine
29929250 which were not for me
0 packets discarded waiting for resolution
6 packets sent after waiting for resolution
17812 ARP requests sent
2 ARP replies sent
```

```

0 requests for memory denied
0 requests dropped on entry
0 requests dropped during retry
ip6:
0 total packets received
0 with size smaller than minimum
0 with data size < data length
0 with bad options
0 with incorrect version number
0 fragments received
0 fragments dropped (dup or out of space)
0 fragments dropped after timeout
0 fragments that exceeded limit
0 packets reassembled ok
0 packets for this host
0 packets forwarded
0 packets not forwardable
0 redirects sent
0 packets sent from this host
0 packets sent with fabricated ip header
0 output packets dropped due to no bufs, etc.
0 output packets discarded due to no route
0 output datagrams fragmented
0 fragments created
0 datagrams that can't be fragmented
0 packets that violated scope rules
0 multicast packets which we don't join
Mbuf statistics:
0 packets whose headers are not continuous
0 tunneling packets that can't find gif
0 packets discarded due to too many headers
0 failures of source address selection
0 forward cache hit
0 forward cache miss
0 packets destined to dead next hop
0 option packets dropped due to rate limit
0 packets dropped (src and int don't match)
0 packets dropped due to bad protocol
icmp6:
0 calls to icmp_error
0 errors not generated because old message was icmp error or so
0 errors not generated because rate limitation
0 messages with bad code fields
0 messages < minimum length
0 bad checksums
0 messages with bad length
Histogram of error messages to be generated:
    0 no route
    0 administratively prohibited
    0 beyond scope
    0 address unreachable
    0 port unreachable
    0 packet too big
    0 time exceed transit
    0 time exceed reassembly
    0 erroneous header field
    0 unrecognized next header
    0 unrecognized option
    0 redirect
    0 unknown
0 message responses generated

```

```
0 messages with too many ND options
ipsec6:
0 inbound packets processed successfully
0 inbound packets violated process security policy
0 inbound packets with no SA available
0 invalid inbound packets
0 inbound packets failed due to insufficient memory
0 inbound packets failed getting SPI
0 inbound packets failed on AH replay check
0 inbound packets failed on ESP replay check
0 inbound AH packets considered authentic
0 inbound AH packets failed on authentication
0 inbound ESP packets considered authentic
0 inbound ESP packets failed on authentication
0 outbound packets processed successfully
0 outbound packets violated process security policy
0 outbound packets with no SA available
0 invalid outbound packets
0 outbound packets failed due to insufficient memory
0 outbound packets with no route
c1n1:
0 total packets received
0 packets delivered
0 too small
0 bad header length
0 bad checksum
0 bad version
0 unknown or unsupported protocol
0 bogus sdl size
0 no free memory in socket buffer
0 send packets discarded
0 sbappend failure
0 mcopy failure
0 address fields were not reasonable
0 segment information forgotten
0 forwarded packets
0 total packets sent
0 output packets discarded
0 non-forwarded packets
0 packets fragmented
0 fragments sent
0 fragments discarded
0 fragments timed out
0 fragmentation prohibited
0 packets reconstructed
0 packets destined to dead nexthop
0 packets discarded due to no route
0 Error pdu rate drops
0 ER pdu generation failure
esis:
0 total pkts received
0 total packets consumed by protocol
0 pdus received with bad checksum
0 pdus received with bad version number
0 pdus received with bad type field
0 short pdus received
0 bogus sdl size
0 bad header length
0 unknown or unsupported protocol
0 no free memory in socket buffer
0 send packets discarded
```

```

0 sbappend failure
0 mcopy failure
0 ISO family not configured
tnp:
146776365 unicast packets received
0 broadcast packets received
0 fragmented packets received
0 hello packets dropped
0 fragments dropped
0 fragment reassembly queue flushes
0 hello packets received
0 control packets received
49681642 rdp packets received
337175 udp packets received
96757548 tunnel packets received
0 input packets discarded with no protocol
98397591 unicast packets sent
0 broadcast packets sent
0 fragmented packets sent
0 hello packets dropped
0 fragments dropped
0 hello packets sent
0 control packets sent
49681642 rdp packets sent
337175 udp packets sent
48378774 tunnel packets sent
0 packets sent with unknown protocol
rdp:
49681642 input packets
0 discards for bad checksum
0 discards bad sequence number
0 refused connections
2031964 acks received
0 dropped due to full socket buffers
49692 retransmits
49681642 output packets
24815968 acks sent
28 connects
0 closes
22783990 keepalives received
22783990 keepalives sent
tudp:
337175 datagrams received
0 with incomplete header
0 with bad data length field
0 with bad checksum
0 dropped due to no socket
0 broadcast/multicast datagrams dropped due to no socket
0 dropped due to full socket buffers
337175 delivered
337175 datagrams output
ttp:
398749 packets sent
0 packets sent while unconnected
0 packets sent while interface down
0 packets sent couldn't get buffer
0 packets sent couldn't find neighbor
44696687 L2 packets received
0 unknown L3 packets received
3682087 IPv4 L3 packets received
0 MPLS L3 packets received

```

```
0 MPLS->IPv4 L3 packets received
0 IPv4->MPLS L3 packets received
0 VPLS L3 packets received
0 IPv6 L3 packets received
0 ARP L3 packets received
0 CLNP L3 packets received
0 TNP L3 packets received
0 NULL L3 packets received
0 cyclotron cycle L3 packets received
0 cyclotron send L3 packets received
0 packets received while unconnected
0 packets received from unknown ifl
0 input packets couldn't get buffer
0 input packets with bad type
0 input packets with discard type
0 Input packets with too many tlvs
0 Input packets with bad tlv header
70633 Input packets with bad tlv type
68877 Input packets dropped based on tlv result
0 input packets for which rt lookup is bypassed

mpls:
0 total mpls packets received
0 packets forwarded
0 packets dropped
0 with header too small
0 after tagging, can't fit link MTU
0 with IPv4 explicit NULL tag
0 with IPv4 explicit NULL cksum errors
0 with router alert tag
0 lsp ping packets (ttl-expired/router alert)
0 with ttl expired
0 with tag encoding error
0 packets discarded, no route

jsr:
  Handle-inf:o
    0 Handles in use
    0 Handles allocated so far
    0 Handles freed so far
    0 Handles in delayed free state
  IHA:
    0 IHA invalid subtype messages
    0 IHA invalid length messages
    0 IHA invalid version messages
    0 IHA too short messages
    0 IHA invalid dst handle messages
    0 IHA invalid src handle messages
    0 IHA unmatched src handle messages
    0 IHA invalid messages for primary
    0 IHA invalid messages for secondary
    0 IHA invalid messages for current state
    0 IHA messages sent for subtype init
    0 IHA messages rcvd for subtype init
    0 IHA messages sent for subtype init
    0 IHA messages rcvd for subtype init
    0 IHA messages sent for subtype init
    0 IHA messages rcvd for subtype init
    0 IHA messages sent for subtype init
    0 IHA messages rcvd for subtype init
    0 IHA messages sent for subtype init
    0 IHA messages rcvd for subtype init
    0 IHA message timeouts
```

```

0 IHA socket unreplicate messages
SDRL:
0 SDRL socket teardowns
0 SDRL socket teardown failures
0 SDRL socket unreplicates
0 SDRL socket unreplicate failures
0 SDRL external timeouts
0 SDRL internal timeouts
0 SDRL ipc messages sent
0 SDRL ipc send failures
0 SDRL ipc messages recvd
0 SDRL ipc messages recvd
0 SDRL primary replication messages sent
0 SDRL primary replication message send failures
0 SDRL primary ack messages received
0 SDRL primary ack message receive failures
0 SDRL primary sock replication inits
0 SDRL primary sock replication init failures
0 SDRL primary throttle remove messages
0 SDRL primary throttle remove failures
0 SDRL primary init handshake messages
0 SDRL primary init handshake failures
0 SDRL secondary replication messages received
0 SDRL secondary replication message receive failures
0 SDRL secondary replication acks sent
0 SDRL secondary replication ack send failures
0 SDRL secondary sock splits
0 SDRL secondary sock split failures
0 SDRL secondary sock merges
0 SDRL secondary sock merge failures
0 SDRL secondary sockets closed
0 SDRL secondary rcv snoop fd close failures
0 SDRL secondary snd snoop fd close failures
0 SDRL secondary init handshake messages
0 SDRL secondary init handshake failures
PRL:
0 PRL packets enqueued
0 PRL packets failed to enqueue
0 PRL packets dequeued
0 PRL packets failed to dequeue
0 PRL queue entry allocations
0 PRL queue entry frees
0 calls to layer 4 input handlers
0 failed calls to layer 4 input handlers
0 PRL queue drains
0 PRL replication timeouts
0 PRL replication messages sent
0 PRL replication message send failures
0 PRL acknowledgment messages sent
0 PRL acknowledgement message send failures
0 PRL replication messages received
0 PRL replication message receive failures
0 PRL acknowledgement messages received
0 PRL acknowledgement receive failures
0 PRL messages with bad IPC type
0 PRL messages with no handler
2 PRL global state initializations
1 PRL global state cleanups
0 PRL per-socket state creations
0 PRL per-socket state creation failures
0 PRL per-socket state cleanups

```

```
0 PRL socket closes
0 PRL socket merges
0 PRL socket unreplicates
0 PRL primary socket replication initializations
0 PRL secondary socket replication initializations
0 PRL primary socket replication activations
0 PRL secondary socket replication activations
0 packets received from peers
0 PRL packets receive operations from peer failed
0 PRL buffer pullup failures
0 new pkts dropped on secondary socket
PSRM:
0 PSRM replication timeouts
0 PSRM replication messages sent
0 PSRM replication message send failures
0 PSRM acknowledgment messages sent
0 PSRM acknowledgement message send failures
0 PSRM flow control messages sent
0 PSRM flow control message send failures
0 PSRM replication messages received
0 PSRM replication message receive failures
0 PSRM acknowledgment messages received
0 PSRM acknowledgment message receive failures
0 PSRM flow control messages received
0 PSRM flow control message receive failures
0 SRM messages with bad IPC type
0 PSRM messages with no handler
2 PSRM global state initializations
1 PSRM global state cleanups
0 PSRM per-socket state creations
0 PSRM per-socket state creation failures
0 PSRM per-socket state cleanups
0 PSRM socket closes
0 PSRM socket merges
0 PSRM socket unreplicates
0 PSRM primary socket replication initializations
0 psrm-secondary-socket-replication-initializations
0 PSRM primary socket replication activations
0 secondary socket replication activations
0 PSRM tcpcb updates
0 PSRM buffer pullup failures
73 PSRM tcp timestamp msg rcv counters
0 PSRM tcp timestamp msg rcv failures
0 PSRM tcp timestamp msg send counters
0 PSRM tcp timestamp msg send failures
TCP:
0 TCP out-of-order packets on JSR sockets
vpls:
0 total packets received
0 with size smaller than minimum
0 with incorrect version number
0 packets for this host
0 packets with no logical interface
0 packets with no family
0 packets with no route table
0 packets with no auxiliary table
0 packets with no corefacing entry
0 packets with no CE-facing entry
0 mac route learning requests
0 mac routes learnt
0 requests to learn an existing route
```



```

0 learning requests while learning disabled on interface
0 learning requests over capacity
0 mac routes moved
0 requests to move static route
0 mac route aging requests
0 mac routes aged
0 bogus address in aging requests
0 requests to age static route
0 requests to re-ageout aged route
0 requests involving multiple peer FEs
0 aging acks from PFE
0 aging non-acks from PFE
0 aging requests timed out waiting on FEs
0 aging requests over max-rate
0 errors finding peer FEs

```

### show system statistics (EX Series Switches)

```
user@host> show system statistics
```

```
Tcp:
```

```

571779 packets sent
    21517 data packets (1797102 bytes)
    2 data packets retransmitted (20 bytes)
    0 resends initiated by MTU discovery
    3708 ack only packets (531 packets delayed)
    0 URG only packets
    1 window probe packets
    1 window update packets
    1093063 control packets
1132541 packets received
    20961 acks(for 1796102 bytes)
    5861 duplicate acks
    0 acks for unsent data
    19556 packets received in-sequence(232079 bytes)
    3018 completely duplicate packets(0 bytes)
    0 old duplicate packets
    4 packets with some duplicate data(4 bytes duped)
    2 out-of-order packets(2 bytes)
    0 packets of data after window(0 bytes)
    0 window probes
    39 window update packets
    0 packets received after close
    0 discarded for bad checksums
    0 discarded for bad header offset fields
    0 discarded because packet too short
546519 connection requests
78 connection accepts
0 bad connection attempts
0 listen queue overflows
100 connections established (including accepts)
546596 connections closed (including 6 drops)
    47 connections updated cached RTT on close
    47 connections updated cached RTT variance on close
    0 connections updated cached ssthresh on close
546497 embryonic connections dropped
20453 segments updated rtt(of 566914 attempts)
2 retransmit timeouts
    0 connections dropped by retransmit timeout
0 persist timeouts
    0 connections dropped by persist timeout
3028 keepalive timeouts

```

```

        3027 keepalive probes sent
        1 connections dropped by keepalive
7515 correct ACK header predictions
12258 correct data packet header predictions
78 syncache entries added
    0 retransmitted
    0 dupsyn
    4 dropped
    78 completed
    0 bucket overflow
    0 cache overflow
    0 reset
    0 stale
    0 aborted
    0 badack
    0 unreach
    0 zone failures
0 cookies sent
0 cookies received
1 SACK recovery episodes
1 segment retransmits in SACK recovery episodes
1 byte retransmits in SACK recovery episodes
71 SACK options (SACK blocks) received
1 SACK options (SACK blocks) sent
0 SACK scoreboard overflow
0 ACKs sent in response to in-window but not exact RSTs
0 ACKs sent in response to in-window SYNs on established connections
0 rcv packets dropped by TCP due to bad address
0 out-of-sequence segment drops due to insufficient memory
546544 RST packets
0 ICMP packets ignored by TCP
0 send packets dropped by TCP due to auth errors
0 rcv packets dropped by TCP due to auth errors
0 outgoing segments dropped due to policing
udp:
    147 datagrams received
    0 with incomplete header
    0 with bad data length field
    0 with bad checksum
    9 dropped due to no socket
    0 broadcast/multicast datagrams dropped due to no socket
    0 dropped due to full socket buffers
    0 not for hashed pcb
    138 delivered
    0 datagrams output
ip:
    73704 total packets received
    0 bad header checksums
    0 with size smaller than minimum
    0 with data size < data length
    0 with header length < data size
    0 with data length < header length
    0 with incorrect version number
    0 packets destined to dead next hop
    0 fragments received
    0 fragments dropped (dup or out of space)
    0 fragments dropped (queue overflow)
    0 fragments dropped after timeout
    0 fragments dropped due to over limit
    0 packets reassembled ok
1133057 packets for this host
```

```

0 packets for unknown/unsupported protocol
40146 packets forwarded
0 packets not forwardable
40146 redirects sent
1121700 packets sent from this host
0 packets sent with fabricated ip header
0 output packets dropped due to no bufs
0 output packets discarded due to no route
0 output datagrams fragmented
0 fragments created
0 datagrams that can't be fragmented
0 packets with bad options
0 packets with options handled without error
0 strict source and record route options
0 loose source and record route options
0 record route options
0 timestamp options
0 timestamp and address options
0 timestamp and prespecified address options
0 option packets dropped due to rate limit
0 router alert options
0 multicast packets dropped (no iflist)
0 packets dropped (src and int don't match)
0 transit re packets dropped on mgmt i/f
0 packets used first nexthop in ecmp unilist
0 incoming ttpoip packets received
0 incoming ttpoip packets dropped
0 outgoing TTPoIP packets sent
0 outgoing TTPoIP packets dropped

icmp:
0 drops due to rate limit
9 calls to icmp_error
0 errors not generated because old message was icmp
Output histogram:
    295 echo reply
    9 destination unreachable
0 messages with bad code fields
0 messages less than the minimum length
0 messages with bad checksum
0 messages with bad source address
0 messages with bad length
0 echo drops with broadcast or multicast destination address
0 timestamp drops with broadcast or multicast destination address
Input histogram:
    295 echo
295 message responses generated

igmp:
0 messages received
0 messages received with too few bytes
0 messages received with bad checksum
0 membership queries received
0 membership queries received with invalid fields
0 membership reports received
0 membership reports received with invalid fields
0 membership reports received for groups to which we belong
0 Membership reports sent

raw_if:
0 RAW packets transmitted
0 PPPoE packets transmitted
0 ISDN packets transmitted
0 DIALER packets transmitted

```

```
0 PPP packets transmitted to pppd
0 PPP packets transmitted to jppd
0 IGMPv2 packets transmitted
13 output drops due to tx error
0 MPU packets transmitted
0 PPPOE packets received
0 ISDN packets received
0 DIALER packets received
0 PPP packets received from pppd
0 MPU packets received
0 PPP packets received from jppd
0 IGMPv2 packets received
0 Input drops due to bogus protocol
0 input drops due to no mbufs available
0 input drops due to no space in socket
0 input drops due to no socket

arp:
186413 datagrams received
88 ARP requests received
88 ARP replies received
0 resolution request received
0 unrestricted proxy requests
0 restricted proxy requests
0 received proxy requests
0 proxy requests not proxied
0 restricted proxy requests not proxied
0 datagrams with bogus interface
0 datagrams with incorrect length
0 datagrams for non-IP protocol
0 datagrams with unsupported op code
0 datagrams with bad protocol address length
0 datagrams with bad hardware address length
0 datagrams with multicast source address
0 datagrams with multicast source address
0 datagrams with my own hardware address
164 datagrams for an address not on the interface
0 datagrams with a broadcast source address
0 datagrams with source address duplicate to mine
186065 datagrams which were not for me
0 packets discarded waiting for resolution
0 packets sent after waiting for resolution
50 ARP requests sent
88 ARP replies sent
0 requests for memory denied
0 requests dropped on entry
0 requests dropped during retry
0 requests dropped due to interface deletion
0 requests on unnumbered interfaces
0 new requests on unnumbered interfaces
0 replies for from unnumbered interfaces
0 requests on unnumbered interface with non-subnetted donor
0 replies from unnumbered interface with non-subnetted donor

ip6:
0 total packets received
0 packets with size smaller than minimum
0 packets with data size < data length
0 packets with bad options
0 packets with incorrect version number
0 fragments received
0 fragments dropped (dup or out of space)
0 fragments dropped after timeout
```

```

0 fragments that exceeded limit
0 packets reassembled ok
0 packets for this host
0 packets forwarded
0 packets not forwardable
0 redirects sent
0 packets sent from this host
0 packets sent with fabricated ip header
0 output packets dropped due to no bufs, etc.
0 output datagrams fragmented
0 fragments created
0 datagrams that can't be fragmented
0 packets that violated scope rules
0 multicast packets which we don't join
0 packets whose headers are not continuous
0 tunneling packets that can't find gif
0 packets discarded due to too many headers
0 failures of source address selection
0 forward cache hit
0 forward cache miss
0 Packets destined to dead next hop
0 option packets dropped due to rate limit
0 Packets dropped (src and int don't match)
0 packets dropped due to bad protocol
0 transit re packet(null) dropped on mgmt i/f

icmp6:
0 Calls to icmp_error
0 Errors not generated because old message was icmp error
0 Errors not generated because rate limitation
0 Messages with bad code fields
0 Messages < minimum length
0 Bad checksums
0 Messages with bad length
    0 No route
    0 Administratively prohibited
    0 Beyond scope
    0 Address unreachable
    0 Port unreachable
    0 packet too big
    0 Time exceed transit
    0 Time exceed reassembly
    0 Erroneous header field
    0 Unrecognized next header
    0 Unrecognized option
    0 redirect
    0 Unknown
0 Message responses generated
0 Messages with too many ND options

pfkey:
0 Requests sent from userland
0 Bytes sent from userland
histogram by message type:
    0 reserved
    0 dump
0 Messages with invalid length field
0 Messages with invalid version field
0 Messages with invalid message type field
0 Messages too short
0 Messages with memory allocation failure
0 Messages with duplicate extension
0 Messages with invalid extension type

```

```

0 Messages with invalid sa type
0 Messages with invalid address extension
0 Requests sent to userland
0 Bytes sent to userland
histogram by message type:
    0 reserved
    0 dump
0 Messages toward single socket
0 Messages toward all sockets
0 Messages toward registered sockets
0 Messages with memory allocation failure
c1n1:
0 Total packets received
0 Packets delivered
0 Too small packets
0 Packets with bad header length
0 Packets with bad checksum
0 Bad version packets
0 Unknown or unsupported protocol packets
0 Packets with bogus sdl size
0 No free memory in socket buffer
0 Send packets discarded
0 Sbappend failure
0 Mcopy failure
0 Address fields were not reasonable
0 Segment information forgotten
0 Forwarded packets
0 Total packets sent
0 Output packets discarded
0 Non-forwarded packets
0 Packets fragmented
0 Fragments sent
0 Fragments discarded
0 Fragments timed out
0 Fragmentation prohibited
0 Packets reconstructed
0 Packets destined to dead nexthop
0 Packets discarded due to no route
0 Error pdu rate drops
    0 ER pdu generation failure
esis:
0 Total pkts received
0 Total packets consumed by protocol
0 Pdus received with bad checksum
0 Pdus received with bad version number
0 Pdus received with bad type field
0 Short pdus received
0 Pdus with bogus sdl size
0 Pdus with bad header length
0 Pdus with unknown or unsupported protocol
0 No free memory in socket buffer
0 Send packets discarded
0 Sbappend failure
0 Mcopy failure
0 ISO family not configured
tnp:
0 Unicast packets received
0 Broadcast packets received
0 Fragmented packets received
0 Hello packets dropped
0 Fragments dropped

```

```

0 Fragment reassembly queue flushes
0 Packets with tnp src address collision received
0 Hello packets received
0 Control packets received
0 Rdp packets received
0 Udp packets received
0 Tunnel packets received
0 Input packets discarded with no protocol
0 Packets of version unspecified received
0 Packets of version 1 received
0 Packets of version 2 received
0 Packets of version 3 received
0 Unicast packets sent
0 Broadcast packets sent
0 Fragmented packets sent
0 Hello packets dropped
0 Fragments dropped
0 Hello packets sent
0 Control packets sent
0 Rdp packets sent
0 Udp packets sent
0 Tunnel packets sent
0 Packets sent with unknown protocol
0 Packets of version unspecified sent
0 Packets of version 1 sent
0 Packets of version 2 sent
0 Packets of version 3 sent
rdp:
0 Input packets
0 Packets discarded for bad checksum
0 Packets discarded due to bad sequence number
0 Refused connections
0 Acks received
0 Packets dropped due to full socket buffers
0 Retransmits
0 Output packets
0 Acks sent
0 Connects
0 Closes
0 Keepalives received
0 Keepalives sent
tudp:
67 Datagrams received
0 Datagrams with incomplete header
0 Datagrams with bad data length field
0 Datagrams with bad checksum
0 Datagrams dropped due to no socket
0 Broadcast/multicast datagrams dropped due to no socket
0 Datagrams dropped due to full socket buffers
67 Delivered
68 Datagrams output
ttp:
0 Packets sent
0 Packets sent while unconnected
0 Packets sent while interface down
0 Packets sent couldn't get buffer
0 Packets sent couldn't find neighbor
0 L2 packets received
0 Unknown L3 packets received
0 IPv4 L3 packets received
0 MPLS L3 packets received

```

```
0 MPLS->IPv4 L3 packets received
0 IPv4->MPLS L3 packets received
0 VPLS L3 packets received
0 IPv6 L3 packets received
0 ARP L3 packets received
0 CLNP L3 packets received
0 TNP L3 packets received
0 NULL L3 packets received
0 Cyclotron cycle L3 packets received
0 Cyclotron send L3 packets received
0 Packets received while unconnected
0 Packets received from unknown ifl
0 Input packets couldn't get buffer
0 Input packets with bad type
0 Input packets with discard type
0 Input packets with too many tlvs
0 Input packets with bad tlv header
70633 Input packets with bad tlv type
68877 Input packets dropped based on tlv result
0 Input packets for which rt lookup is bypassed

mpls:
0 Total MPLS packets received
0 Packets forwarded
0 Packets dropped
0 Packets with header too small
0 After tagging, packets can't fit link MTU
0 Packets with IPv4 explicit NULL tag
0 Packets with IPv4 explicit NULL cksum errors
0 Packets with router alert tag
0 LSP ping packets (ttl-expired/router alert)
0 Packets with ttl expired
0 Packets with tag encoding error
0 Packets discarded due to no route
0 Packets used first nexthop in ecmp unilist
0 Packets dropped due to ifl down

vpls:
0 Total packets received
0 Packets with size smaller than minimum
0 Packets with incorrect version number
0 Packets for this host
0 Packets with no logical interface
0 Packets with no family
0 Packets with no route table
0 Packets with no auxiliary table
0 Packets with no corefacing entry
0 packets with no CE-facing entry
0 MAC route learning requests
0 MAC routes learnt
0 Requests to learn an existing route
0 Learning requests while learning disabled on interface
0 Learning requests over capacity
0 MAC routes moved
0 Requests to move static route
0 MAC route aging requests
0 MAC routes aged
0 Bogus address in aging requests
0 Requests to age static route
0 Requests to re-ageout aged route
0 Requests involving multiple peer FEs
0 Aging acks from PFE
```



```

0 Aging non-acks from PFE
0 Aging requests timed out waiting on FEs
0 Aging requests over max-rate
0 Errors finding peer FEs
0 Unsupported platform
0 Packets dropped due to no l3 route table
0 Packets dropped due to no local ifl
0 Packets punted
0 Packets dropped due to no socket
bridge:
Input:
0 packets received
0 packets forwarded
0 packets failed to forward
0 packets dropped
0 packets with vmember lookup failures
0 packets with vlan lookup failures
0 packets with stp state lookup failures
0 packets dropped due to stp blocked/listening
0 packets dropped due to stp learning
0 packets with src MAC learning failures
0 packets with input control processing failures
Forward:
0 packets sent successfully
0 packets with send failures
0 packets forwarded to l3 interface
0 packets with l3 send failures
0 packets discarded
0 packets with l2ifl store failures
0 packets with ifl mismatch failures
0 packets with packet duplication failures
0 packets with tag lookup failures
0 packets with no route for DMAC
0 packets with no route table
0 packets with no nexthop
0 packets with dead nexthop
0 packets with eof reached error
Learning:
0 MACs learned
0 packets sent to l3 interface
0 packets with l3 send failures
0 packets hit holdq while learning
0 MAC moves
0 packets discarded
0 packets with no route for SMAC
0 packets with no nexthop
0 packets with dead nexthop
0 packets dropped due to no resolve route
0 packets with l3 ifd lookup failures
0 packets with l3 ifl lookup failures
0 packets with l3 invalid rnh
0 packets with no route for SMAC in clone learning
0 packets with no nexthop in clone learning
0 packets with dead nexthop in clone learning
0 packets dropped due to no resolve nh in clone learning
Output:
0 packets forwarded
0 packets failed to forward
0 packets with vmember lookup failures
0 packets with vlan lookup failures
0 packets with input control processing failures

```

```
Send:
0 packets sent successfully
0 packets with send failures
0 packets dropped due to interface down
0 packets with dev output failures
0 blocked ifl discards
0 packets with tag lookup failures
0 packets with stp state lookup failures
0 packets with tag insertion failures
0 packets with tag removal failures
Flood:
0 packets flooded
0 flood failures
IGMP:
0 packets sent successfully
0 packets with send failures
0 packets forwarded
0 packets failed to forward
0 packets with mpull failures
0 packets with vmember lookup failures
0 packets with vlan lookup failures
0 packets with ifl lookup failures
0 packets with tag lookup failures
Misc:
0 packets with size smaller than minimum
0 packets with double tags
0 packets with no ifl
0 packets with no family
0 packets with no route table
```

#### show system statistics (TX Matrix Router)

```
user@host> show system statistics
sfc0-re0:
```

```
-----
Tcp:
361694 packets sent
    326507 data packets (103237236 bytes)
    2343 data packets retransmitted (2673324 bytes)
    0 resends initiated by MTU discovery
    33857 ack only packets (31613 packets delayed)
    0 URG only packets
    14 window probe packets
    387 window update packets
    1108 control packets
345879 packets received
    298207 acks(for 103141728 bytes)
    438 duplicate acks
    0 acks for unsent data
    204578 packets received in-sequence(13820995 bytes)
    6 completely duplicate packets(18 bytes)
    0 old duplicate packets
    0 packets with some duplicate data(0 bytes duped)
    0 out-of-order packets(0 bytes)
    0 packets of data after window(0 bytes)
    0 window probes
    899 window update packets
    166 packets received after close
    0 discarded for bad checksums
    0 discarded for bad header offset fields
    0 discarded because packet too short
```

```

406 connection requests
233 connection accepts
0 bad connection attempts
0 listen queue overflows
616 connections established (including accepts)
911 connections closed (including 41 drops)
    346 connections updated cached RTT on close
    346 connections updated cached RTT variance on close
    200 connections updated cached ssthresh on close
23 embryonic connections dropped
298155 segments updated rtt(of 287216 attempts)
1163 retransmit timeouts
    27 connections dropped by retransmit timeout
0 persist timeouts
    0 connections dropped by persist timeout
5 keepalive timeouts
    5 keepalive probes sent
    0 connections dropped by keepalive
69922 correct ACK header predictions
34993 correct data packet header predictions
233 syncache entries added
    0 retransmitted
    0 dupsyn
    0 dropped
    233 completed
    0 bucket overflow
    0 cache overflow
    0 reset
    0 stale
    0 aborted
    0 badack
    0 unreach
    0 zone failures
0 cookies sent
0 cookies received
23 SACK recovery episodes
68 segment retransmits in SACK recovery episodes
71542 byte retransmits in SACK recovery episodes
158 SACK options (SACK blocks) received
0 SACK options (SACK blocks) sent
0 SACK scoreboard overflow
0 ACKs sent in response to in-window but not exact RSTs
0 ACKs sent in response to in-window SYNs on established connections
0 rcv packets dropped by TCP due to bad address
0 out-of-sequence segment drops due to insufficient memory
259 RST packets
0 ICMP packets ignored by TCP
0 send packets dropped by TCP due to auth errors
0 rcv packets dropped by TCP due to auth errors
0 outgoing segments dropped due to policing

```

lcc0-re0:

-----  
 Tcp:

```

346 packets sent
    222 data packets (22894 bytes)
    0 data packets retransmitted (0 bytes)
    0 resends initiated by MTU discovery
    80 ack only packets (12 packets delayed)
    0 URG only packets
    0 window probe packets

```

```
        5 window update packets
        42 control packets
358 packets received
        268 acks(for 22939 bytes)
        9 duplicate acks
        0 acks for unsent data
        203 packets received in-sequence(33820 bytes)
        0 completely duplicate packets(0 bytes)
        0 old duplicate packets
        0 packets with some duplicate data(0 bytes duped)
        0 out-of-order packets(0 bytes)
        0 packets of data after window(0 bytes)
        0 window probes
        6 window update packets
        0 packets received after close
        0 discarded for bad checksums
        0 discarded for bad header offset fields
        0 discarded because packet too short
13 connection requests
18 connection accepts
0 bad connection attempts
0 listen queue overflows
31 connections established (including accepts)
35 connections closed (including 2 drops)
        3 connections updated cached RTT on close
        3 connections updated cached RTT variance on close
        0 connections updated cached ssthresh on close
0 embryonic connections dropped
268 segments updated rtt(of 247 attempts)
0 retransmit timeouts
        0 connections dropped by retransmit timeout
0 persist timeouts
        0 connections dropped by persist timeout
0 keepalive timeouts
        0 keepalive probes sent
        0 connections dropped by keepalive
0 correct ACK header predictions
42 correct data packet header predictions
18 syncache entries added
        0 retransmitted
        0 dupsyn
        0 dropped
        18 completed
        0 bucket overflow
        0 cache overflow
        0 reset
        0 stale
        0 aborted
        0 badack
        0 unreach
        0 zone failures
0 cookies sent
0 cookies received
0 SACK recovery episodes
0 segment retransmits in SACK recovery episodes
0 byte retransmits in SACK recovery episodes
0 SACK options (SACK blocks) received
0 SACK options (SACK blocks) sent
0 SACK scoreboard overflow
0 ACKs sent in response to in-window but not exact RSTs
0 ACKs sent in response to in-window SYNs on established connections
```

