



Junos[®] OS

Access Privilege Configuration Guide

Release

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Juniper Networks, Inc.
1194 North Mathilda Avenue
Sunnyvale, California 94089
USA
408-745-2000
www.juniper.net

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Table of Contents

	About This Guide	xi
	Junos OS Documentation and Release Notes	xi
	Objectives	xi
	Audience	xii
	Supported Platforms	xii
	Documentation Conventions	xii
	Documentation Feedback	xiv
	Requesting Technical Support	xiv
	Self-Help Online Tools and Resources	xv
	Opening a Case with JTAC	xv
Part 1	Configuring Access Privileges	
Chapter 1	Configuring and Customizing Access Privileges	3
	Junos OS Access Privilege Levels Overview	3
	Junos OS Login Class Permission Flags	3
	Allowing or Denying Individual Commands for Junos OS Login Classes	6
	Configuring Access Privilege Levels	8
	Example: Configuring Access Privilege Levels	8
	Specifying Access Privileges for Junos OS Operational Mode Commands	8
	Example: Configuring Access Privileges for Operational Mode Commands	10
	Specifying Access Privileges for Junos OS Configuration Mode Hierarchies	11
	Example: Defining Access Privileges for Configuration Mode Hierarchies	12
Chapter 2	User Permission Flags	15
	Access Privilege User Permissions Flags Overview	16
	access	17
	admin	18
	clear	18
	configure	26
	control	26
	field	26
	firewall	27
	flow-tap	28
	flow-tap-operation	28
	interface	28
	maintenance	29
	network	35
	pgcp-session-mirroring	36
	reset	37
	rollback	37

routing	38
security	41
shell	44
snmp	45
system	45
trace	46
view	52
view-configuration	90

Part 2

Index

Index	93
-------------	----

List of Tables

	About This Guide	xi
	Table 1: Notice Icons	xiii
	Table 2: Text and Syntax Conventions	xiii
Part 1	Configuring Access Privileges	
Chapter 1	Configuring and Customizing Access Privileges	3
	Table 3: Login Class Permission Flags	4

About This Guide

This preface provides the following guidelines for using the *Junos[®] OS Access Privilege Configuration Guide*:

- Junos OS Documentation and Release Notes on page xi
- Objectives on page xi
- Audience on page xii
- Supported Platforms on page xii
- Documentation Conventions on page xii
- Documentation Feedback on page xiv
- Requesting Technical Support on page xiv

Junos OS Documentation and Release Notes

For a list of related Junos OS documentation, see <http://www.juniper.net/techpubs/software/junos/>.

If the information in the latest release notes differs from the information in the documentation, follow the *Junos OS 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 <http://www.juniper.net/techpubs/>.

Juniper Networks supports a technical book program to publish books by Juniper Networks engineers and subject matter experts with book publishers around the world. These books go beyond the technical documentation to explore the nuances of network architecture, deployment, and administration using the Junos operating system (Junos OS) and Juniper Networks devices. In addition, the Juniper Networks Technical Library, published in conjunction with O'Reilly Media, explores improving network security, reliability, and availability using Junos OS configuration techniques. All the books are for sale at technical bookstores and book outlets around the world. The current list can be viewed at <http://www.juniper.net/books>.

Objectives

This guide describes how to configure access privileges for login classes in order to restrict the commands and statements available to users who manage your router. It also provides

a list of permission flags and their corresponding command-line interface (CLI) operational mode commands and configuration statements.



NOTE: For additional information about the Junos OS—either corrections to or information that might have been omitted from this guide—see the software release notes at <http://www.juniper.net/>.

For information about configuration statements and guidelines related to the commands described in this reference, see the following configuration guides:

- *Junos OS CLI User Guide*
- *Junos OS Installation and Upgrade Guide*
- *Junos OS System Basics Configuration Guide*
- *Junos XML Management Protocol Guide*
- *Junos OS Network Management Configuration Guide*

Audience

This guide is designed for network administrators who are configuring and monitoring a Juniper Networks M Series, MX Series, T Series, EX Series, or J Series router or switch.

To use this guide, you need to know how to use the Junos OS command-line interface (CLI) operational mode commands and configuration statements. For more information about the Junos operational mode commands and configuration statements, see the *Junos® OS Access Privilege Configuration Guide*.

Supported Platforms

For the features described in this manual, the Junos OS currently supports the following platforms:

- J Series
- M Series
- MX Series
- T Series
- EX Series

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.

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

Table 2: Text and Syntax Conventions

Convention	Description	Examples
Bold text like this	Represents text that you type.	To enter configuration mode, type the configure command: <code>user@host> configure</code>
Fixed-width text like this	Represents output that appears on the terminal screen.	<code>user@host> show chassis alarms</code> <code>No alarms currently active</code>
<i>Italic text like this</i>	<ul style="list-style-type: none"> Introduces important new terms. Identifies book names. Identifies RFC and Internet draft titles. 	<ul style="list-style-type: none"> A policy <i>term</i> is a named structure that defines match conditions and actions. <i>Junos OS System Basics Configuration Guide</i> RFC 1997, <i>BGP Communities Attribute</i>
<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: [edit] root@# set system domain-name <i>domain-name</i>
Text like this	Represents names of configuration statements, commands, files, and directories; interface names; configuration hierarchy levels; or labels on routing platform components.	<ul style="list-style-type: none"> To configure a stub area, include the stub statement at the [edit protocols ospf area area-id] hierarchy level. The console port is labeled CONSOLE.
< > (angle brackets)	Enclose optional keywords or variables.	<code>stub <default-metric metric>;</code>

Table 2: Text and Syntax Conventions (*continued*)

Convention	Description	Examples
(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.	broadcast multicast <i>(string1 string2 string3)</i>
# (pound sign)	Indicates a comment specified on the same line as the configuration statement to which it applies.	rsvp { # Required for dynamic MPLS only
[] (square brackets)	Enclose a variable for which you can substitute one or more values.	community name members [community-ids]
Indentation and braces ({ })	Identify a level in the configuration hierarchy.	[edit] routing-options { static { route default { nexthop <i>address</i> ; retain; } } }
;(semicolon)	Identifies a leaf statement at a configuration hierarchy level.	
J-Web GUI Conventions		
Bold text like this	Represents J-Web graphical user interface (GUI) items you click or select.	<ul style="list-style-type: none"> In the Logical Interfaces box, select All Interfaces. To cancel the configuration, click Cancel.
> (bold right angle bracket)	Separates levels in a hierarchy of J-Web selections.	In the configuration editor hierarchy, select Protocols>Ospf .

Documentation Feedback

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- Document or topic name
- URL or page number
- Software release version (if applicable)

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- JTAC policies—For a complete understanding of our JTAC procedures and policies, review the *JTAC User Guide* located at <http://www.juniper.net/us/en/local/pdf/resource-guides/7100059-en.pdf> .
- Product warranties—For product warranty information, visit <http://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.

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- Search for known bugs: <http://www2.juniper.net/kb/>
- Find product documentation: <http://www.juniper.net/techpubs/>
- Find solutions and answer questions using our Knowledge Base: <http://kb.juniper.net/>
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- Search technical bulletins for relevant hardware and software notifications: <https://www.juniper.net/alerts/>
- Join and participate in the Juniper Networks Community Forum: <http://www.juniper.net/company/communities/>
- Open a case online in the CSC Case Management tool: <http://www.juniper.net/cm/>

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

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 <http://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 <http://www.juniper.net/support/requesting-support.html> .

PART 1

Configuring Access Privileges

- [Configuring and Customizing Access Privileges on page 3](#)
- [User Permission Flags on page 15](#)

CHAPTER 1

Configuring and Customizing Access Privileges

The following topics provide information about how you can configure user access privileges. They cover the use of permission flags for configuring user access privilege levels, and the use of regular expressions for configuring access to individual commands and statements.

- Junos OS Access Privilege Levels Overview on page 3
- Configuring Access Privilege Levels on page 8
- Example: Configuring Access Privilege Levels on page 8
- Specifying Access Privileges for Junos OS Operational Mode Commands on page 8
- Example: Configuring Access Privileges for Operational Mode Commands on page 10
- Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11
- Example: Defining Access Privileges for Configuration Mode Hierarchies on page 12

Junos OS Access Privilege Levels Overview

Each top-level command-line interface (CLI) command and each configuration statement have an access privilege level associated with them. Users can execute only those commands and configure and view only those statements for which they have access privileges. The access privileges for each login class are defined by one or more *permission flags*.

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 specified in the **permissions** statement.

The following sections provide additional information on permissions:

- Junos OS Login Class Permission Flags on page 3
- Allowing or Denying Individual Commands for Junos OS Login Classes on page 6

Junos OS Login Class Permission Flags

The **permissions** statement specifies one or more of the permission flags listed in Table 3 on page 4. Permission flags are not cumulative, so for each class you must list all the

permission flags needed, including **view** to display information and **configure** to enter configuration mode. Two forms of the permissions control the individual parts of the configuration:

- "Plain" form—Provides read-only capability for that permission type. An example is **interface**.
- Form that ends in **-control**—Provides read and write capability for that permission type. An example is **interface-control**.

Table 3 on page 4 lists the Junos OS login class permission flags that you can configure by including the **permissions** statement at the **[edit system login class *class-name*]** hierarchy level.

Table 3: Login Class Permission Flags

Permission Flag	Description
access	Can view the access configuration in configuration mode and with the show configuration operational mode command.
access-control	Can view and configure access information at the [edit access] hierarchy level.
admin	Can view user account information in configuration mode and with the show configuration operational mode command.
admin-control	Can view user accounts and configure them at the [edit system login] hierarchy level.
all	Has all permissions.
clear	Can clear (delete) information learned from the network that is stored in various network databases by using the clear commands.
configure	Can enter configuration mode by using the configure command.
control	Can perform all control-level operations—all operations configured with the -control permission flags.
field	Can view field debug commands. Reserved for field debugging support.
firewall	Can view the firewall filter configuration in configuration mode.
firewall-control	Can view and configure firewall filter information at the [edit firewall] hierarchy level.
floppy	Can read from and write to the removable media.
flow-tap	Can view the flow-tap configuration in configuration mode.
flow-tap-control	Can view the flow-tap configuration in configuration mode and can configure flow-tap configuration information at the [edit services flow-tap] hierarchy level.

Table 3: Login Class Permission Flags (*continued*)

Permission Flag	Description
flow-tap-operation	<p>Can make flow-tap requests to the router or switch. For example, a Dynamic Tasking Control Protocol (DTCP) client must authenticate itself to the Junos OS as an administrative user. That account must have flow-tap-operation permission.</p> <p>NOTE: The flow-tap-operation option is not included in the all permissions flag.</p>
interface	Can view the interface configuration in configuration mode and with the show configuration operational mode command.
interface-control	<p>Can view chassis, class of service (CoS), groups, forwarding options, and interfaces configuration information. Can edit configuration at the following hierarchy levels:</p> <ul style="list-style-type: none"> • [edit chassis] • [edit class-of-service] • [edit groups] • [edit forwarding-options] • [edit interfaces]
maintenance	Can perform system maintenance, including starting a local shell on the router and becoming the superuser in the shell by using the su root command, and can halt and reboot the router by using the request system commands.
network	Can access the network by using the ping , ssh , telnet , and traceroute commands.
pgcp-session-mirroring	Can view pgcp session mirroring configuration.
pgcp-session-mirroring-control	Can modify pgcp session mirroring configuration.
reset	Can restart software processes using the restart command and can configure whether software processes are enabled or disabled at the [edit system processes] hierarchy level.
rollback	Can use the rollback command to return to a previously committed configuration other than the most recently committed one.
routing	Can view general routing, routing protocol, and routing policy configuration information in configuration and operational modes.
routing-control	Can view general routing, routing protocol, and routing policy configuration information and can configure general routing at the [edit routing-options] hierarchy level, routing protocols at the [edit protocols] hierarchy level, and routing policy at the [edit policy-options] hierarchy level.
secret	Can view passwords and other authentication keys in the configuration.
secret-control	Can view passwords and other authentication keys in the configuration and can modify them in configuration mode.
security	Can view security configuration in configuration mode and with the show configuration operational mode command.

Table 3: Login Class Permission Flags (*continued*)

Permission Flag	Description
security-control	Can view and configure security information at the [edit security] hierarchy level.
shell	Can start a local shell on the router or switch by using the start shell command.
snmp	Can view Simple Network Management Protocol (SNMP) configuration information in configuration and operational modes.
snmp-control	Can view SNMP configuration information and can modify SNMP configuration at the [edit snmp] hierarchy level.
system	Can view system-level information in configuration and operational modes.
system-control	Can view system-level configuration information and configure it at the [edit system] hierarchy level.
trace	Can view trace file settings and configure trace file properties.
trace-control	Can view trace file settings and configure trace file properties.
view	Can use various commands to display current systemwide, routing table, and protocol-specific values and statistics. Cannot view secret configuration.
view-configuration	Can view all of the configuration (excluding secrets).

Allowing or Denying Individual Commands for Junos OS Login Classes

By default, all top-level CLI commands have associated access privilege levels. Users can execute only those commands and view only those statements for which they have access privileges. 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 specified in the **permissions** statement.

**NOTE:**

- The all login class permission bits take precedence over extended regular expressions when a user with rollback permission issues the rollback command.
- Expressions used to allow and deny commands for users on RADIUS/TACACS+ servers have been simplified. Instead of a single, long expression with multiple commands (`allow-commands=cmd1 cmd2 ... cmdn`), you can specify each command as a separate expression. This new syntax is valid for `allow-configuration` and `deny-configuration`, `allow-commands` and `deny-commands`, and `user-permissions`.
- Users cannot issue the `load override` command when specifying an extended regular expression. Users can only issue the `merge`, `replace`, and `patch` configuration commands.
- If you allow and deny the same commands, the `allow-commands` permissions takes precedence over the permissions specified by the `deny-commands`. For example, if you include `allow-commands "request system software add"` and `deny-commands "request system software add"`, the login class user is allowed to install software using the `request system software add` command.
- Regular expressions for `allow-commands` and `deny-commands` can also include the `commit`, `load`, `rollback`, `save`, `status`, and `update` commands.
- If you specify a regular expression for `allow-commands` and `deny-commands` with two different variants of a command, the longest match is always executed.

For example, if you specify a regular expression for `allow-commands` with the `commit-synchronize` command and a regular expression for `deny-commands` with the `commit` command, users assigned to such a login class would be able to issue the `commit synchronize` command, but 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`.

Likewise, if you specify a regular expression for `allow-commands` with the `commit` command and a regular expression for `deny-commands` with the `commit-synchronize` command, users assigned to such a login class would be able to issue the `commit` command, but not the `commit-synchronize` command. This is because `commit-synchronize` is the longest match between `commit` and `commit-synchronize` and it is specified for `deny-commands`.

Related Documentation

- [Configuring Access Privilege Levels on page 8](#)

Configuring Access Privilege Levels

Each top-level command-line interface (CLI) command and each configuration statement have an access privilege level associated with it. 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:

```
[edit system login class class-name]  
permissions [ permissions ];
```

Related Documentation

- Example: Configuring Access Privilege Levels on page 8
- Junos OS Access Privilege Levels Overview on page 3
- Specifying Access Privileges for Junos OS Operational Mode Commands on page 8
- Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11
- Specifying Access Privileges for Junos OS Configuration Mode Hierarchies
- permissions
- permissions

Example: Configuring Access Privilege Levels

Create two access privilege classes on the router, one for configuring and viewing user accounts only and the second for configuring and viewing SNMP parameters only:

```
[edit]  
system {  
  login {  
    class user-accounts {  
      permissions [ configure admin admin-control ];  
    }  
    class network-mgmt {  
      permissions [ configure snmp snmp-control ];  
    }  
  }  
}
```

Related Documentation

- Configuring Access Privilege Levels on page 8

Specifying Access Privileges for Junos OS Operational Mode Commands

You can specify extended regular expressions by using the **allow-commands** and **deny-commands** statements to define a user's access privileges to individual operational mode commands. Doing so takes precedence over login class permissions bit set for a user. You can include one **deny-commands** and one **allow-commands** statement in each login class.

To explicitly provide use of an individual operational mode command that would otherwise be denied, include the **allow-commands** statement at the **[edit system login class *class-name*]** hierarchy level:

```
[edit system login class class-name]
allow-commands "regular-expression";
```

To explicitly deny access to an individual operational mode command that would otherwise be supported, include the **deny-commands** statement at the **[edit system login class *class-name*]** hierarchy level:

```
[edit system login class class-name]
deny-commands "regular-expression";
```

If the regular expression contains any spaces, operators, or wildcard characters, enclose the expression in quotation marks. Regular expressions are not case-sensitive.

```
allow-commands "show interfaces";
```



NOTE: Modifiers are not supported within the regular expression string to be matched. If a modifier is used, then nothing is matched.

For example, the deny command **set protocols** does not match anything, whereas **protocols** matches *protocols*.

Explicitly providing access to operational mode commands using the **allow-commands** statement adds to the regular permissions set using the **permissions** statement. Likewise, explicitly denying access to operational mode commands using the **deny-commands** statement removes permissions for the specified commands from the default permissions provided by the **permissions** statement.

For example, if a login class has permissions **view** and the **allow-commands** statement includes the **request system software add** command, the specified login class user can install software, in addition to the permissions specified by the **view** permissions flag. Likewise, if a login class has permissions **all** and the **deny-commands** statement includes the **request system software add** command, the specified login class user can perform all operations allowed by the **all** permissions flag, except installing software using the **request system software add** command.

If you allow and deny the same commands, the **allow-commands** permissions take precedence over the permissions specified by **deny-commands**. For example, if you include **allow-commands "request system software add"** and **deny-commands "request system software add"**, the login class user is allowed to install software using the **request system software add** command.

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

For example, if you specify a regular expression for **allow-commands** with the **commit-synchronize** command and a regular expression for **deny-commands** with the **commit** command, users assigned to such a login class would be able to issue the **commit synchronize** command, but 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**.

Likewise, if you specify a regular expression for **allow-commands** with the **commit** command and a regular expression for **deny-commands** with the **commit-synchronize** command, users assigned to such a login class would be able to issue the **commit** command, but not the **commit-synchronize** command. This is because **commit-synchronize** is the longest match between **commit** and **commit-synchronize** and it is specified for **deny-commands**.

Anchors are required when specifying complex regular expressions with **allow-commands** or **deny-commands** statements. For example, when specifying multiple commands using the pipe (|) symbol for **allow-commands**, the following syntax is incorrect:

allow-commands = "(monitor.*)"|(ping.*)"|(show.*)"|(exit)". Instead, you must specify the expression using the following syntax: **allow-commands = "^(^monitor) | (^ping) | (^show) | (^exit)"** OR **allow-commands = "^(monitor | ping | show | exit)"**

Related Documentation

- Example: Configuring Access Privileges for Operational Mode Commands on page 10
- Regular Expressions for Allowing and Denying Junos OS Operational Mode Commands
- allow-commands
- deny-commands
- allow-commands
- deny-commands

Example: Configuring Access Privileges for Operational Mode Commands

The following example shows how to configure access privileges for different login classes for individual operational mode commands:

```
[edit]
system {
  # This login class has operator privileges and the additional ability
  # to reboot the router.
  login {
    # This login class has operator privileges and the additional ability to reboot the
    # router.
    class operator-and-boot {
      permissions [ clear network reset trace view ];
      allow-commands "request system reboot";
    }
    # This login class has operator privileges but can't use any commands beginning
    # with "set".
    # This login class has operator privileges
    # but cannot use any commands beginning with "set"
    class operator-no-set {
      permissions [ clear network reset trace view ];
      deny-commands "^set";
    }
  }
}
```

```
# This login class has operator privileges and can install software but not view
# BGP information, and can issue the show route command, without specifying
# commands or arguments under it.
class operator-and-install-but-no-bgp {
  permissions [ clear network reset trace view ];
  allow-commands "(request system software add)|(show route$)";
  deny-commands "show bgp";
}
}
```

Related Documentation • Specifying Access Privileges for Junos OS Operational Mode Commands on page 8

Specifying Access Privileges for Junos OS Configuration Mode Hierarchies

You can specify extended regular expressions by using the **allow-configuration** and **deny-configuration** attributes to define user access privileges to parts of the configuration hierarchy. Doing so overrides login class permission bits set for a user. You can also use wildcards to restrict access. When you define access privileges to parts of the configuration hierarchy, do the following:

- Specify the full paths in the extended regular expressions with the **allow-configuration** and **deny-configuration** attributes.
- Enclose parentheses around an extended regular expression that connects two or more expressions with the pipe | symbol. For example:

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



NOTE: 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. You cannot define access to keywords such as **set**, **edit**, or **activate**.

To explicitly allow an individual configuration mode hierarchy that would otherwise be denied, include the **allow-configuration** statement at the **[edit system login class *class-name*]** hierarchy level:

```
[edit system login class class-name]
allow-configuration "regular-expression";
```

To explicitly deny an individual configuration hierarchy that would otherwise be allowed, include the **deny-configuration** statement at the **[edit system login class *class-name*]** hierarchy level:

```
[edit system login class class-name]
deny-configuration "regular-expression";
```

You can include one **deny-configuration** and one **allow-configuration** statement in each login class.



NOTE:

- 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, if a login class has permissions **configure** and the **allow-configuration** statement includes the **system services** expression, the specified login class user can edit 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 (the permissions specified by the **configure** permission flag). Likewise, if a login class has permissions **all** and the **deny-configuration** statement includes **system services**, the specified login class user can perform all operations allowed by the **all** permissions flag, except issuing configuration mode commands (such as **commit**) or modifying configuration at the **[edit system services]** hierarchy level.

- If you allow and deny the same set of configuration hierarchy levels, regular expressions, or commands, the **allow-configuration** statement permissions take precedence over the permissions specified by the **deny-configuration** statement. For example, if you include **allow-configuration "system services"**; and **deny-configuration "system services"**, the login class user can continue to edit configuration or issue commands at the **edit system services** hierarchy level.

Related Documentation

- [Example: Defining Access Privileges for Configuration Mode Hierarchies on page 12](#)
- [Regular Expressions for Allowing and Denying Junos OS Configuration Mode Hierarchies](#)
- [Configuring Access Privilege Levels on page 8](#)

Example: Defining Access Privileges for Configuration Mode Hierarchies

The following examples show how to configure access privileges for individual configuration mode hierarchy levels.

If the following statement is included in the configuration and the user's login class permission bit is set to **all**, the user cannot configure telnet parameters:

```
[edit system login class class-name]  
user@switch# set deny-configuration "system services telnet"
```

If the following statement is included in the configuration and the user's login class permission bit is set to **all**, the user cannot issue login class commands within any login class whose name begins with "m":

```
[edit system login class class-name]
user@switch# set deny-configuration "system login class m.*"
```

If the following statement is included in the configuration and the user's login class permission bit is set to **all**, the user cannot edit a configuration or issue commands (such as **commit**) at the login class or system services hierarchy levels:

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

The following example shows how to configure permissions for individual configuration mode hierarchies:

```
[edit]
system {
  login { # This login class has operator privileges and the additional ability to edit
    # configuration at the system services hierarchy level.
    class only-system-services {
      permissions [ configure ];
      allow-configuration "system services";
    }
    # services commands.
    class all-except-system-services { # This login class has operator privileges but
      # cannot edit any system services configuration.
      permissions [ all ];
      deny-configuration "system services";
    }
  }
}
```

Related Documentation

- Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11
- Specifying Access Privileges for Junos OS Configuration Mode Hierarchies

CHAPTER 2

User Permission Flags

The following sections provide details about the permission flags that grant access to operational mode commands and configuration statements:

- Access Privilege User Permissions Flags Overview on page 16
- access on page 17
- admin on page 18
- clear on page 18
- configure on page 26
- control on page 26
- field on page 26
- firewall on page 27
- flow-tap on page 28
- flow-tap-operation on page 28
- interface on page 28
- maintenance on page 29
- network on page 35
- pgcp-session-mirroring on page 36
- reset on page 37
- rollback on page 37
- routing on page 38
- security on page 41
- shell on page 44
- snmp on page 45
- system on page 45
- trace on page 46
- view on page 52
- view-configuration on page 90

Access Privilege User Permissions Flags Overview

Permission flags are used to grant a user access to operational mode commands and configuration statements. By specifying a specific permission flag on the user's login class at the **[edit system login class]** hierarchy level, you grant the user access to the corresponding commands and configuration statements. To grant access to all commands and configuration statements, use the **all** permissions flag.

For permission flags that grant access to configuration statements, the flag grants read-only privilege to that configuration. For example, the **interface** permissions flag grants read-only access to the **[edit interfaces]** hierarchy level. The **-control** form of the flag grants read-write access to that configuration. Using the preceding example, **interface-control** grants read-write access to the **[edit interfaces]** hierarchy level.

The permission flags listed in "Related Documentation" grant a specific set of access privileges. Each permission flag is listed with the operational mode commands and configuration statements for which that flag grants access.



NOTE: Each command listed represents that command and all subcommands with that command as a prefix. Each configuration statement listed represents the top of the configuration hierarchy to which that flag grants access.

Related Documentation

- Junos OS Access Privilege Levels Overview on page 3
- access on page 17
- admin on page 18
- clear on page 18
- configure on page 26
- control on page 26
- field on page 26
- firewall on page 27
- flow-tap on page 28
- flow-tap-operation on page 28
- interface on page 28
- maintenance on page 29
- network on page 35
- pgcp-session-mirroring on page 36
- reset on page 37
- rollback on page 37
- routing on page 38

- security on page 41
- shell on page 44
- snmp on page 45
- system on page 45
- trace on page 46
- view on page 52
- view-configuration on page 90

access

Can view the access configuration in configuration mode.

Commands No associated CLI commands.

Statements

```
[edit access]
[edit dynamic-profile]
[edit logical-systems access]
[edit logical-systems routing-instances instance system services static-subscribers
access-profile]
[edit logical-systems routing-instances instance system services static-subscribers
dynamic-profile]
[edit logical-systems routing-instances instance system services static-subscribers group
access-profile]
[edit logical-systems routing-instances instance system services static-subscribers group
dynamic-profile]
[edit logical-systems system services static-subscribers access-profile]
[edit logical-systems system services static-subscribers dynamic-profile]
[edit logical-systems system services static-subscribers group access-profile]
[edit logical-systems system services static-subscribers group dynamic-profile]
[edit routing-instances instance system services static-subscribers access-profile]
[edit routing-instances instance system services static-subscribers dynamic-profile]
[edit routing-instances instance system services static-subscribers group access-profile]
[edit routing-instances instance system services static-subscribers group dynamic-profile]
[edit system services static-subscribers access-profile]
[edit system services static-subscribers dynamic-profile]
[edit system services static-subscribers group access-profile]
[edit system services static-subscribers group dynamic-profile]
```

Related Documentation

- Access Privilege User Permissions Flags Overview on page 16
- Junos OS Access Privilege Levels Overview on page 3
- Configuring Access Privilege Levels on page 8
- Specifying Access Privileges for Junos OS Operational Mode Commands on page 8
- Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11

admin

Can view user account information in configuration mode.

Commands `show system audit`

Statements `[edit system]`
 `[edit system accounting]`
 `[edit system diag-port-authentication]`
 `[edit system extensions]`
 `[edit system login]`
 `[edit system pic-console-authentication]`
 `[edit system root-authentication]`
 `[edit system services ssh protocol-version]`
 `[edit system services ssh root-login]`

- Related Documentation**
- [Access Privilege User Permissions Flags Overview on page 16](#)
 - [Junos OS Access Privilege Levels Overview on page 3](#)
 - [Configuring Access Privilege Levels on page 8](#)
 - [Specifying Access Privileges for Junos OS Operational Mode Commands on page 8](#)
 - [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11](#)

clear

Can clear (delete) information learned from the network that is stored in various network databases.

Commands `clear`
 `clear amt`
 `clear amt statistics`
 `clear amt tunnel`
 `clear amt tunnel gateway-address`
 `clear amt tunnel statistics`
 `clear amt tunnel statistics gateway-address`
 `clear amt tunnel statistics tunnel-interface`
 `clear amt tunnel tunnel-interface`
 `clear ancp`
 `clear ancp neighbor`
 `<clear-ancp-neighbor-connection>`

 `clear ancp subscriber`
 `clear ancp subscriber identifier`
 `<clear-ancp-subscriber-identifier-information>`