```

0 rcv packets dropped by TCP due to bad address
0 out-of-sequence segment drops due to insufficient memory
5 RST packets
0 ICMP packets ignored by TCP
0 send packets dropped by TCP due to auth errors
0 rcv packets dropped by TCP due to auth errors
0 outgoing segments dropped due to policing

```

```
lcc1-re0:
```

```
-----
Tcp:
```

```

348 packets sent
    223 data packets (22895 bytes)
    0 data packets retransmitted (0 bytes)
    0 resends initiated by MTU discovery
    81 ack only packets (13 packets delayed)
    0 URG only packets
    0 window probe packets
    5 window update packets
    42 control packets
360 packets received
    269 acks(for 22940 bytes)
    9 duplicate acks
    0 acks for unsent data
    203 packets received in-sequence(33820 bytes)
    0 completely duplicate packets(0 bytes)
    0 old duplicate packets
    0 packets with some duplicate data(0 bytes duped)
    0 out-of-order packets(0 bytes)
    0 packets of data after window(0 bytes)
    0 window probes
    6 window update packets
    0 packets received after close
    0 discarded for bad checksums
    0 discarded for bad header offset fields
    0 discarded because packet too short
13 connection requests
18 connection accepts
0 bad connection attempts
0 listen queue overflows
31 connections established (including accepts)
36 connections closed (including 2 drops)
    3 connections updated cached RTT on close
    3 connections updated cached RTT variance on close
    0 connections updated cached ssthresh on close
0 embryonic connections dropped
269 segments updated rtt(of 248 attempts)
0 retransmit timeouts
    0 connections dropped by retransmit timeout
0 persist timeouts
    0 connections dropped by persist timeout
0 keepalive timeouts
    0 keepalive probes sent
    0 connections dropped by keepalive
0 correct ACK header predictions
43 correct data packet header predictions
18 syncache entries added
    0 retransmitted
    0 dupsyn
    0 dropped
    18 completed

```

```
0 bucket overflow
0 cache overflow
0 reset
0 stale
0 aborted
0 badack
0 unreach
0 zone failures
0 cookies sent
0 cookies received
0 SACK recovery episodes
0 segment retransmits in SACK recovery episodes
0 byte retransmits in SACK recovery episodes
0 SACK options (SACK blocks) received
0 SACK options (SACK blocks) sent
0 SACK scoreboard overflow
0 ACKs sent in response to in-window but not exact RSTs
0 ACKs sent in response to in-window SYNs on established connections
0 rcv packets dropped by TCP due to bad address
0 out-of-sequence segment drops due to insufficient memory
5 RST packets
0 ICMP packets ignored by TCP
0 send packets dropped by TCP due to auth errors
0 rcv packets dropped by TCP due to auth errors
0 outgoing segments dropped due to policing
```

lcc2-re0:

-----  
Tcp:

```
405 packets sent
    271 data packets (23926 bytes)
    0 data packets retransmitted (0 bytes)
    0 resends initiated by MTU discovery
    86 ack only packets (13 packets delayed)
    0 URG only packets
    0 window probe packets
    5 window update packets
    46 control packets
418 packets received
    321 acks(for 23975 bytes)
    9 duplicate acks
    0 acks for unsent data
    234 packets received in-sequence(34403 bytes)
    0 completely duplicate packets(0 bytes)
    0 old duplicate packets
    0 packets with some duplicate data(0 bytes duped)
    0 out-of-order packets(0 bytes)
    0 packets of data after window(0 bytes)
    0 window probes
    7 window update packets
    0 packets received after close
    0 discarded for bad checksums
    0 discarded for bad header offset fields
    0 discarded because packet too short
15 connection requests
19 connection accepts
0 bad connection attempts
0 listen queue overflows
34 connections established (including accepts)
39 connections closed (including 2 drops)
    4 connections updated cached RTT on close
```

```

        4 connections updated cached RTT variance on close
        0 connections updated cached ssthresh on close
0 embryonic connections dropped
321 segments updated rtt(of 299 attempts)
0 retransmit timeouts
    0 connections dropped by retransmit timeout
0 persist timeouts
    0 connections dropped by persist timeout
0 keepalive timeouts
    0 keepalive probes sent
    0 connections dropped by keepalive
0 correct ACK header predictions
48 correct data packet header predictions
19 syncache entries added
    0 retransmitted
    0 dupsyn
    0 dropped
    19 completed
    0 bucket overflow
    0 cache overflow
    0 reset
    0 stale
    0 aborted
    0 badack
    0 unreach
    0 zone failures
0 cookies sent
0 cookies received
0 SACK recovery episodes
0 segment retransmits in SACK recovery episodes
0 byte retransmits in SACK recovery episodes
0 SACK options (SACK blocks) received
0 SACK options (SACK blocks) sent
0 SACK scoreboard overflow
0 ACKs sent in response to in-window but not exact RSTs
0 ACKs sent in response to in-window SYNs on established connections
0 rcv packets dropped by TCP due to bad address
0 out-of-sequence segment drops due to insufficient memory
5 RST packets
0 ICMP packets ignored by TCP
0 send packets dropped by TCP due to auth errors
0 rcv packets dropped by TCP due to auth errors
0 outgoing segments dropped due to policing

```

lcc3-re0:

-----  
 Tcp:

```

346 packets sent
    221 data packets (22895 bytes)
    0 data packets retransmitted (0 bytes)
    0 resends initiated by MTU discovery
    81 ack only packets (13 packets delayed)
    0 URG only packets
    0 window probe packets
    5 window update packets
    42 control packets
360 packets received
    267 acks(for 22940 bytes)
    9 duplicate acks
    0 acks for unsent data
    203 packets received in-sequence(33820 bytes)

```

```
0 completely duplicate packets(0 bytes)
0 old duplicate packets
0 packets with some duplicate data(0 bytes duped)
0 out-of-order packets(0 bytes)
0 packets of data after window(0 bytes)
0 window probes
6 window update packets
0 packets received after close
0 discarded for bad checksums
0 discarded for bad header offset fields
0 discarded because packet too short
13 connection requests
18 connection accepts
0 bad connection attempts
0 listen queue overflows
31 connections established (including accepts)
35 connections closed (including 2 drops)
    3 connections updated cached RTT on close
    3 connections updated cached RTT variance on close
    0 connections updated cached ssthresh on close
0 embryonic connections dropped
267 segments updated rtt(of 246 attempts)
0 retransmit timeouts
    0 connections dropped by retransmit timeout
0 persist timeouts
    0 connections dropped by persist timeout
0 keepalive timeouts
    0 keepalive probes sent
    0 connections dropped by keepalive
0 correct ACK header predictions
43 correct data packet header predictions
18 syncache entries added
    0 retransmitted
    0 dupsyn
    0 dropped
    18 completed
    0 bucket overflow
    0 cache overflow
    0 reset
    0 stale
    0 aborted
    0 badack
    0 unreach
    0 zone failures
0 cookies sent
0 cookies received
0 SACK recovery episodes
0 segment retransmits in SACK recovery episodes
0 byte retransmits in SACK recovery episodes
0 SACK options (SACK blocks) received
0 SACK options (SACK blocks) sent
0 SACK scoreboard overflow
0 ACKs sent in response to in-window but not exact RSTs
0 ACKs sent in response to in-window SYNs on established connections
0 rcv packets dropped by TCP due to bad address
0 out-of-sequence segment drops due to insufficient memory
5 RST packets
0 ICMP packets ignored by TCP
0 send packets dropped by TCP due to auth errors
0 rcv packets dropped by TCP due to auth errors
0 outgoing segments dropped due to policing
```



**show system statistics (QFX Series)**

```

user@switch> show system statistics
Tcp:
571779 packets sent
21517 data packets (1797102 bytes)
2 data packets retransmitted (20 bytes)
0 resends initiated by MTU discovery
3708 ack only packets (531 packets delayed)
0 URG only packets
1 window probe packets
1 window update packets
1093063 control packets
1132541 packets received
20961 acks(for 1796102 bytes)
5861 duplicate acks
0 acks for unsent data
19556 packets received in-sequence(232079 bytes)
3018 completely duplicate packets(0 bytes)
0 old duplicate packets
4 packets with some duplicate data(4 bytes duped)
2 out-of-order packets(2 bytes)
0 packets of data after window(0 bytes)
0 window probes
39 window update packets
0 packets received after close
0 discarded for bad checksums
0 discarded for bad header offset fields
0 discarded because packet too short
546519 connection requests
78 connection accepts
0 bad connection attempts
0 listen queue overflows
100 connections established (including accepts)
546596 connections closed (including 6 drops)
47 connections updated cached RTT on close
47 connections updated cached RTT variance on close
0 connections updated cached ssthresh on close
546497 embryonic connections dropped
20453 segments updated rtt(of 566914 attempts)
2 retransmit timeouts
0 connections dropped by retransmit timeout
0 persist timeouts
0 connections dropped by persist timeout
3028 keepalive timeouts
3027 keepalive probes sent
1 connections dropped by keepalive
7515 correct ACK header predictions
12258 correct data packet header predictions
78 syncache entries added
0 retransmitted
0 dupsyn
4 dropped
78 completed
0 bucket overflow
0 cache overflow
0 reset
0 stale
0 aborted
0 badack

```

```
0 unreachable
0 zone failures
0 cookies sent
0 cookies received
1 SACK recovery episodes
1 segment retransmits in SACK recovery episodes
1 byte retransmits in SACK recovery episodes
71 SACK options (SACK blocks) received
1 SACK options (SACK blocks) sent
0 SACK scoreboard overflow
0 ACKs sent in response to in-window but not exact RSTs
0 ACKs sent in response to in-window SYNs on established connections
0 rcv packets dropped by TCP due to bad address
0 out-of-sequence segment drops due to insufficient memory
546544 RST packets
0 ICMP packets ignored by TCP
0 send packets dropped by TCP due to auth errors
0 rcv packets dropped by TCP due to auth errors
0 outgoing segments dropped due to policing
udp:
147 datagrams received
0 with incomplete header
0 with bad data length field
0 with bad checksum
9 dropped due to no socket
0 broadcast/multicast datagrams dropped due to no socket
0 dropped due to full socket buffers
0 not for hashed pcb
138 delivered
0 datagrams output
ip:
73704 total packets received
0 bad header checksums
0 with size smaller than minimum
0 with data size < data length
0 with header length < data size
0 with data length < header length
0 with incorrect version number
0 packets destined to dead next hop
0 fragments received
0 fragments dropped (dup or out of space)
0 fragments dropped (queue overflow)
0 fragments dropped after timeout
0 fragments dropped due to over limit
0 packets reassembled ok
1133057 packets for this host
0 packets for unknown/unsupported protocol
40146 packets forwarded
0 packets not forwardable
40146 redirects sent
1121700 packets sent from this host
0 packets sent with fabricated ip header
0 output packets dropped due to no bufs
0 output packets discarded due to no route
0 output datagrams fragmented
0 fragments created
0 datagrams that can't be fragmented
0 packets with bad options
0 packets with options handled without error
0 strict source and record route options
0 loose source and record route options
```

```

0 record route options
0 timestamp options
0 timestamp and address options
0 timestamp and prespecified address options
0 option packets dropped due to rate limit
0 router alert options
0 multicast packets dropped (no iflist)
0 packets dropped (src and int don't match)
0 transit re packets dropped on mgmt i/f
0 packets used first nexthop in ecmp unilist
0 incoming ttpoip packets received
0 incoming ttpoip packets dropped
0 outgoing TTPoIP packets sent
0 outgoing TTPoIP packets dropped
icmp:
0 drops due to rate limit
9 calls to icmp_error
0 errors not generated because old message was icmp
Output histogram:
295 echo reply
9 destination unreachable
0 messages with bad code fields
0 messages less than the minimum length
0 messages with bad checksum
0 messages with bad source address
0 messages with bad length
0 echo drops with broadcast or multicast destination address
0 timestamp drops with broadcast or multicast destination address
Input histogram:
295 echo
295 message responses generated
igmp:
0 messages received
0 messages received with too few bytes
0 messages received with bad checksum
0 membership queries received
0 membership queries received with invalid fields
0 membership reports received
0 membership reports received with invalid fields
0 membership reports received for groups to which we belong
0 Membership reports sent
raw_if:
0 RAW packets transmitted
0 PPPOE packets transmitted
0 ISDN packets transmitted
0 DIALER packets transmitted
0 PPP packets transmitted to pppd
0 PPP packets transmitted to jppd
0 IGMP2 packets transmitted
13 output drops due to tx error
0 MPU packets transmitted
0 PPPOE packets received
0 ISDN packets received
0 DIALER packets received
0 PPP packets received from pppd
0 MPU packets received
0 PPP packets received from jppd
0 IGMP2 packets received
0 Input drops due to bogus protocol
0 input drops due to no mbufs available
0 input drops due to no space in socket

```

```
0 input drops due to no socket
arp:
186413 datagrams received
88 ARP requests received
88 ARP replies received
0 resolution request received
0 unrestricted proxy requests
0 restricted proxy requests
0 received proxy requests
0 proxy requests not proxied
0 restricted proxy requests not proxied
0 datagrams with bogus interface
0 datagrams with incorrect length
0 datagrams for non-IP protocol
0 datagrams with unsupported op code
0 datagrams with bad protocol address length
0 datagrams with bad hardware address length
0 datagrams with multicast source address
0 datagrams with multicast source address
0 datagrams with my own hardware address
164 datagrams for an address not on the interface
0 datagrams with a broadcast source address
0 datagrams with source address duplicate to mine
186065 datagrams which were not for me
0 packets discarded waiting for resolution
0 packets sent after waiting for resolution
50 ARP requests sent
88 ARP replies sent
0 requests for memory denied
0 requests dropped on entry
0 requests dropped during retry
0 requests dropped due to interface deletion
0 requests on unnumbered interfaces
0 new requests on unnumbered interfaces
0 replies for from unnumbered interfaces
0 requests on unnumbered interface with non-subnetted donor
0 replies from unnumbered interface with non-subnetted donor
ip6:
0 total packets received
0 packets with size smaller than minimum
0 packets with data size < data length
0 packets with bad options
0 packets with incorrect version number
0 fragments received
0 fragments dropped (dup or out of space)
0 fragments dropped after timeout
0 fragments that exceeded limit
0 packets reassembled ok
0 packets for this host
0 packets forwarded
0 packets not forwardable
0 redirects sent
0 packets sent from this host
0 packets sent with fabricated ip header
0 output packets dropped due to no bufs, etc.
0 output datagrams fragmented
0 fragments created
0 datagrams that can't be fragmented
0 packets that violated scope rules
0 multicast packets which we don't join
0 packets whose headers are not continuous
```

```

0 tunneling packets that can't find gif
0 packets discarded due to too may headers
0 failures of source address selection
0 forward cache hit
0 forward cache miss
0 Packets destined to dead next hop
0 option packets dropped due to rate limit
0 Packets dropped (src and int don't match)
0 packets dropped due to bad protocol
0 transit re packet(null) dropped on mgmt i/f
icmp6:
0 Calls to icmp_error
0 Errors not generated because old message was icmp error
0 Errors not generated because rate limitation
0 Messages with bad code fields
0 Messages < minimum length
0 Bad checksums
0 Messages with bad length
0 No route
0 Administratively prohibited
0 Beyond scope
0 Address unreachable
0 Port unreachable
0 packet too big
0 Time exceed transit
0 Time exceed reassembly
0 Erroneous header field
0 Unrecognized next header
0 Unrecognized option
0 redirect
0 Unknown
0 Message responses generated
0 Messages with too many ND options
pfkey:
0 Requests sent from userland
0 Bytes sent from userland
histogram by message type:
0 reserved
0 dump
0 Messages with invalid length field
0 Messages with invalid version field
0 Messages with invalid message type field
0 Messages too short
0 Messages with memory allocation failure
0 Messages with duplicate extension
0 Messages with invalid extension type
0 Messages with invalid sa type
0 Messages with invalid address extension
0 Requests sent to userland
0 Bytes sent to userland
histogram by message type:
0 reserved
0 dump
0 Messages toward single socket
0 Messages toward all sockets
0 Messages toward registered sockets
0 Messages with memory allocation failure
c1n1:
0 Total packets received
0 Packets delivered
0 Too small packets

```

0 Packets with bad header length  
0 Packets with bad checksum  
0 Bad version packets  
0 Unknown or unsupported protocol packets  
0 Packets with bogus sdl size  
0 No free memory in socket buffer  
0 Send packets discarded  
0 Sbappend failure  
0 Mcopy failure  
0 Address fields were not reasonable  
0 Segment information forgotten  
0 Forwarded packets  
0 Total packets sent  
0 Output packets discarded  
0 Non-forwarded packets  
0 Packets fragmented  
0 Fragments sent  
0 Fragments discarded  
0 Fragments timed out  
0 Fragmentation prohibited  
0 Packets reconstructed  
0 Packets destined to dead nexthop  
0 Packets discarded due to no route  
0 Error pdu rate drops  
0 ER pdu generation failure  
esis:  
0 Total pkts received  
0 Total packets consumed by protocol  
0 Pdus received with bad checksum  
0 Pdus received with bad version number  
0 Pdus received with bad type field  
0 Short pdus received  
0 Pdus with bogus sdl size  
0 Pdus with bad header length  
0 Pdus with unknown or unsupported protocol  
0 No free memory in socket buffer  
0 Send packets discarded  
0 Sbappend failure  
0 Mcopy failure  
0 ISO family not configured  
tnp:  
0 Unicast packets received  
0 Broadcast packets received  
0 Fragmented packets received  
0 Hello packets dropped  
0 Fragments dropped  
0 Fragment reassembly queue flushes  
0 Packets with tnp src address collision received  
0 Hello packets received  
0 Control packets received  
0 Rdp packets received  
0 Udp packets received  
0 Tunnel packets received  
0 Input packets discarded with no protocol  
0 Packets of version unspecified received  
0 Packets of version 1 received  
0 Packets of version 2 received  
0 Packets of version 3 received  
0 Unicast packets sent  
0 Broadcast packets sent  
0 Fragmented packets sent

```
0 Hello packets dropped
0 Fragments dropped
0 Hello packets sent
0 Control packets sent
0 Rdp packets sent
0 Udp packets sent
0 Tunnel packets sent
0 Packets sent with unknown protocol
0 Packets of version unspecified sent
0 Packets of version 1 sent
0 Packets of version 2 sent
0 Packets of version 3 sent
rdp:
0 Input packets
0 Packets discarded for bad checksum
0 Packets discarded due to bad sequence number
0 Refused connections
0 Acks received
0 Packets dropped due to full socket buffers
0 Retransmits
0 Output packets
0 Acks sent
0 Connects
0 Closes
0 Keepalives received
0 Keepalives sent
tudp:
67 Datagrams received
0 Datagrams with incomplete header
0 Datagrams with bad data length field
0 Datagrams with bad checksum
0 Datagrams dropped due to no socket
0 Broadcast/multicast datagrams dropped due to no socket
0 Datagrams dropped due to full socket buffers
67 Delivered
68 Datagrams output
ttp:
0 Packets sent
0 Packets sent while unconnected
0 Packets sent while interface down
0 Packets sent couldn't get buffer
0 Packets sent couldn't find neighbor
0 L2 packets received
0 Unknown L3 packets received
0 IPv4 L3 packets received
0 MPLS L3 packets received
0 MPLS->IPv4 L3 packets received
0 IPv4->MPLS L3 packets received
0 VPLS L3 packets received
0 IPv6 L3 packets received
0 ARP L3 packets received
0 CLNP L3 packets received
0 TNP L3 packets received
0 NULL L3 packets received
0 Cyclotron cycle L3 packets received
0 Cyclotron send L3 packets received
0 Packets received while unconnected
0 Packets received from unknown ifl
0 Input packets couldn't get buffer
0 Input packets with bad type
0 Input packets with discard type
```

```
0 Input packets with too many tlvs
0 Input packets with bad tlv header
70633 Input packets with bad tlv type
68877 Input packets dropped based on tlv result0 Input packets for which rt lookup
  is bypassed
mpls:
0 Total MPLS packets received
0 Packets forwarded
0 Packets dropped
0 Packets with header too small
0 After tagging, packets can't fit link MTU
0 Packets with IPv4 explicit NULL tag
0 Packets with IPv4 explicit NULL cksum errors
0 Packets with router alert tag
0 LSP ping packets (ttl-expired/router alert)
0 Packets with ttl expired
0 Packets with tag encoding error
0 Packets discarded due to no route
0 Packets used first nexthop in ecmp unilist
0 Packets dropped due to ifl down
vpls:
0 Total packets received
0 Packets with size smaller than minimum
0 Packets with incorrect version number
0 Packets for this host
0 Packets with no logical interface
0 Packets with no family
0 Packets with no route table
582 Copyright © 2010, Juniper Networks, Inc.
0 Packets with no auxiliary table
0 Packets with no corefacing entry
0 packets with no CE-facing entry
0 MAC route learning requests
0 MAC routes learnt
0 Requests to learn an existing route
0 Learning requests while learning disabled on interface
0 Learning requests over capacity
0 MAC routes moved
0 Requests to move static route
0 MAC route aging requests
0 MAC routes aged
0 Bogus address in aging requests
0 Requests to age static route
0 Requests to re-ageout aged route
0 Requests involving multiple peer FEs
0 Aging acks from PFE
0 Aging non-acks from PFE
0 Aging requests timed out waiting on FEs
0 Aging requests over max-rate
0 Errors finding peer FEs
0 Unsupported platform
0 Packets dropped due to no l3 route table
0 Packets dropped due to no local ifl
0 Packets punted
0 Packets dropped due to no socket
bridge:
Input:
0 packets received
0 packets forwarded
0 packets failed to forward
0 packets dropped
```



```

0 packets with vmember lookup failures
0 packets with vlan lookup failures
0 packets with stp state lookup failures
0 packets dropped due to stp blocked/listening
0 packets dropped due to stp learning
0 packets with src MAC learning failures
0 packets with input control processing failures
Forward:
0 packets sent successfully
0 packets with send failures
0 packets forwarded to l3 interface
0 packets with l3 send failures
0 packets discarded
0 packets with l2ifl store failures
0 packets with ifl mismatch failures
0 packets with packet duplication failures
0 packets with tag lookup failures
0 packets with no route for DMAC
0 packets with no route table
0 packets with no nexthop
0 packets with dead nexthop
0 packets with eof reached error
Learning:
0 MACs learned
0 packets sent to l3 interface
0 packets with l3 send failures
0 packets hit holdq while learning
0 MAC moves
0 packets discarded
0 packets with no route for SMAC
0 packets with no nexthop
0 packets with dead nexthop
0 packets dropped due to no resolve route
0 packets with l3 ifd lookup failures
0 packets with l3 ifl lookup failures
0 packets with l3 invalid rnh
0 packets with no route for SMAC in clone learning
0 packets with no nexthop in clone learning
0 packets with dead nexthop in clone learning
0 packets dropped due to no resolve nh in clone learning
Output:
0 packets forwarded
0 packets failed to forward
0 packets with vmember lookup failures
0 packets with vlan lookup failures
0 packets with input control processing failures
Send:
0 packets sent successfully
0 packets with send failures
0 packets dropped due to interface down
0 packets with dev output failures
0 blocked ifl discards
0 packets with tag lookup failures
0 packets with stp state lookup failures
0 packets with tag insertion failures
0 packets with tag removal failures
Flood:
0 packets flooded
0 flood failures
IGMP:
0 packets sent successfully

```

```
0 packets with send failures
0 packets forwarded
0 packets failed to forward
0 packets with mpull failures
0 packets with vmember lookup failures
0 packets with vlan lookup failures
0 packets with ifl lookup failures
0 packets with tag lookup failures
Misc:
0 packets with size smaller than minimum
0 packets with double tags
0 packets with no ifl
0 packets with no family
0 packets with no route table
```

### show system statistics extended (MX Series)

```
user@switch> show system statistics extended
ipv4:
0 input IP datagrams received
0 octets received in input IP datagrams
0 IP datagrams discarded due to errors in their IP headers
0 input IP datagrams discarded because no route
0 input IP datagrams discarded because invalid IP address
0 locally-addressed IP datagrams received with unsupported protocol
0 input IP datagrams discarded because datagram frame didn't carry enough data
0 input datagrams for which this entity attempted to find a route to forward them
11892 IP fragments received that needed to be reassembled
11892 IP datagrams successfully reassembled
0 failures detected by the IP re-assembly
0 input IP datagrams discarded
22444663 datagrams successfully delivered to IP user protocols
22602347 IP datagrams that local IP user protocols supplied for transmission
6688 locally generated IP datagrams discarded because no route
0 datagrams for which this entity was not their final IP destination
0 output IP datagrams discarded
15463 IP datagrams that would require fragmentation
15463 IP datagrams that have been successfully fragmented
0 IP datagrams discarded because they needed to be fragmented but could not be
107206 output datagram fragments
0 IP datagrams that this entity supplied to the lower layers for transmission
0 octets in IP datagrams delivered to the lower layers for transmission
0 IP multicast datagrams received
0 octets received in IP multicast datagrams
0 multicast datagrams transmitted
0 octets transmitted in IP multicast
2018-08-31 20:05:47 PDT system statistics discontinuity time
ipv6:
0 input IP datagrams received
0 octets received in input IP datagrams
0 IP datagrams discarded due to errors in their IP headers
0 input IP datagrams discarded because no route
0 input IP datagrams discarded because invalid IP address
0 locally-addressed IP datagrams received with unsupported protocol
0 input IP datagrams discarded because datagram frame didn't carry enough data
0 input datagrams for which this entity attempted to find a route to forward them
0 IP fragments received that needed to be reassembled
0 IP datagrams successfully reassembled
0 failures detected by the IP re-assembly
0 input IP datagrams discarded
0 datagrams successfully delivered to IP user protocols
```

96 IP datagrams that local IP user protocols supplied for transmission  
0 locally generated IP datagrams discarded because no route  
0 datagrams for which this entity was not their final IP destination  
0 output IP datagrams discarded  
0 IP datagrams that would require fragmentation  
0 IP datagrams that have been successfully fragmented  
0 IP datagrams discarded because they needed to be fragmented but could not be  
0 output datagram fragments  
0 IP datagrams that this entity supplied to the lower layers for transmission  
0 octets in IP datagrams delivered to the lower layers for transmission  
0 IP multicast datagrams received  
0 octets received in IP multicast datagrams  
0 multicast datagrams transmitted  
0 octets transmitted in IP multicast  
2018-08-31 20:05:47 PDT system statistics discontinuity time

## show system storage

---

<b>List of Syntax</b>	<a href="#">Syntax on page 1172</a> <a href="#">Syntax (EX Series Switches) on page 1172</a> <a href="#">Syntax (MX Series Router) on page 1172</a> <a href="#">Syntax (QFX Series) on page 1172</a> <a href="#">Syntax (SRX Series) on page 1172</a> <a href="#">Syntax (TX Matrix Router) on page 1172</a> <a href="#">Syntax (TX Matrix Plus Router and TX Matrix Plus Router with 3D SIBs) on page 1172</a>
<b>Syntax</b>	<code>show system storage</code> <code>&lt;detail&gt;</code> <code>&lt;invoke-on (all-routing-engines   other-routing-engine)&gt;</code>
<b>Syntax (EX Series Switches)</b>	<code>show system storage</code> <code>&lt;detail&gt;</code> <code>&lt;all-members&gt;</code> <code>&lt;local&gt;</code> <code>&lt;member <i>member-id</i>&gt;</code> <code>&lt;invoke-on (all-routing-engines   other-routing-engine)&gt;</code>
<b>Syntax (MX Series Router)</b>	<code>show system storage</code> <code>&lt;detail&gt;</code> <code>&lt;all-members&gt;</code> <code>&lt;local&gt;</code> <code>&lt;member <i>member-id</i>&gt;</code> <code>&lt;invoke-on (all-routing-engines   other-routing-engine)&gt;</code>
<b>Syntax (QFX Series)</b>	<code>show system storage</code> <code>&lt;detail&gt;</code> <code>&lt;infrastructure <i>name</i>&gt;</code> <code>&lt;interconnect-device <i>name</i>&gt;</code> <code>&lt;node-group <i>name</i>&gt;</code> <code>&lt;invoke-on (all-routing-engines   other-routing-engine)&gt;</code>
<b>Syntax (SRX Series)</b>	<code>show system storage</code> <code>&lt;detail&gt;</code> <code>&lt;partitions&gt;</code> <code>&lt;invoke-on (all-routing-engines   other-routing-engine)&gt;</code>
<b>Syntax (TX Matrix Router)</b>	<code>show system storage</code> <code>&lt;detail&gt;</code> <code>&lt;all-chassis   all-lcc   lcc <i>number</i>   scc&gt;</code> <code>&lt;invoke-on (all-routing-engines   other-routing-engine)&gt;</code>
<b>Syntax (TX Matrix Plus Router and TX Matrix Plus Router with 3D SIBs)</b>	<code>show system storage</code> <code>&lt;detail&gt;</code> <code>&lt;all-chassis   all-lcc   lcc <i>number</i>   sfc <i>number</i>&gt;</code> <code>&lt;invoke-on (all-routing-engines   other-routing-engine)&gt;</code>

<b>Release Information</b>	<p>Command introduced before Junos OS Release 7.4.</p> <p>Command introduced in Junos OS Release 9.0 for EX Series switches.</p> <p><b>sfc</b> option introduced for the TX Matrix Plus router in JUNOS Release 9.6.</p> <p>Command introduced in Junos OS Release 11.1 for the QFX Series.</p> <p>Option <b>invoke-on (all-routing-engines   other-routing-engine)</b> introduced in Junos OS Release 14.1</p> <p>Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.</p> <p>Output upgraded for devices running Junos OS with upgraded FreeBSD in Junos OS Release 18.1R1.</p>
<b>Description</b>	<p>Display statistics about the amount of free disk space in the router's or switch's file systems.</p>
<b>Options</b>	<p><b>none</b>—Display standard information about the amount of free disk space in the router's or switch's file systems.</p> <p><b>detail</b>—(Optional) Display detailed output.</p> <p><b>invoke-on all-routing-engines</b>—(Optional) Display the system storage information on all master and backup Routing Engines on a routing matrix based on the TX Matrix or TX Matrix Plus router or on a router that has dual Routing Engines.</p> <p><b>invoke-on other-routing-engines</b>—(Optional) Display the system storage information on the other Routing Engine. For example, if you issue this command on the master Routing Engine on an M320 router, the JUNOS Software displays the system storage information on the backup Routing Engine. On a routing matrix based on the TX Matrix or TX Matrix Plus router, if you issue this command on the TX Matrix or TX Matrix Plus router's master Routing Engine, the JUNOS Software displays all the system storage information on all the backup Routing Engines.</p> <p><b>all-chassis</b>—(TX Matrix routers and TX Matrix Plus routers only) (Optional) Display system storage statistics for all the routers in the chassis.</p> <p><b>all-lcc</b>—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display system storage statistics for all T640 routers connected to the TX Matrix router. On a TX Matrix Plus router, display system storage statistics for all routers connected to the TX Matrix Plus router.</p> <p><b>all-members</b>—(EX4200 switches and MX Series routers only) (Optional) Display system storage statistics for all members of the Virtual Chassis configuration.</p> <p><b>infrastructure name</b>—(QFabric systems only) (Optional) Display system storage statistics for the fabric control Routing Engines or fabric manager Routing Engines.</p> <p><b>interconnect-device name</b>—(QFabric systems only) (Optional) Display system storage statistics for the Interconnect device.</p> <p><b>lcc number</b>—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display system storage statistics for a specific T640 router that is connected to the TX Matrix router. On a TX Matrix Plus router, display system storage statistics for a specific router that is connected to the TX Matrix Plus router.</p>

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(EX4200 switches and MX Series routers only) (Optional) Display system storage statistics for the local Virtual Chassis member.

**member *member-id***—(EX4200 switches and MX Series routers only) (Optional) Display system storage statistics for the specified member of the Virtual Chassis configuration. For EX4200 switches, replace *member-id* with a value from 0 through 9. For an MX Series Virtual Chassis, replace *member-id* with a value of 0 or 1.

**node-group *name***—(QFabric systems only) (Optional) Display system storage statistics for the Node group.

**scc**—(TX Matrix routers only) (Optional) Display system storage statistics for the TX Matrix router (or switch-card chassis).

**sfc *number***—(TX Matrix Plus routers only) (Optional) Display system storage statistics for the TX Matrix Plus router. Replace *number* with 0.

**Additional Information** By default, when you issue the **show system storage** command on the master Routing Engine of a TX Matrix router or a TX Matrix Plus router, the command is broadcast to all the master Routing Engines of the LCCs connected to it in the routing matrix. Likewise, if you issue the same command on the backup Routing Engine of a TX Matrix or a TX Matrix Plus router, the command is broadcast to all backup Routing Engines of the LCCs that are connected to it in the routing matrix.

In Junos OS Release 15.1, when certain platforms switched to Junos OS with upgraded FreeBSD, there was a change in the file system used to the UNIX file system (UFS). This change led to the output of the **show system storage** command being long and difficult to use to determine the free space available on the system. Starting in Junos OS Release 18.1R1, the output of this command has been upgraded to be more concise and readable. To determine affected platforms, see [Feature Explorer](#) and enter **FreeBSD 10 kernel for Junos OS**.

**Required Privilege Level** view

- Related Documentation**
- [Routing Matrix with a TX Matrix Plus Router Solutions Page](#)
  - [show system storage partitions](#)

- List of Sample Output**
- [show system storage on page 1175](#)
  - [show system storage \(Junos OS with upgraded FreeBSD starting in Junos OS Release 18.1R1\) on page 1176](#)
  - [show system storage \(TX Matrix Plus Router\) on page 1176](#)
  - [show system storage \(QFX3500 Switch\) on page 1178](#)
  - [show system storage invoke-on all-routing-engines on page 1178](#)
  - [show system storage invoke-on other-routing-engine on page 1179](#)

- Output Fields** [Table 45 on page 1175](#) describes the output fields for the **show system storage** command. Output fields are listed in the approximate order in which they appear.

*Table 45: show system storage Output Fields*

Field Name	Field Description
<b>Filesystem</b>	Name of the filesystem.
<b>Size</b>	Size of the filesystem.
<b>Used</b>	Amount of space used in the filesystem.
<b>Avail</b>	Amount of space available in the filesystem.
<b>Capacity</b>	Percentage of the filesystem space that is being used.
<b>Mounted on</b>	Directory in which the filesystem is mounted.

## Sample Output

### show system storage