 `clear arp`
 `<clear-arp-table>`

 `clear auto-configuration`
 `clear auto-configuration interfaces`

```
clear bfd
clear bfd adaptation
clear bfd adaptation address
clear bfd adaptation discriminator
clear bfd session
clear bfd session address
clear bfd session discriminator
clear bgp
clear bgp damping
  <clear-bgp-damping>

clear bgp neighbor
  <clear-bgp-neighbor>

clear bgp table
  <clear-bgp-table>

clear bridge
clear bridge mac-table
  <clear-bridge-mac-table>

clear bridge mac-table interface
  <clear-bridge-interface-mac-table>

clear cli
clear cli logical-system
clear database-replication
clear database-replication statistics
  <clear-database-replication-statistics-information>

clear dhcp
clear dhcp relay
clear dhcp relay binding
  <clear-dhcp-relay-binding-information>

clear dhcp relay binding interface
clear dhcp relay statistics
  <clear-dhcp-relay-statistics-information>

clear dhcp server
clear dhcp server binding
  <clear-dhcp-server-binding-information>

clear dhcp server binding interface
clear dhcp server statistics
  <clear-server-statistics-information>

clear diameter

clear diameter function
  <clear-diameter-function>

clear diameter peer
  <clear-diameter-peer>

clear dot1x
```

```
clear dot1x interface
  <clear-dot1x-interface-session>

clear dot1x mac-address
  <clear-dot1x-mac-session>

clear error
clear error bpd
clear error bpd interface
clear error mac-rewrite
clear error mac-rewrite interface
clear esis
clear esis adjacency
clear esis statistics
clear firewall
clear firewall all
clear helper
clear helper statistics
  <clear-helper-statistics-information>

clear igmp
clear igmp membership
clear igmp snooping
clear igmp snooping membership
clear igmp snooping membership bridge-domain
clear igmp snooping statistics
clear igmp snooping statistics bridge-domain
clear igmp statistics
clear ike
clear ike security-associations
clear ilmi
clear ilmi statistics
clear interfaces
clear interfaces interface-set
clear interfaces interface-set statistics
clear interfaces interface-set statistics all
clear interfaces interval
clear interfaces mac-database
clear interfaces mac-database statistics
clear interfaces mac-database statistics all
clear interfaces statistics
  <clear-interfaces-statistics>

clear interfaces statistics all
  <clear-interfaces-statistics-all>

clear ipsec
clear ipsec security-associations
clear ipv6
clear ipv6 neighbors
  <clear-ipv6-nd-information>

clear ipv6 neighbors all
clear isis
clear isis adjacency
  <clear-isis-adjacency-information>
```

```
clear isis database
  <clear-isis-database-information>

clear isis overload
  <clear-isis-overload-information>

clear isis statistics
  <clear-isis-statistics-information>

clear l2-learning
clear l2-learning mac-move-buffer
clear l2-learning-redundancy-group
clear l2-learning remote-backbone-edge-bridges
clear ldp
clear ldp statistics
clear ldp statistics interface
clear ldp neighbor
clear ldp session
clear lldp
clear lldp neighbors
clear lldp neighbors interface
clear lldp statistics
clear lldp statistics interface
clear mld
clear mld membership
clear mld statistics
clear mobile-ip
clear mobile-ip binding
clear mobile-ip binding all
  <clear-binding-all>

clear mobile-ip binding ip-address
  <clear-binding-ip>

clear mobile-ip binding nai
  <clear-binding-nai>

clear mobile-ip visitor
clear mobile-ip visitor all
  <clear-visitor-all>

clear mobile-ip visitor ip-address
  <clear-visitor-ip>

clear mobile-ip visitor nai
  <clear-visitor-nai>

clear mpls
clear mpls lsp
  <clear-mpls-lsp-information>

clear mpls static-lsp
  <clear-mpls-static-lsp-information>

clear mpls traceroute
```

```
clear mpls traceroute database
clear mpls traceroute database ldp
clear msdp
clear msdp cache
clear msdp statistics
clear multicast
clear multicast bandwidth-admission
clear multicast scope
clear multicast sessions
clear multicast statistics
clear mvrp
clear mvrp statistics
  <clear-mvrp-interface-statistics>

clear network-access
clear network-access aaa
clear network-access aaa statistics
  <clear-aaa-statistics-table>

clear network-access aaa statistics address-assignment
clear network-access aaa statistics address-assignment client
clear network-access aaa statistics address-assignment pool
clear network-access aaa subscriber
  <clear-aaa-subscriber-table>

clear network-access gx-plus
clear network-access gx-plus replay
clear network-access gx-plus statistics
  <clear-gx-plus-statistics-information>
clear network-access aaa subscriber statistics
  <clear-aaa-subscriber-table-specific-statistics>

clear network-access requests
clear network-access requests pending
  <clear-authentication-pending-table>

clear network-access requests statistics
  <clear-authentication-statistics>

clear network-access securid-node-secret-file
  <clear-node-secret-file>

clear oam
clear oam ethernet
clear oam ethernet connectivity-fault-management
clear oam ethernet connectivity-fault-management continuity-measurement
  <clear-cfm-continuity-measurement>
clear oam ethernet connectivity-fault-management delay-statistics
  <clear-cfm-delay-statistics>
clear oam ethernet connectivity-fault-management loss-statistics
  <clear-cfm-loss-statistics>
clear oam ethernet connectivity-fault-management path-database
  <clear-cfm-linktrace-path-database>

clear oam ethernet connectivity-fault-management policer
clear oam ethernet connectivity-fault-management sla-iterator-statistics
```

```
<clear-cfm-iterator-statistics>
clear oam ethernet connectivity-fault-management statistics
<clear-cfm-statistics>

clear oam ethernet link-fault-management
clear oam ethernet link-fault-management state
clear oam ethernet link-fault-management statistics
clear oam ethernet link-fault-management statistics action-profile
clear oam ethernet lmi
clear oam ethernet lmi statistics
<clear-elmi-statistics>

clear ospf
clear ospf database
<clear-ospf-database-information>

clear ospf io-statistics
<clear-ospf-io-statistics-information>

clear ospf neighbor
<clear-ospf-neighbor-information>

clear ospf overload
<clear-ospf-overload-information>

clear ospf statistics
<clear-ospf-statistics-information>

clear ospf3
clear ospf3 database
<clear-ospf3-database-information>

clear ospf3 io-statistics
clear ospf3 neighbor
<clear-ospf3-neighbor-information>

clear ospf3 overload
<clear-ospf3-overload-information>

clear ospf3 statistics
<clear-ospf3-io-statistics-information>

clear passive-monitoring
<clear-passive-monitoring>
clear passive-monitoring statistics
<clear-passive-monitoring-statistics>
clear pgm
clear pgm negative-acknowledgments
clear pgm source-path-messages
clear pgm statistics
clear pim
clear pim join
clear pim register
clear pim statistics
clear ppp
clear ppp statistics
```

```

<clear-ppp-statistics-information>

clear pppoe
clear pppoe sessions
clear pppoe statistics
clear pppoe statistics interfaces
clear protection-group
clear protection-group ethernet-ring
clear protection-group ethernet-ring statistics
clear rip
clear rip general-statistics
clear rip statistics
clear ripng
clear ripng general-statistics
clear ripng statistics
clear rsvp
clear rsvp session
  <clear-rsvp-session-information>

clear rsvp statistics
  < clear-rsvp-counters-information>
clear services
clear services alg
clear services application-identification
clear services application-identification application-system-cache
  <clear-appid-application-system-cache>

clear services application-identification counter
  <clear-appid-counter>

clear services border-signaling-gateway
clear services border-signaling-gateway denied-messages
  <clear-service-bsg-denied-messages>

clear services border-signaling-gateway name-resolution-cache
  <clear-service-border-signaling-gateway-name-resolution-cache>

clear services border-signaling-gateway name-resolution-cache all
  <clear-service-border-signaling-gateway-name-resolution-cache-all>

clear services border-signaling-gateway name-resolution-cache by-fqdn
clear services border-signaling-gateway statistics
  <clear-service-border-signaling-gateway-statistics>
clear services captive-portal-content-delivery
clear services captive-portal-content-delivery statistics
clear services captive-portal-content-delivery statistics interface
clear services ipsec-vpn ike
clear services ipsec-vpn ike security-associations
clear services l2tp
clear services l2tp destination
clear services l2tp multilink
clear services l2tp session
clear services l2tp tunnel
clear services l2tp user
clear services local-policy-decision-function
clear services local-policy-decision-function statistics

```



```
clear services local-policy-decision-function statistics relay
clear services nat
clear services nat statistics
  <clear services local-policy-decision-function statistics>
clear services service-sets statistics syslog
  <clear-service-set-syslog-statistics>
clear services stateful-firewall flow-analysis
  <clear-service-flow-analysis>
clear services software
clear services software statistics
clear services pgcp
clear services pgcp gates
  <clear-service-pgcp-gates>

clear services pgcp gates gateway
  <clear-service-pgcp-gates-gateway>

clear services pgcp statistics
  <clear-service-pgcp-statistics>

clear services pgcp statistics gateway
  <clear-service-pgcp-statistics-gateway>

clear snmp
clear snmp statistics
clear spanning-tree
clear spanning-tree protocol-migration
clear spanning-tree protocol-migration interface
clear spanning-tree statistics
clear spanning-tree statistics interface
clear spanning-tree statistics routing-instance
clear spanning-tree topology-change-counter
clear synchronous-ethernet
clear synchronous-ethernet esmc
clear synchronous-ethernet esmc statistics
clear system

<clear-dhcp-binding-information>

<clear-dhcp-conflict-information>

<clear-dhcp-statistics-information>

clear vpls
clear vpls mac-address
clear vpls mac-table
  <clear-vpls-mac-table>

clear vpls mac-table interface
  <clear-vpls-interface-mac-table>

clear vrrp
clear vrrp interface
request services ipsec-vpn ipsec
request services ipsec-vpn ipsec switch
request services ipsec-vpn ipsec switch tunnel
```

No associated CLI configuration statements.

Related Documentation

- Access Privilege User Permissions Flags Overview on page 16
- Junos OS Access Privilege Levels Overview on page 3
- Configuring Access Privilege Levels on page 8
- Specifying Access Privileges for Junos OS Operational Mode Commands on page 8
- Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11

configure

Can enter configuration mode.

Commands

`configure`
`request snmp`

Statements

No associated CLI configuration statements.

Related Documentation

- Access Privilege User Permissions Flags Overview on page 16
- Junos OS Access Privilege Levels Overview on page 3
- Configuring Access Privilege Levels on page 8
- Specifying Access Privileges for Junos OS Operational Mode Commands on page 8
- Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11

control

Can perform all control-level operations; can modify any configuration.

Commands

`test configuration`

Statements

No associated CLI configuration statements.

Related Documentation

- Access Privilege User Permissions Flags Overview on page 16
- Junos OS Access Privilege Levels Overview on page 3
- Configuring Access Privilege Levels on page 8
- Specifying Access Privileges for Junos OS Operational Mode Commands on page 8
- Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11

field

Can view field debug commands.

Commands No associated CLI commands

Statements No associated CLI configuration statements.

- Related Documentation**
- Access Privilege User Permissions Flags Overview on page 16
 - Junos OS Access Privilege Levels Overview on page 3
 - Configuring Access Privilege Levels on page 8
 - Specifying Access Privileges for Junos OS Operational Mode Commands on page 8
 - Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11

firewall

Can view the firewall filter configuration in configuration mode.

Commands

```
show firewall
  <get-firewall-information>

show firewall counter
  <get-firewall-counter-information>

show firewall filter
  <get-firewall-filter-information>

show firewall filter version
  <get-filter-version>

show firewall log
  <get-firewall-log-information>

show firewall prefix-action-stats
  <get-firewall-prefix-action-information>

show policer
```

Statements

```
[edit dynamic-profiles firewall]
[edit firewall]
[edit logical-systems firewall]
```

- Related Documentation**
- Access Privilege User Permissions Flags Overview on page 16
 - Junos OS Access Privilege Levels Overview on page 3
 - Configuring Access Privilege Levels on page 8
 - Specifying Access Privileges for Junos OS Operational Mode Commands on page 8
 - Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11

flow-tap

Can view the flow-tap configuration in configuration mode.

Commands No associated CLI commands.

Statements [edit services flow-tap]
 [edit services radius-flow-tap]
 [edit system services flow-tap-dtcp]

Related Documentation

- Access Privilege User Permissions Flags Overview on page 16
- Junos OS Access Privilege Levels Overview on page 3
- Configuring Access Privilege Levels on page 8
- Specifying Access Privileges for Junos OS Operational Mode Commands on page 8
- Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11

flow-tap-operation

Can make flow-tap requests to the router.

Commands No associated CLI commands.

Statements No associated CLI configuration statements.

Related Documentation

- Access Privilege User Permissions Flags Overview on page 16
- Junos OS Access Privilege Levels Overview on page 3
- Configuring Access Privilege Levels on page 8
- Specifying Access Privileges for Junos OS Operational Mode Commands on page 8
- Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11

interface

Can view the interface configuration in configuration mode.

Commands No associated CLI commands.

Statements [edit accounting-options]
 [edit chassis]
 [edit class-of-service]
 [edit class-of-service interfaces]
 [edit dynamic-profiles class-of-service]
 [edit dynamic-profiles class-of-service interfaces]
 [edit dynamic-profiles interfaces]
 [edit dynamic-profiles routing-instances instance system services dhcp-local-server]

```

[edit dynamic-profiles routing-instances instance system services static-subscribers
group]
[edit forwarding-options]
[edit interfaces]
[edit jnx-example]
[edit logical-systems forwarding-options]
[edit logical-systems interfaces]
[edit logical-systems routing-instances instance system services dhcp-local-server]
[edit logical-systems routing-instances instance system services static-subscribers
group]
[edit logical-systems system services dhcp-local-server]
[edit logical-systems system services static-subscribers group]
[edit routing-instances instance system services dhcp-local-server]
[edit routing-instances instance system services static-subscribers group]
[edit services logging]
[edit services radius-flow-tap]
[edit services radius-flow-tap interfaces]
[edit system services dhcp-local-server]
[edit system services static-subscribers group]

```

Related Documentation

- Access Privilege User Permissions Flags Overview on page 16
- Junos OS Access Privilege Levels Overview on page 3
- Configuring Access Privilege Levels on page 8
- Specifying Access Privileges for Junos OS Operational Mode Commands on page 8
- Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11

maintenance

Can perform system maintenance, including starting a local shell on the router and becoming the superuser in the shell, and can halt and reboot the router.

Commands

```

clear system reboot
  <clear-reboot>

clear-system-services-reverse-information
file archive
monitor traffic
request chassis cb
request chassis cfeb
request chassis cfeb master
request chassis cip
request chassis fabric
request chassis fabric plane
request chassis feb
  <request-feb>

request chassis fpc
request chassis mcs
request chassis mic
request chassis pcg
request chassis pic

```

```
request chassis redundancy
request chassis redundancy feb
  <request-redundancy-feb>

request chassis scg
request chassis sfm
request chassis sfm master
request chassis sib
request chassis sib f13

request chassis sib f2s
request chassis spmb
request chassis ssb
request chassis ssb master
request chassis synchronization
request chassis synchronization switch
request chassis vcpu
request chassis vnpu
request l2circuit-switchover
request mpls
request mpls lsp
request mpls lsp adjust-autobandwidth
request security
request security certificate
request security certificate enroll
request security datapath-debug
request security datapath-debug action-profile
request security datapath-debug action-profile reload-all
  <reload-eedebg-action-profile>

request security idp
  <request-idp-security-policy-load>

request security idp security-package
request security idp security-package download
  <request-idp-security-package-download>

request security idp security-package download version
  <request-idp-security-package-download-version>

request security idp security-package install
  <request-idp-security-package-install>

request security idp ssl-inspection
request security idp ssl-inspection key
request security idp ssl-inspection key add
  <request-idp-ssl-key-add>

request security idp ssl-inspection key delete
  <request-idp-ssl-key-delete>

request security key-pair
request security pki
request security pki ca-certificate
request security pki ca-certificate enroll
request security pki ca-certificate load
```

```
<load-pki-ca-certificate>
request security pki ca-certificate verify
  <verify-pki-ca-certificate>
request security pki crt
request security pki crt load
  <load-pki-crt>
request security pki generate-certificate-request
  <generate-pki-certificate-request>
request security pki generate-key-pair
  <generate-pki-key-pair>
request security pki local-certificate
request security pki local-certificate enroll
request security pki local-certificate generate-self-signed
  <generate-pki-self-signed-local-certificate>
request security pki local-certificate load
  <load-pki-local-certificate>
request security pki local-certificate verify
  <verify-pki-local-certificate>
request services fips
request services fips authorize
request services fips authorize pic
request services fips zeroize
request services fips zeroize pic
request services flow-collector
request services flow-collector change-destination
  <request-services-flow-collector-destination>

request services ggsn
request services ggsn pdp
request services ggsn pdp terminate
request services ggsn pdp terminate apn
  <request-ggsn-terminate-contexts-apn>

request services ggsn pdp terminate context
  <request-ggsn-terminate-context>

request services ggsn pdp terminate context msisdn
  <request-ggsn-terminate-msisdn-context>

request services ggsn restart
request services ggsn restart interface
  <request-ggsn-restart-interface>

request services ggsn restart node
  <request-ggsn-restart-node>

request services ggsn start
request services ggsn start interface
request services ggsn stop
request services ggsn stop interface
  <request-ggsn-stop-interface>

request services ggsn stop node
  <request-ggsn-stop-node>

request services ggsn trace
```

```
request services ggsn trace software
request services ggsn trace software update
  <request-ggsn-software-update>
```

```
request services ggsn trace start
request services ggsn trace start imsi
  <request-ggsn-start-imsi-trace>
```

```
request services ggsn trace start msisdn
  <request-ggsn-start-msisdn-trace>
```

```
request services ggsn trace stop
request services ggsn trace stop all
  <request-ggsn-stop-trace-activity>
```

```
request services ggsn trace stop imsi
  <request-ggsn-stop-imsi-trace>
```

```
request services ggsn trace stop msisdn
  <request-ggsn-stop-msisdn-trace>
```

```
request support
request support information
request system
request system certificate
request system certificate add
request system configuration
request system configuration rescue
request system configuration rescue delete
  <request-delete-rescue-configuration>
```

```
request system configuration rescue save
  <request-save-rescue-configuration>
```

```
request system fips
request system fips self-test
  <fips-selftest>
```

```
request system firmware
request system firmware downgrade
request system firmware downgrade feb
request system firmware downgrade fpc
request system firmware downgrade pic
request system firmware downgrade re
request system firmware downgrade scb
request system firmware downgrade sfm
request system firmware downgrade spmb
request system firmware downgrade ssb
request system firmware downgrade vcpu
request system firmware upgrade
request system firmware upgrade feb
request system firmware upgrade fpc
request system firmware upgrade pic
request system firmware upgrade re
request system firmware upgrade re bios
request system firmware upgrade scb
request system firmware upgrade sfm
request system firmware upgrade spmb
```



```
request system firmware upgrade ssb
request system firmware upgrade vcpu
request system halt
  <request-halt>

request system keep-alive
request system license
request system license add
request system license delete
  <request-license-delete>

request system license save
request system license update
....<request-license-update>
request system logout
request system partition
request system partition abort
request system partition compact-flash
request system partition hard-disk
request system power-off
  <request-power-off>

request system power-on
request system reboot
  <request-reboot>

request system scripts
request system scripts add
  <request-scripts-package-add>

request system scripts convert
request system scripts convert slax-to-xslt
request system scripts convert xslt-to-slax
request system scripts delete
  <request-scripts-package-delete>

request system scripts event-scripts
request system scripts event-scripts reload
  <reload-event-scripts>

request system scripts refresh-from
  <request-script-refresh-from>

request system scripts rollback
  <request-scripts-package-rollback>

request system snapshot
  <request-snapshot>

request system software
request system software abort
request system software abort in-service-upgrade
  <abort-in-service-upgrade>

request system software add
  <request-package-add>
```

```
request system software delete
  <request-package-delete>

request system software delete-backup
  <request-package-delete-backup>

request system software in-service-upgrade
  <request-package-in-service-upgrade>

request system software nonstop-upgrade
  <request-package-nonstop-upgrade>
request system software rollback
  <request-package-rollback>

request system software validate
  <request-package-validate>
request system software validate in-service-upgrade
  <check-in-service-upgrade>

request system storage
request system storage cleanup
  <request-system-storage-cleanup>

request system zeroize
request vpls-switchover
set date
set date ntpshow services fips
start shell
start shell user
test access
test access profile
  <get-radius-profile-access-test-result>

test access radius-server
  <get-radius-server-access-test-result>
```

Statements

```
[edit event-options]
[edit security ipsec internal]
[edit services dynamic-flow-capture traceoptions]
[edit services ggsn]
[edit services ggsn rule-space]
[edit system processes daemon-process command]
[edit system scripts]
[edit system scripts commit]
[edit system scripts op]
```

Related Documentation

- Access Privilege User Permissions Flags Overview on page 16
- Junos OS Access Privilege Levels Overview on page 3
- Configuring Access Privilege Levels on page 8
- Specifying Access Privileges for Junos OS Operational Mode Commands on page 8

- Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11

network

Can access the network by using the **ping**, **ssh**, **telnet**, and **traceroute** commands.

Commands

```
mtrace
mtrace from-source
mtrace monitor
mtrace to-gateway
ping
  <ping>

ping atm
ping clns
ping ethernet
  <request-ping-ethernet>
ping fibre-channel
ping fibre-channel fcid
  <request-ping-fc-fcid>
ping fibre-channel wwn
  <request-ping-fc-wwn>
ping mpls
ping mpls bgp
  <request-ping-bgp-lsp>
ping mpls l2circuit
ping mpls l2circuit interface
  <request-ping-l2circuit-interface>

ping mpls l2circuit virtual-circuit
  <request-ping-l2circuit-virtual-circuit>

ping mpls l2vpn
ping mpls l2vpn instance
  <request-ping-l2vpn-instance>

ping mpls l2vpn interface
  <request-ping-l2vpn-interface>

ping mpls l3vpn
  <request-ping-l3vpn>

ping mpls ldp
  <request-ping-ldp-lsp>

ping mpls ldp p2mp
  <request-ping-ldp-p2mp-lsp>

ping mpls lsp-end-point
  <request-ping-lsp-end-point>

ping mpls rsvp
  <request-ping-rsvp-lsp>
```

```
ping vpls
ping vpls instance
  <request-ping-vpls-instance>

request routing-engine
request routing-engine login
request routing-engine login other-routing-engine
request services flow-collector
request services flow-collector test-file-transfer
  <request-services-flow-collector-test-file-transfer>

show host
show interfaces level-extra descriptions
show multicast mrimfo
ssh
telnet
traceroute
  <traceroute>

traceroute clns
traceroute ethernet
  <request-traceroute-ethernet>

traceroute monitor
traceroute mpls
traceroute mpls ldp
traceroute mpls rsvp
```

No associated CLI configuration statements.

- | | |
|------------------------------|---|
| Related Documentation | <ul style="list-style-type: none">• Access Privilege User Permissions Flags Overview on page 16• Junos OS Access Privilege Levels Overview on page 3• Configuring Access Privilege Levels on page 8• Specifying Access Privileges for Junos OS Operational Mode Commands on page 8• Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11 |
|------------------------------|---|

pgcp-session-mirroring

Can view session mirroring configuration by using the **pgcp** command.

Commands	<code>show services pgcp gates gate-way display session-mirroring</code>
-----------------	--

Statements	<code>[edit services pgcp gateway session-mirroring]</code> <code>[edit services pgcp session-mirroring]</code>
-------------------	--

- | | |
|------------------------------|---|
| Related Documentation | <ul style="list-style-type: none">• Access Privilege User Permissions Flags Overview on page 16• Junos OS Access Privilege Levels Overview on page 3• Configuring Access Privilege Levels on page 8 |
|------------------------------|---|

- Specifying Access Privileges for Junos OS Operational Mode Commands on page 8
- Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11

reset

Can restart software processes, and can configure whether software processes are enabled or disabled.

Commands

```
request chassis cfeb master switch
request chassis cfeb master switch no-confirm
request chassis sfm master switch
request chassis sfm master switch no-confirm
request chassis ssb master switch
request chassis ssb master switch no-confirm
restart
restart kernel-replication
restart routing
restart services
restart services pgcp
restart web-management
```

Statements No associated CLI configuration statements.

- Related Documentation**
- Access Privilege User Permissions Flags Overview on page 16
 - Junos OS Access Privilege Levels Overview on page 3
 - Configuring Access Privilege Levels on page 8
 - Specifying Access Privileges for Junos OS Operational Mode Commands on page 8
 - Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11

rollback

Can rollback to previous configurations.

Commands `rollback`

Statements

```
[edit]
```

- Related Documentation**
- Access Privilege User Permissions Flags Overview on page 16
 - Junos OS Access Privilege Levels Overview on page 3
 - Configuring Access Privilege Levels on page 8
 - Specifying Access Privileges for Junos OS Operational Mode Commands on page 8
 - Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11

routing

Can view general routing, routing protocol, and routing policy configuration information.

Commands No associated CLI commands.

Statements

- [edit bridge-domains]
- [edit bridge-domains domain multicast-snooping-options]
- [edit bridge-domains domain multicast-snooping-options traceoptions]
- [edit dynamic-profiles protocols igmp traceoptions]
- [edit dynamic-profiles protocols mld traceoptions]
- [edit dynamic-profiles protocols router-advertisement traceoptions]
- [edit dynamic-profiles routing-instances]
- [edit dynamic-profiles routing-instances instance bridge-domains]
- [edit dynamic-profiles routing-instances instance bridge-domains domain multicast-snooping-options]
- [edit dynamic-profiles routing-instances instance bridge-domains domain multicast-snooping-options traceoptions]
- [edit dynamic-profiles routing-instances instance multicast-snooping-options]
- [edit dynamic-profiles routing-instances instance multicast-snooping-options traceoptions]
- [edit dynamic-profiles routing-instances instance pbb-options]
- [edit dynamic-profiles routing-instances instance protocols]
- [edit dynamic-profiles routing-instances instance protocols bgp group neighbor traceoptions]
- [edit dynamic-profiles routing-instances instance protocols bgp group traceoptions]
- [edit dynamic-profiles routing-instances instance protocols bgp traceoptions]
- [edit dynamic-profiles routing-instances instance protocols esis traceoptions]
- [edit dynamic-profiles routing-instances instance protocols isis traceoptions]
- [edit dynamic-profiles routing-instances instance protocols l2vpn traceoptions]
- [edit dynamic-profiles routing-instances instance protocols ldp traceoptions]
- [edit dynamic-profiles routing-instances instance protocols msdp group peer traceoptions]
- [edit dynamic-profiles routing-instances instance protocols msdp group traceoptions]
- [edit dynamic-profiles routing-instances instance protocols msdp peer traceoptions]
- [edit dynamic-profiles routing-instances instance protocols msdp traceoptions]
- [edit dynamic-profiles routing-instances instance protocols mvpn traceoptions]
- [edit dynamic-profiles routing-instances instance protocols ospf traceoptions]
- [edit dynamic-profiles routing-instances instance protocols pim traceoptions]
- [edit dynamic-profiles routing-instances instance protocols ripng traceoptions]
- [edit dynamic-profiles routing-instances instance protocols router-discovery traceoptions]
- [edit dynamic-profiles routing-instances instance protocols vpls traceoptions]
- [edit dynamic-profiles routing-instances instance routing-options]
- [edit dynamic-profiles routing-instances instance routing-options multicast traceoptions]
- [edit dynamic-profiles routing-instances instance routing-options traceoptions]
- [edit dynamic-profiles routing-instances instance service-groups]
- [edit dynamic-profiles routing-instances instance switch-options]
- [edit dynamic-profiles routing-options multicast traceoptions]
- [edit jnx-example]
- [edit fabric protocols]
- [edit fabric protocols bgp group neighbor traceoptions]
- [edit fabric protocols bgp group traceoptions]
- [edit fabric protocols bgp traceoptions]

```
[edit fabric routing-instances]
[edit fabric routing-instances instance routing-options]
[edit fabric routing-instances instance routing-options traceoptions]
[edit fabric routing-options]
[edit fabric routing-options traceoptions]
[edit logical-systems bridge-domains]
[edit logical-systems bridge-domains domain multicast-snooping-options]
[edit logical-systems bridge-domains domain multicast-snooping-options traceoptions]
[edit logical-systems policy-options]
[edit logical-systems protocols]
[edit logical-systems protocols bgp group neighbor traceoptions]
[edit logical-systems protocols bgp group traceoptions]
[edit logical-systems protocols bgp traceoptions]
[edit logical-systems protocols dvmrp traceoptions]
[edit logical-systems protocols esis traceoptions]
[edit logical-systems protocols igmp traceoptions]
[edit logical-systems protocols igmp-host traceoptions]
[edit logical-systems protocols isis traceoptions]
[edit logical-systems protocols l2circuit traceoptions]
[edit logical-systems protocols l2iw traceoptions]
[edit logical-systems protocols ldp traceoptions]
[edit logical-systems protocols mld traceoptions]
[edit logical-systems protocols mld-host traceoptions]
[edit logical-systems protocols msdp group peer traceoptions]
[edit logical-systems protocols msdp group traceoptions]
[edit logical-systems protocols msdp peer traceoptions]
[edit logical-systems protocols msdp traceoptions]
[edit logical-systems protocols ospf traceoptions]
[edit logical-systems protocols pim traceoptions]
[edit logical-systems protocols rip traceoptions]
[edit logical-systems protocols ripng traceoptions]
[edit logical-systems protocols router-advertisement traceoptions]
[edit logical-systems protocols router-discovery traceoptions]
[edit logical-systems protocols rsvp traceoptions]
[edit logical-systems routing-instances]
[edit logical-systems routing-instances instance bridge-domains]
[edit logical-systems routing-instances instance bridge-domains domain
multicast-snooping-options]
[edit logical-systems routing-instances instance bridge-domains domain
multicast-snooping-options traceoptions]
[edit logical-systems routing-instances instance multicast-snooping-options]
[edit logical-systems routing-instances instance multicast-snooping-options
traceoptions]
[edit logical-systems routing-instances instance pbb-options]
[edit logical-systems routing-instances instance protocols]
[edit logical-systems routing-instances instance protocols bgp group neighbor
traceoptions]
[edit logical-systems routing-instances instance protocols bgp group traceoptions]
[edit logical-systems routing-instances instance protocols bgp traceoptions]
[edit logical-systems routing-instances instance protocols esis traceoptions]
[edit logical-systems routing-instances instance protocols isis traceoptions]
[edit logical-systems routing-instances instance protocols l2vpn traceoptions]
[edit logical-systems routing-instances instance protocols ldp traceoptions]
[edit logical-systems routing-instances instance protocols msdp group peer traceoptions]
[edit logical-systems routing-instances instance protocols msdp group traceoptions]
[edit logical-systems routing-instances instance protocols msdp peer traceoptions]
```

```
[edit logical-systems routing-instances instance protocols msdp traceoptions]
[edit logical-systems routing-instances instance protocols mvpn traceoptions]
[edit logical-systems routing-instances instance protocols ospf traceoptions]
[edit logical-systems routing-instances instance protocols pim traceoptions]
[edit logical-systems routing-instances instance protocols rip traceoptions]
[edit logical-systems routing-instances instance protocols ripng traceoptions]
[edit logical-systems routing-instances instance protocols router-discovery traceoptions]
[edit logical-systems routing-instances instance protocols vpls traceoptions]
[edit logical-systems routing-instances instance routing-options]
[edit logical-systems routing-instances instance routing-options multicast traceoptions]
[edit logical-systems routing-instances instance routing-options traceoptions]
[edit logical-systems routing-instances instance service-groups]
[edit logical-systems routing-instances instance switch-options]
[edit logical-systems routing-options]
[edit logical-systems routing-options multicast traceoptions]
[edit logical-systems routing-options traceoptions]
[edit logical-systems switch-options]
[edit multicast-snooping-options]
[edit multicast-snooping-options traceoptions]
[edit policy-options]
[edit protocols]
[edit protocols amt traceoptions]
[edit protocols bgp group neighbor traceoptions]
[edit protocols bgp group traceoptions]
[edit protocols bgp traceoptions]
[edit protocols dvmrp traceoptions]
[edit protocols esis traceoptions]
[edit protocols igmp traceoptions]
[edit protocols igmp-host traceoptions]
[edit protocols isis traceoptions]
[edit protocols l2circuit traceoptions]
[edit protocols l2iw traceoptions]
[edit protocols ldp traceoptions]
[edit protocols mld traceoptions]
[edit protocols mld-host traceoptions]
[edit protocols msdp group peer traceoptions]
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[edit protocols ospf traceoptions]
[edit protocols pim traceoptions]
[edit protocols rip traceoptions]
[edit protocols ripng traceoptions]
[edit protocols router-advertisement traceoptions]
[edit protocols router-discovery traceoptions]
[edit protocols rsvp traceoptions]
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[edit routing-instances instance bridge-domains domain multicast-snooping-options
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[edit routing-instances instance protocols]
[edit routing-instances instance protocols bgp group neighbor traceoptions]
```



```
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[edit routing-instances instance protocols bgp traceoptions]
[edit routing-instances instance protocols esis traceoptions]
[edit routing-instances instance protocols isis traceoptions]
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[edit routing-instances instance protocols msdp group traceoptions]
[edit routing-instances instance protocols msdp peer traceoptions]
[edit routing-instances instance protocols msdp traceoptions]
[edit routing-instances instance protocols mvpn traceoptions]
[edit routing-instances instance protocols ospf traceoptions]
[edit routing-instances instance protocols pim traceoptions]
[edit routing-instances instance protocols rip traceoptions]
[edit routing-instances instance protocols ripng traceoptions]
[edit routing-instances instance protocols router-discovery traceoptions]
[edit routing-instances instance protocols vpls traceoptions]
[edit routing-instances instance routing-options]
[edit routing-instances instance routing-options multicast traceoptions]
[edit routing-instances instance routing-options traceoptions]
[edit routing-instances instance service-groups]
[edit routing-instances instance switch-options]
[edit routing-options]
[edit routing-options multicast traceoptions]
[edit routing-options traceoptions]
[edit switch-options]
```

Related Documentation

- Access Privilege User Permissions Flags Overview on page 16
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- Specifying Access Privileges for Junos OS Operational Mode Commands on page 8
- Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11

security

Can view security configuration.