```

user@host> show system storage
Filesystem      Size      Used      Avail  Capacity  Mounted on
/dev/ad0s1a      77M       37M       34M      52%      /
devfs            16K       16K        0B     100%    /dev/
/dev/vn0         12M       12M        0B     100%    /packages/mnt/jbase
/dev/vn1         39M       39M        0B     100%
/packages/mnt/jkernel-7.2R1.7
/dev/vn2         12M       12M        0B     100%
/packages/mnt/jpfe-M40-7.2R1.7
/dev/vn3         2.3M      2.3M        0B     100%
/packages/mnt/jdocs-7.2R1.7
/dev/vn4         14M       14M        0B     100%
/packages/mnt/jroute-7.2R1.7
/dev/vn5         4.5M      4.5M        0B     100%
/packages/mnt/jcrypto-7.2R1.7
mfs:172         1.5G      4.0K      1.3G      0%      /tmp
/dev/ad0s1e      12M       20K       11M      0%      /config

```

```

procfs          4.0K      4.0K      0B      100% /proc
/dev/ad1s1f     9.4G      4.9G      3.7G      57% /var

```

#### show system storage (Junos OS with upgraded FreeBSD starting in Junos OS Release 18.1R1)

```

user@host> show system storage
Filesystem      Size      Used      Avail Capacity  Mounted on
/dev/gpt/oam     945M      663M      207M      76%
/dev/gpt/junos   32G       14G       16G       46%  /.mount
tmpfs           5.4G       12K       5.4G       0%  /.mount/tmp
tmpfs           592M       1.2M      591M       0%  /.mount/mfs

```

#### show system storage (TX Matrix Plus Router)

```

user@host> show system storage
sfc0-re0:
-----
Filesystem      Size      Used      Avail Capacity  Mounted on
/dev/ad0s1a     3.4G      178M      2.9G        6%  /
devfs           1.0K      1.0K      0B        100% /dev
devfs           1.0K      1.0K      0B        100% /dev/
/dev/md0         33M       33M       0B        100% /packages/mnt/jbase
/dev/md1        216M      216M      0B        100%
/packages/mnt/jkernel-9.6-20090519.0
/dev/md2         66M       66M       0B        100%
/packages/mnt/jpfe-T-9.6-20090519.0
/dev/md3         4.1M      4.1M      0B        100%
/packages/mnt/jdocs-9.6-20090519.0
/dev/md4         57M       57M       0B        100%
/packages/mnt/jroute-9.6-20090519.0
/dev/md5         15M       15M       0B        100%
/packages/mnt/jcrypto-9.6-20090519.0
/dev/md6         34M       34M       0B        100%
/packages/mnt/jpfe-common-9.6-20090519.0
/dev/md7         2.0G      10.0K      1.8G        0% /tmp
/dev/md8         2.0G       1.0M      1.8G        0% /mfs
/dev/ad0s1e     383M       82K      352M        0% /config
procfs          4.0K      4.0K      0B        100% /proc
/dev/ad1s1f     52G       7.5G      40G        16% /var

lcc0-re0:
-----
Filesystem      Size      Used      Avail Capacity  Mounted on
/dev/ad0s1a     3.4G      178M      2.9G        6%  /
devfs           1.0K      1.0K      0B        100% /dev
devfs           1.0K      1.0K      0B        100% /dev/
/dev/md0         33M       33M       0B        100% /packages/mnt/jbase
/dev/md1        216M      216M      0B        100%
/packages/mnt/jkernel-9.6-20090519.0
/dev/md2         66M       66M       0B        100%
/packages/mnt/jpfe-T-9.6-20090519.0
/dev/md3         4.1M      4.1M      0B        100%
/packages/mnt/jdocs-9.6-20090519.0
/dev/md4         57M       57M       0B        100%
/packages/mnt/jroute-9.6-20090519.0
/dev/md5         15M       15M       0B        100%
/packages/mnt/jcrypto-9.6-20090519.0
/dev/md6         34M       34M       0B        100%
/packages/mnt/jpfe-common-9.6-20090519.0
/dev/md7         2.0G      10.0K      1.8G        0% /tmp

```



```

/dev/md8          2.0G      540K      1.8G       0% /mfs
/dev/ad0s1e       383M       88K      352M       0% /config
procfs           4.0K      4.0K       0B      100% /proc
/dev/ad1s1f       52G       6.3G      41G       13% /var

```

lcc1-re0:

```

-----
Filesystem      Size      Used      Avail  Capacity  Mounted on
/dev/ad0s1a     3.4G     178M     2.9G      6%      /
devfs           1.0K     1.0K       0B     100%   /dev
devfs           1.0K     1.0K       0B     100%   /dev/
/dev/md0         33M      33M       0B     100%   /packages/mnt/jbase
/dev/md1        216M     216M       0B     100%
/packages/mnt/jkernel-9.6-20090519.0
/dev/md2         66M      66M       0B     100%
/packages/mnt/jpfe-T-9.6-20090519.0
/dev/md3         4.1M     4.1M       0B     100%
/packages/mnt/jdocs-9.6-20090519.0
/dev/md4         57M      57M       0B     100%
/packages/mnt/jroute-9.6-20090519.0
/dev/md5         15M      15M       0B     100%
/packages/mnt/jcrypto-9.6-20090519.0
/dev/md6         34M      34M       0B     100%
/packages/mnt/jpfe-common-9.6-20090519.0
/dev/md7         2.0G     10.0K     1.8G       0%   /tmp
/dev/md8          2.0G      540K     1.8G       0%   /mfs
/dev/ad0s1e       383M       88K     352M       0%   /config
procfs           4.0K      4.0K       0B     100%   /proc
/dev/ad1s1f       23G      13G      7.7G      64%   /var

```

lcc2-re0:

```

-----
Filesystem      Size      Used      Avail  Capacity  Mounted on
/dev/ad0s1a     3.4G     178M     2.9G      6%      /
devfs           1.0K     1.0K       0B     100%   /dev
devfs           1.0K     1.0K       0B     100%   /dev/
/dev/md0         33M      33M       0B     100%   /packages/mnt/jbase
/dev/md1        216M     216M       0B     100%
/packages/mnt/jkernel-9.6-20090519.0
/dev/md2         66M      66M       0B     100%
/packages/mnt/jpfe-T-9.6-20090519.0
/dev/md3         4.1M     4.1M       0B     100%
/packages/mnt/jdocs-9.6-20090519.0
/dev/md4         57M      57M       0B     100%
/packages/mnt/jroute-9.6-20090519.0
/dev/md5         15M      15M       0B     100%
/packages/mnt/jcrypto-9.6-20090519.0
/dev/md6         34M      34M       0B     100%
/packages/mnt/jpfe-common-9.6-20090519.0
/dev/md7         2.0G     10.0K     1.8G       0%   /tmp
/dev/md8          2.0G      540K     1.8G       0%   /mfs
/dev/ad0s1e       383M       64K     352M       0%   /config
procfs           4.0K      4.0K       0B     100%   /proc
/dev/ad1s1f       23G      3.7G      17G      18%   /var

```

lcc3-re0:

```

-----
Filesystem      Size      Used      Avail  Capacity  Mounted on
/dev/ad0s1a     3.4G     178M     2.9G      6%      /
devfs           1.0K     1.0K       0B     100%   /dev
devfs           1.0K     1.0K       0B     100%   /dev/

```

/dev/md0	33M	33M	0B	100%	/packages/mnt/jbase
/dev/md1	216M	216M	0B	100%	
/packages/mnt/jkernel-9.6-20090519.0					
/dev/md2	66M	66M	0B	100%	
/packages/mnt/jpfe-T-9.6-20090519.0					
/dev/md3	4.1M	4.1M	0B	100%	
/packages/mnt/jdocs-9.6-20090519.0					
/dev/md4	57M	57M	0B	100%	
/packages/mnt/jroute-9.6-20090519.0					
/dev/md5	15M	15M	0B	100%	
/packages/mnt/jcrypto-9.6-20090519.0					
/dev/md6	34M	34M	0B	100%	
/packages/mnt/jpfe-common-9.6-20090519.0					
/dev/md7	2.0G	10.0K	1.8G	0%	/tmp
/dev/md8	2.0G	540K	1.8G	0%	/mfs
/dev/ad0s1e	383M	34K	352M	0%	/config
procfs	4.0K	4.0K	0B	100%	/proc
/dev/ad1s1f	23G	18G	3.5G	84%	/var

### show system storage (QFX3500 Switch)

```
user@switch> show system storage
```

Filesystem	Size	Used	Avail	Capacity	Mounted on
/dev/da0s2a	343M	192M	123M	61%	/
devfs	1.0K	1.0K	0B	100%	/dev
/dev/md0	119M	119M	0B	100%	/packages/mnt/jbase
/dev/md1	513M	513M	0B	100%	
/packages/mnt/jkernel-qfx-11.1R1.5					
/dev/md2	37M	37M	0B	100%	
/packages/mnt/jpfe-qfx-e9xxx-11.1R1.5					
/dev/md3	6.0M	6.0M	0B	100%	
/packages/mnt/jdocs-qfx-11.1R1.5					
/dev/md4	216M	216M	0B	100%	
/packages/mnt/jroute-qfx-11.1R1.5					
/dev/md5	59M	59M	0B	100%	
/packages/mnt/jcrypto-qfx-11.1R1.5					
/dev/md6	85M	85M	0B	100%	
/packages/mnt/jswitch-qfx-11.1R1.5					
/dev/md7	63M	8.0K	58M	0%	/tmp
/dev/da0s2f	228M	14M	196M	7%	/var
/dev/da0s3d	590M	3.0M	540M	1%	/var/tmp
/dev/da0s3e	104M	162K	95M	0%	/config
procfs	4.0K	4.0K	0B	100%	/proc

### show system storage invoke-on all-routing-engines

```
user@host> show system storage invoke-on all-routing-engines
re0:
```

Filesystem	Size	Used	Avail	Capacity	Mounted on
/dev/ad0s1a	3.3G	440M	2.6G	14%	/
devfs	1.0K	1.0K	0B	100%	/dev
/dev/md0	76M	76M	0B	100%	/packages/mnt/jbase
/dev/md1	40M	40M	0B	100%	
/packages/mnt/jkernel64-14.1-20140407.1					
/dev/md2	219M	219M	0B	100%	
/packages/mnt/jpfe-T-14.1-20140407.1					
/dev/md3	5.4M	5.4M	0B	100%	
/packages/mnt/jdocs-14.1-20140407.1					
/dev/md4	116M	116M	0B	100%	

```

/packages/mnt/jroute-14.1-20140407.1
/dev/md5          44M          44M          0B          100%
/packages/mnt/jcrypto64-14.1-20140407.1
/dev/md6          70M          70M          0B          100%
/packages/mnt/jpfe-common-14.1-20140407.1
/dev/md7          182K         182K          0B          100%
/packages/mnt/jplatform-14.1-20140407.1
/dev/md8          499M         499M          0B          100%
/packages/mnt/jruntime-14.1-20140407.1
/dev/md9          41M          41M          0B          100%
/packages/mnt/jruntime64-14.1-20140407.1
/dev/md10         12M          12M          0B          100%
/packages/mnt/py-base-i386-14.1-20140407.1
/dev/md11         3.2G          8.0K          2.9G          0% /tmp
/dev/md12         3.2G          1.1M          2.9G          0% /mfs
/dev/ad0s1e       376M          220K          346M          0% /config
procfs           4.0K          4.0K          0B          100% /proc
/dev/ad1s1f       50G           43G          3.2G          93% /var

```

```
rel:
```

```

-----
Filesystem      Size      Used      Avail  Capacity  Mounted on
/dev/ad0s1a     3.3G      440M      2.6G      14%      /
devfs           1.0K      1.0K      0B        100%     /dev
/dev/md0        76M       76M       0B        100%     /packages/mnt/jbase
/dev/md1        40M       40M       0B        100%
/packages/mnt/jkernel64-14.1-20140407.1
/dev/md2        219M      219M      0B        100%
/packages/mnt/jpfe-T-14.1-20140407.1
/dev/md3        5.4M      5.4M      0B        100%
/packages/mnt/jdocs-14.1-20140407.1
/dev/md4        116M      116M      0B        100%
/packages/mnt/jroute-14.1-20140407.1
/dev/md5        44M       44M       0B        100%
/packages/mnt/jcrypto64-14.1-20140407.1
/dev/md6        70M       70M       0B        100%
/packages/mnt/jpfe-common-14.1-20140407.1
/dev/md7        182K      182K      0B        100%
/packages/mnt/jplatform-14.1-20140407.1
/dev/md8        499M      499M      0B        100%
/packages/mnt/jruntime-14.1-20140407.1
/dev/md9        41M       41M      0B        100%
/packages/mnt/jruntime64-14.1-20140407.1
/dev/md10       12M       12M      0B        100%
/packages/mnt/py-base-i386-14.1-20140407.1
/dev/md11       3.2G       8.0K      2.9G          0% /tmp
/dev/md12       3.2G      662K      2.9G          0% /mfs
/dev/ad0s1e     375M      230K      344M          0% /config
procfs         4.0K       4.0K      0B        100% /proc
/dev/ad1s1f     52G       46G      2.2G          95% /var

```

### show system storage invoke-on other-routing-engine

```
user@host> show system storage invoke-on other-routing-engine
```

```
rel:
```

```

-----
Filesystem      Size      Used      Avail  Capacity  Mounted on
/dev/ad0s1a     3.3G      440M      2.6G      14%      /
devfs           1.0K      1.0K      0B        100%     /dev
/dev/md0        76M       76M       0B        100%     /packages/mnt/jbase
/dev/md1        40M       40M       0B        100%

```

/packages/mnt/jkernel64-14.1-20140407.1					
/dev/md2	219M	219M	0B	100%	
/packages/mnt/jpfe-T-14.1-20140407.1					
/dev/md3	5.4M	5.4M	0B	100%	
/packages/mnt/jdocs-14.1-20140407.1					
/dev/md4	116M	116M	0B	100%	
/packages/mnt/jroute-14.1-20140407.1					
/dev/md5	44M	44M	0B	100%	
/packages/mnt/jcrypto64-14.1-20140407.1					
/dev/md6	70M	70M	0B	100%	
/packages/mnt/jpfe-common-14.1-20140407.1					
/dev/md7	182K	182K	0B	100%	
/packages/mnt/jplatform-14.1-20140407.1					
/dev/md8	499M	499M	0B	100%	
/packages/mnt/jruntime-14.1-20140407.1					
/dev/md9	41M	41M	0B	100%	
/packages/mnt/jruntime64-14.1-20140407.1					
/dev/md10	12M	12M	0B	100%	
/packages/mnt/py-base-i386-14.1-20140407.1					
/dev/md11	3.2G	8.0K	2.9G	0%	/tmp
/dev/md12	3.2G	662K	2.9G	0%	/mfs
/dev/ad0s1e	375M	230K	344M	0%	/config
procfs	4.0K	4.0K	0B	100%	/proc
/dev/ad1s1f	52G	46G	2.2G	95%	/var

## show system uptime

<b>List of Syntax</b>	<a href="#">Syntax on page 1181</a> <a href="#">Syntax (EX Series Switches) on page 1181</a> <a href="#">Syntax (QFX Series) on page 1181</a> <a href="#">Syntax (TX Matrix Router) on page 1181</a> <a href="#">Syntax (TX Matrix Plus Router) on page 1181</a> <a href="#">Syntax (MX Series Router) on page 1181</a>
<b>Syntax</b>	show system uptime
<b>Syntax (EX Series Switches)</b>	show system uptime <all-members> <local> <member <i>member-id</i> >
<b>Syntax (QFX Series)</b>	show system uptime <director-group <i>name</i> > <infrastructure <i>name</i> > <interconnect-device <i>name</i> > <node-group <i>name</i> >
<b>Syntax (TX Matrix Router)</b>	show system uptime <all-chassis   all-lcc   lcc <i>number</i>   scc>
<b>Syntax (TX Matrix Plus Router)</b>	show system uptime <detail> <all-chassis   all-lcc   lcc <i>number</i>   sfc <i>number</i> >
<b>Syntax (MX Series Router)</b>	show system uptime <all-members> <invoke-on> <local> <member <i>member-id</i> >
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. Command introduced in Junos OS Release 9.0 for EX Series switches. <b>sfc</b> option introduced for the TX Matrix Plus router in JUNOS Release 9.6. Command introduced in Junos OS Release 11.1 for the QFX Series. Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Display the current time and information about how long the router or switch, router or switch software, and routing protocols have been running.



**NOTE:** Time values computed from differences in timestamps can vary due to the insertion or deletion of leap-seconds between them.

**Options** **none**—Show time since the system rebooted and processes started.

**all-chassis**—(TX Matrix routers and TX Matrix Plus routers only) (Optional) Show time since the system rebooted and processes started on all the routers in the chassis.

**all-lcc**—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, show time since the system rebooted and processes started for all T640 routers (or line-card chassis) connected to the TX Matrix router. On a TX Matrix Plus router, show time since the system rebooted and processes started for all connected T1600 or T4000 LCCs.

**all-members**—(EX4200 switches and MX Series routers only) (Optional) Show time since the system rebooted and processes started on all members of the Virtual Chassis configuration.

**director-group *name***—(QFabric systems only) (Optional) Show time since the system rebooted and processes started on the Director group.

**infrastructure *name***—(QFabric systems only) (Optional) Show time since the system rebooted and processes started on the fabric control Routing Engine and fabric manager Routing Engine.

**interconnect-device *name***—(QFabric systems only) (Optional) Show time since the system rebooted and processes started on the Interconnect device.

**invoke-on**—(MX Series routers only) (Optional) Display the time since the system rebooted and processes started on the master Routing Engine, backup Routing Engine, or both, on a router with two Routing Engines.

**lcc *number***—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, show time since the system rebooted and processes started for a specific T640 router that is connected to the TX Matrix router. On a TX Matrix Plus router, show time since the system rebooted and processes started for a specific router that is connected to the TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(EX4200 switches and MX Series routers only) (Optional) Show time since the system rebooted and processes started on the local Virtual Chassis member.

**member *member-id***—(EX4200 switches and MX Series routers only) (Optional) Show time since the system rebooted and processes started on the specified member of the Virtual Chassis configuration. For EX4200 switches, replace ***member-id*** with a value from 0 through 9. For an MX Series Virtual Chassis, replace ***member-id*** with a value of 0 or 1.

**node-group *name***—(QFabric systems only) (Optional) Show time since the system rebooted and processes started on the Node group.

**scc**—(TX Matrix routers only) (Optional) Show time since the system rebooted and processes started for the TX Matrix router (or switch-card chassis).

**sfc *number***—(TX Matrix Plus routers only) (Optional) Show time since the system rebooted and processes started for the TX Matrix Plus router. Replace ***number*** with 0.

**Additional Information** By default, when you issue the **show system uptime** command on the master Routing Engine of a TX Matrix router or a TX Matrix Plus router, the command is broadcast to all the master Routing Engines of the LCCs connected to it in the routing matrix. Likewise, if you issue the same command on the backup Routing Engine of a TX Matrix or a TX Matrix Plus router, the command is broadcast to all backup Routing Engines of the LCCs that are connected to it in the routing matrix.

**Required Privilege Level** view

**Related Documentation**

- [10-Gigabit Ethernet LAN/WAN PIC with XFP \(T640 Router\)](#)
- [Routing Matrix with a TX Matrix Plus Router Solutions Page](#)

**List of Sample Output**

- [show system uptime on page 1184](#)
- [show system uptime all-lcc \(TX Matrix Router\) on page 1184](#)
- [show system uptime all-lcc \(TX Matrix Plus Router\) on page 1184](#)
- [show system uptime \(EX Series\) on page 1185](#)
- [show system uptime \(QFX Series\) on page 1185](#)

**Output Fields** [Table 46 on page 1183](#) describes the output fields for the **show system uptime** command. Output fields are listed in the approximate order in which they appear.

*Table 46: show system uptime Output Fields*

Field Name	Field Description
Current time	Current system time in UTC.
Time Source	Reference time source that the system is locked to.
System booted	Date and time when the Routing Engine on the router or switch was last booted and how long it has been running.

Table 46: show system uptime Output Fields (continued)

Field Name	Field Description
<b>Protocols started</b>	Date and time when the routing protocols were last started and how long they have been running.
<b>Last configured</b>	Date and time when a configuration was last committed. Also shows the name of the user who issued the last <b>commit</b> command.
<b>time and up</b>	Current time, in the local time zone, and how long the router or switch has been operational.
<b>users</b>	Number of users logged in to the router or switch.
<b>load averages</b>	Load averages for the last 1 minute, 5 minutes, and 15 minutes.

## Sample Output

### show system uptime

```

user@host> show system uptime
Current time:      1998-10-13 19:45:47 UTC
Time Source:      NTP CLOCK
System booted:    1998-10-12 20:51:41 UTC (22:54:06 ago)
Protocols started: 1998-10-13 19:33:45 UTC (00:12:02 ago)
Last configured:  1998-10-13 19:33:45 UTC (00:12:02 ago) by abc
12:45PM up 22:54, 2 users, load averages: 0.07, 0.02, 0.01

```

### show system uptime all-lcc (TX Matrix Router)

```

user@host> show system uptime all-lcc
lcc0-re0:
-----
Current time: 2004-09-13 09:55:35 PDT
Time Source: LOCAL CLOCK
System booted: 2004-09-13 03:13:55 PDT (06:41:40 ago)
Last configured: 2004-09-13 03:17:48 PDT (06:37:47 ago) by root
9:55AM PDT up 6:42, 1 user, load averages: 0.02, 0.03, 0.00
lcc2-re0:
-----
Current time: 2004-09-13 09:55:35 PDT
Time Source: LOCAL CLOCK
System booted: 2004-09-12 03:23:43 PDT (1d 06:31 ago)
Last configured: 2004-09-13 03:05:36 PDT (06:49:59 ago) by root
9:55AM PDT up 1 day, 6:32, 1 user, load averages: 0.02, 0.01, 0.00

```

### show system uptime all-lcc (TX Matrix Plus Router)

```

user@host> show system uptime all-lcc
sfc0-re0:
-----
Current time: 2009-05-25 00:24:30 PDT
Time Source: NTP CLOCK
System booted: 2009-05-24 06:39:33 PDT (17:44:57 ago)
Protocols started: 2009-05-24 06:40:30 PDT (17:44:00 ago)
Last configured: 2009-05-24 06:33:27 PDT (17:51:03 ago) by user1
12:24AM up 17:45, 2 users, load averages: 0.07, 0.05, 0.01

```



lcc0-re0:

```
-----
Current time: 2009-05-25 00:24:30 PDT
Time Source: NTP CLOCK
System booted: 2009-05-24 06:39:46 PDT (17:44:44 ago)
error: the routing subsystem is not running
Last configured: 2009-05-24 06:40:47 PDT (17:43:43 ago) by root
12:24AM up 17:45, 0 users, load averages: 0.00, 0.00, 0.00
```

lcc1-re0:

```
-----
Current time: 2009-05-25 00:24:30 PDT
Time Source: NTP CLOCK
System booted: 2009-05-24 06:39:38 PDT (17:44:52 ago)
error: the routing subsystem is not running
Last configured: 2009-05-24 06:40:18 PDT (17:44:12 ago) by root
12:24AM up 17:45, 0 users, load averages: 0.00, 0.00, 0.00
```

lcc2-re0:

```
-----
Current time: 2009-05-25 00:24:30 PDT
Time Source: NTP CLOCK
System booted: 2009-05-24 06:39:48 PDT (17:44:42 ago)
error: the routing subsystem is not running
Last configured: 2009-05-24 06:40:44 PDT (17:43:46 ago) by root
12:24AM up 17:45, 0 users, load averages: 0.00, 0.00, 0.00
```

lcc3-re0:

```
-----
Current time: 2009-05-25 00:24:30 PDT
Time Source: NTP CLOCK
System booted: 2009-05-24 06:39:44 PDT (17:44:46 ago)
error: the routing subsystem is not running
Last configured: 2009-05-24 06:40:08 PDT (17:44:22 ago) by root
12:24AM up 17:45, 0 users, load averages: 0.00, 0.00, 0.00
```

### show system uptime (EX Series)

```
user@switch> show system uptime
Current time: 2014-03-12 16:39:56 UTC
Time Source: NTP CLOCK
System booted: 2014-03-12 14:58:05 UTC (01:41:51 ago)
Protocols started: 2014-03-12 14:59:48 UTC (01:40:08 ago)
Last configured: 2014-03-12 14:58:58 UTC (01:40:58 ago) by root
4:39PM up 1:42, 4 users, load averages: 0.02, 0.02, 0.00
```

### show system uptime (QFX Series)