Commands

```
clear security
clear security idp
clear security idp application-ddos
clear security idp application-ddos cache
  <clear-idp-appddos-cache>

clear security idp application-identification
clear security idp application-identification application-system-cache
  <clear-idp-application-system-cache>

clear security idp application-statistics
  <clear-idp-applications-information>
```

```
clear security idp attack
clear security idp attack table
  <clear-idp-attack-table>

clear security idp counters
  <clear-idp-counters-by-counter-class>

clear security idp ssl-inspection
clear security idp ssl-inspection session-id-cache
  <clear-idp-ssl-session-cache-information>
clear security idp status
  <clear-idp-status-information>
clear security pki
clear security pki ca-certificate
  <clear-pki-ca-certificate>
clear security pki certificate-request
  <clear-pki-certificate-request>
clear security pki crl
  <clear-pki-crl>
clear security pki key-pair
  <clear-pki-key-pair>
clear security pki local-certificate
  <clear-pki-local-certificate>
request security
request security certificate
request security certificate enroll
request security datapath-debug
request security datapath-debug action-profile
request security datapath-debug action-profile reload-all
request security idp
  <request-idp-policy-load>
request security idp security-package
request security idp security-package download
  <request-idp-security-package-download>

request security idp security-package download version
  <request-idp-security-package-download-version>

request security idp security-package install
  <request-idp-security-package-install>

request security idp ssl-inspection
request security idp ssl-inspection key
request security idp ssl-inspection key add
  <request-idp-ssl-key-add>

request security idp ssl-inspection key delete
  <request-idp-ssl-key-delete>

request security key-pair
request security pki
request security pki ca-certificate
request security pki ca-certificate verify
  <verify-pki-ca-certificate>
request security pki ca-certificate enroll
request security pki ca-certificate load
```

```
<load-pki-ca-certificate>
request security pki crt
request security pki crt load
  <request security pki crt load>
request security pki generate-certificate-request
  <generate-pki-certificate-request>
request security pki generate-key-pair
  <generate-pki-key-pair>
request security pki local-certificate
request security pki local-certificate verify
  <verify-pki-local-certificate>
request security pki local-certificate enroll
request security pki local-certificate generate-self-signed
  <generate-pki-self-signed-local-certificate>
request security pki local-certificate load
  <load-pki-local-certificate>
request system set-encryption-key
show security
show security idp
show security idp application-ddos
show security idp application-ddos application
  <get-idp-addos-application-information>

show security idp application-identification
show security idp application-identification application-system-cache
  <get-idp-application-system-cache>

show security idp application-statistics
  <get-idp-applications-information>

show security idp attack
show security idp attack table
  <get-idp-attack-table-information>

show security idp counters
  <get-idp-counter-information>

show security idp memory
  <get-idp-memory-information>

show security idp policies
  <get-idp-subscriber-policy-list>

show security idp policy-templates-list
  <get-idp-policy-template-information>

show security idp policy-commit-status
  <get-idp-policy-commit-status>

<get-idp-predefined-attack-groups>
  <get-idp-predefined-attacks>

<get-idp-predefined-attack-group-filters>
  <get-idp-predefined-attack-filters>

<get-idp-recent-security-package-information>
```

```
show security idp security-package-version
  <get-idp-security-package-information>

show security idp ssl-inspection
show security idp ssl-inspection key
  <get-idp-ssl-key-information>

show security idp ssl-inspection session-id-cache
  <get-idp-ssl-session-cache-information>

show security idp status
  <get-idp-status-information>

show security idp status detail
  <get-idp-detail-status-information>

show security pki
show security pki ca-certificate
  <get-pki-ca-certificate>
show security pki certificate-request
  <get-pki-certificate-request>
show security pki crl
  <get-pki-crl>
show security pki local-certificate
  <get-pki-local-certificate>
```

Statements [edit security]

- Related Documentation**
- Access Privilege User Permissions Flags Overview on page 16
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shell

Can start a local shell on the router.

Commands start shell
start shell user

Statements No associated CLI configuration statements.

- Related Documentation**
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snmp

Can view Simple Network Management Protocol (SNMP) configuration.

Commands No associated CLI commands.

Statements [edit snmp]

Related Documentation

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system

Can view system-level configuration information.

Commands request chassis synchronization
request chassis synchronization switch

Statements [edit applications]
[edit chassis system-domains]
[edit dynamic-profiles routing-instances instance forwarding-options helpers tftp]
[edit dynamic-profiles routing-instances instance routing-options fate-sharing]
[edit forwarding-options helpers bootp]
[edit forwarding-options helpers domain]
[edit forwarding-options helpers port]
[edit forwarding-options helpers tftp]
[edit logical-systems]
[edit logical-systems routing-instances instance forwarding-options helpers bootp]
[edit logical-systems routing-instances instance forwarding-options helpers domain]
[edit logical-systems routing-instances instance forwarding-options helpers port]
[edit logical-systems routing-instances instance forwarding-options helpers tftp]
[edit logical-systems routing-instances instance routing-options fate-sharing]
[edit logical-systems routing-options fate-sharing]
[edit logical-systems system]
[edit routing-instances instance forwarding-options helpers bootp]
[edit routing-instances instance forwarding-options helpers domain]
[edit routing-instances instance forwarding-options helpers port]
[edit routing-instances instance forwarding-options helpers tftp]
[edit routing-instances instance routing-options fate-sharing]
[edit routing-options fate-sharing]
[edit services]
[edit services ggsn charging charging-log traceoptions]
[edit system]
[edit system archival]

```
[edit system backup-router]
[edit system compress-configuration-files]
[edit system default-address-selection]
[edit system domain-name]
[edit system domain-search]
[edit system encrypt-configuration-files]
[edit system host-name]
[edit system inet6-backup-router]
[edit system internet-options gre-path-mtu-discovery]
[edit system internet-options ipip-path-mtu-discovery]
[edit system internet-options ipv6-path-mtu-discovery]
[edit system internet-options ipv6-path-mtu-discovery-timeout]
[edit system internet-options ipv6-reject-zero-hop-limit]
[edit system internet-options no-tcp-reset]
[edit system internet-options no-tcp-rfc1323]
[edit system internet-options no-tcp-rfc1323-paws]
[edit system internet-options path-mtu-discovery]
[edit system internet-options source-port upper-limit]
[edit system internet-options source-quench]
[edit system internet-options tcp-drop-synfin-set]
[edit system internet-options tcp-mss]
[edit system license]
[edit system max-configuration-rollback]
[edit system max-configurations-on-flash]
[edit system mirror-flash-on-disk]
[edit system name-server]
[edit system no-multicast-echo]
[edit system no-neighbor-learn]
[edit system no-redirects]
[edit system ports auxiliary log-out-on-disconnect]
[edit system ports console log-out-on-disconnect]
[edit system processes]
[edit system saved-core-context]
[edit system saved-core-files]
[edit system services]
[edit system services web-management]
[edit system static-host-mapping]
[edit system syslog]
[edit system time-zone]
```

**Related
Documentation**

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trace

Can view trace file settings and configure trace file properties.

Commands	clear log monitor request-monitor-ethernet-delay-measurement <request-monitor-ethernet-loss-measurement> monitor interface monitor interface traffic monitor label-switched-path monitor list monitor start monitor static-lsp monitor stop show log show log user <get-syslog-events>
Statements	[edit bridge-domains domain forwarding-options dhcp-relay traceoptions] [edit bridge-domains domain forwarding-options dhcp-relay interface-traceoptions] [edit bridge-domains domain multicast-snooping-options traceoptions] [edit bridge-domains domain protocols igmp-snooping traceoptions] [edit demux traceoptions] [edit dynamic-profiles protocols igmp traceoptions] [edit dynamic-profiles protocols mld traceoptions] [edit dynamic-profiles protocols oam ethernet link-fault-management traceoptions] [dynamic-profiles protocols oam ethernet lmi] [edit dynamic-profiles protocols router-advertisement traceoptions] [edit dynamic-profiles protocols oam gre-tunnel traceoptions] [edit dynamic-profiles routing-instances instance bridge-domains domain forwarding-options dhcp-relay traceoptions] [edit dynamic-profiles routing-instances instance bridge-domains domain multicast-snooping-options traceoptions] [edit dynamic-profiles routing-instances instance bridge-domains domain protocols igmp-snooping traceoptions] [edit dynamic-profiles routing-instances instance forwarding-options dhcp-relay traceoptions] [edit dynamic-profiles routing-instances instance multicast-snooping-options traceoptions] [edit dynamic-profiles routing-instances instance protocols bgp group neighbor traceoptions] [edit dynamic-profiles routing-instances instance protocols bgp group traceoptions] [edit dynamic-profiles routing-instances instance protocols bgp traceoptions] [edit dynamic-profiles routing-instances instance protocols esis traceoptions] [edit dynamic-profiles routing-instances instance protocols igmp-snooping traceoptions] [edit dynamic-profiles routing-instances instance protocols isis traceoptions] [edit dynamic-profiles routing-instances instance protocols l2vpn traceoptions] [edit dynamic-profiles routing-instances instance protocols ldp traceoptions] [edit dynamic-profiles routing-instances instance protocols msdp group peer traceoptions] [edit dynamic-profiles routing-instances instance protocols msdp group traceoptions] [edit dynamic-profiles routing-instances instance protocols msdp peer traceoptions] [edit dynamic-profiles routing-instances instance protocols msdp traceoptions] [edit dynamic-profiles routing-instances instance protocols mvpn traceoptions] [edit dynamic-profiles routing-instances instance protocols ospf traceoptions] [edit dynamic-profiles routing-instances instance protocols pim traceoptions] [edit dynamic-profiles routing-instances instance protocols rip traceoptions] [edit dynamic-profiles routing-instances instance protocols ripng traceoptions]

```
[edit dynamic-profiles routing-instances instance protocols router-discovery traceoptions]
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[edit dynamic-profiles routing-instances instance routing-options multicast traceoptions]
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[edit dynamic-profiles routing-instances instance services mobile-ip traceoptions]
[edit dynamic-profiles routing-instances instance system services dhcp-local-server
traceoptions]
[edit dynamic-profiles routing-options multicast traceoptions]
[edit fabric protocols bgp group neighbor traceoptions]
[edit fabric protocols bgp group traceoptions]
[edit fabric protocols bgp traceoptions]
[edit fabric routing-instances instance routing-options traceoptions]
[edit fabric routing-options traceoptions]
[edit forwarding-options dhcp-relay traceoptions]
[edit forwarding-options dhcp-relay interface-traceoptions]
[edit jnx-example traceoptions]
[edit logical-systems bridge-domains domain forwarding-options dhcp-relay
traceoptions]
[edit logical-systems bridge-domains domain forwarding-options dhcp-relay
interface-traceoptions]
[edit logical-systems bridge-domains domain multicast-snooping-options traceoptions]
[edit logical-systems bridge-domains domain protocols igmp-snooping traceoptions]
[edit logical-systems forwarding-options dhcp-relay traceoptions]
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[edit logical-systems protocols bgp group neighbor traceoptions]
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[edit logical-systems protocols dvmrp traceoptions]
[edit logical-systems protocols esis traceoptions]
[edit logical-systems protocols igmp traceoptions]
[edit logical-systems protocols igmp-host traceoptions]
[edit logical-systems protocols ilmi traceoptions]
[edit logical-systems protocols isis traceoptions]
[edit logical-systems protocols l2circuit traceoptions]
[edit logical-systems protocols l2iw traceoptions]
[edit logical-systems protocols lacp traceoptions]
[edit logical-systems protocols layer2-control traceoptions]
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[edit logical-systems protocols mld traceoptions]
[edit logical-systems protocols mld-host traceoptions]
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[edit logical-systems protocols pim traceoptions]
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```



```
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[edit logical-systems protocols router-discovery traceoptions]
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```

```
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[edit protocols igmp traceoptions]
[edit protocols igmp-host traceoptions]
[edit protocols ilmi traceoptions]
[edit protocols isis traceoptions]
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[edit protocols l2iw traceoptions]
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[edit protocols oam ethernet lmi traceoptions]
[edit protocols ospf traceoptions]
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[edit protocols rip traceoptions]
[edit protocols ripng traceoptions]
[edit protocols router-advertisement traceoptions]
[edit protocols router-discovery traceoptions]
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[edit routing-instances instance protocols bgp group traceoptions]
[edit routing-instances instance protocols bgp traceoptions]
[edit routing-instances instance protocols esis traceoptions]
[edit routing-instances instance protocols igmp-snooping traceoptions]
[edit routing-instances instance protocols isis traceoptions]
[edit routing-instances instance protocols l2vpn traceoptions]
[edit routing-instances instance protocols ldp traceoptions]
```

```

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[edit routing-instances instance protocols mvpn traceoptions]
[edit routing-instances instance protocols ospf traceoptions]
[edit routing-instances instance protocols pim traceoptions]
[edit routing-instances instance protocols rip traceoptions]
[edit routing-instances instance protocols ripng traceoptions]
[edit routing-instances instance protocols router-discovery traceoptions]
[edit routing-instances instance protocols vpls traceoptions]
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[edit routing-instances instance system services dhcp-local-server interface-traceoptions]
[edit routing-options multicast traceoptions]
[edit routing-options traceoptions]
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[edit security pki traceoptions]
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[edit services captive-portal-content-delivery]
[edit services l2tp traceoptions]
[edit services logging traceoptions]
[edit services mobile-ip traceoptions]
[edit services ssl traceoptions]
[edit system accounting traceoptions]
[edit system auto-configuration traceoptions]
[edit system license traceoptions]
[edit system processes datapath-trace-service traceoptions]
[edit system processes diameter-service traceoptions]
[edit system processes general-authentication-service traceoptions]
[edit system processes mac-validation traceoptions]
[edit system processes process-monitor traceoptions]
[edit system processes resource-cleanup traceoptions]
[edit system processes sdk-service traceoptions]
[edit system processes static-subscribers traceoptions]
[edit system services database-replication traceoptions]
[edit system services dhcp traceoptions]
[edit system services dhcp-local-server traceoptions]
[edit system services dhcp-local-server interface-traceoptions]
[edit system services local-policy-decision-function traceoptions]
[edit system services outbound-ssh traceoptions]
[edit system services service-deployment traceoptions]
[edit system services subscriber-management traceoptions]

```

Related Documentation

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view

Can view current system-wide, routing table, and protocol-specific values and statistics.

Commands

```
show
show accounting

show accounting profile
  <get-accounting-profile-information>

show accounting records
  <get-accounting-record-information>

show amt
show amt statistics
  <get-amt-statistics>
show amt summary
  <get-amt-summary>
show amt tunnel
....<get-amt-tunnel-information>
show amt tunnel gateway-address
show amt tunnel tunnel-interface
show ancp
show ancp cos
  <get-ancp-cos-information>

show ancp cos last-update
  <get-ancp-cos-last-update-information>

show ancp cos pending-update
  <get-ancp-cos-pending-information>

show ancp neighbor
  <get-ancp-neighbor-information>

show ancp subscriber
  <get-ancp-subscriber-information>

show ancp subscriber identifier
show ancp subscriber neighbor
show aps
show aps group
show aps interface
show arp
  <get-arp-table-information>

show as-path
show as-path domain
show auto-configuration
show auto-configuration interfaces
show bfd
show bfd session
  <get-bfd-session-information>
```

```
show bfd session address
show bfd session discriminator
show bfd session prefix
show bgp
show bgp bmp
show bgp group
  <get-bgp-group-information>

show bgp group rtf
  <get-bgp-rtf-information>

show bgp group traffic-statistics
  <get-bgp-traffic-statistics-information>

show bgp neighbor
  <get-bgp-neighbor-information>

show bgp neighbor orf
  <get-bgp-orf-information>

show bgp replication
show bgp summary
  <get-bgp-summary-information>

show bridge
show bridge domain
  <get-bridge-instance-information>

show bridge domain operational
show bridge flood
show bridge flood event-queue
  <get-bridge-domain-event-queue-information>

show bridge flood route
show bridge flood route all-ce-flood
  <get-show-bridge-domain-all-ce-flood-route-information>

show bridge flood route all-ve-flood
  <get-show-bridge-domain-ve-flood-route-information>

show bridge flood route alt-root-flood
  <get-bridge-domain-alt-root-flood-route-information>

show bridge flood route bd-flood
  <get-bridge-domain-bd-flood-route-information>

show bridge flood route mlp-flood
  <get-bridge-domain-mlp-flood-route-information>

show bridge flood route re-flood
  <get-bridge-domain-re-flood-route-information>

show bridge mac-table
  <get-bridge-mac-table>

show bridge mac-table interface
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    <get-bridge-interface-mac-table>

show bridge statistics
    <get-bridge-statistics-information>

show chassis
show chassis alarms
    <get-alarm-information>

show chassis cfeb
    <get-cfeb-information>

show chassis cip
show chassis craft-interface
    <get-craft-information>

show chassis environment
    <get-environment-information>

show chassis environment cb
    <get-environment-cb-information>

show chassis environment cip
    <get-environment-cip-information>

show chassis environment feb
    <get-environment-feb-information>

show chassis environment fpc
    <get-environment-fpc-information>

show chassis environment fpm
    <get-environment-fpm-information>

show chassis environment mcs
    <get-environment-mcs-information>

show chassis environment pcg
    <get-environment-pcg-information>

show chassis environment pem
    <get-environment-pem-information>

show chassis environment psu
    <get-environment-psu-information>

show chassis environment routing-engine
    <get-environment-re-information>

show chassis environment scg
    <get-environment-scg-information>

show chassis environment sfm
    <get-environment-sfm-information>

show chassis environment sib

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```
<get-environment-sib-information>

show chassis environment sib f13
show chassis environment sib f2s
show chassis ethernet-switch
show chassis ethernet-switch errors
show chassis ethernet-switch statistics
show chassis fabric
show chassis fabric device
  <get-chassis-fabric-information-device>
show chassis fabric errors
show chassis fabric errors fpc
  <get-fm-fpc-errors>

show chassis fabric errors sib
  <get-fm-sib-errors>

show chassis fabric errors sib f13
show chassis fabric errors sib f2s
show chassis fabric feb
show chassis fabric fpcs
  <get-fm-fpc-state-information>

show chassis fabric links
  <get-chassis-fabric-link-information>
show chassis fabric map
show chassis fabric plane
  <get-fm-plane-state-information>

show chassis fabric plane-location
show chassis fabric sibs
  <get-fm-sib-state-information>
show chassis fabric spray-weights
....<get-chassis-fabric-spray-weight-information>
show chassis fabric spray-weights from
show chassis fabric spray-weights to
show chassis fabric summary
  <get-fm-state-information>

show chassis fabric topology
  <get-chassis-fabric-topology-information>
show chassis fan
show chassis feb
  <get-feb-brief-information>

show chassis feb detail
  <get-feb-information>

show chassis firmware
  <get-firmware-information>

show chassis forwarding
  <get-fwdd-information>

show chassis fpc
  <get-fpc-information>
```

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show chassis fpc pic-status
  <get-pic-information>

show chassis fpc-feb-connectivity
  <get-fpc-feb-connectivity-information>

show chassis hardware
  <get-chassis-inventory>

show chassis in-service-upgrade
show chassis ioc-npc-connectivity
  <get-ioc-npc-connectivity-information>

show chassis lccs
  <get-fru-information>

show chassis location
  <get-chassis-location>

show chassis location fpc
show chassis location interface
show chassis location interface by-name
  <get-interface-location-name-information>

show chassis location interface by-slot
  <get-interface-location-information>

show chassis network-services
  <network-services>

show chassis nonstop-upgrade
show chassis pic
  <get-pic-detail>

show chassis pic-mode
  <get-chassis-pic-mode-information>
show chassis power
  <get-power-usage-information>

show chassis power sequence
show chassis power upgrade

show chassis power-ratings
  <get-power-management>

show chassis psd
  <get-psd-information>

show chassis redundancy
show chassis redundancy feb
  <get-feb-redundancy-information>

show chassis redundancy feb errors
  <get-feb-redundancy-error-information>

```


show chassis redundancy feb redundancy-group
 <get-feb-redundancy-group-information>

show chassis redundant-power-system
 <get-rps-chassis-information>

show chassis routing-engine
 <get-route-engine-information>

show chassis routing-engine bios
 <get-bios-version-information>

show chassis scb
 <get-scb-information>

show chassis sfm
 <get-sfm-information>

show chassis sfm detail
show chassis sibs
 <get-sib-information>

show chassis spmb
 <get-spmb-information>

show chassis spmb sibs
 <get-spmb-sib-information>

show chassis ssb
 <get-ssb-information>

show chassis synchronization
 <get-clock-synchronization-information>

show chassis synchronization backup
show chassis synchronization master
show chassis temperature-thresholds
 <get-temperature-threshold-information>

show chassis vcpu
 <get-vcpu-information>

show chassis zones
 <get-chassis-zones-information>

show class-of-service
 <get-cos-information>

show class-of-service adaptive-shaper
 <get-cos-adaptive-shaper-information>

show class-of-service classifier
 <get-cos-classifier-information>

show class-of-service code-point-aliases
 <get-cos-code-point-map-information>

show class-of-service congestion-notification

```
<get-cos-congestion-notification-information>
show class-of-service drop-profile
  <get-cos-drop-profile-information>

show class-of-service fabric
show class-of-service fabric scheduler-map
  <get-cos-fabric-scheduler-map-information>

show class-of-service fabric statistics
  <get-fabric-queue-information>

show class-of-service forwarding-class
  <get-cos-forwarding-class-information>

show class-of-service forwarding-class-set
  <get-cos-forwarding-class-set-information>
show class-of-service forwarding-table
  <get-cos-table-information>

show class-of-service forwarding-table classifier
  <get-cos-classifier-table-information>

show class-of-service forwarding-table classifier mapping
  <get-cos-classifier-table-map-information>

show class-of-service forwarding-table drop-profile
  <get-cos-red-information>

show class-of-service forwarding-table fabric
show class-of-service forwarding-table fabric scheduler-map
  <get-cos-fwtab-fabric-scheduler-map-information>

show class-of-service forwarding-table forwarding-class-map
  <get-cos-forwarding-class-map-table-information>

show class-of-service forwarding-table forwarding-class-map mapping
  <get-cos-forwarding-class-map-interface-table-information>

show class-of-service forwarding-table loss-priority-map
  <get-cos-loss-priority-map-table-information>

show class-of-service forwarding-table loss-priority-map mapping
  <get-cos-loss-priority-map-table-binding-information>

show class-of-service forwarding-table policer
  <get-cos-policer-table-map-information>

show class-of-service forwarding-table rewrite-rule
  <get-cos-rewrite-table-information>

show class-of-service forwarding-table rewrite-rule mapping
  <get-cos-rewrite-table-map-information>

show class-of-service forwarding-table scheduler-map
  <get-cos-scheduler-map-table-information>
```

```
show class-of-service forwarding-table shaper
  <get-cos-shaper-table-map-information>

show class-of-service forwarding-table translation-table
  <get-cos-translation-table-information>

show class-of-service forwarding-table translation-table mapping
  <get-cos-translation-table-mapping-information>

show class-of-service fragmentation-map
  <get-cos-fragmentation-map-information>

show class-of-service interface
  <get-cos-interface-map-information>

show class-of-service interface-set
  <get-cos-interface-set-map-information>

show class-of-service l2tp-session
  <get-cos-l2tp-session-map-information>

show class-of-service loss-priority-map
  <get-cos-loss-priority-map-information>

show class-of-service multi-destination
  <get-cos-multi-destination-information>

show class-of-service rewrite-rule
  <get-cos-rewrite-information>

show class-of-service routing-instance
  <get-cos-routing-instance-map-information>

show class-of-service scheduler-map
  <get-cos-scheduler-map-information>

show class-of-service traffic-control-profile
  <get-cos-traffic-control-profile-information>

show class-of-service translation-table
  <get-cos-translation-table-map-information>

show class-of-service virtual-channel
  <get-cos-virtual-channel-information>

show class-of-service virtual-channel-group
  <get-cos-virtual-channel-group-information>

show cli
show cli authorization
  <get-authorization-information>

show cli directory
show cli history
show configuration
show connections
```

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show database-replication
show database-replication statistics
  <get-database-replication-statistics-information>

show database-replication summary
  <get-database-replication-summary-information>

show dhcp
show dhcp relay
show dhcp relay binding
  <get-dhcp-relay-binding-information>

show dhcp relay binding interface
show dhcp relay statistics
  <get-dhcp-relay-statistics-information>

show dhcp server
show dhcp server binding
  <get-dhcp-server-binding-information>

show dhcp server binding interface
show dhcp server statistics
  <get-dhcp-server-statistics-information>

show dhcpv6
show dhcpv6 server
show dhcpv6 server binding
  <get-dhcpv6-server-binding-information>

show dhcpv6 server binding interface
show dhcpv6 server statistics
  <get-dhcpv6-server-statistics-information>

show diameter
  <get-diameter-information>

show diameter function
  <get-diameter-function-information>

show diameter function statistics
  <get-diameter-function-statistics>

show diameter instance
  <get-diameter-instance-information>

show diameter network-element
  <get-diameter-network-element-information>

show diameter network-element map
  <get-diameter-network-element-map-information>

show diameter peer
  <get-diameter-peer-information>

show diameter peer map
  <get-diameter-peer-map-information>

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show diameter peer statistics
  <get-diameter-peer-statistics>

show diameter route
  <get-diameter-route-information>

show dot1x
show dot1x authentication-failed-users
  <get-dot1x-authentication-failed-users>

show dot1x interface
  <get-dot1x-interface-information>

show dot1x static-mac-address
  <get-dot1x-static-mac-addresses>

show dot1x static-mac-address interface
  <get-dot1x-interface-mac-addresses>

show dvmrp
show dvmrp interfaces
  <get-dvmrp-interfaces-information>

show dvmrp neighbors
  <get-dvmrp-neighbors-information>

show dvmrp prefix
  <get-dvmrp-prefix-information>

show dvmrp prunes
  <get-dvmrp-prunes-information>

show dynamic-tunnels
show dynamic-tunnels database
show esis
show esis adjacency
  <get-esis-adjacency-information>

show esis interface
  <get-esis-interface-information>

show esis statistics
  <get-esis-statistics-information>

show event-options
show event-options event-scripts
show event-options event-scripts policies
  <get-event-summary>

show extension-provider
show extension-provider system
show extension-provider system connections
  <get-mspinfo-connections>

show extension-provider system packages
```

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<get-mspinfo-packages>

show extension-provider system processes
  <get-mspinfo-processes>

show extension-provider system processes brief
  <get-mspinfo-processes-brief>

show extension-provider system processes extensive
  <get-mspinfo-processes-extensive>

show extension-provider system uptime
  <get-mspinfo-uptime>

show extension-provider system virtual-memory
  <get-mspinfo-virtual-memory>

show forwarding-options
show forwarding-options next-hop-group
show forwarding-options port-mirroring

show helper
show helper statistics
  <get-helper-statistics-information>

show iccp
show igmp
show igmp group
  <get-igmp-group-information>

show igmp interface
  <get-igmp-interface-information>

show igmp output-group
  <get-igmp-output-group-information>

show igmp snooping
show igmp snooping interface
  <get-igmp-snooping-interface-information>

show igmp snooping interface bridge-domain
show igmp snooping membership
  <get-igmp-snooping-membership-information>

show igmp snooping membership bridge-domain
show igmp snooping statistics
  <get-igmp-snooping-statistics-information>

show igmp snooping statistics bridge-domain
show igmp statistics
  <get-igmp-statistics-information>

show ike
show ike security-associations
  <get-ike-security-associations-information>

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show ilmi
show ilmi interface
show ilmi statistics
show ingress-replication
  <get-ingress-replication-information>
show interfaces
  <get-interface-information>

show interfaces controller
show interfaces destination-class
  <get-destination-class-statistics>

show interfaces destination-class all
show interfaces diagnostics
show interfaces diagnostics optics
  <get-interface-optics-diagnostics-information>

show interfaces far-end-interval
show interfaces filters
  <get-interface-filter-information>

show interfaces interface-set
show interfaces interface-set queue
  <get-interface-set-queue-information>

show interfaces interval
show interfaces mac-database
  <get-mac-database>

show interfaces mc-ae
show interfaces policers
  <get-interface-policer-information>

show interfaces queue
  <get-interface-queue-information>

show interfaces redundancy
show interfaces redundancy detail
show interfaces routing
show interfaces source-class
  <get-source-class-statistics>

show interfaces source-class all
show ipsec
show ipsec certificates
  <get-certificates-information>

show ipsec certificates crl
  <get-crl-information>

show ipsec redundancy
show ipsec redundancy interface
  <get-ipsec-pic-redundancy-information>

show ipsec redundancy security-associations
  <get-ipsec-tunnel-redundancy-information>
```

```
show ipsec security-associations
  <get-security-associations-information>

show ipv6
show ipv6 neighbors
  <get-ipv6-nd-information>

show ipv6 router-advertisement
  <get-ipv6-ra-information>

show isis
show isis adjacency
  <get-isis-adjacency-information>

show isis authentication
  <get-isis-authentication-information>

show isis backup
show isis backup coverage
  <get-isis-backup-coverage-information>

show isis backup label-switched-path
  <get-isis-backup-lsp-information>

show isis backup spf

show isis backup spf results
  <get-isis-backup-spf-results-information>

show isis context-identifier
  <get-isis-context-identifier-information>

show isis context-identifier identifier
  <get-isis-context-identifier-origin-information>
show isis database
  <get-isis-database-information>

show isis hostname
  <get-isis-hostname-information>

show isis interface
  <get-isis-interface-information>

show isis overview
  <get-isis-overview-information>

show isis route
  <get-isis-route-information>

show isis spf
show isis spf brief
  <get-isis-spf-results-brief-information>

show isis spf log
  <get-isis-spf-log-information>
```



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show isis spf results
  <get-isis-spf-results-information>

show isis statistics
  <get-isis-statistics-information>

show l2-learning
show l2-learning backbone-instance
show l2-learning global-information
show l2-learning global-mac-count
show l2-learning instance
show l2-learning interface
show l2-learning mac-move-buffer
show l2-learning provider-instance
show l2-learning redundancy-groups
show l2-learning remote-backbone-edge-bridges

show l2circuit
show l2circuit connections
  <get-l2ckt-connection-information>

show l2cpd
show l2cpd task
show l2cpd task io
show l2cpd task memory
show l2cpd task replication
show l2vpn
show l2vpn connections
  <get-l2vpn-connection-information>

show lacp
show lacp interfaces
  <get-lacp-interface-information>

show lacp statistics
show lacp statistics interfaces
  <get-lacp-interface-statistics>

show ldp
show ldp database
  <get-ldp-database-information>

show ldp fec-filters
  <get-ldp-fec-filters-information>

show ldp interface
  <get-ldp-interface-information>

show ldp neighbor
  <get-ldp-neighbor-information>

show ldp oam
show ldp path
  <get-ldp-path-information>
```

```
show ldp route
  <get-ldp-route-information>

show ldp session
  <get-ldp-session-information>

show ldp statistics
  <get-ldp-statistics-information>

show ldp traffic-statistics
  <get-ldp-traffic-statistics-information>

show link-management
  <get-lm-information>

show link-management peer
  <get-lm-peer-information>

show link-management routing
  <get-lm-routing-information>

show link-management routing peer
  <get-lm-routing-peer-information>

show link-management routing resource
  <get-lm-routing-resource-information>

show link-management routing te-link
  <get-lm-routing-te-link-information>

show lldp
  <get-lldp-information>

show lldp detail
  <get-lldp-information-detail>

show lldp local-information
  <get-lldp-local-info>

show lldp neighbors
  <get-lldp-neighbors-information>

show lldp neighbors interface
show lldp remote-global-statistics
  <get-lldp-remote-global-statistics>

show lldp statistics
  <get-lldp-statistics-information>

show lldp statistics interface
show link-management statistics
  <get-lm-statistics-information>

show link-management statistics peer
  <get-lm-peer-statistics>
```