```
user@switch> show system uptime
Current time: 2010-08-27 03:12:30 PDT
Time Source: NTP CLOCK
System booted: 2010-08-13 17:11:54 PDT (1w6d 10:00 ago)
Protocols started: 2010-08-13 17:13:56 PDT (1w6d 09:58 ago)
Last configured: 2010-08-26 05:54:00 PDT (21:18:30 ago) by user
3:12AM up 13 days, 10:01, 3 users, load averages: 0.00, 0.00, 0.00
```

## show system virtual-memory

---

<b>List of Syntax</b>	<a href="#">Syntax on page 1186</a> <a href="#">Syntax (EX Series) on page 1186</a> <a href="#">Syntax (TX Matrix Router) on page 1186</a> <a href="#">Syntax (TX Matrix Plus Router) on page 1186</a> <a href="#">Syntax (MX Series Router) on page 1186</a> <a href="#">Syntax (QFX Series) on page 1186</a> <a href="#">Syntax (SRX Series) on page 1186</a>
<b>Syntax</b>	show system virtual-memory
<b>Syntax (EX Series)</b>	show system virtual-memory <all-members> <local> <member <i>member-id</i> >
<b>Syntax (TX Matrix Router)</b>	show system virtual-memory <all-chassis   all-lcc   lcc <i>number</i>   scc>
<b>Syntax (TX Matrix Plus Router)</b>	show system virtual-memory <all-chassis   all-lcc   lcc <i>number</i>   sfc <i>number</i> >
<b>Syntax (MX Series Router)</b>	show system virtual-memory <all-members> <local> <member <i>member-id</i> >
<b>Syntax (QFX Series)</b>	show system virtual-memory <infrastructure <i>name</i> > <interconnect-device <i>name</i> > <node-group <i>name</i> >
<b>Syntax (SRX Series)</b>	show system virtual-memory
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. Command introduced in Junos OS Release 9.0 for EX Series switches. <b>sfc</b> option introduced for the TX Matrix Plus router in Junos OS Release 9.6. Command introduced in Junos OS Release 11.1 for the QFX Series. Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Display the usage of Junos OS kernel memory listed first by size of allocation and then by type of usage. Use the <b>show system virtual-memory</b> command for troubleshooting with Juniper Networks Customer Support.
<b>Options</b>	<b>none</b> —Display kernel dynamic memory usage information.

**all-chassis**—(TX Matrix routers and TX Matrix Plus routers only) (Optional) Display kernel dynamic memory usage information for all chassis.

**all-lcc**—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display kernel dynamic memory usage information for all T640 routers connected to the TX Matrix router. On a TX Matrix Plus router, display kernel dynamic memory usage information for all connected T1600 or T4000 LCCs.

**all-members**—(EX4200 switches and MX Series routers only) (Optional) Display kernel dynamic memory usage information for all members of the Virtual Chassis configuration.

**infrastructure *name***—(QFabric systems only) (Optional) Display kernel dynamic memory usage information for the fabric control Routing Engine and fabric manager Routing Engine.

**interconnect-device *name***—(QFabric systems only) (Optional) Display kernel dynamic memory usage information for the Interconnect device.

**lcc *number***—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display kernel dynamic memory usage information for a specific T640 router that is connected to the TX Matrix router. On a TX Matrix Plus router, display kernel dynamic memory usage information for a specific router that is connected to the TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(EX4200 switches and MX Series routers only) (Optional) Display kernel dynamic memory usage information for the local Virtual Chassis member.

**member *member-id***—(EX4200 switches and MX Series routers only) (Optional) Display kernel dynamic memory usage information for the specified member of the Virtual Chassis configuration. For EX4200 switches, replace *member-id* with a value from 0 through 9. For an MX Series Virtual Chassis, replace *member-id* with a value of 0 or 1.

**node-group *name***—(QFabric systems only) (Optional) Display kernel dynamic memory usage information for the Node group.

**scc**—(TX Matrix routers only) (Optional) Display kernel dynamic memory usage information for the TX Matrix router (or switch-card chassis).

**sfc *number***—(TX Matrix Plus routers only) (Optional) Display kernel dynamic memory usage information for the TX Matrix Plus router. Replace ***number*** with 0.

**Additional Information** By default, when you issue the **show system virtual-memory** command on the master Routing Engine of a TX Matrix router or a TX Matrix Plus router, the command is broadcast to all the master Routing Engines of the LCCs connected to it in the routing matrix. Likewise, if you issue the same command on the backup Routing Engine of a TX Matrix or a TX Matrix Plus router, the command is broadcast to all backup Routing Engines of the LCCs that are connected to it in the routing matrix.



**NOTE:** The **show system virtual-memory** command with the **| display XML** pipe option now displays XML output for the command in the parent tags: **<vmstat-memstat-malloc>**, **<vmstat-memstat-zone>**, **<vmstat-sumstat>**, **<vmstat-intr>**, and **<vmstat-kernel-state>** with each child element as a separate XML tag. In Junos OS Releases 10.1 and earlier, the **| display XML** option for this command does not have an XML API element and the entire output is displayed in a single **<output>** tag element.

**Required Privilege Level** view

**Related Documentation**

- [Routing Matrix with a TX Matrix Plus Router Solutions Page](#)

**List of Sample Output** [show system virtual-memory on page 1190](#)  
[show system virtual-memory scc \(TX Matrix Router\) on page 1194](#)  
[show system virtual-memory sfc \(TX Matrix Plus Router\) on page 1195](#)  
[show system virtual-memory | display xml on page 1198](#)  
[show system virtual-memory \(QFX Series\) on page 1221](#)

**Output Fields** [Table 47 on page 1189](#) lists the output fields for the **show system virtual-memory** command. Output fields are listed in the approximate order in which they appear.

Table 47: show system virtual-memory Output Fields

Field Name	Field Description
<b>Memory statistics by bucket size</b>	
<b>Size</b>	Memory block size (bytes). The kernel memory allocator appropriates blocks of memory whose size is exactly a power of 2.
<b>In Use</b>	Number of memory blocks of this size that are in use (bytes).
<b>Free</b>	Number of memory blocks of this size that are free (bytes).
<b>Requests</b>	Number of memory allocation requests made.
<b>HighWater</b>	Maximum value the free list can have. Once the system starts reclaiming physical memory, it continues until the free list is increased to this value.
<b>Couldfree</b>	Total number of times that the free elements for a bucket size exceed the high-water mark for that bucket size.
<b>Memory usage type by bucket size</b>	
<b>Size</b>	Memory block size (bytes).
<b>Type(s)</b>	Kernel modules that are using these memory blocks. For a definition of each type, refer to a FreeBSD book.
<b>Memory statistics by type</b>	
<b>Type</b>	Kernel module that is using dynamic memory.
<b>InUse</b>	Number of memory blocks used by this type. The number is rounded up.
<b>MemUse</b>	Amount of memory in use, in kilobytes (KB).
<b>HighUse</b>	Maximum memory ever used by this type.
<b>Limit</b>	Maximum memory that can be allocated to this type.
<b>Requests</b>	Total number of dynamic memory allocation requests this type has made.
<b>Type Limit</b>	Number of times requests were blocked for reaching the maximum limit.
<b>Kern Limit</b>	Number of times requests were blocked for the kernel map.
<b>Size(s)</b>	Memory block sizes this type is using.
<b>Memory Totals</b>	
<b>In Use</b>	Total kernel dynamic memory in use (bytes, rounded up).
<b>Free</b>	Total kernel dynamic memory free (bytes, rounded up).

Table 47: show system virtual-memory Output Fields (continued)

Field Name	Field Description
<b>Requests</b>	Total number of memory allocation requests.
<b>ITEM</b>	Kernel module that is using memory.
<b>Size</b>	Memory block size (bytes).
<b>Limit</b>	Maximum memory that can be allocated to this type.
<b>Used</b>	Number of memory blocks used by this type. The number is rounded up.
<b>Free</b>	Number of memory blocks available to this type.
<b>Requests</b>	Total number of memory allocation requests this type has made.
<b>interrupt</b>	Timer events and scheduling interruptions.
<b>total</b>	Total number of interruptions for each type.
<b>rate</b>	Interruption rate.
<b>Total</b>	Total for all interruptions.

## Sample Output

### show system virtual-memory

```

user@host> show system virtual-memory
Memory statistics by bucket size
Size  In Use  Free  Requests  HighWater  Couldfree
16    906    118    154876    1280        0
32    455    313    209956    640         0
64    4412   260    75380     320        20
128   3200   32     19361     160        81
256   1510   10     8844      80         4
512   446    2      5085      40         0
1K    18     2      5901      20         0
2K    1128   2      4445      10        1368
4K    185    1       456       5         0
8K     5     1      2653       5         0
16K   181    0       233       5         0
32K    2     0      1848       5         0
64K    20    0       22        5         0
128K   5     0        5        5         0
256K   2     0        2        5         0
512K   1     0        1        5         0

Memory usage type by bucket size
Size  Type(s)
16    uc_devlist, nexusdev, iftable, temp, devbuf, atexit, COS, BPF,
      DEVFS mount, DEVFS node, vnodes, mount, pcb, soname, proc-args, kld,
      MD disk, rman, ATA generic, bus, sysctl, ippool, pfestat, ifstate,

```

```

pfe_ipc, mkey, rtable, ifmaddr, ipfw, rnode
32 atkbddev, dirrem, mkdir, diradd, freefile, freefrag, indirdep,
bmsafemap, newblk, temp, devbuf, COS, vnodes, cluster_save buffer,
pcb, soname, proc-args, sigio, kld, Gzip trees, taskqueue, SWAP,
eventhandler, bus, sysctl, uidinfo, subproc, pgrp, pfestat, itable32,
ifstate, pfe_ipc, mkey, rtable, ifmaddr, ipfw, rnode, rtnexthop
64 isadev, iftable, MFS node, allocindir, allocdirect, pagedep, temp,
devbuf, lockf, COS, NULLFS hash, DEVFS name, vnodes,
cluster_save buffer, vfscache, pcb, soname, proc-args, file,
AR driver, AD driver, Gzip trees, rman, eventhandler, bus, sysctl,
subproc, pfestat, pic, ifstate, pfe_ipc, mkey, ifaddr, rtable, ipfw
128 ZONE, freeblks, inodedep, temp, devbuf, zombie, COS, DEVFS node,
vnodes, mount, vfscache, pcb, soname, proc-args, ttys, dev_t,
timecounter, kld, Gzip trees, ISOFS node, bus, uidinfo, cred,
session, pic, itable16, ifstate, pfe_ipc, rtable, ifstat, metrics,
rtnexthop, iffamily
256 iflogical, iftable, MFS node, FFS node, newblk, temp, devbuf,
NFS daemon, vnodes, proc-args, kqueue, file desc, Gzip trees, bus,
subproc, itable16, ifstate, pfe_ipc, sysctl, rtnexthop
512 UFS mount, temp, devbuf, mount, BIO buffer, ptys, ttys, AR driver,
Gzip trees, ISOFS mount, msg, iocltops, ATA generic, bus, proc,
pfestat, lr, ifstate, pfe_ipc, rtable, ipfw, ifstat, rtnexthop
1K iftable, temp, devbuf, NQ NFS Lease, kqueue, kld, AD driver,
Gzip trees, sem, MD disk, bus, ifstate, pfe_ipc, ipfw
2K uc_devlist, UFS mount, temp, devbuf, BIO buffer, pcb, AR driver,
Gzip trees, iocltops, bus, ipfw, ifstat, rcache
4K memdesc, iftable, UFS mount, temp, devbuf, kld, Gzip trees, sem, msg
8K temp, devbuf, syncache, Gzip trees
16K indirdep, temp, devbuf, shm, msg
32K pagedep, kld, Gzip trees
64K VM pgdata, devbuf, MSDOSFS mount
128K UFS ihash, inodedep, NFS hash, kld, ISOFS mount
256K mbuf, vfscache
512K SWAP

```

Memory statistics by type					Type	Kern		
Type	InUse	MemUse	HighUse	Limit	Requests	Limit	Limit	Size(s)
isadev	13	1K	1K127753K	13	0	0	0	64
atkbddev	2	1K	1K127753K	2	0	0	0	32
uc_devlist	24	3K	3K127753K	24	0	0	0	16,2K
nexusdev	3	1K	1K127753K	3	0	0	0	16
memdesc	1	4K	4K127753K	1	0	0	0	4K
mbuf	1	152K	152K127753K	1	0	0	0	256K
iflogical	6	2K	2K127753K	6	0	0	0	256
iftable	17	9K	9K127753K	18	0	0	0	16,64,256,1K,4K
ZONE	15	2K	2K127753K	15	0	0	0	128
VM pgdata	1	64K	64K127753K	1	0	0	0	64K
UFS mount	12	26K	26K127753K	12	0	0	0	512,2K,4K
UFS ihash	1	128K	128K127753K	1	0	0	0	128K
MFS node	6	2K	3K127753K	35	0	0	0	64,256
FFS node	906	227K	227K127753K	1352	0	0	0	256
dirrem	0	0K	4K127753K	500	0	0	0	32
mkdir	0	0K	1K127753K	38	0	0	0	32
diradd	0	0K	6K127753K	521	0	0	0	32
freefile	0	0K	4K127753K	374	0	0	0	32
freeblks	0	0K	8K127753K	219	0	0	0	128
freefrag	0	0K	1K127753K	193	0	0	0	32
allocindir	0	0K	25K127753K	1518	0	0	0	64
indirdep	0	0K	17K127753K	76	0	0	0	32,16K
allocdirect	0	0K	10K127753K	760	0	0	0	64
bmsafemap	0	0K	1K127753K	72	0	0	0	32

newblk	1	1K	1K127753K	2279	0	0	32,256
inodedep	1	128K	175K127753K	2367	0	0	128,128K
pagedep	1	32K	33K127753K	47	0	0	64,32K
temp	1239	92K	96K127753K	8364	0	0	16,32,64K
devbuf	1413	5527K	5527K127753K	1535	0	0	16,32,64,128,256
lockf	38	3K	3K127753K	2906	0	0	64
atexit	1	1K	1K127753K	1	0	0	16
zombie	0	0K	2K127753K	3850	0	0	128
NFS hash	1	128K	128K127753K	1	0	0	128K
NQNFS Lease	1	1K	1K127753K	1	0	0	1K
NFS daemon	1	1K	1K127753K	1	0	0	256
syncache	1	8K	8K127753K	1	0	0	8K
COS	353	44K	44K127753K	353	0	0	16,32,64,128
BPF	189	3K	3K127753K	189	0	0	16
MSDOSFS mount	1	64K	64K127753K	1	0	0	64K
NULLFS hash	1	1K	1K127753K	1	0	0	64
DEVFS mount	2	1K	1K127753K	2	0	0	16
DEVFS name	487	31K	31K127753K	487	0	0	64
DEVFS node	471	58K	58K127753K	479	0	0	16,128
vnodes	28	7K	7K127753K	429	0	0	16,32,64,128,256
mount	15	8K	8K127753K	18	0	0	16,128,512
cluster_save buffer	0	0K	1K127753K	55	0	0	32,64
vfscache	1898	376K	376K127753K	3228	0	0	64,128,256K
BIO buffer	49	98K	398K127753K	495	0	0	512,2K
pcb	159	16K	17K127753K	399	0	0	16,32,64,128,2K
soname	82	10K	10K127753K	42847	0	0	16,32,64,128
proc-args	57	2K	3K127753K	2105	0	0	16,32,64,128,256
ptys	32	16K	16K127753K	32	0	0	512
ttys	254	33K	33K127753K	522	0	0	128,512
kqueue	5	3K	4K127753K	23	0	0	256,1K
sigio	1	1K	1K127753K	27	0	0	32
file	383	24K	24K127753K	16060	0	0	64
file desc	76	19K	20K127753K	3968	0	0	256
shm	1	12K	12K127753K	1	0	0	16K
dev_t	286	36K	36K127753K	286	0	0	128
timecounter	10	2K	2K127753K	10	0	0	128
kld	11	117K	122K127753K	34	0	0	16,32,128,1K,4K
AR driver	1	1K	3K127753K	5	0	0	64,512,2K
AD driver	2	2K	3K127753K	2755	0	0	64,1K
Gzip trees	0	0K	46K127753K	133848	0	0	32,64,128,256
ISOFS node	1136	142K	142K127753K	1189	0	0	128
ISOFS mount	9	132K	132K127753K	10	0	0	512,128K
sem	3	6K	6K127753K	3	0	0	1K,4K
MD disk	2	2K	2K127753K	2	0	0	16,1K
msg	4	25K	25K127753K	4	0	0	512,4K,16K
rman	59	4K	4K127753K	461	0	0	16,64
ioctlops	0	0K	2K127753K	992	0	0	512,2K
taskqueue	2	1K	1K127753K	2	0	0	32
SWAP	2	413K	413K127753K	2	0	0	32,512K
ATA generic	6	3K	3K127753K	6	0	0	16,512
eventhandler	17	1K	1K127753K	17	0	0	32,64
bus	340	30K	31K127753K	794	0	0	16,32,64,128,256
sysctl	0	0K	1K127753K	130262	0	0	16,32,64
uidinfo	4	1K	1K127753K	10	0	0	32,128
cred	22	3K	3K127753K	3450	0	0	128
subproc	156	10K	10K127753K	7882	0	0	32,64,256
proc	2	1K	1K127753K	2	0	0	512
session	12	2K	2K127753K	34	0	0	128
pgrp	16	1K	1K127753K	45	0	0	32
ippool	1	1K	1K127753K	1	0	0	16
pfestat	0	0K	1K127753K	47349	0	0	16,32,64,512



pic	5	1K	1K127753K	5	0	0	64,128
lr	1	1K	1K127753K	1	0	0	512
itable32	110	4K	4K127753K	110	0	0	32
itable16	161	26K	26K127753K	161	0	0	128,256
ifstate	694	159K	160K127753K	1735	0	0	16,32,64,128,1K
pfe_ipc	0	0K	1K127753K	56218	0	0	16,32,64,128,1K
mkey	250	4K	4K127753K	824	0	0	16,32,64
ifaddr	9	1K	1K127753K	9	0	0	64
sysctl	0	0K	1K127753K	30	0	0	256
rtable	49	6K	6K127753K	307	0	0	16,32,64,128,512
ifmaddr	22	1K	1K127753K	22	0	0	16,32
ipfw	23	10K	10K127753K	48	0	0	16,32,64,512,2K
ifstat	698	805K	805K127753K	698	0	0	128,512,2K
rcache	4	8K	8K127753K	4	0	0	2K
rnode	27	1K	1K127753K	285	0	0	16,32
metrics	1	1K	1K127753K	3	0	0	128
rtnexthop	57	9K	9K127753K	312	0	0	32,128,256,512
iffamily	12	2K	2K127753K	12	0	0	128

Memory Totals:	In Use	Free	Requests
	9311K	54K	489068

ITEM	SIZE	LIMIT	USED	FREE	REQUESTS
PIPE:	192,	0,	4,	81,	4422
SWAPMETA:	160,	95814,	0,	0,	0
unpcb:	160,	0,	114,	36,	279
ripcb:	192,	25330,	5,	37,	5
syncache:	128,	15359,	0,	64,	5
tcpcb:	576,	25330,	23,	12,	32
udpcb:	192,	25330,	14,	28,	255
socket:	256,	25330,	246,	26,	819
KNOTE:	96,	0,	27,	57,	71
NFSNODE:	352,	0,	0,	0,	0
NFSMOUNT:	544,	0,	0,	0,	0
VNODE:	224,	0,	2778,	43,	2778
NAMEI:	1024,	0,	0,	8,	40725
VMSPACE:	192,	0,	57,	71,	3906
PROC:	448,	0,	73,	17,	3923
DP fakepg:	64,	0,	0,	0,	0
PV ENTRY:	28,	499566,	44530,	152053,	1525141
MAP ENTRY:	48,	0,	1439,	134,	351075
KMAP ENTRY:	48,	35645,	179,	119,	10904
MAP:	108,	0,	7,	3,	7
VM OBJECT:	92,	0,	2575,	109,	66912

```

792644 cpu context switches
9863474 device interrupts
286510 software interrupts
390851 traps
3596829 system calls
  16 kernel threads created
 3880 fork() calls
   27 vfork() calls
    0 rfork() calls
    0 swap pager pageins
    0 swap pager pages paged in
    0 swap pager pageouts
    0 swap pager pages paged out
 380 vnode pager pageins
 395 vnode pager pages paged in
 122 vnode pager pageouts

```

```

1476 vnode pager pages paged out
    0 page daemon wakeups
    0 pages examined by the page daemon
101 pages reactivated
161722 copy-on-write faults
    0 copy-on-write optimized faults
84623 zero fill pages zeroed
83063 zero fill pages prezeroed
    7 intransit blocking page faults
535606 total VM faults taken
    0 pages affected by kernel thread creation
238254 pages affected by fork()
    2535 pages affected by vfork()
    0 pages affected by rfork()
283379 pages freed
    0 pages freed by daemon
190091 pages freed by exiting processes
17458 pages active
29166 pages inactive
    0 pages in VM cache
10395 pages wired down
134610 pages free
    4096 bytes per page
183419 total name lookups
    cache hits (90% pos + 7% neg) system 0% per-directory
    deletions 0%, falsehits 0%, toolong 0%

interrupt          total          rate
ata0 irq14         113338           3
mux irq7           727643          21
fxp1 irq10        1178671          34
sio0 irq4           833             0
clk irq0          3439769          99
rtc irq8          4403221         127
Total             9863475         286

Kernel direct memory map:
    4423 pages used
    4057340 pages maximum

```

*Note:* Kernel direct memory map only displays for 64 bit platform.

### show system virtual-memory scc (TX Matrix Router)

```
user@host> show system virtual-memory scc
```

Memory statistics by bucket size

Size	In Use	Free	Requests	HighWater	Couldfree
16	898	126	749493	1280	0
32	2018	1310	980643	640	632
64	3490	13342	935420	320	5365
...					

Memory usage type by bucket size

Size	Type(s)
16	uc_devlist, COS, BPF, DEVFS mount, DEVFS node, vnodes, mount, pcb, soname, rman, bus, sysctl, ifstate, pfe_ipc, mkey, socket, rtable, ifmaddr, ipfw, rnode, iftable, temp, devbuf, atexit, proc-args, kld, MD disk
32	atkbddev, Gzip trees, dirrem, mkdir, diradd, freefile, freefrag, indirdep, bmsafemap, newblk, tseg_qent, COS, vnodes,

...

```

Memory statistics by type
      Type InUse MemUse HighUse Limit Requests Limit Limit Size(s)
      isadev 12 1K 1K166400K 12 0 0 64
      atkbddev 2 1K 1K166400K 2 0 0 32
      uc_devlist 24 3K 3K166400K 24 0 0 16,2K
      ....

Memory Totals: In Use Free Requests
                6091K 1554K 2897122

```

### show system virtual-memory sfc (TX Matrix Plus Router)

```

user@host> show system virtual-memory sfc 0
sfc0-re0:

```

```

-----
      Type InUse MemUse HighUse Requests Size(s)
CAM dev queue 1 1K - 1 64
  entropy 1024 64K - 1024 64
  linker 487 6272K - 1163 16,32,64,4096,32768,131072
  USB 127 10K - 127 16,32,64,128,256,1024,2048
  lockf 46 3K - 98418 64
  USBdev 10 2K - 34 16,128,2048,16384
ifstateSLLNode 0 0K - 1096 16
  devbuf 21243 15683K - 21810
16,32,64,128,256,512,1024,2048,4096,8192,16384,32768,65536,131072
  temp 1283 151K - 2483472
16,32,64,128,256,512,1024,2048,4096,8192,16384,32768,65536,131072
  ip6ndp 0 0K - 4 64
  in6ifmulti 1 1K - 1 64
  in6grenty 1 1K - 1 64
  iflogical 20 5K - 29 2048
  iffamilly 45 6K - 69 32,1024,2048
  rtnexthop 266 46K - 608013 32,256,512,1024,2048,4096
  metrics 31 4K - 54 256
  rnode 212 4K - 607848 16,32
  rcache 4 8K - 4 65536
  iflist 0 0K - 6 16,64
  ifdevice 11 8K - 17 16,32768
  ifstat 424 472K - 427 512,16384,65536
  ipfw 42 23K - 145
16,32,64,128,256,512,1024,16384,32768,65536,131072
  ifmaddr 415 11K - 415 16,32
  rtable 329 28K - 608066 16,32,64,128,1024,16384
  sysctl 0 0K - 887976 16,32,64,4096,16384,32768
  ifaddr 64 5K - 70 32,64,128
  mkey 331 6K - 12528 16,128
  pfe_ipc 0 0K - 7299115
16,32,64,128,256,512,1024,2048,4096,8192,16384,32768,65536,131072
  ifstate 1245054 70088K - 3040437
16,32,64,128,256,512,1024,2048,4096,8192,16384,32768
  idxbucket 1 1K - 1 16
  itable16 5069 1250K - 5103 1024,4096
  itable32 157 10K - 157 64
  itable64 2 1K - 2 128
  lr 1 1K - 4 16384
  pic 37 6K - 37 64,16384
  pfestat 0 0K - 6220 32,64,128,256,131072
  gencfg 1486 424K - 2614 16,32,64,256,512,16384,32768,65536

```

```

        jsr      2      1K      -      22  16
        idl      1      4K      -      165
32, 64, 128, 256, 512, 1024, 2048, 8192, 16384, 32768, 65536, 131072
        rtmsg    0      0K      -      16  131072
        module   250    16K      -      250  64, 128
        mtx_pool  1      8K      -      1   64, 128
        DEVFS3   113    13K      -      114  256
        DEVFS1   106    24K      -      106  2048
        pgrp     15     1K      -      8600  64
        session  11     2K      -      2829  512
        proc      2     1K      -      2   16384
        subproc   296   572K     -     24689  2048, 131072
        cred      38     5K      -     619244  256
        plimit    18     4K      -     21311  2048
        uidinfo    3     1K      -      10  32, 512
        sysctluid 2701   82K      -     2701  16, 32, 64
        sysctltmp  0      0K      -     15572  16, 32, 64, 1024
        umtx     171    11K      -      171  64
        SWAP      2    277K      -      2   64
        bus       779   125K     -     3072  16, 32, 64, 128, 32768
        bus-sc    67     62K     -     1477
16, 32, 64, 512, 1024, 2048, 8192, 16384, 65536, 131072
        devstat   8     17K      -      8   16, 131072
        eventhandler 46    2K      -      47  32, 128
        kobj      93   186K      -     111  65536
        DEVFS      8     1K      -      9   16, 64
        rman     106     7K      -     490  16, 32, 64
        sbuf       0      0K      -     28234  16, 32, 32768, 131072
...
lcc0-re0:

```

```

-----
        Type InUse MemUse HighUse Requests Size(s)
CAM dev queue   1     1K      -      1   64
        entropy 1024   64K      -     1024  64
        linker   487  6272K     -     1163  16, 32, 64, 4096, 32768, 131072
        USB      127   10K      -      127  16, 32, 64, 128, 256, 1024, 2048
        lockf    23     2K      -    169585  64
        USBdev   10     2K      -      34  16, 128, 2048, 16384
        devbuf   5128 10760K     -     5310
16, 32, 64, 128, 256, 512, 1024, 2048, 4096, 8192, 16384, 32768, 65536, 131072
        temp    1285   151K     -     10770
16, 32, 64, 128, 256, 512, 2048, 4096, 8192, 16384, 32768, 65536, 131072
        ip6ndp    0      0K      -      4   64
        iflogical 20     5K      -      29  2048
        iffamilly 45     6K      -      69  32, 1024, 2048
        rtnexthop 189    29K      -    1211988  32, 256, 512, 1024, 2048, 4096
        metrics   11     2K      -      16  256
        rnode    135     3K      -    606391  16, 32
        rcache     4     8K      -      4  65536
        iflist     0      0K      -      6  16, 64
        ifdevice  11     8K      -      17  16, 32768
        ifstat    412   471K     -     415  512, 16384, 65536
        ipfw      42    23K      -      91
16, 32, 64, 128, 256, 512, 1024, 16384, 32768, 65536, 131072
        ifmaddr   415    11K     -      415  16, 32
        rtable    225    20K     -    606584  16, 32, 64, 128, 1024, 16384
        sysctl     0      0K      -    2302479  16, 32, 64
        ifaddr    53     4K      -      69  32, 64, 128
        mkey     133     3K      -     8974  16, 128
        pfe_ipc    0      0K      -    19035108
16, 32, 64, 128, 512, 1024, 2048, 8192, 16384, 32768, 65536, 131072

```

```

ifstate 710270 42176K - 9583703
16,32,64,128,256,512,1024,2048,8192,16384,32768
idxbucket 1 1K - 1 16
itable16 5045 1245K - 1825178 1024,4096
itable32 157 10K - 157 64
itable64 2 1K - 2 128
lr 1 1K - 4 16384
pic 37 6K - 37 64,16384
pfestat 0 0K - 1682 32,64,128,256,131072
gencfg 1486 424K - 2812 16,32,64,256,512,16384,32768,65536
jsr 0 0K - 22 16
idl 0 0K - 4 32768,131072
rtsmsg 0 0K - 3 131072
module 250 16K - 250 64,128
mtx_pool 1 8K - 1 64,128
DEVFS3 108 12K - 109 256
DEVFS1 101 23K - 101 2048
pgrp 5 1K - 917 64
session 5 1K - 917 512
proc 2 1K - 2 16384
subproc 217 441K - 4867 2048,131072
cred 21 3K - 48719 256
plimit 9 2K - 5255 2048
uidinfo 2 1K - 2 32,512
sysctluid 2786 85K - 2786 16,32,64
sysctltmp 0 0K - 1833 16,32,64,1024
umtx 126 8K - 126 64
SWAP 2 277K - 2 64
bus 780 125K - 2734 16,32,64,128,32768
bus-sc 69 69K - 1194
16,32,64,512,1024,2048,8192,16384,65536,131072
devstat 8 17K - 8 16,131072
eventhandler 45 2K - 46 32,128
kobj 93 186K - 111 65536
DEVFS 8 1K - 9 16,64
rman 94 6K - 477 16,32,64
sbuf 0 0K - 532 16,32,32768,131072
NULLFS hash 1 1K - 1 64
taskqueue 5 1K - 5 64
turnstiles 127 8K - 127 64
Unitno 6 1K - 44 16,64
ioctlops 0 0K - 1771718 16,32,64,128,8192,16384,65536,131072

iov 0 0K - 79425 16,64,128,256,512,1024,2048,131072
msg 4 25K - 4 32768,131072
sem 4 7K - 4 16384,32768,131072
shm 2 13K - 4 32768
ttys 93 16K - 195 512,32768
soname 31 3K - 389284 16,32,64,256
pcb 101 16K - 4374
16,32,64,128,1024,2048,4096,16384,65536
BIO buffer 40 80K - 750 65536
vfscache 1 512K - 1 65536
cluster_save buffer 0 OK - 55 32,64
VFS hash 1 256K - 1 32,64
vnodes 1 1K - 1 512
mount 266 21K - 481 16,32,64,128,256,4096,32768
vnodemarker 0 0K - 2497 16384
pfs_nodes 25 3K - 25 128
pfs_vncache 144 5K - 386 32
STP 1 1K - 1 64

```

GEOM	173	15K	-	1068	
16,32,64,128,256,512,2048,16384,32768,131072					
syncache	1	8K	-	1	
16,32,64,128,256,512,2048,16384,32768,131072					
tlv_stat	0	0K	-	223	
16,32,64,128,256,512,2048,16384,32768,131072					
NFS daemon	1	8K	-	1	
16,32,64,128,256,512,2048,16384,32768,131072					
p1003.1b	1	1K	-	1	16
MD disk	9	18K	-	9	65536
ata_generic	2	2K	-	25	16,16384,32768
ISOFS mount	7	1K	-	13	512
ISOFS node	1439	135K	-	1453	128
CAM SIM	1	1K	-	1	64
CAM XPT	6	1K	-	9	16,64,16384
CAM periph	1	1K	-	1	128
ad_driver	2	1K	-	2	256
pagedep	1	64K	-	105	64
inodedep	1	256K	-	552	256
newblk	1	1K	-	327	64,4096
bmsafemap	0	0K	-	19	64
allocdirect	0	0K	-	326	128
freefrag	0	0K	-	31	32
freeblks	0	0K	-	103	2048
freefile	0	0K	-	175	32
diradd	0	0K	-	590	64
mkdir	0	0K	-	166	32
dirrem	0	0K	-	382	32
savedino	0	0K	-	283	512
UFS mount	15	36K	-	15	2048,65536,131072
ata_dma	6	1K	-	6	256
UMAHash	1	4K	-	5	4096,16384,32768,65536,131072
cdev	26	3K	-	26	256
file desc	111	25K	-	5199	16,1024,2048,16384
VM pgdata	2	65K	-	2	64
sigio	1	1K	-	27	32
kenv	30	5K	-	33	16,32,64,131072
atkbddev	2	1K	-	2	32
kqueue	0	0K	-	88	1024,4096,32768
proc-args	28	2K	-	3970	32,64,128,256,512,1024
isadev	23	2K	-	23	64
zombie	1	1K	-	4651	128
ithread	92	7K	-	92	16,64,256
legacydrv	3	1K	-	3	16
memdesc	1	4K	-	1	131072
nexusdev	2	1K	-	2	16
CAM queue	3	1K	-	3	16
KTRACE	100	10K	-	100	128
kbdmux	5	9K	-	5	128,2048,65536,131072
ITEM	SIZE	LIMIT	USED	FREE	REQUESTS
UMA Kgs:	136,	0,	71,	1,	71
...					

### show system virtual-memory | display xml

```

user@host> show system virtual-memory | display xml
<rpc-reply xmlns:junos="http://xml.device1.example.com/junos/10.2R1/junos">
  <system-virtual-memory-information>
    <vmstat-memstat-malloc>
      <memstat-name>CAM dev queue</memstat-name>
      <inuse>1</inuse>
    
```

```

<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>entropy</memstat-name>
<inuse>1024</inuse>
<memuse>64</memuse>
<high-use>--</high-use>
<memstat-req>1024</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>linker</memstat-name>
<inuse>481</inuse>
<memuse>1871</memuse>
<high-use>--</high-use>
<memstat-req>1145</memstat-req>
<memstat-size>16,32,64,4096,32768,131072</memstat-size>
<memstat-name>lockf</memstat-name>
<inuse>56</inuse>
<memuse>4</memuse>
<high-use>--</high-use>
<memstat-req>5998</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>devbuf</memstat-name>
<inuse>2094</inuse>
<memuse>3877</memuse>
<high-use>--</high-use>
<memstat-req>2099</memstat-req>

<memstat-size>16,32,64,128,512,1024,4096,8192,16384,32768,65536,131072</memstat-size>

<memstat-name>temp</memstat-name>
<inuse>21</inuse>
<memuse>66</memuse>
<high-use>--</high-use>
<memstat-req>3127</memstat-req>

<memstat-size>16,32,64,128,256,512,2048,4096,8192,16384,32768,65536,131072</memstat-size>