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show link-management te-link
  <get-lm-te-link-information>

show mac-rewrite
show mac-rewrite interface
show mld
show mld group
  <get-mld-group-information>

show mld interface
  <get-mld-interface-information>

show mld output-group
  <get-mld-output-group-information>

show mld statistics
  <get-mld-statistics-information>

show mobile-ip
show mobile-ip home-agent
show mobile-ip home-agent binding
  <get-mip-binding-information>

show mobile-ip home-agent binding ip-address
  <get-ip-mip-binding-information>

show mobile-ip home-agent binding nai
  <get-nai-mip-binding-information>

show mobile-ip home-agent binding summary
  <get-summary-mip-binding-information>

show mobile-ip home-agent interface
  <get-mip-ha-interface-information>

show mobile-ip home-agent overview
  <get-mip-ha-overview-information>

show mobile-ip home-agent traffic
  <get-mip-ha-traffic-information>

show mobile-ip home-agent virtual-network
  <get-mip-ha-virtual-network-information>

show mobile-ip tunnel
show mobile-ip wimax
show mobile-ip wimax release
  <get-mip-wimax-release-information>

show mpls
show mpls admin-groups
  <get-mpls-admin-group-information>

show mpls admin-groups-extended
  <get-mpls-admin-group-extended-information>
show mpls call-admission-control
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    <get-mpls-call-admission-control-information>

show mpls context-identifier
    <get-mpls-context-identifier-information>

show network-access domain-map
show network-access domain-map statistics
    <get-domain-map-statistics>
show network-access gx-plus
show network-access gx-plus statistics
show network-access gx-plus sync-state
    <get gx-plus sync statet information>
show mpls cspf
    <get-mpls-cspf-information>

show mpls diffserv-te
    <get-mpls-diffserv-te-information>

show mpls interface
    <get-mpls-interface-information>

show mpls lsp
    <get-mpls-lsp-information>

show mpls lsp defaults
    <get-mpls-lsp-defaults-information>

show mpls path
    <get-mpls-path-information>

show mpls static-lsp
    <get-mpls-static-lsp-information>
show mpls traceroute
show mpls traceroute database
show mpls traceroute database ldp
show msdp
show msdp source
    <get-msdp-source-information>

show msdp source-active
    <get-msdp-source-active-information>

show msdp statistics
    <get-msdp-statistics-information>

show multicast
show multicast backup-pe-groups
    <get-multicast-backup-pe-groups-information>

show multicast backup-pe-groups address
    <get-multicast-backup-pe-address-information>

show multicast backup-pe-groups group
show multicast flow-map
    <get-multicast-flow-maps-information>

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show multicast interface
  <get-multicast-interface-information>

show multicast next-hops
  <get-multicast-next-hops-information>

show multicast pim-to-igmp-proxy
  <get-multicast-pim-to-igmp-proxy-information>

show multicast pim-to-mld-proxy
  <get-multicast-pim-to-mld-proxy-information>

show multicast route
  <get-multicast-route-information>

show multicast rpf
  <get-multicast-rpf-information>

show multicast scope
  <get-multicast-scope-information>

show multicast sessions
  <get-multicast-sessions-information>

show multicast snooping
show multicast snooping next-hops
  <get-multicast-snooping-next-hops-information>

show multicast snooping route
  <get-multicast-snooping-route-information>

show multicast statistics
  <get-multicast-statistics-information>

show multicast usage
  <get-multicast-usage-information>

show mvpn
show mvpn c-multicast
show mvpn instance
  <get-mvpn-instance-information>

show mvpn neighbor
show mvrp
  <get-mvrp-information>

show mvrp applicant-state
  <get-mvrp-applicant-information>

show mvrp dynamic-vlan-memberships
  <get-mvrp-dynamic-vlan-memberships>

show mvrp interface
  <get-mvrp-interface-information>

show mvrp registration-state
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<get-mvrp-registration-state>

show mvrp statistics
  <get-mvrp-interface-statistics>

show network-access
show network-access aaa
show network-access aaa statistics
  <get-aaa-module-statistics>

show network-access aaa statistics address-assignment
show network-access aaa statistics address-assignment client
show network-access aaa statistics address-assignment pool
show network-access aaa subscribers
  <get-aaa-subscriber-table>

show network-access aaa subscribers session-id

show network-access aaa subscribers statistics
  <get-aaa-subscriber-statistics>

show network-access address-assignment
show network-access address-assignment pool
  <get-address-assignment-pool-table>

show network-access requests
show network-access requests pending
  <get-authentication-pending-table>

show network-access requests statistics
  <get-authentication-statistics>

show network-access securid-node-secret-file
  <get-node-secret-file-table>

show ntp
show ntp associations
show ntp status
show oam
show oam ethernet
show oam ethernet connectivity-fault-management
show oam ethernet connectivity-fault-management delay-statistics
  <get-cfm-delay-statistics>

show oam ethernet connectivity-fault-management forwarding-state
show oam ethernet connectivity-fault-management forwarding-state instance
  <get-cfm-forwarding-state-instance-information>

show oam ethernet connectivity-fault-management forwarding-state interface
  <get-cfm-forwarding-state-interface-information>

show oam ethernet connectivity-fault-management interfaces
  <get-cfm-interfaces-information>
show oam ethernet connectivity-fault-management loss-statistics
  <get-cfm-loss-statistics>
show oam ethernet connectivity-fault-management mep-database

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<get-cfm-mep-database>

show oam ethernet connectivity-fault-management mep-statistics
  <get-cfm-mep-statistics>

show oam ethernet connectivity-fault-management mip
  <get-cfm-mip-information>

show oam ethernet connectivity-fault-management path-database
  <get-cfm-linktrace-path-database>

show oam ethernet connectivity-fault-management policer
  <get-evc-information>

show oam ethernet connectivity-fault-management sla-iterator-statistics
  <get-cfm-iterator-statistics>
show oam ethernet evc
  <get-evc-information>
show oam ethernet link-fault-management
  <get-lfmd-information>

show oam ethernet lmi
  <get-elmi-information>

show oam ethernet lmi statistics
  <get-elmi-statistics>

show ospf
show ospf backup
show ospf backup coverage
  <get-ospf-backup-coverage-information>

show ospf backup lsp
  <get-ospf-backup-lsp-information>

show ospf backup neighbor
  <get-ospf-backup-neighbor-information>

show ospf backup spf
  <get-ospf-backup-spf-information>

show ospf context-identifier
  <get-ospf-context-id-information>

show ospf database
  <get-ospf-database-information>

show ospf interface
  <get-ospf-interface-information>

show ospf io-statistics
  <get-ospf-io-statistics-information>

show ospf log
  <get-ospf-log-information>
```

```
show ospf neighbor
  <get-ospf-neighbor-information>

show ospf overview
  <get-ospf-overview-information>

show ospf route
  <get-ospf-route-information>

show ospf statistics
  <get-ospf-statistics-information>

show ospf3
show ospf3 backup
show ospf3 backup coverage
  <get-ospf3-backup-coverage-information>

show ospf3 backup lsp
  <get-ospf3-backup-lsp-information>

show ospf3 backup neighbor
  <get-ospf3-backup-neighbor-information>

show ospf3 backup spf
  <get-ospf3-backup-spf-information>

show ospf3 database
  <get-ospf3-database-information>

show ospf3 interface
  <get-ospf3-interface-information>

show ospf3 io-statistics
  <get-ospf3-io-statistics-information>

show ospf3 log
  <get-ospf3-log-information>

show ospf3 neighbor
  <get-ospf3-neighbor-information>

show ospf3 overview
  <get-ospf3-overview-information>

show ospf3 route
  <get-ospf3-route-information>

show ospf3 statistics
  <get-ospf3-statistics-information>

show passive-monitoring
  <get-passive-monitoring-information>

show passive-monitoring error
  <get-passive-monitoring-error-information>
```



```
show passive-monitoring flow
  <get-passive-monitoring-flow-information>
```

```
show passive-monitoring memory
  <get-passive-monitoring-memory-information>
```

```
show passive-monitoring status
  <get-passive-monitoring-status-information>
```

```
show passive-monitoring usage
  <get-passive-monitoring-usage-information>
```

```
show pfe
show pfe cfeb
show pfe feb
show pfe fpc
show pfe fwdd
show pfe lcc
show pfe next-hop
show pfe pfem
show pfe pfem detail
show pfe pfem extensive
show pfe route
show pfe route inet6
show pfe route inet6 table
show pfe route ip
show pfe route ip table
show pfe route iso
show pfe route iso table
show pfe scb
show pfe sfm
show pfe ssb
show pfe statistics
show pfe statistics ip
show pfe statistics ip6
show pfe statistics traffic
  <get-pfe-statistics>
```

```
show pfe statistics traffic cpu
show pfe statistics traffic cpu fpe
show pfe statistics traffic egress-queues
show pfe statistics traffic egress-queues fpc
show pfe statistics traffic multicast
show pfe statistics traffic multicast fpcshow pfe statistics traffic protocol
show pfe terse
  <get-pfe-information>
```

```
show pfe version brief
show pfe version detail
show pgm
show pgm negative-acknowledgments
  <get-pgm-nak>
```

```
show pgm source-path-messages
  <get-pgm-source-path-messages>
```

```

show pgm statistics
  <get-pgm-statistics>

show pim
show pim bootstrap
  <get-pim-bootstrap-information>

show pim interfaces
  <get-pim-interfaces-information>

show pim join
  <get-pim-join-information>

show pim mdt
  <get-pim-mdt-information>

show pim mvpn
  <get-pim-mvpn-information>

show pim neighbors
  <get-pim-neighbors-information>

show pim rps
  <get-pim-rps-information>

show pim source
  <get-pim-source-information>

show pim statistics
  <get-pim-statistics-information>

show policy
show policy conditions
show policy damping
show ppp
show ppp address-pool
  <get-ppp-address-pool-information>

show ppp interface
  <get-ppp-interface-information>

show ppp statistics
  <get-ppp-statistics-information>

show ppp summary
  <get-ppp-summary-information>

show pppoe
show pppoe interfaces
  <get-pppoe-interface-information>

show pppoe service-name-tables
  <get-pppoe-service-name-table-information>

show pppoe statistics
  <get-pppoe-statistics-information>

```

```
show pppoe underlying-interfaces
  <get-pppoe-underlying-interface-information>

show pppoe version
  <get-pppoe-version>

show protection-group
show protection-group ethernet-aps
  <show-protection-group-ethernet-aps>
show protection-group ethernet-ring
show protection-group ethernet-ring aps
show protection-group ethernet-ring interface
show protection-group ethernet-ring node-state
show protection-group ethernet-ring statistics
show protection-group ethernet-ring vlan
show r2cp
show r2cp interfaces
  <get-r2cp-interface-information>
show r2cp radio
  <get-r2cp-radio-information>
show r2cp sessions
  <get-r2cp-session-information>
show r2cp statistics
  <get-r2cp-statistics>
show redundant-power-system
show redundant-power-system led
show redundant-power-system power-supply
show redundant-power-system status
show redundant-power-system version
show rip
show rip general-statistics
  <get-rip-general-statistics-information>

show rip neighbor
  <get-rip-neighbor-information>

show rip statistics
  <get-rip-statistics-information>

show ripng
show ripng general-statistics
show ripng neighbor
show ripng statistics
show route
  <get-route-information>

show route export
  <get-rteexport-table-information>

show route export instance
  <get-rteexport-instance-information>

show route export vrf-target
  <get-rteexport-target-information>
```

```

show route flow
show route flow validation
    <get-rtflow-dep-information>

show route forwarding-table
    <get-forwarding-table-information>

show route instance
    <get-instance-information>

show route instance operational
    <get-operational-routing-instance-information>

show route martians
show route resolution
show route resolution summary
show route resolution unresolved
show route rib-groups
show route snooping
show route snooping summary
show route summary
    <get-route-summary-information>

show rsvp
show rsvp interface
    <get-rsvp-interface-information>

show rsvp neighbor
    <get-rsvp-neighbor-information>

show rsvp session
    <get-rsvp-session-information>

show rsvp statistics
    <get-rsvp-statistics-information>

show rsvp version
    <get-rsvp-version-information>

show sap
show sap listen
    <get-sap-listen-information>

show services
show services accounting
    <get-service-accounting-information>

show services accounting aggregation
    <get-service-accounting-aggregation-information>

show services accounting aggregation as
    <get-service-accounting-aggregation-as-information>

show services accounting aggregation destination-prefix
    <get-service-accounting-aggregation-destination-prefix-information>

```

```
show services accounting aggregation protocol-port
  <get-service-accounting-aggregation-protocol-port-information>

show services accounting aggregation source-destination-prefix
  <get-service-accounting-aggregation-source-destination-prefix-information>

show services accounting aggregation source-prefix
  <get-service-accounting-aggregation-source-prefix-information>

show services accounting aggregation template
  <get-service-accounting-aggregation-template-information>

show services accounting errors
  <get-service-accounting-errors-information>

show services accounting flow
  <get-service-accounting-flow-information>

show services accounting flow-detail
  <get-service-accounting-flow-detail>

show services accounting memory
  <get-service-accounting-memory-information>

show services accounting packet-size-distribution
  <get-packet-distribution-information>

show services accounting status
  <get-service-accounting-status-information>

show services accounting usage
  <get-service-accounting-usage-information>

show services alg
show services alg conversations
  <get-service-msp-alg-conversation-information>
show services alg statistics
show services application-aware-access-list
show services application-aware-access-list flows
show services application-aware-access-list flows interface
show services application-aware-access-list flows subscriber
show services application-aware-access-list statistics
show services application-aware-access-list statistics interface
show services application-aware-access-list statistics subscriber
show services application-identification
show services application-identification application-system-cache
  <get-appid-application-system-cache>

show services application-identification counter
  <get-appid-counter>

show services application-identification version
  <get-appid-package-version>

show services border-signaling-gateway
show services border-signaling-gateway accounting
```

```
show services border-signaling-gateway accounting statistics
  <get-service-border-signaling-gateway-charging-statistics>
show services border-signaling-gateway accounting status
  <get-service-border-signaling-gateway-charging-status>
show services border-signaling-gateway admission-control
  <get-service-border-signaling-gateway-statistics-admission-control>

show services border-signaling-gateway by-call-context-id
  <get-service-bsg-information-by-call-context-id>

show services border-signaling-gateway by-contact
  <get-service-border-signaling-gateway-information-by-contact>

show services border-signaling-gateway by-request-uri
  <get-service-border-signaling-gateway-information-by-request-uri>

show services border-signaling-gateway calls
  <get-service-border-signaling-gateway-statistics-calls>

show services border-signaling-gateway calls-duration
  <get-service-border-signaling-gateway-calls-duration>

show services border-signaling-gateway calls-failed
  <get-service-border-signaling-gateway-statistics-calls-failed>

show services border-signaling-gateway charging
show services border-signaling-gateway charging statistics
  <get-service-border-signaling-gateway-charging-statistics>
show services border-signaling-gateway charging status
  <get-service-border-signaling-gateway-charging-status>
show services border-signaling-gateway denied-messages
  <get-service-bsg-denied-messages>

show services border-signaling-gateway embedded-spdf
  <get-service-border-signaling-gateway-embedded-spdf>

show services border-signaling-gateway embedded-spdf status
  <get-service-border-signaling-gateway-embedded-spdf-status>

show services border-signaling-gateway name-resolution-cache
  <get-service-border-signaling-gateway-name-resolution-cache>

show services border-signaling-gateway name-resolution-cache all
  <get-service-border-signaling-gateway-name-resolution-cache-all>

show services border-signaling-gateway name-resolution-cache by-fqdn
show services border-signaling-gateway status
  <get-service-bsg-status-information>
show services captive-portal-content-delivery
show services captive-portal-content-delivery pic
show services captive-portal-content-delivery profile
show services captive-portal-content-delivery rule
show services captive-portal-content-delivery ruleset
show services captive-portal-content-delivery sset
show services captive-portal-content-delivery statistics
show services captive-portal-content-delivery statistics interface
```