<memstat-name>ip6ndp</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>4</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>in6ifmulti</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>in6grenty</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>iflogical</memstat-name>
<inuse>13</inuse>
<memuse>3</memuse>
<high-use>--</high-use>
<memstat-req>13</memstat-req>

```

```
<memstat-size>64,2048</memstat-size>
<memstat-name>iffamily</memstat-name>
<inuse>28</inuse>
<memuse>4</memuse>
<high-use>--</high-use>
<memstat-req>28</memstat-req>
<memstat-size>32,1024,2048</memstat-size>
<memstat-name>rtnexthop</memstat-name>
<inuse>127</inuse>
<memuse>18</memuse>
<high-use>--</high-use>
<memstat-req>129</memstat-req>
<memstat-size>32,256,512,1024,2048,4096</memstat-size>
<memstat-name>metrics</memstat-name>
<inuse>3</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>5</memstat-req>
<memstat-size>256</memstat-size>
<memstat-name>inifmulti</memstat-name>
<inuse>3</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>3</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>ingrentry</memstat-name>
<inuse>6</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>6</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>rnode</memstat-name>
<inuse>68</inuse>
<memuse>2</memuse>
<high-use>--</high-use>
<memstat-req>76</memstat-req>
<memstat-size>16,32</memstat-size>
<memstat-name>rcache</memstat-name>
<inuse>4</inuse>
<memuse>8</memuse>
<high-use>--</high-use>
<memstat-req>4</memstat-req>
<memstat-size>65536</memstat-size>
<memstat-name>ifdevice</memstat-name>
<inuse>4</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>4</memstat-req>
<memstat-size>16</memstat-size>
<memstat-name>ifstat</memstat-name>
<inuse>40</inuse>
<memuse>22</memuse>
<high-use>--</high-use>
<memstat-req>40</memstat-req>
<memstat-size>512,16384,32768</memstat-size>
<memstat-name>ipfw</memstat-name>
<inuse>42</inuse>
<memuse>23</memuse>
<high-use>--</high-use>
<memstat-req>91</memstat-req>
```



```

<memstat-size>16,32,64,128,256,512,1024,16384,32768,65536,131072</memstat-size>
  <memstat-name>ifmaddr</memstat-name>
  <inuse>103</inuse>
  <memuse>3</memuse>
  <high-use>--</high-use>
  <memstat-req>103</memstat-req>
  <memstat-size>16,32</memstat-size>
  <memstat-name>rtable</memstat-name>
  <inuse>129</inuse>
  <memuse>14</memuse>
  <high-use>--</high-use>
  <memstat-req>139</memstat-req>
  <memstat-size>16,32,64,128,1024,16384</memstat-size>
  <memstat-name>sysctl</memstat-name>
  <inuse>0</inuse>
  <memuse>0</memuse>
  <high-use>--</high-use>
  <memstat-req>14847</memstat-req>
  <memstat-size>16,32,64,4096,16384,32768</memstat-size>
  <memstat-name>ifaddr</memstat-name>
  <inuse>29</inuse>
  <memuse>3</memuse>
  <high-use>--</high-use>
  <memstat-req>29</memstat-req>
  <memstat-size>64,128</memstat-size>
  <memstat-name>mkey</memstat-name>
  <inuse>345</inuse>
  <memuse>6</memuse>
  <high-use>--</high-use>
  <memstat-req>2527</memstat-req>
  <memstat-size>16,128</memstat-size>
  <memstat-name>pfe_ipc</memstat-name>
  <inuse>0</inuse>
  <memuse>0</memuse>
  <high-use>--</high-use>
  <memstat-req>1422</memstat-req>

<memstat-size>16,32,64,128,512,1024,2048,8192,16384,32768,65536,131072</memstat-size>
  <memstat-name>ifstate</memstat-name>
  <inuse>594</inuse>
  <memuse>51</memuse>
  <high-use>--</high-use>
  <memstat-req>655</memstat-req>

<memstat-size>16,32,64,128,256,1024,2048,4096,16384,32768</memstat-size>
  <memstat-name>itable16</memstat-name>
  <inuse>276</inuse>
  <memuse>52</memuse>
  <high-use>--</high-use>
  <memstat-req>294</memstat-req>
  <memstat-size>1024,4096</memstat-size>
  <memstat-name>itable32</memstat-name>
  <inuse>160</inuse>
  <memuse>10</memuse>
  <high-use>--</high-use>
  <memstat-req>160</memstat-req>
  <memstat-size>64</memstat-size>
  <memstat-name>itable64</memstat-name>
  <inuse>2</inuse>
  <memuse>1</memuse>

```

```
<high-use>--</high-use>
<memstat-req>2</memstat-req>
<memstat-size>128</memstat-size>
<memstat-name>lr</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>16384</memstat-size>
<memstat-name>pic</memstat-name>
<inuse>5</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>5</memstat-req>
<memstat-size>64,512</memstat-size>
<memstat-name>pfestat</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>162</memstat-req>
<memstat-size>16,32,128,256,16384</memstat-size>
<memstat-name>gencfg</memstat-name>
<inuse>224</inuse>
<memuse>56</memuse>
<high-use>--</high-use>
<memstat-req>540</memstat-req>
<memstat-size>16,32,64,256,512,32768,65536</memstat-size>
<memstat-name>jsr</memstat-name>
<inuse>2</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>4</memstat-req>
<memstat-size>16</memstat-size>
<memstat-name>idl</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>13</memstat-req>
<memstat-size>16,32,64,128,256,4096,16384,32768,131072</memstat-size>

<memstat-name>rtsmsg</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>2</memstat-req>
<memstat-size>131072</memstat-size>
<memstat-name>module</memstat-name>
<inuse>249</inuse>
<memuse>16</memuse>
<high-use>--</high-use>
<memstat-req>249</memstat-req>
<memstat-size>64,128</memstat-size>
<memstat-name>mtx_pool</memstat-name>
<inuse>1</inuse>
<memuse>8</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>64,128</memstat-size>
<memstat-name>DEVFS3</memstat-name>
<inuse>109</inuse>
<memuse>12</memuse>
```

```

<high-use>--</high-use>
<memstat-req>117</memstat-req>
<memstat-size>256</memstat-size>
<memstat-name>DEVFS1</memstat-name>
<inuse>102</inuse>
<memuse>23</memuse>
<high-use>--</high-use>
<memstat-req>109</memstat-req>
<memstat-size>2048</memstat-size>
<memstat-name>pgrp</memstat-name>
<inuse>12</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>21</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>session</memstat-name>
<inuse>8</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>15</memstat-req>
<memstat-size>512</memstat-size>
<memstat-name>proc</memstat-name>
<inuse>2</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>2</memstat-req>
<memstat-size>16384</memstat-size>
<memstat-name>subproc</memstat-name>
<inuse>244</inuse>
<memuse>496</memuse>
<high-use>--</high-use>
<memstat-req>1522</memstat-req>
<memstat-size>2048,131072</memstat-size>
<memstat-name>cred</memstat-name>
<inuse>30</inuse>
<memuse>4</memuse>
<high-use>--</high-use>
<memstat-req>11409</memstat-req>
<memstat-size>256</memstat-size>
<memstat-name>plimit</memstat-name>
<inuse>17</inuse>
<memuse>4</memuse>
<high-use>--</high-use>
<memstat-req>133</memstat-req>
<memstat-size>2048</memstat-size>
<memstat-name>uidinfo</memstat-name>
<inuse>3</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>6</memstat-req>
<memstat-size>32,512</memstat-size>
<memstat-name>sysctlpid</memstat-name>
<inuse>1117</inuse>
<memuse>34</memuse>
<high-use>--</high-use>
<memstat-req>1117</memstat-req>
<memstat-size>16,32,64</memstat-size>
<memstat-name>sysctltmp</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>

```

```
<memstat-req>743</memstat-req>
<memstat-size>16,32,64,1024</memstat-size>
<memstat-name>umtx</memstat-name>
<inuse>144</inuse>
<memuse>9</memuse>
<high-use>--</high-use>
<memstat-req>144</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>SWAP</memstat-name>
<inuse>2</inuse>
<memuse>209</memuse>
<high-use>--</high-use>
<memstat-req>2</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>bus</memstat-name>
<inuse>496</inuse>
<memuse>55</memuse>
<high-use>--</high-use>
<memstat-req>1196</memstat-req>
<memstat-size>16,32,64,128,32768</memstat-size>
<memstat-name>bus-sc</memstat-name>
<inuse>23</inuse>
<memuse>33</memuse>
<high-use>--</high-use>
<memstat-req>335</memstat-req>

<memstat-size>16,32,64,512,1024,2048,8192,16384,65536,131072</memstat-size>
<memstat-name>devstat</memstat-name>
<inuse>10</inuse>
<memuse>21</memuse>
<high-use>--</high-use>
<memstat-req>10</memstat-req>
<memstat-size>16,131072</memstat-size>
<memstat-name>eventhandler</memstat-name>
<inuse>35</inuse>
<memuse>2</memuse>
<high-use>--</high-use>
<memstat-req>36</memstat-req>
<memstat-size>32,128</memstat-size>
<memstat-name>kobj</memstat-name>
<inuse>93</inuse>
<memuse>186</memuse>
<high-use>--</high-use>
<memstat-req>111</memstat-req>
<memstat-size>65536</memstat-size>
<memstat-name>DEVFS</memstat-name>
<inuse>8</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>9</memstat-req>
<memstat-size>16,64</memstat-size>
<memstat-name>rman</memstat-name>
<inuse>71</inuse>
<memuse>5</memuse>
<high-use>--</high-use>
<memstat-req>433</memstat-req>
<memstat-size>16,32,64</memstat-size>
<memstat-name>sbuf</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
```

```

<memstat-req>522</memstat-req>
<memstat-size>16,32,32768,131072</memstat-size>
<memstat-name>NULLFS hash</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>taskqueue</memstat-name>
<inuse>5</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>5</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>turnstiles</memstat-name>
<inuse>145</inuse>
<memuse>10</memuse>
<high-use>--</high-use>
<memstat-req>145</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>Unitno</memstat-name>
<inuse>8</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>44</memstat-req>
<memstat-size>16,64</memstat-size>
<memstat-name>iocltops</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>27622</memstat-req>
<memstat-size>16,64,8192,16384,131072</memstat-size>
<memstat-name>iov</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>18578</memstat-req>
<memstat-size>16,64,128,256,512,1024,2048,131072</memstat-size>
<memstat-name>msg</memstat-name>
<inuse>4</inuse>
<memuse>25</memuse>
<high-use>--</high-use>
<memstat-req>4</memstat-req>
<memstat-size>32768,131072</memstat-size>
<memstat-name>sem</memstat-name>
<inuse>4</inuse>
<memuse>7</memuse>
<high-use>--</high-use>
<memstat-req>4</memstat-req>
<memstat-size>16384,32768,131072</memstat-size>
<memstat-name>shm</memstat-name>
<inuse>9</inuse>
<memuse>20</memuse>
<high-use>--</high-use>
<memstat-req>14</memstat-req>
<memstat-size>32768</memstat-size>
<memstat-name>ttys</memstat-name>
<inuse>321</inuse>
<memuse>61</memuse>
<high-use>--</high-use>
<memstat-req>528</memstat-req>

```

```
<memstat-size>512,32768</memstat-size>
<memstat-name>ptys</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>128</memstat-size>
<memstat-name>mbuf_tag</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>23383</memstat-req>
<memstat-size>16</memstat-size>
<memstat-name>soname</memstat-name>
<inuse>115</inuse>
<memuse>12</memuse>
<high-use>--</high-use>
<memstat-req>24712</memstat-req>
<memstat-size>16,32,64,256</memstat-size>
<memstat-name>pcb</memstat-name>
<inuse>216</inuse>
<memuse>33</memuse>
<high-use>--</high-use>
<memstat-req>484</memstat-req>

<memstat-size>16,32,64,128,1024,2048,4096,16384,32768,65536</memstat-size>
<memstat-name>BIO buffer</memstat-name>
<inuse>43</inuse>
<memuse>86</memuse>
<high-use>--</high-use>
<memstat-req>405</memstat-req>
<memstat-size>65536</memstat-size>
<memstat-name>vfscache</memstat-name>
<inuse>1</inuse>
<memuse>256</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>65536</memstat-size>
<memstat-name>cluster_save buffer</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>2</memstat-req>
<memstat-size>32,64</memstat-size>
<memstat-name>VFS hash</memstat-name>
<inuse>1</inuse>
<memuse>128</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>32,64</memstat-size>
<memstat-name>vnodes</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>512</memstat-size>
<memstat-name>mount</memstat-name>
<inuse>290</inuse>
<memuse>23</memuse>
<high-use>--</high-use>
<memstat-req>535</memstat-req>
```

```

<memstat-size>16,32,64,128,256,4096,32768</memstat-size>
<memstat-name>vnodemarker</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>498</memstat-req>
<memstat-size>16384</memstat-size>
<memstat-name>pfs_nodes</memstat-name>
<inuse>25</inuse>
<memuse>3</memuse>
<high-use>--</high-use>
<memstat-req>25</memstat-req>
<memstat-size>128</memstat-size>
<memstat-name>pfs_vncache</memstat-name>
<inuse>27</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>53</memstat-req>
<memstat-size>32</memstat-size>
<memstat-name>STP</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>GEOM</memstat-name>
<inuse>146</inuse>
<memuse>11</memuse>
<high-use>--</high-use>
<memstat-req>1042</memstat-req>

<memstat-size>16,32,64,128,256,512,2048,16384,32768,131072</memstat-size>
<memstat-name>syncache</memstat-name>
<inuse>1</inuse>
<memuse>8</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>

<memstat-size>16,32,64,128,256,512,2048,16384,32768,131072</memstat-size>
<memstat-name>tlv_stat</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>8</memstat-req>

<memstat-size>16,32,64,128,256,512,2048,16384,32768,131072</memstat-size>
<memstat-name>NFS_daemon</memstat-name>
<inuse>1</inuse>
<memuse>8</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>

<memstat-size>16,32,64,128,256,512,2048,16384,32768,131072</memstat-size>
<memstat-name>p1003.1b</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>16</memstat-size>
<memstat-name>MD_disk</memstat-name>
<inuse>10</inuse>

```

```
<memuse>20</memuse>
<high-use>--</high-use>
<memstat-req>10</memstat-req>
<memstat-size>65536</memstat-size>
<memstat-name>ata_generic</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>6</memstat-req>
<memstat-size>16,16384,32768</memstat-size>
<memstat-name>ISOFs mount</memstat-name>
<inuse>8</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>15</memstat-req>
<memstat-size>512</memstat-size>
<memstat-name>ISOFs node</memstat-name>
<inuse>1440</inuse>
<memuse>135</memuse>
<high-use>--</high-use>
<memstat-req>1457</memstat-req>
<memstat-size>128</memstat-size>
<memstat-name>CAM SIM</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>CAM XPT</memstat-name>
<inuse>6</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>9</memstat-req>
<memstat-size>16,64,16384</memstat-size>
<memstat-name>CAM periph</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>128</memstat-size>
<memstat-name>ad_driver</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>256</memstat-size>
<memstat-name>pagedep</memstat-name>
<inuse>1</inuse>
<memuse>32</memuse>
<high-use>--</high-use>
<memstat-req>106</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>inodedep</memstat-name>
<inuse>1</inuse>
<memuse>128</memuse>
<high-use>--</high-use>
<memstat-req>464</memstat-req>
<memstat-size>256</memstat-size>
<memstat-name>newblk</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
```



```

<high-use>--</high-use>
<memstat-req>336</memstat-req>
<memstat-size>64,4096</memstat-size>
<memstat-name>bmsafemap</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>63</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>allocdirect</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>320</memstat-req>
<memstat-size>128</memstat-size>
<memstat-name>indirdep</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>17</memstat-req>
<memstat-size>32</memstat-size>
<memstat-name>allocindir</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>15</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>freefrag</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>12</memstat-req>
<memstat-size>32</memstat-size>
<memstat-name>freeblks</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>40</memstat-req>
<memstat-size>2048</memstat-size>
<memstat-name>freefile</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>101</memstat-req>
<memstat-size>32</memstat-size>
<memstat-name>diradd</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>465</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>mkdir</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>136</memstat-req>
<memstat-size>32</memstat-size>
<memstat-name>dirrem</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>

```

```
<memstat-req>168</memstat-req>
<memstat-size>32</memstat-size>
<memstat-name>newdirblk</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>32</memstat-size>
<memstat-name>saveditino</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>157</memstat-req>
<memstat-size>512</memstat-size>
<memstat-name>UFS mount</memstat-name>
<inuse>15</inuse>
<memuse>36</memuse>
<high-use>--</high-use>
<memstat-req>15</memstat-req>
<memstat-size>2048,65536,131072</memstat-size>
<memstat-name>ata_dma</memstat-name>
<inuse>2</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>2</memstat-req>
<memstat-size>256</memstat-size>
<memstat-name>UMAHash</memstat-name>
<inuse>1</inuse>
<memuse>2</memuse>
<high-use>--</high-use>
<memstat-req>4</memstat-req>
<memstat-size>4096,16384,32768,65536</memstat-size>
<memstat-name>cdev</memstat-name>
<inuse>22</inuse>
<memuse>3</memuse>
<high-use>--</high-use>
<memstat-req>22</memstat-req>
<memstat-size>256</memstat-size>
<memstat-name>file desc</memstat-name>
<inuse>141</inuse>
<memuse>32</memuse>
<high-use>--</high-use>
<memstat-req>1583</memstat-req>
<memstat-size>16,1024,2048,16384</memstat-size>
<memstat-name>VM pgdata</memstat-name>
<inuse>2</inuse>
<memuse>65</memuse>
<high-use>--</high-use>
<memstat-req>2</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>sigio</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>20</memstat-req>
<memstat-size>32</memstat-size>
<memstat-name>kenv</memstat-name>
<inuse>24</inuse>
<memuse>5</memuse>
<high-use>--</high-use>
<memstat-req>27</memstat-req>
```

```

<memstat-size>16,32,64,131072</memstat-size>
<memstat-name>atkbddev</memstat-name>
<inuse>2</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>2</memstat-req>
<memstat-size>32</memstat-size>
<memstat-name>kqueue</memstat-name>
<inuse>15</inuse>
<memuse>9</memuse>
<high-use>--</high-use>
<memstat-req>19</memstat-req>
<memstat-size>1024,4096,32768</memstat-size>
<memstat-name>proc-args</memstat-name>
<inuse>57</inuse>
<memuse>3</memuse>
<high-use>--</high-use>
<memstat-req>1001</memstat-req>
<memstat-size>16,32,64,128,256,512,1024</memstat-size>
<memstat-name>isadev</memstat-name>
<inuse>21</inuse>
<memuse>2</memuse>
<high-use>--</high-use>
<memstat-req>21</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>zombie</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>1278</memstat-req>
<memstat-size>128</memstat-size>
<memstat-name>ithread</memstat-name>
<inuse>69</inuse>
<memuse>5</memuse>
<high-use>--</high-use>
<memstat-req>69</memstat-req>
<memstat-size>16,64,256</memstat-size>
<memstat-name>legacydrv</memstat-name>
<inuse>4</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>4</memstat-req>
<memstat-size>16</memstat-size>
<memstat-name>memdesc</memstat-name>
<inuse>1</inuse>
<memuse>4</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>131072</memstat-size>
<memstat-name>nexusdev</memstat-name>
<inuse>2</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>2</memstat-req>
<memstat-size>16</memstat-size>
<memstat-name>CAM queue</memstat-name>
<inuse>3</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>3</memstat-req>
<memstat-size>16</memstat-size>

```

```
<memstat-name>$PIR</memstat-name>
<inuse>4</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>4</memstat-req>
<memstat-size>32</memstat-size>
<memstat-name>KTRACE</memstat-name>
<inuse>100</inuse>
<memuse>10</memuse>
<high-use>--</high-use>
<memstat-req>100</memstat-req>
<memstat-size>128</memstat-size>
<memstat-name>kbdmux</memstat-name>
<inuse>5</inuse>
<memuse>9</memuse>
<high-use>--</high-use>
<memstat-req>5</memstat-req>
<memstat-size>128,2048,65536,131072</memstat-size>
</vmstat-memstat-malloc>
<vmstat-memstat-zone>
  <zone-name>UMA Kegs:</zone-name>
  <zone-size>136</zone-size>
  <count-limit>0</count-limit>
  <used>71</used>
  <free>1</free>
  <zone-req>71</zone-req>
  <zone-name>UMA Zones:</zone-name>
  <zone-size>120</zone-size>
  <count-limit>0</count-limit>
  <used>71</used>
  <free>19</free>
  <zone-req>71</zone-req>
  <zone-name>UMA Slabs:</zone-name>
  <zone-size>64</zone-size>
  <count-limit>0</count-limit>
  <used>490</used>
  <free>41</free>
  <zone-req>579</zone-req>
  <zone-name>UMA RCntSlabs:</zone-name>
  <zone-size>104</zone-size>
  <count-limit>0</count-limit>
  <used>276</used>
  <free>20</free>
  <zone-req>276</zone-req>
  <zone-name>UMA Hash:</zone-name>
  <zone-size>128</zone-size>
  <count-limit>0</count-limit>
  <used>4</used>
  <free>26</free>
  <zone-req>5</zone-req>
  <zone-name>16 Bucket:</zone-name>
  <zone-size>76</zone-size>
  <count-limit>0</count-limit>
  <used>30</used>
  <free>20</free>
  <zone-req>30</zone-req>
  <zone-name>32 Bucket:</zone-name>
  <zone-size>140</zone-size>
  <count-limit>0</count-limit>
  <used>33</used>
  <free>23</free>
```

```

<zone-req>33</zone-req>
<zone-name>64 Bucket:</zone-name>
<zone-size>268</zone-size>
<count-limit>0</count-limit>
<used>33</used>
<free>9</free>
<zone-req>33</zone-req>
<zone-name>128 Bucket:</zone-name>
<zone-size>524</zone-size>
<count-limit>0</count-limit>
<used>49</used>
<free>0</free>
<zone-req>49</zone-req>
<zone-name>VM OBJECT:</zone-name>
<zone-size>128</zone-size>
<count-limit>0</count-limit>
<used>2111</used>
<free>79</free>
<zone-req>25214</zone-req>
<zone-name>MAP:</zone-name>
<zone-size>160</zone-size>
<count-limit>0</count-limit>
<used>7</used>
<free>41</free>
<zone-req>7</zone-req>
<zone-name>KMAP ENTRY:</zone-name>
<zone-size>68</zone-size>
<count-limit>35336</count-limit>
<used>19</used>
<free>149</free>
<zone-req>2397</zone-req>
<zone-name>MAP ENTRY:</zone-name>
<zone-size>68</zone-size>
<count-limit>0</count-limit>
<used>2031</used>
<free>153</free>
<zone-req>62417</zone-req>
<zone-name>PV ENTRY:</zone-name>
<zone-size>24</zone-size>
<count-limit>509095</count-limit>
<used>57177</used>
<free>6333</free>
<zone-req>1033683</zone-req>
<zone-name>DP fakepg:</zone-name>
<zone-size>72</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>mt_zone:</zone-name>
<zone-size>64</zone-size>
<count-limit>0</count-limit>
<used>238</used>
<free>57</free>
<zone-req>238</zone-req>
<zone-name>16:</zone-name>
<zone-size>16</zone-size>
<count-limit>0</count-limit>
<used>2114</used>
<free>119</free>
<zone-req>80515</zone-req>

```

```
<zone-name>32:</zone-name>
<zone-size>32</zone-size>
<count-limit>0</count-limit>
<used>1335</used>
<free>134</free>
<zone-req>10259</zone-req>
<zone-name>64:</zone-name>
<zone-size>64</zone-size>
<count-limit>0</count-limit>
<used>3529</used>
<free>129</free>
<zone-req>29110</zone-req>
<zone-name>96:</zone-name>
<zone-size>96</zone-size>
<count-limit>0</count-limit>
<used>2062</used>
<free>58</free>
<zone-req>4365</zone-req>
<zone-name>112:</zone-name>
<zone-size>112</zone-size>
<count-limit>0</count-limit>
<used>361</used>
<free>164</free>
<zone-req>24613</zone-req>
<zone-name>128:</zone-name>
<zone-size>128</zone-size>
<count-limit>0</count-limit>
<used>359</used>
<free>61</free>
<zone-req>942</zone-req>
<zone-name>160:</zone-name>
<zone-size>160</zone-size>
<count-limit>0</count-limit>
<used>364</used>
<free>44</free>
<zone-req>577</zone-req>
<zone-name>224:</zone-name>
<zone-size>224</zone-size>
<count-limit>0</count-limit>
<used>422</used>
<free>20</free>
<zone-req>1950</zone-req>
<zone-name>256:</zone-name>
<zone-size>256</zone-size>
<count-limit>0</count-limit>
<used>204</used>
<free>36</free>
<zone-req>1225</zone-req>
<zone-name>288:</zone-name>
<zone-size>288</zone-size>
<count-limit>0</count-limit>
<used>2</used>
<free>24</free>
<zone-req>10</zone-req>
<zone-name>512:</zone-name>
<zone-size>512</zone-size>
<count-limit>0</count-limit>
<used>49</used>
<free>7</free>
<zone-req>911</zone-req>
<zone-name>1024:</zone-name>
```

```

<zone-size>1024</zone-size>
<count-limit>0</count-limit>
<used>213</used>
<free>11</free>
<zone-req>1076</zone-req>
<zone-name>2048:</zone-name>
<zone-size>2048</zone-size>
<count-limit>0</count-limit>
<used>199</used>
<free>113</free>
<zone-req>640</zone-req>
<zone-name>4096:</zone-name>
<zone-size>4096</zone-size>
<count-limit>0</count-limit>
<used>144</used>
<free>7</free>
<zone-req>2249</zone-req>
<zone-name>Files:</zone-name>
<zone-size>72</zone-size>
<count-limit>0</count-limit>
<used>665</used>
<free>77</free>
<zone-req>16457</zone-req>
<zone-name>MAC labels:</zone-name>
<zone-size>20</zone-size>
<count-limit>0</count-limit>
<used>3998</used>
<free>227</free>
<zone-req>21947</zone-req>
<zone-name>PROC:</zone-name>
<zone-size>544</zone-size>
<count-limit>0</count-limit>
<used>116</used>
<free>10</free>
<zone-req>1394</zone-req>
<zone-name>THREAD:</zone-name>
<zone-size>416</zone-size>
<count-limit>0</count-limit>
<used>127</used>
<free>17</free>
<zone-req>131</zone-req>
<zone-name>KSEGRP:</zone-name>
<zone-size>88</zone-size>
<count-limit>0</count-limit>
<used>127</used>
<free>73</free>
<zone-req>131</zone-req>
<zone-name>UPCALL:</zone-name>
<zone-size>44</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>SLEEPQUEUE:</zone-name>
<zone-size>32</zone-size>
<count-limit>0</count-limit>
<used>145</used>
<free>194</free>
<zone-req>145</zone-req>
<zone-name>VMSPACE:</zone-name>
<zone-size>268</zone-size>

```

```
<count-limit>0</count-limit>
<used>57</used>
<free>13</free>
<zone-req>1335</zone-req>
<zone-name>mbuf_packet:</zone-name>
<zone-size>256</zone-size>
<count-limit>180000</count-limit>
<used>256</used>
<free>128</free>
<zone-req>49791</zone-req>
<zone-name>mbuf:</zone-name>
<zone-size>256</zone-size>
<count-limit>180000</count-limit>
<used>50</used>
<free>466</free>
<zone-req>105183</zone-req>
<zone-name>mbuf_cluster:</zone-name>
<zone-size>2048</zone-size>
<count-limit>25190</count-limit>
<used>387</used>
<free>165</free>
<zone-req>5976</zone-req>
<zone-name>mbuf_jumbo_pagesize:</zone-name>
<zone-size>4096</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>mbuf_jumbo_9k:</zone-name>
<zone-size>9216</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>mbuf_jumbo_16k:</zone-name>
<zone-size>16384</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>ACL UMA zone:</zone-name>
<zone-size>388</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>g_bio:</zone-name>
<zone-size>132</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>174</free>
<zone-req>69750</zone-req>
<zone-name>ata_request:</zone-name>
<zone-size>200</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>57</free>
<zone-req>5030</zone-req>
<zone-name>ata_composite:</zone-name>
<zone-size>192</zone-size>
<count-limit>0</count-limit>
```



```

<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>GENCFG:</zone-name>
<zone-size>72</zone-size>
<count-limit>1000004</count-limit>
<used>57</used>
<free>102</free>
<zone-req>57</zone-req>
<zone-name>VNODE:</zone-name>
<zone-size>292</zone-size>
<count-limit>0</count-limit>
<used>2718</used>
<free>25</free>
<zone-req>2922</zone-req>
<zone-name>VNODEPOLL:</zone-name>
<zone-size>72</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>S VFS Cache:</zone-name>
<zone-size>68</zone-size>
<count-limit>0</count-limit>
<used>2500</used>
<free>76</free>
<zone-req>3824</zone-req>
<zone-name>L VFS Cache:</zone-name>
<zone-size>291</zone-size>
<count-limit>0</count-limit>
<used>51</used>
<free>14</free>
<zone-req>63</zone-req>
<zone-name>NAMEI:</zone-name>
<zone-size>1024</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>8</free>
<zone-req>53330</zone-req>
<zone-name>NFSMOUNT:</zone-name>
<zone-size>480</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>NFSNODE:</zone-name>
<zone-size>460</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>PIPE:</zone-name>
<zone-size>404</zone-size>
<count-limit>0</count-limit>
<used>27</used>
<free>9</free>
<zone-req>717</zone-req>
<zone-name>KNOTE:</zone-name>
<zone-size>72</zone-size>
<count-limit>0</count-limit>
<used>42</used>

```

```
<free>64</free>
<zone-req>3311</zone-req>
<zone-name>socket:</zone-name>
<zone-size>412</zone-size>
<count-limit>25191</count-limit>
<used>343</used>
<free>8</free>
<zone-req>2524</zone-req>
<zone-name>unpcb:</zone-name>
<zone-size>140</zone-size>
<count-limit>25200</count-limit>
<used>170</used>
<free>26</free>
<zone-req>2157</zone-req>
<zone-name>ipq:</zone-name>
<zone-size>52</zone-size>
<count-limit>216</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>udpcb:</zone-name>
<zone-size>232</zone-size>
<count-limit>25194</count-limit>
<used>19</used>
<free>32</free>
<zone-req>31</zone-req>
<zone-name>inpcb:</zone-name>
<zone-size>232</zone-size>
<count-limit>25194</count-limit>
<used>40</used>
<free>28</free>
<zone-req>105</zone-req>
<zone-name>tcpcb:</zone-name>
<zone-size>520</zone-size>
<count-limit>25193</count-limit>
<used>40</used>
<free>16</free>
<zone-req>105</zone-req>
<zone-name>tcptw:</zone-name>
<zone-size>56</zone-size>
<count-limit>5092</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>syncache:</zone-name>
<zone-size>128</zone-size>
<count-limit>15360</count-limit>
<used>0</used>
<free>60</free>
<zone-req>55</zone-req>
<zone-name>tcpreass:</zone-name>
<zone-size>20</zone-size>
<count-limit>1690</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>sackhole:</zone-name>
<zone-size>20</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>0</free>
```