```
show services cos
show services cos statistics
  <get-service-cos-statistics-information>

show services cos statistics diffserv
  <get-service-cos-diffserv-statistics>

show services cos statistics forwarding-class
  <get-service-cos-forwarding-class-statistics>

show services crtp
  <get-service-crtp-params-information>

show services crtp extensive
  <get-service-crtp-extensive-information>

show services crtp flows
  <get-service-crtp-flow-table-information>

show services dynamic-flow-capture
show services dynamic-flow-capture content-destination
  <get-services-dynamic-flow-capture-content-destination-information>

show services dynamic-flow-capture control-source
  <get-services-dynamic-flow-capture-control-source-information>

show services dynamic-flow-capture statistics
show services fips
show services fips pic
show services fips pic status
  <get-fips-pic-status-information>

show services flow-collector
  <get-services-flow-collector-information>

show services flow-collector file
  <get-services-flow-collector-file-information>

show services flow-collector input
  <get-services-flow-collector-input-information>

show services flow-table
show services flow-table statistics
  <get-flow-table-statistics-information>

show services flows
  <get-service-msp-flow-table-information>

show services ggsn
show services ggsn diagnostics
show services ggsn diagnostics pdp
  <get-pdp-diagnostics-per-apn>

show services ggsn statistics
  <get-ggsn-statistics>
```

```
show services ggsn statistics apn
  <get-ggsn-apn-statistics-information>

show services ggsn statistics charging
  <get-ggsn-charging-statistics-information>

show services ggsn statistics gtp
  <get-ggsn-gtp-statistics-information>

show services ggsn statistics gtp-prime
  <get-ggsn-gtp-prime-statistics-information>

show services ggsn statistics imsi
  <get-ggsn-imsi-user-information>

show services ggsn statistics l2tp-tunnel
  <get-ggsn-l2tp-tunnel-statistics-information>

show services ggsn statistics msisdn
show services ggsn statistics radius
  <get-ggsn-radius-statistics-information>

show services ggsn statistics sgsn
  <get-ggsn-sgsn-statistics-information>

show services ggsn status
  <get-ggsn-interface-information>

show services ggsn trace
show services ggsn trace all
  <get-ggsn-trace>

show services ggsn trace imsi
  <get-ggsn-imsi-trace>

show services ggsn trace msisdn
  <get-ggsn-msisdn-trace>

show services ids
show services ids destination-table
  <get-service-ids-destination-table-information>

show services ids pair-table
  <get-service-ids-pair-table-information>

show services ids source-table
  <get-service-ids-source-table-information>

show services ipsec-vpn
show services ipsec-vpn certificates
show services ipsec-vpn ike
show services ipsec-vpn ike security-associations
  <get-ike-services-security-associations-information>

show services ipsec-vpn ipsec
show services ipsec-vpn ipsec security-associations
```



```
<get-services-security-associations-information>

show services ipsec-vpn ipsec statistics
  <get-services-ipsec-statistics-information>

show services l2tp
show services l2tp destination
  <get-l2tp-destination-information>
show services l2tp multilink
  <get-l2tp-multilink-information>

show services l2tp radius
show services l2tp radius accounting
show services l2tp radius accounting servers
  <get-services-l2tp-radius-accounting-servers-information>

show services l2tp radius accounting statistics
  <get-services-l2tp-radius-accounting-statistics-information>

show services l2tp radius authentication
show services l2tp radius authentication servers
  <get-services-l2tp-radius-authentication-servers-information>

show services l2tp radius authentication statistics
  <get-services-l2tp-radius-authentication-statistics-information>

show services l2tp radius servers
  <get-services-l2tp-radius-authentication-accounting-servers-information>

show services l2tp radius statistics
  <get-services-l2tp-radius-authentication-accounting-statistics-information>

show services l2tp session
  <get-l2tp-session-information>

show services l2tp summary
  <get-l2tp-summary-information>

show services l2tp tunnel
  <get-l2tp-tunnel-information>

show services l2tp user
show services link-services
show services link-services cpu-usage
  <get-link-services-cpu-usage>

show services local-policy-decision-function
show services local-policy-decision-function flows
show services local-policy-decision-function flows interface
show services local-policy-decision-function flows subscriber
show services local-policy-decision-function statistics
show services local-policy-decision-function statistics interface
show services local-policy-decision-function statistics subscriber
show services logging
show services logging history
show services logging history client
```

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show services logging logfiles
show services nat
show services nat ipv6-multicast-interfaces
  <get-service-nat-ipv6-multicast-information>

show services nat mappings
show services nat mappings brief
  <get-service-nat-mapping-brief>
show services nat mappings detail
  <get-service-nat-mapping-detail>
show services nat mappings summary
  <get-service-nat-mapping-summary>
show services nat pool
  <get-service-nat-pool-information>
show services nat statistics
  <get-service-nat-statistics-information>
show services pgcp
show services pgcp active-configuration
  <get-pgcpd-active-configuration>

show services pgcp active-configuration gateway
  <get-service-pgcp-active-configuration-gateway>

show services pgcp conversations
  <get-service-pgcp-conversation-information>

show services pgcp conversations gateway
  <get-service-pgcp-conversation-information-gateway>

show services pgcp flows
  <get-service-pgcp-flow-table-information>

show services pgcp flows gateway
  <get-service-pgcp-flow-table-information-gateway>

show services pgcp gate
  <get-service-pgcp-gate>

show services pgcp gate gateway
  <get-service-pgcp-gate-gateway>

show services pgcp gates
  <get-service-pgcp-gates>

show services pgcp gates gateway
  <get-service-pgcp-gates-gateway>

show services pgcp root-termination
  <get-services-pgcpd-root-termination>

show services pgcp root-termination gateway
  <get-services-pgcpd-root-termination-gateway>

show services pgcp statistics
  <get-service-pgcp-statistics>
```

```
show services pgcp statistics gateway
  <get-service-pgcp-statistics-gateway>

show services pgcp terminations
  <get-service-pgcp-terminations>

show services pgcp terminations gateway
  <get-service-pgcp-terminations-gateway>

show services rpm
show services rpm active-servers
  <get-active-servers>

show services rpm history-results
  <get-history-results>

show services rpm probe-results
  <get-probe-results>

show services rpm twamp
show services rpm twamp server
show services rpm twamp server connection
show services rpm twamp server session
show services service-identification
show services service-identification header-redirect
show services service-identification header-redirect statistics
  <get-header-redirect-set-statistics-information>

show services service-identification statistics
  <get-service-identification-statistics-information>

show services service-identification uri-redirect
show services service-identification uri-redirect statistics
  <get-uri-redirect-set-statistics-information>

show services service-sets
show services service-sets cpu-usage
  <get-service-set-cpu-statistics>

show services service-sets memory-usage
  <get-service-set-memory-statistics>

show services service-sets memory-usage zone
show services service-sets plug-ins
  <get-service-set-plugin-summary>

show services service-sets statistics
show services service-sets statistics packet-drops
  <get-service-set-packet-drop-statistics>

show services service-sets statistics syslog
  <get-service-set-syslog-statistics>
show services service-sets statistics tcp-mss
  <get-service-set-tcp-mss-statistics>

show services service-sets summary
```

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    <get-service-set-summary-information>

show services sessions
    <get-msp-session-table>

show services softwire
    <get-service-softwire-table-information>

show services softwire flows
    <get-service-softwire-flow-table-information>

show services softwire flows ds-lite
    <get-service-softwire-ds-lite-flow-table-information>

show services softwire flows v6rd
    <get-service-softwire-v6rd-flow-table-information>

show services softwire statistics
    <get-service-softwire-statistics-information>

show services stateful-firewall
show services stateful-firewall flow-analysis
    <get-service-flow-analysis-information>
show services stateful-firewall conversations
    <get-service-sfw-conversation-information>

show services stateful-firewall flows
    <get-service-sfw-flow-table-information>

show services stateful-firewall sip-call
    <get-service-sfw-sip-call-information>

show services stateful-firewall sip-register
    <get-service-sfw-sip-register-information>

show services stateful-firewall statistics
    <get-service-sfw-statistics-information>

show services stateful-firewall statistics application-protocol
show snmp
show snmp health-monitor
    <get-health-monitor-information>

show snmp health-monitor alarms
    <get-health-monitor-alarm-information>

show snmp health-monitor logs
    <get-health-monitor-log-information>

show snmp inform-statistics
    <get-snmp-inform-statistics>

show snmp mib
show snmp mib get
    <get-snmp-object>

```

```
show snmp mib get-next
  <get-next-snmp-object>

show snmp mib walk
  <get-walk-snmp-object>

show snmp rmon
  <get-rmon-information>

show snmp rmon alarms
  <get-rmon-alarm-information>

show snmp rmon events
  <get-rmon-event-information>

show snmp rmon history
  <get-rmon-history-information>

show snmp rmon logs
  <get-rmon-log-information>

show snmp statistics
  <get-snmp-information>

show snmp v3
  <get-snmp-v3-information>

show snmp v3 access
  <get-snmp-v3-access-information>

show snmp v3 community
  <get-snmp-v3-community-information>

show snmp v3 general
  <get-snmp-v3-general-information>

show snmp v3 groups
  <get-snmp-v3-group-information>

show snmp v3 notify
  <get-snmp-v3-notify-information>

show snmp v3 notify filter
  <get-snmp-v3-notify-filter-information>

show snmp v3 target
  <get-snmp-v3-target-information>

show snmp v3 target address
  <get-snmp-v3-target-address-information>

show snmp v3 target parameters
  <get-snmp-v3-target-parameters-information>

show snmp v3 users
```

```
<get-snmp-v3-usm-user-information>

show spanning-tree
show spanning-tree bridge
show spanning-tree interface
show spanning-tree mstp
show spanning-tree mstp configuration
show spanning-tree statistics
show spanning-tree statistics interface
show spanning-tree statistics routing-instance
show static-subscribers
show static-subscribers sessions
show subscribers
  <get-subscribers>
show subscribers summary
...<get-subscribers-summary>
<get-syslog-filenames>

show synchronous-ethernet
show synchronous-ethernet esmc
show synchronous-ethernet esmc statistics
show synchronous-ethernet esmc transmit
show synchronous-ethernet global-information
show system
show system alarms
  <get-system-alarm-information>

show system boot-messages
show system buffers
show system certificate
show system commit
  <get-commit-information>

show system configuration
show system configuration archival
  <get-system-archival>

show system configuration rescue
  <get-rescue-information>

show system connections
show system core-dumps
show system core-dumps core-file-info
  <get-core-file-information>

show system directory-usage
  <get-directory-usage-information>

show system firmware
  <get-system-firmware-information>

show system license
  <get-license-summary-information>

show system license installed
  <get-license-information>
```

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show system license keys
  <get-license-key-information>

show system license usage
  <get-license-usage-summary>

show system processes
show system processes brief
show system processes extensive
show system processes health
  <get-process-health-information>

show system processes providers
show system processes resource-limits
show system processes summary
show system queues
show system reboot
show system relay
show system relay fpc
show system relay group
show system relay pfe
show system relay pic
show system relay summary
show system resource-cleanup
show system resource-cleanup processes
  <get-system-resource-cleanup-processes-information>

show system rollback
  <get-rollback-information>

show system services
show system services dhcp
show system services dhcp binding
  <get-dhcp-binding-information>

show system services dhcp conflict
  <get-dhcp-conflict-information>

show system services dhcp global
  <get-dhcp-global-information>

show system services dhcp pool
  <get-dhcp-pool-information>

show system services dhcp statistics
  <get-dhcp-statistics-information>

show system services reverse
  <get-system-services-reverse-information>

show system services service-deployment
  <get-service-deployment-service-information>

show system snapshot
  <get-snapshot-information>
```

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show system software
show system software backup
  <get-package-backup-information>

<get-software-installation-status>

show system statistics
  <get-statistics-information>

show system statistics bridge
show system statistics vpls
show system storage
  <get-system-storage>
show system storage partitions
  <get-system-storage-partitions>
show system subscriber-management
show system subscriber-management summary
show system switchover
  <get-switchover-information>

show system uptime
  <get-system-uptime-information>

show system users
  <get-system-users-information>

show system virtual-memory
show task
show task io
show task memory
show task replication
show task snooping
show task snooping io
show task snooping memory
show ted
show ted database
  <get-ted-database-information>

show ted link
  <get-ted-link-information>

show ted protocol
  <get-ted-protocol-information>

show version
  <get-software-information>

show vpls
show vpls connections
  <get-vpls-connection-information>

show vpls flood
show vpls flood event-queue
  <get-vpls-event-queue-information>

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show vpls flood route
show vpls flood route all-ce-flood
  <get-vpls-all-ce-flood-route-information>

show vpls flood route all-flood
  <get-vpls-all-flood-route-information>

show vpls flood route alt-root-flood
  <get-vpls-alt-root-flood-route-information>

show vpls flood route ce-flood
  <get-vpls-ce-flood-route-information>

show vpls flood route mlp-flood
  <get-vpls-mlp-flood-route-information>

show vpls flood route re-flood
  <get-vpls-re-flood-route-information>

show vpls mac-table
  <get-vpls-mac-table>

show vpls mac-table interface
  <get-vpls-interface-mac-table>

show vpls statistics
  <get-vpls-statistics-information>

show vrrp
show vrrp interface
show vrrp track
test interface
test interface fdl-line-loop
test interface fdl-line-loop ansi
test interface fdl-line-loop ansi initiate
test interface fdl-line-loop ansi terminate
test interface fdl-line-loop bellcore
test interface fdl-line-loop bellcore initiate
test interface fdl-line-loop bellcore terminate
test interface fdl-payload-loop
test interface fdl-payload-loop ansi
test interface fdl-payload-loop ansi initiate
test interface fdl-payload-loop ansi terminate
test interface fdl-payload-loop bellcore
test interface fdl-payload-loop bellcore initiate
test interface fdl-payload-loop bellcore terminate
test interface inband-line-loop
test interface inband-line-loop ansi
test interface inband-line-loop ansi initiate
test interface inband-line-loop ansi terminate
test interface inband-line-loop bellcore
test interface inband-line-loop bellcore initiate
test interface inband-line-loop bellcore terminate
test interface inband-line-loop initiate
test interface inband-line-loop terminate
test interface inband-payload-loop
```

```
test interface inband-payload-loop ansi
test interface inband-payload-loop ansi initiate
test interface inband-payload-loop ansi terminate
test interface inband-payload-loop bellcore
test interface inband-payload-loop bellcore initiate
test interface inband-payload-loop bellcore terminate
test msdp
test msdp dependent-peers
test msdp rpf-peer
test policy
```

Statements

```
[edit dynamic-profiles routing-instances instance services mobile-ip home-agent
enable-service]
[edit logical-systems routing-instances instance services mobile-ip home-agent
enable-service]
[edit logical-systems services mobile-ip home-agent enable-service]
[edit routing-instances instance services mobile-ip home-agent enable-service]
[edit services mobile-ip home-agent enable-service]
```

- Related Documentation**
- Access Privilege User Permissions Flags Overview on page 16
 - Junos OS Access Privilege Levels Overview on page 3
 - Configuring Access Privilege Levels on page 8
 - Specifying Access Privileges for Junos OS Operational Mode Commands on page 8
 - Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11

view-configuration

Can view all of the configuration (not including secrets)

Commands No associated CLI commands.

Statements No associated CLI configuration statements.

- Related Documentation**
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 - Specifying Access Privileges for Junos OS Operational Mode Commands on page 8
 - Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11

PART 2

Index

- Index on page 93

Index

Symbols

#, comments in configuration statements.....	xiv
(), in syntax descriptions.....	xiv
< >, in syntax descriptions.....	xiii
[], in configuration statements.....	xiv
{ }, in configuration statements.....	xiv
(pipe), in syntax descriptions.....	xiv

A

access privilege levels	
configuration example	
operational mode commands.....	10
configuring.....	8
operational mode commands.....	8
login classes.....	3
allow-commands statement	
usage guidelines.....	6
allow-configuration statement	
usage guidelines.....	6
allowing commands to login classes.....	6

B

braces, in configuration statements.....	xiv
brackets	
angle, in syntax descriptions.....	xiii
square, in configuration statements.....	xiv

C

commands	
allowing or denying to login classes.....	6
comments, in configuration statements.....	xiv
conventions	
text and syntax.....	xiii
curly braces, in configuration statements.....	xiv
customer support.....	xiv
contacting JTAC.....	xiv

D

deny-commands statement	
usage guidelines.....	6

deny-configuration statement	
usage guidelines.....	6
denying commands to login classes.....	6
documentation	
comments on.....	xiv

F

font conventions.....	xiii
-----------------------	------

L

login classes	
access privilege levels.....	3
commands, allowing or denying.....	6

M

manuals	
comments on.....	xiv

P

parentheses, in syntax descriptions.....	xiv
permissions statement	
usage guidelines.....	3

S

support, technical See technical support	
syntax conventions.....	xiii

T

technical support	
contacting JTAC.....	xiv