```

    <zone-req>0</zone-req>
    <zone-name>ripcb:</zone-name>
    <zone-size>232</zone-size>
    <count-limit>25194</count-limit>
    <used>5</used>
    <free>29</free>
    <zone-req>5</zone-req>
    <zone-name>SWAPMETA:</zone-name>
    <zone-size>276</zone-size>
    <count-limit>94948</count-limit>
    <used>0</used>
    <free>0</free>
    <zone-req>0</zone-req>
    <zone-name>FFS inode:</zone-name>
    <zone-size>132</zone-size>
    <count-limit>0</count-limit>
    <used>1146</used>
    <free>72</free>
    <zone-req>1306</zone-req>
    <zone-name>FFS1 dinode:</zone-name>
    <zone-size>128</zone-size>
    <count-limit>0</count-limit>
    <used>1146</used>
    <free>24</free>
    <zone-req>1306</zone-req>
    <zone-name>FFS2 dinode:</zone-name>
    <zone-size>256</zone-size>
    <count-limit>0</count-limit>
    <used>0</used>
    <free>0</free>
    <zone-req>0</zone-req>
</vmstat-memstat-zone>
<vmstat-sumstat>
    <cpu-context-switch>934906</cpu-context-switch>
    <dev-intr>1707986</dev-intr>
    <soft-intr>33819</soft-intr>
    <traps>203604</traps>
    <sys-calls>1200636</sys-calls>
    <kernel-thrds>60</kernel-thrds>
    <fork-calls>1313</fork-calls>
    <vfork-calls>21</vfork-calls>
    <rfork-calls>0</rfork-calls>
    <swap-pageins>0</swap-pageins>
    <swap-pagedin>0</swap-pagedin>
    <swap-pageouts>0</swap-pageouts>
    <swap-pagedout>0</swap-pagedout>
    <vnode-pageins>23094</vnode-pageins>
    <vnode-pagedin>23119</vnode-pagedin>
    <vnode-pageouts>226</vnode-pageouts>
    <vnode-pagedout>3143</vnode-pagedout>
    <page-daemon-wakeup>0</page-daemon-wakeup>
    <page-daemon-examined-pages>0</page-daemon-examined-pages>
    <pages-reactivated>8821</pages-reactivated>
    <copy-on-write-faults>48364</copy-on-write-faults>
    <copy-on-write-optimized-faults>31</copy-on-write-optimized-faults>
    <zero-fill-pages-zeroed>74665</zero-fill-pages-zeroed>
    <zero-fill-pages-prezeroed>70061</zero-fill-pages-prezeroed>
    <transit-blocking-page-faults>85</transit-blocking-page-faults>
    <total-vm-faults>191824</total-vm-faults>

<pages-affected-by-kernel-thrd-creat>0</pages-affected-by-kernel-thrd-creat>

```

```

    <pages-affected-by-fork>95343</pages-affected-by-fork>
    <pages-affected-by-vfork>3526</pages-affected-by-vfork>
    <pages-affected-by-rfork>0</pages-affected-by-rfork>
    <pages-freed>221502</pages-freed>
    <pages-freed-by-daemon>0</pages-freed-by-daemon>
    <pages-freed-by-exiting-proc>75630</pages-freed-by-exiting-proc>
    <pages-active>45826</pages-active>
    <pages-inactive>13227</pages-inactive>
    <pages-in-vm-cache>49278</pages-in-vm-cache>
    <pages-wired-down>10640</pages-wired-down>
    <pages-free>70706</pages-free>
    <bytes-per-page>4096</bytes-per-page>
    <swap-pages-used>0</swap-pages-used>
    <peak-swap-pages-used>0</peak-swap-pages-used>
    <total-name-lookups>214496</total-name-lookups>
    <positive-cache-hits>92</positive-cache-hits>
    <negative-cache-hits>5</negative-cache-hits>
    <pass2>0</pass2>
    <cache-deletions>0</cache-deletions>
    <cache-falsehits>0</cache-falsehits>
    <toolong>0</toolong>
  </vmstat-sumstat>
  <vmstat-intr>
    <intr-name>irq0: clk          </intr-name>
    <intr-cnt>1243455</intr-cnt>
    <intr-rate>999</intr-rate>
    <intr-name>irq4: sio0        </intr-name>
    <intr-cnt>1140</intr-cnt>
    <intr-rate>0</intr-rate>
    <intr-name>irq8: rtc         </intr-name>
    <intr-cnt>159164</intr-cnt>
    <intr-rate>127</intr-rate>
    <intr-name>irq9: cbb1 fxp0   </intr-name>
    <intr-cnt>28490</intr-cnt>
    <intr-rate>22</intr-rate>
    <intr-name>irq10: fxp1       </intr-name>
    <intr-cnt>20593</intr-cnt>
    <intr-rate>16</intr-rate>
    <intr-name>irq14: ata0       </intr-name>
    <intr-cnt>5031</intr-cnt>
    <intr-rate>4</intr-rate>
    <intr-name>Total</intr-name>
    <intr-cnt>1457873</intr-cnt>
    <intr-rate>1171</intr-rate>
  </vmstat-intr>
  <vm-kernel-state>
    <vm-kmem-map-free>248524800</vm-kmem-map-free>
  </vm-kernel-state>
  <kernel-direct-mm-size-information>
    <vm-directmm-size-used>4644</vm-directmm-size-used>
    <vm-directmm-size-max>4057334</vm-directmm-size-max>
  </kernel-direct-mm-size-information>
</system-virtual-memory-information>
<cli>
  <banner></banner>
</cli>
</rpc-reply>

```

Note: <kernel-direct-mm-size-information> only displays for 64 bit platform.

## show system virtual-memory (QFX Series)

```

user@switch> show system virtual-memory | display xml
<rpc-reply xmlns:junos="http://device1.example.com/junos/11.1R1/junos">
  <system-virtual-memory-information>
    <vmstat-memstat-malloc>
      <memstat-name>CAM dev queue</memstat-name>
      <inuse>1</inuse>
      <memuse>1</memuse>
      <high-use>-</high-use>
      <memstat-req>1</memstat-req>
      <memstat-size>64</memstat-size>
      <memstat-name>entropy</memstat-name>
      <inuse>1024</inuse>
      <memuse>64</memuse>
      <high-use>-</high-use>
      <memstat-req>1024</memstat-req>
      <memstat-size>64</memstat-size>
      <memstat-name>linker</memstat-name>
      <inuse>481</inuse>
      <memuse>1871</memuse>
      <high-use>-</high-use>
      <memstat-req>1145</memstat-req>
      <memstat-size>16,32,64,4096,32768,131072</memstat-size>
      <memstat-name>lockf</memstat-name>
      <inuse>56</inuse>
      <memuse>4</memuse>
      <high-use>-</high-use>
      <memstat-req>5998</memstat-req>
      <memstat-size>64</memstat-size>
      <memstat-name>devbuf</memstat-name>
      <inuse>2094</inuse>
      <memuse>3877</memuse>
      <high-use>-</high-use>
      <memstat-req>2099</memstat-req>

      <memstat-size>16,32,64,128,512,1024,4096,8192,16384,32768,65536,131072</memstat-size>

      <memstat-name>temp</memstat-name>
      <inuse>21</inuse>
      <memuse>66</memuse>
      <high-use>-</high-use>
      <memstat-req>3127</memstat-req>

      <memstat-size>16,32,64,128,256,512,2048,4096,8192,16384,32768,65536,131072</memstat-size>

      <memstat-name>ip6ndp</memstat-name>
      <inuse>0</inuse>
      <memuse>0</memuse>
      <high-use>-</high-use>
      <memstat-req>4</memstat-req>
      <memstat-size>64</memstat-size>
      <memstat-name>in6ifmulti</memstat-name>
      <inuse>1</inuse>
      <memuse>1</memuse>
      <high-use>-</high-use>
      <memstat-req>1</memstat-req>
      <memstat-size>64</memstat-size>
      <memstat-name>in6grentry</memstat-name>
      <inuse>1</inuse>
      <memuse>1</memuse>

```

```
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>iflogical</memstat-name>
<inuse>13</inuse>
<memuse>3</memuse>
<high-use>--</high-use>
<memstat-req>13</memstat-req>
<memstat-size>64,2048</memstat-size>
<memstat-name>iffamily</memstat-name>
<inuse>28</inuse>
<memuse>4</memuse>
<high-use>--</high-use>
<memstat-req>28</memstat-req>
<memstat-size>32,1024,2048</memstat-size>
<memstat-name>rtnextthop</memstat-name>
<inuse>127</inuse>
<memuse>18</memuse>
<high-use>--</high-use>
<memstat-req>129</memstat-req>
<memstat-size>32,256,512,1024,2048,4096</memstat-size>
<memstat-name>metrics</memstat-name>
<inuse>3</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>5</memstat-req>
<memstat-size>256</memstat-size>
<memstat-name>inifmulti</memstat-name>
<inuse>3</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>3</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>ingrentry</memstat-name>
<inuse>6</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>6</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>rnode</memstat-name>
<inuse>68</inuse>
<memuse>2</memuse>
<high-use>--</high-use>
<memstat-req>76</memstat-req>
<memstat-size>16,32</memstat-size>
<memstat-name>rcache</memstat-name>
<inuse>4</inuse>
<memuse>8</memuse>
<high-use>--</high-use>
<memstat-req>4</memstat-req>
<memstat-size>65536</memstat-size>
<memstat-name>ifdevice</memstat-name>
<inuse>4</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>4</memstat-req>
<memstat-size>16</memstat-size>
<memstat-name>ifstat</memstat-name>
<inuse>40</inuse>
<memuse>22</memuse>
<high-use>--</high-use>
```

```

    <memstat-req>40</memstat-req>
    <memstat-size>512,16384,32768</memstat-size>
    <memstat-name>ipfw</memstat-name>
    <inuse>42</inuse>
    <memuse>23</memuse>
    <high-use>--</high-use>
    <memstat-req>91</memstat-req>

<memstat-size>16,32,64,128,256,512,1024,16384,32768,65536,131072</memstat-size>
    <memstat-name>ifmaddr</memstat-name>
    <inuse>103</inuse>
    <memuse>3</memuse>
    <high-use>--</high-use>
    <memstat-req>103</memstat-req>
    <memstat-size>16,32</memstat-size>
    <memstat-name>rtable</memstat-name>
    <inuse>129</inuse>
    <memuse>14</memuse>
    <high-use>--</high-use>
    <memstat-req>139</memstat-req>
    <memstat-size>16,32,64,128,1024,16384</memstat-size>
    <memstat-name>sysctl</memstat-name>
    <inuse>0</inuse>
    <memuse>0</memuse>
    <high-use>--</high-use>
    <memstat-req>14847</memstat-req>
    <memstat-size>16,32,64,4096,16384,32768</memstat-size>
    <memstat-name>ifaddr</memstat-name>
    <inuse>29</inuse>
    <memuse>3</memuse>
    <high-use>--</high-use>
    <memstat-req>29</memstat-req>
    <memstat-size>64,128</memstat-size>
    <memstat-name>mkey</memstat-name>
    <inuse>345</inuse>
    <memuse>6</memuse>
    <high-use>--</high-use>
    <memstat-req>2527</memstat-req>
    <memstat-size>16,128</memstat-size>
    <memstat-name>pfe_ipc</memstat-name>
    <inuse>0</inuse>
    <memuse>0</memuse>
    <high-use>--</high-use>
    <memstat-req>1422</memstat-req>

<memstat-size>16,32,64,128,512,1024,2048,8192,16384,32768,65536,131072</memstat-size>

    <memstat-name>ifstate</memstat-name>
    <inuse>594</inuse>
    <memuse>51</memuse>
    <high-use>--</high-use>
    <memstat-req>655</memstat-req>

<memstat-size>16,32,64,128,256,1024,2048,4096,16384,32768</memstat-size>
    <memstat-name>itable16</memstat-name>
    <inuse>276</inuse>
    <memuse>52</memuse>
    <high-use>--</high-use>
    <memstat-req>294</memstat-req>
    <memstat-size>1024,4096</memstat-size>
    <memstat-name>itable32</memstat-name>

```

```

<inuse>160</inuse>
<memuse>10</memuse>
<high-use>--</high-use>
<memstat-req>160</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>itable64</memstat-name>
<inuse>2</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>2</memstat-req>
<memstat-size>128</memstat-size>
<memstat-name>lr</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>16384</memstat-size>
<memstat-name>pic</memstat-name>
<inuse>5</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>5</memstat-req>
<memstat-size>64,512</memstat-size>
<memstat-name>pfestat</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>162</memstat-req>
<memstat-size>16,32,128,256,16384</memstat-size>
<memstat-name>gencfg</memstat-name>
<inuse>224</inuse>
<memuse>56</memuse>
<high-use>--</high-use>
<memstat-req>540</memstat-req>
<memstat-size>16,32,64,256,512,32768,65536</memstat-size>
<memstat-name>jsr</memstat-name>
<inuse>2</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>4</memstat-req>
<memstat-size>16</memstat-size>
<memstat-name>idl</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>13</memstat-req>
<memstat-size>16,32,64,128,256,4096,16384,32768,131072</memstat-size>

<memstat-name>rtsmsg</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>2</memstat-req>
<memstat-size>131072</memstat-size>
<memstat-name>module</memstat-name>
<inuse>249</inuse>
<memuse>16</memuse>
<high-use>--</high-use>
<memstat-req>249</memstat-req>
<memstat-size>64,128</memstat-size>
<memstat-name>mtx_pool</memstat-name>

```



```

<inuse>1</inuse>
<memuse>8</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>64,128</memstat-size>
<memstat-name>DEVFS3</memstat-name>
<inuse>109</inuse>
<memuse>12</memuse>
<high-use>--</high-use>
<memstat-req>117</memstat-req>
<memstat-size>256</memstat-size>
<memstat-name>DEVFS1</memstat-name>
<inuse>102</inuse>
<memuse>23</memuse>
<high-use>--</high-use>
<memstat-req>109</memstat-req>
<memstat-size>2048</memstat-size>
<memstat-name>pgrp</memstat-name>
<inuse>12</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>21</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>session</memstat-name>
<inuse>8</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>15</memstat-req>
<memstat-size>512</memstat-size>
<memstat-name>proc</memstat-name>
<inuse>2</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>2</memstat-req>
<memstat-size>16384</memstat-size>
<memstat-name>subproc</memstat-name>
<inuse>244</inuse>
<memuse>496</memuse>
<high-use>--</high-use>
<memstat-req>1522</memstat-req>
<memstat-size>2048,131072</memstat-size>
<memstat-name>cred</memstat-name>
<inuse>30</inuse>
<memuse>4</memuse>
<high-use>--</high-use>
<memstat-req>11409</memstat-req>
<memstat-size>256</memstat-size>
<memstat-name>plimit</memstat-name>
<inuse>17</inuse>
<memuse>4</memuse>
<high-use>--</high-use>
<memstat-req>133</memstat-req>
<memstat-size>2048</memstat-size>
<memstat-name>uidinfo</memstat-name>
<inuse>3</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>6</memstat-req>
<memstat-size>32,512</memstat-size>
<memstat-name>sysctluid</memstat-name>
<inuse>1117</inuse>

```

```

<memuse>34</memuse>
<high-use>--</high-use>
<memstat-req>1117</memstat-req>
<memstat-size>16,32,64</memstat-size>
<memstat-name>sysctltmp</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>743</memstat-req>
<memstat-size>16,32,64,1024</memstat-size>
<memstat-name>umtx</memstat-name>
<inuse>144</inuse>
<memuse>9</memuse>
<high-use>--</high-use>
<memstat-req>144</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>SWAP</memstat-name>
<inuse>2</inuse>
<memuse>209</memuse>
<high-use>--</high-use>
<memstat-req>2</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>bus</memstat-name>
<inuse>496</inuse>
<memuse>55</memuse>
<high-use>--</high-use>
<memstat-req>1196</memstat-req>
<memstat-size>16,32,64,128,32768</memstat-size>
<memstat-name>bus-sc</memstat-name>
<inuse>23</inuse>
<memuse>33</memuse>
<high-use>--</high-use>
<memstat-req>335</memstat-req>

<memstat-size>16,32,64,512,1024,2048,8192,16384,65536,131072</memstat-size>
<memstat-name>devstat</memstat-name>
<inuse>10</inuse>
<memuse>21</memuse>
<high-use>--</high-use>
<memstat-req>10</memstat-req>
<memstat-size>16,131072</memstat-size>
<memstat-name>eventhandler</memstat-name>
<inuse>35</inuse>
<memuse>2</memuse>
<high-use>--</high-use>
<memstat-req>36</memstat-req>
<memstat-size>32,128</memstat-size>
<memstat-name>kobj</memstat-name>
<inuse>93</inuse>
<memuse>186</memuse>
<high-use>--</high-use>
<memstat-req>111</memstat-req>
<memstat-size>65536</memstat-size>
<memstat-name>DEVFS</memstat-name>
<inuse>8</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>9</memstat-req>
<memstat-size>16,64</memstat-size>
<memstat-name>rman</memstat-name>
<inuse>71</inuse>

```

```

<memuse>5</memuse>
<high-use>--</high-use>
<memstat-req>433</memstat-req>
<memstat-size>16,32,64</memstat-size>
<memstat-name>sbuf</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>522</memstat-req>
<memstat-size>16,32,32768,131072</memstat-size>
<memstat-name>NULLFS hash</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>taskqueue</memstat-name>
<inuse>5</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>5</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>turnstiles</memstat-name>
<inuse>145</inuse>
<memuse>10</memuse>
<high-use>--</high-use>
<memstat-req>145</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>Unitno</memstat-name>
<inuse>8</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>44</memstat-req>
<memstat-size>16,64</memstat-size>
<memstat-name>iocltops</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>27622</memstat-req>
<memstat-size>16,64,8192,16384,131072</memstat-size>
<memstat-name>iov</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>18578</memstat-req>
<memstat-size>16,64,128,256,512,1024,2048,131072</memstat-size>
<memstat-name>msg</memstat-name>
<inuse>4</inuse>
<memuse>25</memuse>
<high-use>--</high-use>
<memstat-req>4</memstat-req>
<memstat-size>32768,131072</memstat-size>
<memstat-name>sem</memstat-name>
<inuse>4</inuse>
<memuse>7</memuse>
<high-use>--</high-use>
<memstat-req>4</memstat-req>
<memstat-size>16384,32768,131072</memstat-size>
<memstat-name>shm</memstat-name>
<inuse>9</inuse>
<memuse>20</memuse>

```

```

<high-use>--</high-use>
<memstat-req>14</memstat-req>
<memstat-size>32768</memstat-size>
<memstat-name>ttys</memstat-name>
<inuse>321</inuse>
<memuse>61</memuse>
<high-use>--</high-use>
<memstat-req>528</memstat-req>
<memstat-size>512,32768</memstat-size>
<memstat-name>ptys</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>128</memstat-size>
<memstat-name>mbuf_tag</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>23383</memstat-req>
<memstat-size>16</memstat-size>
<memstat-name>soname</memstat-name>
<inuse>115</inuse>
<memuse>12</memuse>
<high-use>--</high-use>
<memstat-req>24712</memstat-req>
<memstat-size>16,32,64,256</memstat-size>
<memstat-name>pcb</memstat-name>
<inuse>216</inuse>
<memuse>33</memuse>
<high-use>--</high-use>
<memstat-req>484</memstat-req>

<memstat-size>16,32,64,128,1024,2048,4096,16384,32768,65536</memstat-size>
<memstat-name>BIO buffer</memstat-name>
<inuse>43</inuse>
<memuse>86</memuse>
<high-use>--</high-use>
<memstat-req>405</memstat-req>
<memstat-size>65536</memstat-size>
<memstat-name>vfscache</memstat-name>
<inuse>1</inuse>
<memuse>256</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>65536</memstat-size>
<memstat-name>cluster_save buffer</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>2</memstat-req>
<memstat-size>32,64</memstat-size>
<memstat-name>VFS hash</memstat-name>
<inuse>1</inuse>
<memuse>128</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>32,64</memstat-size>
<memstat-name>vnodes</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>

```

```

<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>512</memstat-size>
<memstat-name>mount</memstat-name>
<inuse>290</inuse>
<memuse>23</memuse>
<high-use>--</high-use>
<memstat-req>535</memstat-req>
<memstat-size>16,32,64,128,256,4096,32768</memstat-size>
<memstat-name>vnodemarker</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>498</memstat-req>
<memstat-size>16384</memstat-size>
<memstat-name>pfs_nodes</memstat-name>
<inuse>25</inuse>
<memuse>3</memuse>
<high-use>--</high-use>
<memstat-req>25</memstat-req>
<memstat-size>128</memstat-size>
<memstat-name>pfs_vncache</memstat-name>
<inuse>27</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>53</memstat-req>
<memstat-size>32</memstat-size>
<memstat-name>STP</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>GEOM</memstat-name>
<inuse>146</inuse>
<memuse>11</memuse>
<high-use>--</high-use>
<memstat-req>1042</memstat-req>

<memstat-size>16,32,64,128,256,512,2048,16384,32768,131072</memstat-size>
<memstat-name>syncache</memstat-name>
<inuse>1</inuse>
<memuse>8</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>

<memstat-size>16,32,64,128,256,512,2048,16384,32768,131072</memstat-size>
<memstat-name>tlv_stat</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>8</memstat-req>

<memstat-size>16,32,64,128,256,512,2048,16384,32768,131072</memstat-size>
<memstat-name>NFS_daemon</memstat-name>
<inuse>1</inuse>
<memuse>8</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>

<memstat-size>16,32,64,128,256,512,2048,16384,32768,131072</memstat-size>

```

```
<memstat-name>p1003.1b</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>16</memstat-size>
<memstat-name>MD disk</memstat-name>
<inuse>10</inuse>
<memuse>20</memuse>
<high-use>--</high-use>
<memstat-req>10</memstat-req>
<memstat-size>65536</memstat-size>
<memstat-name>ata_generic</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>6</memstat-req>
<memstat-size>16,16384,32768</memstat-size>
<memstat-name>ISOFS mount</memstat-name>
<inuse>8</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>15</memstat-req>
<memstat-size>512</memstat-size>
<memstat-name>ISOFS node</memstat-name>
<inuse>1440</inuse>
<memuse>135</memuse>
<high-use>--</high-use>
<memstat-req>1457</memstat-req>
<memstat-size>128</memstat-size>
<memstat-name>CAM SIM</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>CAM XPT</memstat-name>
<inuse>6</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>9</memstat-req>
<memstat-size>16,64,16384</memstat-size>
<memstat-name>CAM periph</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>128</memstat-size>
<memstat-name>ad_driver</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>256</memstat-size>
<memstat-name>pagedep</memstat-name>
<inuse>1</inuse>
<memuse>32</memuse>
<high-use>--</high-use>
<memstat-req>106</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>inodedep</memstat-name>
```

```

<inuse>1</inuse>
<memuse>128</memuse>
<high-use>--</high-use>
<memstat-req>464</memstat-req>
<memstat-size>256</memstat-size>
<memstat-name>newblk</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>336</memstat-req>
<memstat-size>64,4096</memstat-size>
<memstat-name>bmsafemap</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>63</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>allocdirect</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>320</memstat-req>
<memstat-size>128</memstat-size>
<memstat-name>indirdep</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>17</memstat-req>
<memstat-size>32</memstat-size>
<memstat-name>allocindir</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>15</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>freefrag</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>12</memstat-req>
<memstat-size>32</memstat-size>
<memstat-name>freeblks</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>40</memstat-req>
<memstat-size>2048</memstat-size>
<memstat-name>freefile</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>101</memstat-req>
<memstat-size>32</memstat-size>
<memstat-name>diradd</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>465</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>mkdir</memstat-name>
<inuse>0</inuse>

```

```
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>136</memstat-req>
<memstat-size>32</memstat-size>
<memstat-name>dirrem</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>168</memstat-req>
<memstat-size>32</memstat-size>
<memstat-name>newdirblk</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>32</memstat-size>
<memstat-name>savedino</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>157</memstat-req>
<memstat-size>512</memstat-size>
<memstat-name>UFS mount</memstat-name>
<inuse>15</inuse>
<memuse>36</memuse>
<high-use>--</high-use>
<memstat-req>15</memstat-req>
<memstat-size>2048,65536,131072</memstat-size>
<memstat-name>ata_dma</memstat-name>
<inuse>2</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>2</memstat-req>
<memstat-size>256</memstat-size>
<memstat-name>UMAHash</memstat-name>
<inuse>1</inuse>
<memuse>2</memuse>
<high-use>--</high-use>
<memstat-req>4</memstat-req>
<memstat-size>4096,16384,32768,65536</memstat-size>
<memstat-name>cdev</memstat-name>
<inuse>22</inuse>
<memuse>3</memuse>
<high-use>--</high-use>
<memstat-req>22</memstat-req>
<memstat-size>256</memstat-size>
<memstat-name>file desc</memstat-name>
<inuse>141</inuse>
<memuse>32</memuse>
<high-use>--</high-use>
<memstat-req>1583</memstat-req>
<memstat-size>16,1024,2048,16384</memstat-size>
<memstat-name>VM pgdata</memstat-name>
<inuse>2</inuse>
<memuse>65</memuse>
<high-use>--</high-use>
<memstat-req>2</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>sigio</memstat-name>
<inuse>1</inuse>
<memuse>1</memuse>
```



```

<high-use>--</high-use>
<memstat-req>20</memstat-req>
<memstat-size>32</memstat-size>
<memstat-name>kenv</memstat-name>
<inuse>24</inuse>
<memuse>5</memuse>
<high-use>--</high-use>
<memstat-req>27</memstat-req>
<memstat-size>16,32,64,131072</memstat-size>
<memstat-name>atkbddev</memstat-name>
<inuse>2</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>2</memstat-req>
<memstat-size>32</memstat-size>
<memstat-name>kqueue</memstat-name>
<inuse>15</inuse>
<memuse>9</memuse>
<high-use>--</high-use>
<memstat-req>19</memstat-req>
<memstat-size>1024,4096,32768</memstat-size>
<memstat-name>proc-args</memstat-name>
<inuse>57</inuse>
<memuse>3</memuse>
<high-use>--</high-use>
<memstat-req>1001</memstat-req>
<memstat-size>16,32,64,128,256,512,1024</memstat-size>
<memstat-name>isadev</memstat-name>
<inuse>21</inuse>
<memuse>2</memuse>
<high-use>--</high-use>
<memstat-req>21</memstat-req>
<memstat-size>64</memstat-size>
<memstat-name>zombie</memstat-name>
<inuse>0</inuse>
<memuse>0</memuse>
<high-use>--</high-use>
<memstat-req>1278</memstat-req>
<memstat-size>128</memstat-size>
<memstat-name>ithread</memstat-name>
<inuse>69</inuse>
<memuse>5</memuse>
<high-use>--</high-use>
<memstat-req>69</memstat-req>
<memstat-size>16,64,256</memstat-size>
<memstat-name>legacydrv</memstat-name>
<inuse>4</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>4</memstat-req>
<memstat-size>16</memstat-size>
<memstat-name>memdesc</memstat-name>
<inuse>1</inuse>
<memuse>4</memuse>
<high-use>--</high-use>
<memstat-req>1</memstat-req>
<memstat-size>131072</memstat-size>
<memstat-name>nexusdev</memstat-name>
<inuse>2</inuse>
<memuse>1</memuse>
<high-use>--</high-use>

```

```
<memstat-req>2</memstat-req>
<memstat-size>16</memstat-size>
<memstat-name>CAM queue</memstat-name>
<inuse>3</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>3</memstat-req>
<memstat-size>16</memstat-size>
<memstat-name>$PIR</memstat-name>
<inuse>4</inuse>
<memuse>1</memuse>
<high-use>--</high-use>
<memstat-req>4</memstat-req>
<memstat-size>32</memstat-size>
<memstat-name>KTRACE</memstat-name>
<inuse>100</inuse>
<memuse>10</memuse>
<high-use>--</high-use>
<memstat-req>100</memstat-req>
<memstat-size>128</memstat-size>
<memstat-name>kbdmux</memstat-name>
<inuse>5</inuse>
<memuse>9</memuse>
<high-use>--</high-use>
<memstat-req>5</memstat-req>
<memstat-size>128,2048,65536,131072</memstat-size>
</vmstat-memstat-malloc>
<vmstat-memstat-zone>
  <zone-name>UMA Kegs:</zone-name>
  <zone-size>136</zone-size>
  <count-limit>0</count-limit>
  <used>71</used>
  <free>1</free>
  <zone-req>71</zone-req>
  <zone-name>UMA Zones:</zone-name>
  <zone-size>120</zone-size>
  <count-limit>0</count-limit>
  <used>71</used>
  <free>19</free>
  <zone-req>71</zone-req>
  <zone-name>UMA Slabs:</zone-name>
  <zone-size>64</zone-size>
  <count-limit>0</count-limit>
  <used>490</used>
  <free>41</free>
  <zone-req>579</zone-req>
  <zone-name>UMA RCntSlabs:</zone-name>
  <zone-size>104</zone-size>
  <count-limit>0</count-limit>
  <used>276</used>
  <free>20</free>
  <zone-req>276</zone-req>
  <zone-name>UMA Hash:</zone-name>
  <zone-size>128</zone-size>
  <count-limit>0</count-limit>
  <used>4</used>
  <free>26</free>
  <zone-req>5</zone-req>
  <zone-name>16 Bucket:</zone-name>
  <zone-size>76</zone-size>
  <count-limit>0</count-limit>
```

```

<used>30</used>
<free>20</free>
<zone-req>30</zone-req>
<zone-name>32 Bucket:</zone-name>
<zone-size>140</zone-size>
<count-limit>0</count-limit>
<used>33</used>
<free>23</free>
<zone-req>33</zone-req>
<zone-name>64 Bucket:</zone-name>
<zone-size>268</zone-size>
<count-limit>0</count-limit>
<used>33</used>
<free>9</free>
<zone-req>33</zone-req>
<zone-name>128 Bucket:</zone-name>
<zone-size>524</zone-size>
<count-limit>0</count-limit>
<used>49</used>
<free>0</free>
<zone-req>49</zone-req>
<zone-name>VM OBJECT:</zone-name>
<zone-size>128</zone-size>
<count-limit>0</count-limit>
<used>2111</used>
<free>79</free>
<zone-req>25214</zone-req>
<zone-name>MAP:</zone-name>
<zone-size>160</zone-size>
<count-limit>0</count-limit>
<used>7</used>
<free>41</free>
<zone-req>7</zone-req>
<zone-name>KMAP ENTRY:</zone-name>
<zone-size>68</zone-size>
<count-limit>35336</count-limit>
<used>19</used>
<free>149</free>
<zone-req>2397</zone-req>
<zone-name>MAP ENTRY:</zone-name>
<zone-size>68</zone-size>
<count-limit>0</count-limit>
<used>2031</used>
<free>153</free>
<zone-req>62417</zone-req>
<zone-name>PV ENTRY:</zone-name>
<zone-size>24</zone-size>
<count-limit>509095</count-limit>
<used>57177</used>
<free>6333</free>
<zone-req>1033683</zone-req>
<zone-name>DP fakepg:</zone-name>
<zone-size>72</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>mt_zone:</zone-name>
<zone-size>64</zone-size>
<count-limit>0</count-limit>
<used>238</used>

```

```
<free>57</free>
<zone-req>238</zone-req>
<zone-name>16:</zone-name>
<zone-size>16</zone-size>
<count-limit>0</count-limit>
<used>2114</used>
<free>119</free>
<zone-req>80515</zone-req>
<zone-name>32:</zone-name>
<zone-size>32</zone-size>
<count-limit>0</count-limit>
<used>1335</used>
<free>134</free>
<zone-req>10259</zone-req>
<zone-name>64:</zone-name>
<zone-size>64</zone-size>
<count-limit>0</count-limit>
<used>3529</used>
<free>129</free>
<zone-req>29110</zone-req>
<zone-name>96:</zone-name>
<zone-size>96</zone-size>
<count-limit>0</count-limit>
<used>2062</used>
<free>58</free>
<zone-req>4365</zone-req>
<zone-name>112:</zone-name>
<zone-size>112</zone-size>
<count-limit>0</count-limit>
<used>361</used>
<free>164</free>
<zone-req>24613</zone-req>
<zone-name>128:</zone-name>
<zone-size>128</zone-size>
<count-limit>0</count-limit>
<used>359</used>
<free>61</free>
<zone-req>942</zone-req>
<zone-name>160:</zone-name>
<zone-size>160</zone-size>
<count-limit>0</count-limit>
<used>364</used>
<free>44</free>
<zone-req>577</zone-req>
<zone-name>224:</zone-name>
<zone-size>224</zone-size>
<count-limit>0</count-limit>
<used>422</used>
<free>20</free>
<zone-req>1950</zone-req>
<zone-name>256:</zone-name>
<zone-size>256</zone-size>
<count-limit>0</count-limit>
<used>204</used>
<free>36</free>
<zone-req>1225</zone-req>
<zone-name>288:</zone-name>
<zone-size>288</zone-size>
<count-limit>0</count-limit>
<used>2</used>
<free>24</free>
```

```
<zone-req>10</zone-req>
<zone-name>512:</zone-name>
<zone-size>512</zone-size>
<count-limit>0</count-limit>
<used>49</used>
<free>7</free>
<zone-req>911</zone-req>
<zone-name>1024:</zone-name>
<zone-size>1024</zone-size>
<count-limit>0</count-limit>
<used>213</used>
<free>11</free>
<zone-req>1076</zone-req>
<zone-name>2048:</zone-name>
<zone-size>2048</zone-size>
<count-limit>0</count-limit>
<used>199</used>
<free>113</free>
<zone-req>640</zone-req>
<zone-name>4096:</zone-name>
<zone-size>4096</zone-size>
<count-limit>0</count-limit>
<used>144</used>
<free>7</free>
<zone-req>2249</zone-req>
<zone-name>Files:</zone-name>
<zone-size>72</zone-size>
<count-limit>0</count-limit>
<used>665</used>
<free>77</free>
<zone-req>16457</zone-req>
<zone-name>MAC labels:</zone-name>
<zone-size>20</zone-size>
<count-limit>0</count-limit>
<used>3998</used>
<free>227</free>
<zone-req>21947</zone-req>
<zone-name>PROC:</zone-name>
<zone-size>544</zone-size>
<count-limit>0</count-limit>
<used>116</used>
<free>10</free>
<zone-req>1394</zone-req>
<zone-name>THREAD:</zone-name>
<zone-size>416</zone-size>
<count-limit>0</count-limit>
<used>127</used>
<free>17</free>
<zone-req>131</zone-req>
<zone-name>KSEGRP:</zone-name>
<zone-size>88</zone-size>
<count-limit>0</count-limit>
<used>127</used>
<free>73</free>
<zone-req>131</zone-req>
<zone-name>UPCALL:</zone-name>
<zone-size>44</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
```

```
<zone-name>SLEEPQUEUE:</zone-name>
<zone-size>32</zone-size>
<count-limit>0</count-limit>
<used>145</used>
<free>194</free>
<zone-req>145</zone-req>
<zone-name>VMSPACE:</zone-name>
<zone-size>268</zone-size>
<count-limit>0</count-limit>
<used>57</used>
<free>13</free>
<zone-req>1335</zone-req>
<zone-name>mbuf_packet:</zone-name>
<zone-size>256</zone-size>
<count-limit>180000</count-limit>
<used>256</used>
<free>128</free>
<zone-req>49791</zone-req>
<zone-name>mbuf:</zone-name>
<zone-size>256</zone-size>
<count-limit>180000</count-limit>
<used>50</used>
<free>466</free>
<zone-req>105183</zone-req>
<zone-name>mbuf_cluster:</zone-name>
<zone-size>2048</zone-size>
<count-limit>25190</count-limit>
<used>387</used>
<free>165</free>
<zone-req>5976</zone-req>
<zone-name>mbuf_jumbo_pagesize:</zone-name>
<zone-size>4096</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>mbuf_jumbo_9k:</zone-name>
<zone-size>9216</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>mbuf_jumbo_16k:</zone-name>
<zone-size>16384</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>ACL UMA zone:</zone-name>
<zone-size>388</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>g_bio:</zone-name>
<zone-size>132</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>174</free>
<zone-req>69750</zone-req>
<zone-name>ata_request:</zone-name>
```

```

<zone-size>200</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>57</free>
<zone-req>5030</zone-req>
<zone-name>ata_composite:</zone-name>
<zone-size>192</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>GENCFG:</zone-name>
<zone-size>72</zone-size>
<count-limit>1000004</count-limit>
<used>57</used>
<free>102</free>
<zone-req>57</zone-req>
<zone-name>VNODE:</zone-name>
<zone-size>292</zone-size>
<count-limit>0</count-limit>
<used>2718</used>
<free>25</free>
<zone-req>2922</zone-req>
<zone-name>VNODEPOLL:</zone-name>
<zone-size>72</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>S VFS Cache:</zone-name>
<zone-size>68</zone-size>
<count-limit>0</count-limit>
<used>2500</used>
<free>76</free>
<zone-req>3824</zone-req>
<zone-name>L VFS Cache:</zone-name>
<zone-size>291</zone-size>
<count-limit>0</count-limit>
<used>51</used>
<free>14</free>
<zone-req>63</zone-req>
<zone-name>NAMEI:</zone-name>
<zone-size>1024</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>8</free>
<zone-req>53330</zone-req>
<zone-name>NFSMOUNT:</zone-name>
<zone-size>480</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>NFSNODE:</zone-name>
<zone-size>460</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>PIPE:</zone-name>
<zone-size>404</zone-size>

```

```
<count-limit>0</count-limit>
<used>27</used>
<free>9</free>
<zone-req>717</zone-req>
<zone-name>KNOTE:</zone-name>
<zone-size>72</zone-size>
<count-limit>0</count-limit>
<used>42</used>
<free>64</free>
<zone-req>3311</zone-req>
<zone-name>socket:</zone-name>
<zone-size>412</zone-size>
<count-limit>25191</count-limit>
<used>343</used>
<free>8</free>
<zone-req>2524</zone-req>
<zone-name>unpcb:</zone-name>
<zone-size>140</zone-size>
<count-limit>25200</count-limit>
<used>170</used>
<free>26</free>
<zone-req>2157</zone-req>
<zone-name>ipq:</zone-name>
<zone-size>52</zone-size>
<count-limit>216</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>udpcb:</zone-name>
<zone-size>232</zone-size>
<count-limit>25194</count-limit>
<used>19</used>
<free>32</free>
<zone-req>31</zone-req>
<zone-name>inpcb:</zone-name>
<zone-size>232</zone-size>
<count-limit>25194</count-limit>
<used>40</used>
<free>28</free>
<zone-req>105</zone-req>
<zone-name>tcpcb:</zone-name>
<zone-size>520</zone-size>
<count-limit>25193</count-limit>
<used>40</used>
<free>16</free>
<zone-req>105</zone-req>
<zone-name>tcptw:</zone-name>
<zone-size>56</zone-size>
<count-limit>5092</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>syncache:</zone-name>
<zone-size>128</zone-size>
<count-limit>15360</count-limit>
<used>0</used>
<free>60</free>
<zone-req>55</zone-req>
<zone-name>tcpreass:</zone-name>
<zone-size>20</zone-size>
<count-limit>1690</count-limit>
```



```

<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>sackhole:</zone-name>
<zone-size>20</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>ripcb:</zone-name>
<zone-size>232</zone-size>
<count-limit>25194</count-limit>
<used>5</used>
<free>29</free>
<zone-req>5</zone-req>
<zone-name>SWAPMETA:</zone-name>
<zone-size>276</zone-size>
<count-limit>94948</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
<zone-name>FFS inode:</zone-name>
<zone-size>132</zone-size>
<count-limit>0</count-limit>
<used>1146</used>
<free>72</free>
<zone-req>1306</zone-req>
<zone-name>FFS1 dinode:</zone-name>
<zone-size>128</zone-size>
<count-limit>0</count-limit>
<used>1146</used>
<free>24</free>
<zone-req>1306</zone-req>
<zone-name>FFS2 dinode:</zone-name>
<zone-size>256</zone-size>
<count-limit>0</count-limit>
<used>0</used>
<free>0</free>
<zone-req>0</zone-req>
</vmstat-memstat-zone>
<vmstat-sumstat>
  <cpu-context-switch>934906</cpu-context-switch>
  <dev-intr>1707986</dev-intr>
  <soft-intr>33819</soft-intr>
  <traps>203604</traps>
  <sys-calls>1200636</sys-calls>
  <kernel-thrds>60</kernel-thrds>
  <fork-calls>1313</fork-calls>
  <vfork-calls>21</vfork-calls>
  <rfork-calls>0</rfork-calls>
  <swap-pageins>0</swap-pageins>
  <swap-pagedin>0</swap-pagedin>
  <swap-pageouts>0</swap-pageouts>
  <swap-pagedout>0</swap-pagedout>
  <vnode-pageins>23094</vnode-pageins>
  <vnode-pagedin>23119</vnode-pagedin>
  <vnode-pageouts>226</vnode-pageouts>
  <vnode-pagedout>3143</vnode-pagedout>
  <page-daemon-wakeup>0</page-daemon-wakeup>
  <page-daemon-examined-pages>0</page-daemon-examined-pages>
  <pages-reactivated>8821</pages-reactivated>

```

```

<copy-on-write-faults>48364</copy-on-write-faults>
<copy-on-write-optimized-faults>31</copy-on-write-optimized-faults>
<zero-fill-pages-zeroed>74665</zero-fill-pages-zeroed>
<zero-fill-pages-prezeroed>70061</zero-fill-pages-prezeroed>
<transit-blocking-page-faults>85</transit-blocking-page-faults>
<total-vm-faults>191824</total-vm-faults>

<pages-affected-by-kernel-thrd-creat>0</pages-affected-by-kernel-thrd-creat>
<pages-affected-by-fork>95343</pages-affected-by-fork>
<pages-affected-by-vfork>3526</pages-affected-by-vfork>
<pages-affected-by-rfork>0</pages-affected-by-rfork>
<pages-freed>221502</pages-freed>
<pages-freed-by-deamon>0</pages-freed-by-deamon>
<pages-freed-by-exiting-proc>75630</pages-freed-by-exiting-proc>
<pages-active>45826</pages-active>
<pages-inactive>13227</pages-inactive>
<pages-in-vm-cache>49278</pages-in-vm-cache>
<pages-wired-down>10640</pages-wired-down>
<pages-free>70706</pages-free>
<bytes-per-page>4096</bytes-per-page>
<swap-pages-used>0</swap-pages-used>
<peak-swap-pages-used>0</peak-swap-pages-used>
<total-name-lookups>214496</total-name-lookups>
<positive-cache-hits>92</positive-cache-hits>
<negative-cache-hits>5</negative-cache-hits>
<pass2>0</pass2>
<cache-deletions>0</cache-deletions>
<cache-falsehits>0</cache-falsehits>
<toolong>0</toolong>
</vmstat-sumstat>
<vmstat-intr>
  <intr-name>irq0: clk      </intr-name>
  <intr-cnt>1243455</intr-cnt>
  <intr-rate>999</intr-rate>
  <intr-name>irq4: sio0    </intr-name>
  <intr-cnt>1140</intr-cnt>
  <intr-rate>0</intr-rate>
  <intr-name>irq8: rtc     </intr-name>
  <intr-cnt>159164</intr-cnt>
  <intr-rate>127</intr-rate>
  <intr-name>irq9: cbb1 fxp0 </intr-name>
  <intr-cnt>28490</intr-cnt>
  <intr-rate>22</intr-rate>
  <intr-name>irq10: fxp1   </intr-name>
  <intr-cnt>20593</intr-cnt>
  <intr-rate>16</intr-rate>
  <intr-name>irq14: ata0   </intr-name>
  <intr-cnt>5031</intr-cnt>
  <intr-rate>4</intr-rate>
  <intr-name>Total</intr-name>
  <intr-cnt>1457873</intr-cnt>
  <intr-rate>1171</intr-rate>
</vmstat-intr>
<vm-kernel-state>
  <vm-kmem-map-free>248524800</vm-kmem-map-free>
</vm-kernel-state>
</system-virtual-memory-information>
<cli>
  <banner></banner>
</cli>
</rpc-reply>

```

```

regress@hager> show system virtual-memory
      Type InUse MemUse HighUse Requests Size(s)
      mtx_pool 1 8K - 1 (F4p)
      DEVFS 63 2K - 64 16,128
      subproc 282 559K - 2131 32768,8388608
      proc 2 1K - 2 262144
      session 6 1K - 19 2048
      pgrp 9 1K - 25 128
      cred 35 5K - 38288 1024
      uidinfo 4 1K - 10 32,128
      plimit 31 8K - 189 32768
      sysctltmp 0 0K - 981 16,32,64,32768
      sysctlold 862 23K - 862 16,32,64
      umtx 189 9K - 189 64
      ifa_list 14 1K - 14 16
vpls_lc_instance 1 2K - 1 4194304
      ifl_tlv_info 1 1K - 1 16
      mesh-group 4 1K - 4 256
      rtmsg 0 0K - 1021 8388608
      idl 1 20K - 186 32,64,512,4096,65536,8388608
      gencfg 569 2777K - 626
16,32,64,128,256,512,1024,2048,4096,8192,1048576,2097152,4194304
      pfestat 123 34K - 626 16,32,4096,16384,4194304,8388608
      pic 4 2K - 4 32,64,256,2097152
      ifservice 1 1K - 1 32
      lr 1 1K - 1 1048576
      itable64 1 1K - 1 2048
      itable32 189 12K - 189 128
      itable16 372 72K - 378 4096,262144
      ifstate 3072 113K - 3506
16,64,128,256,512,1024,2048,4096,8192,32768,1048576,2097152,4194304
      pfe_ipc 0 0K - 1766
16,32,64,128,256,512,1024,4096,8192,16384,32768,524288,1048576,2097152,4194304,8388608

      mkey 568 9K - 7615 16,256
      socket 2 1K - 2 16
      ifaddr 27 2K - 27 128
      sysctl 23 6K - 43074 16,32,64,128,262144,1048576,2097152

      rtable 115 17K - 117 16,32,256,512,4096,8192,1048576
      ifmaddr 40 2K - 40 16,32
      ipfw 48 25K - 103
16,32,64,256,1024,4096,16384,32768,262144,524288,1048576,2097152,4194304,8388608

      rtdata 1 1K - 1 32
      ifstat 109 158K - 156
32,512,2048,16384,32768,1048576,8388608
      ifdevice 5 3K - 5 16,2097152
      rcache 4 8K - 4 4194304
      rnode 56 2K - 58 16,32
      metrics 3 1K - 4 1024
      rtnexthop 126 17K - 126 16,32,2048,4096,8192,16384,32768,65536

      iffamilly 31 4K - 31 16,32,2048,4096
      iflogical 18 5K - 18 16,128,65536,1048576
      NULLFS node 14 1K - 3102 16
      NULLFS hash 1 1K - 1 128
      bus-sc 19 8K - 82
16,64,128,1024,2048,4096,8192,16384,262144,524288,1048576,2097152,4194304,8388608

```

bus	256	35K	-	425	16, 32, 64, 128, 512, 2097152
devstat	10	21K	-	10	16, 8388608
eventhandler	72	4K	-	72	32, 256, 512
NULLFS mount	6	1K	-	6	16
kobj	72	144K	-	78	4194304
pfs_nodes	25	2K	-	25	256
pfs_vncache	41	2K	-	81	32
rman	38	3K	-	43	16, 32, 256
CAM dev queue	2	1K	-	2	128
sbuf	0	0K	-	427	16, 32, 128, 2048, 2097152
GEOM	142	15K	-	725	
16, 32, 128, 256, 512, 1024, 2048, 16384, 1048576, 2097152					
ISOFS node	4780	449K	-	4780	512
taskqueue	9	1K	-	9	16, 256
turnstiles	190	12K	-	190	128
Unitno	6	1K	-	8	16, 64
iov	0	0K	-	72731	16, 32, 64, 128, 256, 512, 1024, 2048
ioctlops	0	0K	-	12180	
16, 64, 65536, 524288, 1048576, 2097152, 4194304, 8388608					
msg	4	25K	-	4	2097152, 8388608
sem	4	7K	-	4	1048576, 2097152, 8388608
shm	13	76K	-	17	8388608
ttys	157	22K	-	892	2048, 2097152
ptys	1	1K	-	1	512
mbuf_tag	6	1K	-	7293	32, 128
pcb	483	111K	-	2577	
16, 32, 64, 128, 256, 8192, 16384, 65536, 262144, 1048576, 2097152, 4194304, 8388608					
soname	164	18K	-	22803	16, 32, 64, 128, 1024
BIO buffer	102	204K	-	1066	4194304
vfscache	1	512K	-	1	4194304
cluster_save buffer	0	0K	-	40	32, 64
VFS hash	1	256K	-	1	32, 64
vnodes	1	1K	-	1	2048
vnodemarker	0	0K	-	729	524288
mount	226	25K	-	337	16, 32, 64, 512, 1024, 262144, 2097152
ISOFS mount	1	1K	-	1	2048
ifl_idx_mgr	1	1K	-	1	128
CAM queue	7	1K	-	25	16
MD sectors	32	128K	-	32	8388608
MD disk	36	9K	-	36	16, 4194304
CAM SIM	2	1K	-	2	64
CAM periph	3	1K	-	4	256
jlist	1	1K	-	1	64
STP	31	7K	-	31	16, 1024, 2048, 1048576
cdev	26	4K	-	26	1024
synccache	1	8K	-	1	1024
CAM XPT	15	3K	-	46	16, 64, 262144, 1048576, 2097152
tlv_stat	0	0K	-	87	16, 64, 262144, 1048576, 2097152
Aggregator	2	1K	-	2	256
sigio	2	1K	-	3	32
Bridge Domain	4	2K	-	4	16, 1048576
p1003.1b	1	1K	-	1	16
filedesc	176	39K	-	2234	16, 4096, 16384, 1048576, 2097152
kenv	50	6K	-	58	16, 32, 64, 128, 512, 8388608
kqueue	27	13K	-	59	32, 4096, 262144, 2097152
proc-args	69	3K	-	1472	
16, 32, 64, 128, 256, 512, 1024, 2048, 4096, 8192					
zombie	1	1K	-	1850	256
entropy	1024	48K	-	1024	64
ithread	45	3K	-	45	16, 64, 2048
UART	3	2K	-	3	128, 1048576, 2097152

```

KTRACE      101      8K      -      101  256
USBdev       4       1K      -      11  16,512,1048576
newblk       1       1K      -      1  262144
inodedep     1     256K      -      1  262144
pagedep      1      64K      -      1  262144
UFS mount    18     38K      -      30  65536,4194304,8388608
linker       212    240K      -      325
16,32,64,128,256,512,1024,2048,4096,8192,16384,32768,65536,262144,524288,1048576,2097152,4194304,8388608

UMAHash      2     17K      -      10  262144,1048576,2097152,4194304,8388608

lockf        89      6K      -      19507 128
USB          134     10K      -      25616 16,32,64,128,1024,8192,262144,4194304

VM pgdata    1     256K      -      1  16,32,64,128,1024,8192,262144,4194304

temp         4384    656K      -      9085
16,32,64,256,512,1024,2048,4096,65536,262144,1048576,2097152,4194304,8388608
devbuf       290   1556K      -      415
16,32,64,128,256,1024,2048,4096,8192,1048576,2097152,4194304,8388608
cache        2       1K      -      2  16384
DEVFS1       79     18K      -      80  32768
DEVFS3      326     39K      -      327 1024
DEVFS2       79      2K      -      228 16
module       186     12K      -      186 64,128
gresstatevarlog 1     96K      -      1 64,128
DEVFS_RULE   5       1K      -      5  32,262144
KATS         0       0K      -      11  16,32,64,256
crypto       1       1K      -      1  1048576
Export Host   2       2K      -      2  2097152
inpcbpolicy  118      2K      -      790 16
ipsecpolicy  236     37K      -      1580 4096
ITEM          SIZE      LIMIT      USED      FREE  REQUESTS
UMA Kegs:     136,        0,        80,        16,         80
UMA Zones:    392,        0,        80,         1,         80
UMA Slabs:     64,        0,     3588,     129,     5170
UMA RCntSlabs: 104,        0,     147,         1,        147
UMA Hash:     128,        0,         5,        25,         7
16 Bucket:    76,        0,        37,        13,         53
32 Bucket:    140,        0,        31,        25,         53
64 Bucket:    268,        0,        37,         5,         82
128 Bucket:   524,        0,        98,         0,        649
VM OBJECT:    136,        0,     8074,     394,     42585
MAP:          168,        0,         8,        15,          8
KMAP ENTRY:   72,     35828,        31,     181,     9422
MAP ENTRY:    72,        0,     5354,     900,    121777
PV ENTRY:     28,     700278,    148072,    12075,    1346404
DP fakepg:    88,        0,         1,        87,          1
mt_zone:      768,        0,        261,     119,        261
16:           16,        0,     4817,     258,     61005
32:           32,        0,        700,        91,     45307
48:           48,        0,     1752,     120,     73638
64:           64,        0,        830,     114,     27311
80:           80,        0,        458,        70,        3204
96:           96,        0,     9523,        37,     9655
120:          120,        0,        694,        74,     56623
128:          128,        0,        337,     113,     1230
160:          160,        0,        512,        16,     2000
176:          176,        0,        123,         9,        178
208:          208,        0,        351,        29,     2390
232:          232,        0,        270,        19,        466

```

240:	240,	0,	22,	26,	1478
248:	248,	0,	0,	0,	0
256:	256,	0,	210,	15,	253
296:	296,	0,	8,	18,	753
512:	512,	0,	113,	7,	564
1024:	1024,	0,	146,	10,	974
2048:	2048,	0,	239,	577,	5805
4096:	4096,	0,	367,	7,	4011
Files:	80,	0,	1030,	74,	47744
MAC labels:	20,	0,	8479,	140,	67133
PROC:	632,	0,	130,	20,	1979
THREAD:	524,	0,	175,	14,	175
KSEGRP:	100,	0,	175,	35,	175
UPCALL:	44,	0,	0,	0,	0
SLEEPQUEUE:	32,	0,	190,	149,	190
VMSPACE:	328,	0,	68,	28,	1917
mbuf_packet:	256,	88200,	0,	128,	9045
mbuf:	256,	88200,	57,	595,	187328
mbuf_cluster:	2048,	22048,	132,	162,	7694
mbuf_jumbo_pagesize:	4096,	0,	0,	0,	0
mbuf_jumbo_9k:	9216,	0,	0,	0,	0
mbuf_jumbo_16k:	16384,	0,	0,	0,	0
g_bio:	144,	0,	0,	297,	87407
ata_request:	224,	0,	0,	0,	0
ata_composite:	192,	0,	0,	0,	0
GENCFG:	72,	1000004,	249,	69,	266
VNODE:	272,	0,	6149,	11,	9449
VNODEPOLL:	72,	0,	0,	0,	0
NAMEI:	1024,	0,	0,	36,	125321
S VFS Cache:	68,	0,	6099,	61,	7466
L VFS Cache:	291,	0,	224,	23,	228
NFSMOUNT:	488,	0,	0,	0,	0
NFSNODE:	472,	0,	0,	0,	0
PIPE:	404,	0,	69,	12,	1198
KNOTE:	72,	0,	106,	53,	18201
socket:	376,	22050,	566,	14,	7613
unpcb:	144,	22059,	258,	39,	5877
ipq:	52,	216,	0,	0,	0
udp_inpcb:	272,	22050,	21,	21,	43
tcp_inpcb:	272,	22050,	91,	7,	743
tcpcb:	704,	22050,	91,	14,	743
sackhole:	20,	0,	0,	0,	0
tcptw:	60,	4410,	0,	0,	0
syncache:	128,	15360,	0,	60,	25
tcpreass:	20,	1521,	0,	0,	0
ripcb:	272,	22050,	8,	20,	8
SWAPMETA:	280,	322518,	0,	0,	0
FFS inode:	144,	0,	1222,	20,	1387
FFS1 dinode:	128,	0,	1222,	8,	1387
FFS2 dinode:	256,	0,	0,	0,	0
md0:	512,	0,	20183,	17,	20183
cryptop:	64,	0,	0,	0,	0
cryptodesc:	56,	0,	0,	0,	0
md3:	512,	0,	18,	6,	18
7497039 cpu context switches					
5325569 device interrupts					
4299293 software interrupts					
0 traps					
7483223 system calls					
63 kernel threads created					
1896 fork() calls					

```

20 vfork() calls
0 rfork() calls
0 swap pager pageins
0 swap pager pages paged in
0 swap pager pageouts
0 swap pager pages paged out
27971 vnode pager pageins
30458 vnode pager pages paged in
551 vnode pager pageouts
5527 vnode pager pages paged out
0 page daemon wakeups
0 pages examined by the page daemon
25370 pages reactivated
173201 copy-on-write faults
36 copy-on-write optimized faults
135659 zero fill pages zeroed
127984 zero fill pages prezeroed
224 intransit blocking page faults
462029 total VM faults taken
0 pages affected by kernel thread creation
780640 pages affected by fork()
4850 pages affected by vfork()
0 pages affected by rfork()
401993 pages freed
0 pages freed by daemon
201585 pages freed by exiting process
71208 pages active
35957 pages inactive
100195 pages in VM cache
399107 pages wired down
411743 pages free
4096 bytes per page
0 swap pages used
0 peak swap pages used
310371 total name lookups
    cache hits (86% pos + 10% neg) system 0% per-directory
    deletions 0%, falsehits 0%, toolong 0%
interrupt                total    rate
clock                    3651206    3990
uart                     67064      73
IPI                      819301     895
Totalodesc:              4537571    4959
vm.kmem_map_free: 391446528

```

## show version

---

<b>List of Syntax</b>	<a href="#">Syntax on page 1248</a> <a href="#">Syntax (EX Series Switches) on page 1248</a> <a href="#">Syntax (TX Matrix Router) on page 1248</a> <a href="#">Syntax (TX Matrix Plus Router) on page 1248</a> <a href="#">Syntax (MX Series Router) on page 1248</a> <a href="#">Syntax (QFX Series) on page 1248</a> <a href="#">Syntax (ACX5048 and ACX5096 Routers) on page 1248</a>
<b>Syntax</b>	show version <brief   detail>
<b>Syntax (EX Series Switches)</b>	show version <all-members> <brief   detail> <local> <member <i>member-id</i> >
<b>Syntax (TX Matrix Router)</b>	show version <brief   detail> <all-chassis   all-lcc   lcc <i>number</i>   scc>
<b>Syntax (TX Matrix Plus Router)</b>	show version <all-chassis   all-lcc   lcc <i>number</i>   sfc <i>number</i> > <brief   detail>
<b>Syntax (MX Series Router)</b>	show version <brief   detail> <all-members> <local> <member <i>member-id</i> >
<b>Syntax (QFX Series)</b>	show version <brief   detail> <component <i>component-name</i>   all>
<b>Syntax (ACX5048 and ACX5096 Routers)</b>	show version <brief   detail>
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. Command introduced in Junos OS Release 9.0 for EX Series switches. sfc option introduced for the TX Matrix Plus router in Junos OS Release 9.6. Command introduced in Junos OS Release 11.1 for the QFX Series. Command introduced in Junos OS Release 15.1X54-D20 for ACX5048 and ACX5096 Routers.



**Description** Display the hostname and version information about the software running on the router or switch.

Beginning in Junos OS Release 13.3, the **show version** command output includes the **Junos** field that displays the Junos OS version running on the device. This field provides a consistent means of identifying the Junos OS version, rather than extracting that information from the list of installed sub-packages.

**Options** **none**—Display standard information about the hostname and version of the software running on the router or switch.

**brief | detail**—(Optional) Display the specified level of output.

**all-members**—(EX4200 switches and MX Series routers only) (Optional) Display standard information about the hostname and version of the software running on all members of the Virtual Chassis configuration.

**component all**—(QFabric systems only) (Optional) Display the host name and version information about the software running on all the components on the QFabric system.

**component *component-name***—(QFabric systems only) (Optional) Display the host name and version information about the software running on a specific QFabric system component. Replace *component-name* with the name of the QFabric system component. The *component-name* can be the name of a diagnostics Routing Engine, Director group, fabric control Routing Engine, fabric manager Routing Engine, Interconnect device, or Node group.

**local**—(EX4200 switches and MX Series routers only) (Optional) Display standard information about the hostname and version of the software running on the local Virtual Chassis member.

**member *member-id***—(EX4200 switches and MX Series routers only) (Optional) Display standard information about the hostname and version of the software running on the specified member of the Virtual Chassis configuration. For EX4200 switches, replace *member-id* with a value from 0 through 9. For an MX Series Virtual Chassis, replace *member-id* with a value of 0 or 1.

**scc**—(TX Matrix routers only) (Optional) Display the hostname and version information about the software running on the TX Matrix router (or switch-card chassis).

**lcc *number***—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display the host name and version information about the software running on for a specified T640 router (line-card chassis or LCC) that is connected to the TX Matrix router. On a TX Matrix Plus router, display the host name and version information about the software running for a specified T1600 or T4000 router (LCC) that is connected to the TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**sfc *number***—(TX Matrix Plus routers only) (Optional) Display the hostname and version information about the software running on the TX Matrix Plus router (or switch-fabric chassis). Replace *number* with 0.

**Additional Information** By default, when you issue the **show version** command on a TX Matrix or TX Matrix Plus master Routing Engine, the command is broadcast to all the T640 (in a routing matrix based on a TX Matrix router) or T1600 or T4000 (in a routing matrix based on a TX Matrix Plus router) master Routing Engines connected to it. Likewise, if you issue the same command on the TX Matrix or TX Matrix Plus backup Routing Engine, the command is broadcast to all the T640 (in a routing matrix based on a TX Matrix router) or T1600 or T4000 (in a routing matrix based on a TX Matrix Plus router) backup Routing Engines that are connected to it.

**Required Privilege Level**

view

**List of Sample Output**

- [show version \(Devices Running Junos OS Release 13.3 and Later\) on page 1251](#)
- [show version on page 1251](#)
- [show version \(TX Matrix Plus Router\) on page 1252](#)
- [show version \(TX Matrix Plus Router with 3D SIBs\) on page 1254](#)
- [show version \(MX Series Router\) on page 1258](#)
- [show version \(QFX3500 Switch\) on page 1258](#)
- [show version \(QFabric System\) on page 1258](#)
- [show version component all \(QFabric System\) on page 1259](#)
- [show version \(ACX5048 Router\) on page 1260](#)
- [show version \(ACX5096 Router\) on page 1261](#)

## Sample Output

### show version (Devices Running Junos OS Release 13.3 and Later)

The following output is from the MX240 Router and shows the **Junos** field introduced in Junos OS 13.3. Depending on the platform running Junos OS 13.3, you might see different installed sub-packages, but the **Junos** field is common across all platforms that run Junos OS 13.3 and later.

```
user@host > show version
Hostname: lab
Model: mx240
Junos: 13.3R1.4
JUNOS Base OS boot [13.3R1.4]
JUNOS Base OS Software Suite [13.3R1.4]
JUNOS Kernel Software Suite [13.3R1.4]
JUNOS Crypto Software Suite [13.3R1.4]
JUNOS Packet Forwarding Engine Support (M/T/EX Common) [13.3R1.4]
JUNOS Packet Forwarding Engine Support (MX Common) [13.3R1.4]
JUNOS Online Documentation [13.3R1.4]
JUNOS Services ACL Container package [13.3R1.4]
JUNOS Services Application Level Gateways [13.3R1.4]
JUNOS AppId Services [13.3R1.4]
JUNOS Border Gateway Function package [13.3R1.4]
JUNOS Services Captive Portal and Content Delivery Container package [13.3R1.4]
JUNOS Services HTTP Content Management package [13.3R1.4]
JUNOS IDP Services [13.3R1.4]
JUNOS Services Jflow Container package [13.3R1.4]
JUNOS Services LL-PDF Container package [13.3R1.4]
JUNOS Services MobileNext Software package [13.3R1.4]
JUNOS Services Mobile Subscriber Service Container package [13.3R1.4]
JUNOS Services NAT [13.3R1.4]
JUNOS Services PTSP Container package [13.3R1.4]
JUNOS Services RPM [13.3R1.4]
JUNOS Services Stateful Firewall [13.3R1.4]
JUNOS Voice Services Container package [13.3R1.4]
JUNOS Services Crypto [13.3R1.4]
JUNOS Services SSL [13.3R1.4]
JUNOS Services IPSec [13.3R1.4]
JUNOS platform Software Suite [13.3R1.4]
JUNOS Runtime Software Suite [13.3R1.4]
JUNOS Routing Software Suite [13.3R1.4]
JUNOS py-base-i386 [13.3R1.4]
```

### show version

```
user@host> show version
Hostname: router1
Model: m20
JUNOS Base OS boot [7.2-20050312.0]
JUNOS Base OS Software Suite [7.2-20050312.0]
JUNOS Kernel Software Suite [7.2R1.7]
JUNOS Packet Forwarding Engine Support (M20/M40) [7.2R1.7]
JUNOS Routing Software Suite [7.2R1.7]
JUNOS Online Documentation [7.2R1.7]
JUNOS Crypto Software Suite [7.2R1.7]
```

```
{master}
```

```
user@host> show version psd 1
psd1-re0:
-----
Hostname: china
Model: t640
JUNOS Base OS boot [9.1I20080311_1959_builder]
JUNOS Base OS Software Suite [9.1-20080321.0]
JUNOS Kernel Software Suite [9.1-20080321.0]
JUNOS Crypto Software Suite [9.1-20080321.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [9.1-20080321.0]
JUNOS Packet Forwarding Engine Support (T-series) [9.1-20080321.0]
JUNOS Online Documentation [9.1-20080321.0]
JUNOS Routing Software Suite [9.1-20080321.0]
labpkg [7.0]
```

### show version (TX Matrix Plus Router)

```
user@host> show version
sfc0-re0:
-----
Hostname: host
Model: txp
JUNOS Base OS boot [12.3-20121019.0]
JUNOS Base OS Software Suite [12.3-20121019.0]
JUNOS Kernel Software Suite [12.3-20121019.0]
JUNOS Crypto Software Suite [12.3-20121019.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [12.3-20121019.0]
JUNOS Packet Forwarding Engine Support (T-Series) [12.3-20121019.0]
JUNOS Online Documentation [12.3-20121019.0]
JUNOS Services AACL Container package [12.3-20121019.0]
JUNOS Services Application Level Gateways [12.3-20121019.0]
JUNOS AppId Services [12.3-20121019.0]
JUNOS Border Gateway Function package [12.3-20121019.0]
JUNOS Services Captive Portal and Content Delivery Container package
[12.3-20121019.0]
JUNOS Services HTTP Content Management package [12.3-20121019.0]
JUNOS IDP Services [12.3-20121019.0]
JUNOS Services LL-PDF Container package [12.3-20121019.0]
JUNOS Services NAT [12.3-20121019.0]
JUNOS Services PTSP Container package [12.3-20121019.0]
JUNOS Services RPM [12.3-20121019.0]
JUNOS Services Stateful Firewall [12.3-20121019.0]
JUNOS Voice Services Container package [12.3-20121019.0]
JUNOS Services Example Container package [12.3-20121019.0]
JUNOS Services Crypto [12.3-20121019.0]
JUNOS Services SSL [12.3-20121019.0]
JUNOS Services IPSec [12.3-20121019.0]
JUNOS Runtime Software Suite [12.3-20121019.0]
JUNOS Routing Software Suite [12.3-20121019.0]

lcc0-re0:
-----
Hostname: host1
Model: t1600
JUNOS Base OS boot [12.3-20121019.0]
JUNOS Base OS Software Suite [12.3-20121019.0]
JUNOS Kernel Software Suite [12.3-20121019.0]
JUNOS Crypto Software Suite [12.3-20121019.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [12.3-20121019.0]
JUNOS Packet Forwarding Engine Support (T-Series) [12.3-20121019.0]
JUNOS Online Documentation [12.3-20121019.0]
```

```

JUNOS Services AACL Container package [12.3-20121019.0]
JUNOS Services Application Level Gateways [12.3-20121019.0]
JUNOS AppId Services [12.3-20121019.0]
JUNOS Border Gateway Function package [12.3-20121019.0]
JUNOS Services Captive Portal and Content Delivery Container package
[12.3-20121019.0]
JUNOS Services HTTP Content Management package [12.3-20121019.0]
JUNOS IDP Services [12.3-20121019.0]
JUNOS Services LL-PDF Container package [12.3-20121019.0]
JUNOS Services NAT [12.3-20121019.0]
JUNOS Services PTSP Container package [12.3-20121019.0]
JUNOS Services RPM [12.3-20121019.0]
JUNOS Services Stateful Firewall [12.3-20121019.0]
JUNOS Voice Services Container package [12.3-20121019.0]
JUNOS Services Example Container package [12.3-20121019.0]
JUNOS Services Crypto [12.3-20121019.0]
JUNOS Services SSL [12.3-20121019.0]
JUNOS Services IPSec [12.3-20121019.0]
JUNOS Runtime Software Suite [12.3-20121019.0]
JUNOS Routing Software Suite [12.3-20121019.0]

```

```
lcc1-re0:
```

```

-----
Hostname: host2
Model: t1600
JUNOS Base OS boot [12.3-20121019.0]
JUNOS Base OS Software Suite [12.3-20121019.0]
JUNOS Kernel Software Suite [12.3-20121019.0]
JUNOS Crypto Software Suite [12.3-20121019.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [12.3-20121019.0]
JUNOS Packet Forwarding Engine Support (T-Series) [12.3-20121019.0]
JUNOS Online Documentation [12.3-20121019.0]
JUNOS Services AACL Container package [12.3-20121019.0]
JUNOS Services Application Level Gateways [12.3-20121019.0]
JUNOS AppId Services [12.3-20121019.0]
JUNOS Border Gateway Function package [12.3-20121019.0]
JUNOS Services Captive Portal and Content Delivery Container package
[12.3-20121019.0]
JUNOS Services HTTP Content Management package [12.3-20121019.0]
JUNOS IDP Services [12.3-20121019.0]
JUNOS Services LL-PDF Container package [12.3-20121019.0]
JUNOS Services NAT [12.3-20121019.0]
JUNOS Services PTSP Container package [12.3-20121019.0]
JUNOS Services RPM [12.3-20121019.0]
JUNOS Services Stateful Firewall [12.3-20121019.0]
JUNOS Voice Services Container package [12.3-20121019.0]
JUNOS Services Example Container package [12.3-20121019.0]
JUNOS Services Crypto [12.3-20121019.0]
JUNOS Services SSL [12.3-20121019.0]
JUNOS Services IPSec [12.3-20121019.0]
JUNOS Runtime Software Suite [12.3-20121019.0]
JUNOS Routing Software Suite [12.3-20121019.0]

```

```
lcc2-re0:
```

```

-----
Hostname: host3
Model: t1600
JUNOS Base OS boot [12.3-20121019.0]
JUNOS Base OS Software Suite [12.3-20121019.0]
JUNOS Kernel Software Suite [12.3-20121019.0]
JUNOS Crypto Software Suite [12.3-20121019.0]

```

```
JUNOS Packet Forwarding Engine Support (M/T Common) [12.3-20121019.0]
JUNOS Packet Forwarding Engine Support (T-Series) [12.3-20121019.0]
JUNOS Online Documentation [12.3-20121019.0]
JUNOS Services AACL Container package [12.3-20121019.0]
JUNOS Services Application Level Gateways [12.3-20121019.0]
JUNOS AppId Services [12.3-20121019.0]
JUNOS Border Gateway Function package [12.3-20121019.0]
JUNOS Services Captive Portal and Content Delivery Container package
[12.3-20121019.0]
JUNOS Services HTTP Content Management package [12.3-20121019.0]
JUNOS IDP Services [12.3-20121019.0]
JUNOS Services LL-PDF Container package [12.3-20121019.0]
JUNOS Services NAT [12.3-20121019.0]
JUNOS Services PTSP Container package [12.3-20121019.0]
JUNOS Services RPM [12.3-20121019.0]
JUNOS Services Stateful Firewall [12.3-20121019.0]
JUNOS Voice Services Container package [12.3-20121019.0]
JUNOS Services Example Container package [12.3-20121019.0]
JUNOS Services Crypto [12.3-20121019.0]
JUNOS Services SSL [12.3-20121019.0]
JUNOS Services IPSec [12.3-20121019.0]
JUNOS Runtime Software Suite [12.3-20121019.0]
JUNOS Routing Software Suite [12.3-20121019.0]
```

```
lcc3-re0:
```

```
-----
Hostname: host4
Model: t1600
JUNOS Base OS boot [12.3-20121019.0]
JUNOS Base OS Software Suite [12.3-20121019.0]
JUNOS Kernel Software Suite [12.3-20121019.0]
JUNOS Crypto Software Suite [12.3-20121019.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [12.3-20121019.0]
JUNOS Packet Forwarding Engine Support (T-Series) [12.3-20121019.0]
JUNOS Online Documentation [12.3-20121019.0]
JUNOS Services AACL Container package [12.3-20121019.0]
JUNOS Services Application Level Gateways [12.3-20121019.0]
JUNOS AppId Services [12.3-20121019.0]
JUNOS Border Gateway Function package [12.3-20121019.0]
JUNOS Services Captive Portal and Content Delivery Container package
[12.3-20121019.0]
JUNOS Services HTTP Content Management package [12.3-20121019.0]
JUNOS IDP Services [12.3-20121019.0]
JUNOS Services LL-PDF Container package [12.3-20121019.0]
JUNOS Services NAT [12.3-20121019.0]
JUNOS Services PTSP Container package [12.3-20121019.0]
JUNOS Services RPM [12.3-20121019.0]
JUNOS Services Stateful Firewall [12.3-20121019.0]
JUNOS Voice Services Container package [12.3-20121019.0]
JUNOS Services Example Container package [12.3-20121019.0]
JUNOS Services Crypto [12.3-20121019.0]
JUNOS Services SSL [12.3-20121019.0]
JUNOS Services IPSec [12.3-20121019.0]
JUNOS Runtime Software Suite [12.3-20121019.0]
JUNOS Routing Software Suite [12.3-20121019.0]
```

#### show version (TX Matrix Plus Router with 3D SIBs)

```
user@host>show version
sfc0-re0:
```

```

Hostname: sfc0
Model: txp
JUNOS Base OS boot [13.1-20130306.0]
JUNOS Base OS Software Suite [13.1-20130306.0]
JUNOS Kernel Software Suite [13.1-20130306.0]
JUNOS Crypto Software Suite [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (T-Series) [13.1-20130306.0]
JUNOS Online Documentation [13.1-20130306.0]
JUNOS Services AACL Container package [13.1-20130306.0]
JUNOS Services Application Level Gateways [13.1-20130306.0]
JUNOS AppId Services [13.1-20130306.0]
JUNOS Border Gateway Function package [13.1-20130306.0]
JUNOS Services Captive Portal and Content Delivery Container package
[13.1-20130306.0]
JUNOS Services HTTP Content Management package [13.1-20130306.0]
JUNOS IDP Services [13.1-20130306.0]
JUNOS Services Jflow Container package [13.1-20130306.0]
JUNOS Services LL-PDF Container package [13.1-20130306.0]
JUNOS Services MobileNext Software package [13.1-20130306.0]
JUNOS Services Mobile Subscriber Service Container package [13.1-20130306.0]
JUNOS Services NAT [13.1-20130306.0]
JUNOS Services PTSP Container package [13.1-20130306.0]
JUNOS Services RPM [13.1-20130306.0]
JUNOS Services Stateful Firewall [13.1-20130306.0]
JUNOS Voice Services Container package [13.1-20130306.0]
JUNOS Services Example Container package [13.1-20130306.0]
JUNOS Services Crypto [13.1-20130306.0]
JUNOS Services SSL [13.1-20130306.0]
JUNOS Services IPSec [13.1-20130306.0]
JUNOS Runtime Software Suite [13.1-20130306.0]
JUNOS Routing Software Suite [13.1-20130306.0]

```

```
lcc0-re0:
```

```

-----
Hostname: lcc0
Model: t4000
JUNOS Base OS boot [13.1-20130306.0]
JUNOS Base OS Software Suite [13.1-20130306.0]
JUNOS Kernel Software Suite [13.1-20130306.0]
JUNOS Crypto Software Suite [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (T-Series) [13.1-20130306.0]
JUNOS Online Documentation [13.1-20130306.0]
JUNOS Services AACL Container package [13.1-20130306.0]
JUNOS Services Application Level Gateways [13.1-20130306.0]
JUNOS AppId Services [13.1-20130306.0]
JUNOS Border Gateway Function package [13.1-20130306.0]
JUNOS Services Captive Portal and Content Delivery Container package
[13.1-20130306.0]
JUNOS Services HTTP Content Management package [13.1-20130306.0]
JUNOS IDP Services [13.1-20130306.0]
JUNOS Services Jflow Container package [13.1-20130306.0]
JUNOS Services LL-PDF Container package [13.1-20130306.0]
JUNOS Services MobileNext Software package [13.1-20130306.0]
JUNOS Services Mobile Subscriber Service Container package [13.1-20130306.0]
JUNOS Services NAT [13.1-20130306.0]
JUNOS Services PTSP Container package [13.1-20130306.0]
JUNOS Services RPM [13.1-20130306.0]
JUNOS Services Stateful Firewall [13.1-20130306.0]
JUNOS Voice Services Container package [13.1-20130306.0]

```

```
JUNOS Services Example Container package [13.1-20130306.0]
JUNOS Services Crypto [13.1-20130306.0]
JUNOS Services SSL [13.1-20130306.0]
JUNOS Services IPSec [13.1-20130306.0]
JUNOS Runtime Software Suite [13.1-20130306.0]
JUNOS Routing Software Suite [13.1-20130306.0]
```

lcc2-re0:

```
-----
Hostname: lcc2
Model: t4000
JUNOS Base OS boot [13.1-20130306.0]
JUNOS Base OS Software Suite [13.1-20130306.0]
JUNOS Kernel Software Suite [13.1-20130306.0]
JUNOS Crypto Software Suite [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (T-Series) [13.1-20130306.0]
JUNOS Online Documentation [13.1-20130306.0]
JUNOS Services AACL Container package [13.1-20130306.0]
JUNOS Services Application Level Gateways [13.1-20130306.0]
JUNOS AppId Services [13.1-20130306.0]
JUNOS Border Gateway Function package [13.1-20130306.0]
JUNOS Services Captive Portal and Content Delivery Container package
[13.1-20130306.0]
JUNOS Services HTTP Content Management package [13.1-20130306.0]
JUNOS IDP Services [13.1-20130306.0]
JUNOS Services Jflow Container package [13.1-20130306.0]
JUNOS Services LL-PDF Container package [13.1-20130306.0]
JUNOS Services MobileNext Software package [13.1-20130306.0]
JUNOS Services Mobile Subscriber Service Container package [13.1-20130306.0]
JUNOS Services NAT [13.1-20130306.0]
JUNOS Services PTSP Container package [13.1-20130306.0]
JUNOS Services RPM [13.1-20130306.0]
JUNOS Services Stateful Firewall [13.1-20130306.0]
JUNOS Voice Services Container package [13.1-20130306.0]
JUNOS Services Example Container package [13.1-20130306.0]
JUNOS Services Crypto [13.1-20130306.0]
JUNOS Services SSL [13.1-20130306.0]
JUNOS Services IPSec [13.1-20130306.0]
JUNOS Runtime Software Suite [13.1-20130306.0]
JUNOS Routing Software Suite [13.1-20130306.0]
```

lcc4-re0:

```
-----
Hostname: lcc4
Model: t4000
JUNOS Base OS boot [13.1-20130306.0]
JUNOS Base OS Software Suite [13.1-20130306.0]
JUNOS Kernel Software Suite [13.1-20130306.0]
JUNOS Crypto Software Suite [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (T-Series) [13.1-20130306.0]
JUNOS Online Documentation [13.1-20130306.0]
JUNOS Services AACL Container package [13.1-20130306.0]
JUNOS Services Application Level Gateways [13.1-20130306.0]
JUNOS AppId Services [13.1-20130306.0]
JUNOS Border Gateway Function package [13.1-20130306.0]
JUNOS Services Captive Portal and Content Delivery Container package
[13.1-20130306.0]
JUNOS Services HTTP Content Management package [13.1-20130306.0]
```



```

JUNOS IDP Services [13.1-20130306.0]
JUNOS Services Jflow Container package [13.1-20130306.0]
JUNOS Services LL-PDF Container package [13.1-20130306.0]
JUNOS Services MobileNext Software package [13.1-20130306.0]
JUNOS Services Mobile Subscriber Service Container package [13.1-20130306.0]
JUNOS Services NAT [13.1-20130306.0]
JUNOS Services PTSP Container package [13.1-20130306.0]
JUNOS Services RPM [13.1-20130306.0]
JUNOS Services Stateful Firewall [13.1-20130306.0]
JUNOS Voice Services Container package [13.1-20130306.0]
JUNOS Services Example Container package [13.1-20130306.0]
JUNOS Services Crypto [13.1-20130306.0]
JUNOS Services SSL [13.1-20130306.0]
JUNOS Services IPSec [13.1-20130306.0]
JUNOS Runtime Software Suite [13.1-20130306.0]
JUNOS Routing Software Suite [13.1-20130306.0]

```

```
lcc6-re0:
```

```

-----
Hostname: lcc6
Model: t1600
JUNOS Base OS boot [13.1-20130306.0]
JUNOS Base OS Software Suite [13.1-20130306.0]
JUNOS Kernel Software Suite [13.1-20130306.0]
JUNOS Crypto Software Suite [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (T-Series) [13.1-20130306.0]
JUNOS Online Documentation [13.1-20130306.0]
JUNOS Services AACL Container package [13.1-20130306.0]
JUNOS Services Application Level Gateways [13.1-20130306.0]
JUNOS AppId Services [13.1-20130306.0]
JUNOS Border Gateway Function package [13.1-20130306.0]
JUNOS Services Captive Portal and Content Delivery Container package
[13.1-20130306.0]
JUNOS Services HTTP Content Management package [13.1-20130306.0]
JUNOS IDP Services [13.1-20130306.0]
JUNOS Services Jflow Container package [13.1-20130306.0]
JUNOS Services LL-PDF Container package [13.1-20130306.0]
JUNOS Services MobileNext Software package [13.1-20130306.0]
JUNOS Services Mobile Subscriber Service Container package [13.1-20130306.0]
JUNOS Services NAT [13.1-20130306.0]
JUNOS Services PTSP Container package [13.1-20130306.0]
JUNOS Services RPM [13.1-20130306.0]
JUNOS Services Stateful Firewall [13.1-20130306.0]
JUNOS Voice Services Container package [13.1-20130306.0]
JUNOS Services Example Container package [13.1-20130306.0]
JUNOS Services Crypto [13.1-20130306.0]
JUNOS Services SSL [13.1-20130306.0]
JUNOS Services IPSec [13.1-20130306.0]
JUNOS Runtime Software Suite [13.1-20130306.0]
JUNOS Routing Software Suite [13.1-20130306.0]

```

```
lcc7-re0:
```

```

-----
Hostname: lcc7
Model: t1600
JUNOS Base OS boot [13.1-20130306.0]
JUNOS Base OS Software Suite [13.1-20130306.0]
JUNOS Kernel Software Suite [13.1-20130306.0]
JUNOS Crypto Software Suite [13.1-20130306.0]

```

```
JUNOS Packet Forwarding Engine Support (M/T Common) [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (T-Series) [13.1-20130306.0]
JUNOS Online Documentation [13.1-20130306.0]
JUNOS Services ACL Container package [13.1-20130306.0]
JUNOS Services Application Level Gateways [13.1-20130306.0]
JUNOS AppID Services [13.1-20130306.0]
JUNOS Border Gateway Function package [13.1-20130306.0]
JUNOS Services Captive Portal and Content Delivery Container package
[13.1-20130306.0]
JUNOS Services HTTP Content Management package [13.1-20130306.0]
JUNOS IDP Services [13.1-20130306.0]
JUNOS Services Jflow Container package [13.1-20130306.0]
JUNOS Services LL-PDF Container package [13.1-20130306.0]
JUNOS Services MobileNext Software package [13.1-20130306.0]
JUNOS Services Mobile Subscriber Service Container package [13.1-20130306.0]
JUNOS Services NAT [13.1-20130306.0]
JUNOS Services PTSP Container package [13.1-20130306.0]
JUNOS Services RPM [13.1-20130306.0]
JUNOS Services Stateful Firewall [13.1-20130306.0]
JUNOS Voice Services Container package [13.1-20130306.0]
JUNOS Services Example Container package [13.1-20130306.0]
JUNOS Services Crypto [13.1-20130306.0]
JUNOS Services SSL [13.1-20130306.0]
JUNOS Services IPSec [13.1-20130306.0]
JUNOS Runtime Software Suite [13.1-20130306.0]
JUNOS Routing Software Suite [13.1-20130306.0]
```

#### show version (MX Series Router)

```
user@host5> show version
Hostname: host5
Model: mx80
JUNOS Base OS boot [11.3-20110717.0]
JUNOS Base OS Software Suite [11.3-20110717.0]
JUNOS Kernel Software Suite [11.3-20110717.0]
JUNOS Crypto Software Suite [11.3-20110717.0]
JUNOS Packet Forwarding Engine Support (MX80) [11.3-20110717.0]
JUNOS Online Documentation [11.3-20110717.0]
JUNOS Routing Software Suite [11.3-20110717.0]
```

#### show version (QFX3500 Switch)

```
user@switch> show version
Hostname: switch
Model: qfx_s3500
JUNOS Base OS boot [11.1R1]
JUNOS Base OS Software Suite [11.1R1]
JUNOS Kernel Software Suite [11.1R1]
JUNOS Crypto Software Suite [11.1R1]
JUNOS Online Documentation [11.1R1]
JUNOS Enterprise Software Suite [11.1R1]
JUNOS Packet Forwarding Engine Support (QFX) [11.1R1]
JUNOS Routing Software Suite [11.1R1]
```

#### show version (QFabric System)

```
user@qfabric> show version
Hostname: qfabric
Model: qfx3000-g
```

```

Serial Number: qfsn-0123456789
QFabric System ID: f158527a-f99e-11e0-9fbd-00e081c57cda
JUNOS Base Version [12.2I20111018_0215_dc-builder]

```

### show version component all (QFabric System)

```

user@switch> show version component all
dg1:
-
Hostname: qfabric
Model: qfx3100
JUNOS Base Version [11.3R1.6]

dg0:
-
Hostname: qfabric
Model: qfx3100
JUNOS Base Version [11.3R1.6]

NW-NG-0:
-
Hostname: qfabric
Model: qfx-jvre
JUNOS Base OS boot [11.3R1.6]
JUNOS Base OS Software Suite [11.3R1.6]
JUNOS Kernel Software Suite [11.3R1.6]
JUNOS Crypto Software Suite [11.3R1.6]
JUNOS Online Documentation [11.3R1.6]
JUNOS Enterprise Software Suite [11.3R1.6]
JUNOS Packet Forwarding Engine Support (QFX RE) [11.3R1.6]
JUNOS Routing Software Suite [11.3R1.6]

FC-0:
-
Hostname: qfabric
Model: qfx-jvre
JUNOS Base OS boot [11.3R1.6]
JUNOS Base OS Software Suite [11.3R1.6]
JUNOS Kernel Software Suite [11.3R1.6]
JUNOS Crypto Software Suite [11.3R1.6]
JUNOS Online Documentation [11.3R1.6]
JUNOS Enterprise Software Suite [11.3R1.6]
JUNOS Packet Forwarding Engine Support (QFX RE) [11.3R1.6]
JUNOS Routing Software Suite [11.3R1.6]

FC-1:
Hostname: qfabric
Model: qfx-jvre
JUNOS Base OS boot [11.3R1.6]
JUNOS Base OS Software Suite [11.3R1.6]
JUNOS Kernel Software Suite [11.3R1.6]
JUNOS Crypto Software Suite [11.3R1.6]
JUNOS Online Documentation [11.3R1.6]
JUNOS Enterprise Software Suite [11.3R1.6]
JUNOS Packet Forwarding Engine Support (QFX RE) [11.3R1.6]
JUNOS Routing Software Suite [11.3R1.6]

DRE-0:
-
Hostname: dre-0
Model: qfx-jvre

```

```
JUNOS Base OS boot [11.3R1.6]
JUNOS Base OS Software Suite [11.3R1.6]
JUNOS Kernel Software Suite [11.3R1.6]
JUNOS Crypto Software Suite [11.3R1.6]
JUNOS Online Documentation [11.3R1.6]
JUNOS Enterprise Software Suite [11.3R1.6]
JUNOS Packet Forwarding Engine Support (QFX RE) [11.3R1.6]
JUNOS Routing Software Suite [11.3R1.6]
```

FM-0:

```
-
Hostname: qfabric
Model: qfx-jvre
JUNOS Base OS boot [11.3R1.6]
JUNOS Base OS Software Suite [11.3R1.6]
JUNOS Kernel Software Suite [11.3R1.6]
JUNOS Crypto Software Suite [11.3R1.6]
JUNOS Online Documentation [11.3R1.6]
JUNOS Enterprise Software Suite [11.3R1.6]
JUNOS Packet Forwarding Engine Support (QFX RE) [11.3R1.6]
JUNOS Routing Software Suite [11.3R1.6]
```

nodedevice1:

```
-
Hostname: qfabric
Model: QFX3500
JUNOS Base OS boot [11.3R1.6]
JUNOS Base OS Software Suite [11.3R1.6]
JUNOS Kernel Software Suite [11.3R1.6]
JUNOS Crypto Software Suite [11.3R1.6]
JUNOS Online Documentation [11.3R1.6]
JUNOS Enterprise Software Suite [11.3R1.6]
JUNOS Packet Forwarding Engine Support (QFX RE) [11.3R1.6]
JUNOS Routing Software Suite [11.3R1.6]
```

interconnectdevice1:

```
-
Hostname: qfabric
Model: QFX3108
JUNOS Base OS boot [11.3R1.6]
JUNOS Base OS Software Suite [11.3R1.6]
JUNOS Kernel Software Suite [11.3R1.6]
JUNOS Crypto Software Suite [11.3R1.6]
JUNOS Online Documentation [11.3R1.6]
JUNOS Enterprise Software Suite [11.3R1.6]
JUNOS Packet Forwarding Engine Support (QFX RE) [11.3R1.6]
JUNOS Routing Software Suite [11.3R1.6]
warning: from interconnectdevice0: Disconnected
```

### show version (ACX5048 Router)

```
user@host> show version
fpc0:
Hostname: acx5k11-ac
Model: acx5048
Junos: 15.1X54-D20.3
JUNOS Base OS boot [15.1X54-D20.3]
JUNOS Online Documentation [15.1X54-D20.3]
JUNOS Crypto Software Suite [15.1X54-D20.3]
JUNOS Base OS Software Suite [15.1X54-D20.3]
JUNOS Kernel Software Suite [15.1X54-D20.3]
```


```
JUNOS Packet Forwarding Engine Support (acx5k) [15.1X54-D20.3]
JUNOS Enterprise Software Suite [15.1X54-D20.3]
JUNOS Routing Software Suite [15.1X54-D20.3]
JUNOS py-base-i386 [15.1X54-D20.3]
JUNOS Host Software [15.1X54-D20.3]
```

#### show version (ACX5096 Router)

```
user@host> show version
fpc0:
Hostname: acx5k13-ac
Model: acx5096
Junos: 15.1X54-D20.3
JUNOS Base OS boot [15.1X54-D20.3]
JUNOS Online Documentation [15.1X54-D20.3]
JUNOS Crypto Software Suite [15.1X54-D20.3]
JUNOS Base OS Software Suite [15.1X54-D20.3]
JUNOS Kernel Software Suite [15.1X54-D20.3]
JUNOS Packet Forwarding Engine Support (acx5k) [15.1X54-D20.3]
JUNOS Enterprise Software Suite [15.1X54-D20.3]
JUNOS Routing Software Suite [15.1X54-D20.3]
JUNOS py-base-i386 [15.1X54-D20.3]
JUNOS Host Software [15.1X54-D20.3]
```

## start shell

---

<b>Syntax</b>	<code>start shell (csh   sh)</code> <code>&lt;user username&gt;</code>
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. Command introduced in Junos OS Release 9.0 for EX Series switches. Command introduced in Junos OS Release 11.1 for the QFX Series. Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Exit from the CLI environment and create a UNIX-level shell. To return to the CLI, type <b>exit</b> from the shell.
<div> <b>NOTE:</b><ul style="list-style-type: none"><li>To issue this command, the user must have the required login access privileges configured by including the <b>permissions</b> statement at the <b>[edit system login class <i>class-name</i>]</b> hierarchy level.</li><li>UNIX wheel group membership or permissions are no longer required to issue this command.</li></ul></div>	
<b>Options</b>	<b>csh</b> —Create a UNIX C shell. <b>sh</b> —Create a UNIX Bourne shell. <b>user <i>username</i></b> —(Optional) Start the shell as another user.
<b>Additional Information</b>	When you are in the shell, the shell prompt has the following format:  <code>username@hostname%</code> An example of the prompt is:  <code>root@host%</code>
<b>Required Privilege Level</b>	shell and maintenance
<b>List of Sample Output</b>	<a href="#">start shell csh on page 1263</a>
<b>Output Fields</b>	When you enter this command, you are provided feedback on the status of your request.

## Sample Output

### start shell csh

```
user@host> start shell csh
%

exit
%

username@hostname% start shell sh
%

exit
user@host>
```

## test configuration

---

<b>Syntax</b>	<code>test configuration <i>filename</i></code> <code>syntax-only</code>
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. Command introduced in Junos OS Release 9.0 for EX Series switches. Command introduced in Junos OS Release 11.1 for the QFX Series. <b>syntax-only</b> option introduced in Junos OS Release 12.1. Command introduced in Junos OS Release 14.1X53-D20 for OCX Series switches.
<b>Description</b>	Verify that the syntax of a configuration file is correct. If the configuration contains any syntax or commit check errors, a message is displayed to indicate the line number and column number in which the error was found. This command only accepts text files.
<b>Options</b>	<b><i>filename</i></b> —Name of the configuration file.  <b>syntax-only</b> —(Optional) Check the syntax of a partial configuration file, without checking for commit errors.
<b>Required Privilege Level</b>	view
<b>List of Sample Output</b>	<a href="#">test configuration on page 1264</a>
<b>Output Fields</b>	When you enter this command, you are provided feedback on the status of your request.

## Sample Output

### test configuration

```
user@host> test configuration terminal
[Type ^D to end input]
system {
host-name host;
test1;
login;
}
terminal:3:(8) syntax error: test
[edit system]
'test;'
syntax error
terminal:4:(11) statement must contain additional statements: ;
[edit system login]
'login ;'
statement must contain additional statements
configuration syntax failed
```