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Junos<sup>®</sup> OS

## Access Privilege Configuration Guide

Release  
12.1



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# About This Guide

This preface provides the following guidelines for using the *Junos<sup>®</sup> OS Access Privilege Configuration Guide*:

- [Junos OS Documentation and Release Notes on page vii](#)
- [Objectives on page vii](#)
- [Audience on page viii](#)
- [Supported Platforms on page viii](#)
- [Documentation Conventions on page viii](#)
- [Documentation Feedback on page x](#)
- [Requesting Technical Support on page x](#)

## Junos OS Documentation and Release Notes

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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<sup>®</sup> 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

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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*

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## 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*.

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## 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
- PTX Series

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## Documentation Conventions

Table 1 on page ix 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 ix defines the text and syntax conventions used in this guide.

Table 2: Text and Syntax Conventions

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

## Documentation Feedback

We encourage you to provide feedback, comments, and suggestions so that we can improve the documentation. You can send your comments to [techpubs-comments@juniper.net](mailto:techpubs-comments@juniper.net), or fill out the documentation feedback form at <https://www.juniper.net/cgi-bin/docbugreport/>. If you are using e-mail, be sure to include the following information with your comments:

- 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/>
- Download the latest versions of software and review release notes: <http://www.juniper.net/customers/csc/software/>
- 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 17](#)



## 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.

- [Understanding Junos OS Access Privilege Levels 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: Specifying Access Privileges Using allow/deny-configuration-regexps Statements on page 12](#)

## Understanding Junos OS Access Privilege Levels

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 about permissions:

- [Junos OS Login Class Permission Flags on page 4](#)
- [Allowing or Denying Individual Commands for Junos OS Login Classes on page 7](#)

## 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 permissions control for individual parts of the configuration are:

- "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
<b>access</b>	Can view the access configuration in configuration mode and with the <b>show configuration</b> operational mode command.
<b>access-control</b>	Can view and configure access information at the <b>[edit access]</b> hierarchy level.
<b>admin</b>	Can view user account information in configuration mode and with the <b>show configuration</b> operational mode command.
<b>admin-control</b>	Can view user accounts and configure them at the <b>[edit system login]</b> hierarchy level.
<b>all-control</b>	Can access all operational mode commands and configuration mode commands. Can modify configuration in all the configuration hierarchy levels.
<b>clear</b>	Can clear (delete) information learned from the network that is stored in various network databases by using the <b>clear</b> commands.
<b>configure</b>	Can enter configuration mode by using the <b>configure</b> command.
<b>control</b>	Can perform all control-level operations—all operations configured with the <b>-control</b> permission flags.
<b>field</b>	Can view field debug commands. Reserved for debugging support.
<b>firewall</b>	Can view the firewall filter configuration in configuration mode.



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

Permission Flag	Description
<b>firewall-control</b>	Can view and configure firewall filter information at the <b>[edit firewall]</b> hierarchy level.
<b>floppy</b>	Can read from and write to the removable media.
<b>flow-tap</b>	Can view the flow-tap configuration in configuration mode.
<b>flow-tap-control</b>	Can view the flow-tap configuration in configuration mode and can configure flow-tap configuration information at the <b>[edit services flow-tap]</b> hierarchy level.
<b>flow-tap-operation</b>	<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 <b>flow-tap-operation</b> permission.</p> <p><b>NOTE:</b> The <b>flow-tap-operation</b> option is not included in the <b>all-control</b> permissions flag.</p>
<b>idp-profiler-operation</b>	Can view profiler data.
<b>interface</b>	Can view the interface configuration in configuration mode and with the <b>show configuration</b> operational mode command.
<b>interface-control</b>	<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"> <li>• <b>[edit chassis]</b></li> <li>• <b>[edit class-of-service]</b></li> <li>• <b>[edit groups]</b></li> <li>• <b>[edit forwarding-options]</b></li> <li>• <b>[edit interfaces]</b></li> </ul>
<b>maintenance</b>	Can perform system maintenance, including starting a local shell on the router and becoming the superuser in the shell by using the <b>su root</b> command, and can halt and reboot the router by using the <b>request system</b> commands.
<b>network</b>	Can access the network by using the <b>ping</b> , <b>ssh</b> , <b>telnet</b> , and <b>traceroute</b> commands.
<b>pgcp-session-mirroring</b>	Can view the <b>pgcp</b> session mirroring configuration.
<b>pgcp-session-mirroring-control</b>	Can modify the <b>pgcp</b> session mirroring configuration.
<b>reset</b>	Can restart software processes by using the <b>restart</b> command and can configure whether software processes are enabled or disabled at the <b>[edit system processes]</b> hierarchy level.

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

Permission Flag	Description
<b>rollback</b>	Can use the <b>rollback</b> command to return to a previously committed configuration other than the most recently committed one.
<b>routing</b>	Can view general routing, routing protocol, and routing policy configuration information in configuration and operational modes.
<b>routing-control</b>	Can view general routing, routing protocol, and routing policy configuration information and can configure general routing at the <b>[edit routing-options]</b> hierarchy level, routing protocols at the <b>[edit protocols]</b> hierarchy level, and routing policy at the <b>[edit policy-options]</b> hierarchy level.
<b>secret</b>	Can view passwords and other authentication keys in the configuration.
<b>secret-control</b>	Can view passwords and other authentication keys in the configuration and can modify them in configuration mode.
<b>security</b>	Can view security configuration in configuration mode and with the <b>show configuration</b> operational mode command.
<b>security-control</b>	Can view and configure security information at the <b>[edit security]</b> hierarchy level.
<b>shell</b>	Can start a local shell on the router or switch by using the <b>start shell</b> command.
<b>snmp</b>	Can view Simple Network Management Protocol (SNMP) configuration information in configuration and operational modes.
<b>snmp-control</b>	Can view SNMP configuration information and can modify SNMP configuration at the <b>[edit snmp]</b> hierarchy level.
<b>system</b>	Can view system-level information in configuration and operational modes.
<b>system-control</b>	Can view system-level configuration information and configure it at the <b>[edit system]</b> hierarchy level.
<b>trace</b>	Can view trace file settings and configure trace file properties.
<b>trace-control</b>	Can modify trace file settings and configure trace file properties.
<b>view</b>	Can use various commands to display current system-wide, routing table, and protocol-specific values and statistics. Cannot view the secret configuration.

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

Permission Flag	Description
<b>view-configuration</b>	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.

- 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 and 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-regexps** and **deny-configuration-regexps**, **allow-commands** and **deny-commands**, and all user permission bits.
- 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 take 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](#)

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## 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](#)
  - [Understanding Junos OS Access Privilege Levels on page 3](#)
  - [Specifying Access Privileges for Junos OS Operational Mode Commands on page 8](#)
  - **permissions**

---

## Example: Configuring Access Privilege Levels

Create two access privilege classes on the router or switch, 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](#)

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## 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 a 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 the permission **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 the permission **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

---

## 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 or switch.
    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

The **allow/deny-configuration** and **allow/deny-configuration-regexps** statements let you explicitly allow or deny users access privileges to portions of the configuration hierarchy. Each of these statements is added to named login classes and configured with one or more regular expressions to be allowed or denied. Each login class is assigned to specific users or user IDs.

The search and match methods differ in the two forms of these statements. You must select which form to use within a login class—you cannot configure **allow-configuration** and **allow-configuration-regexps** together in the same login class. You must select just one. If you have existing configurations using the **allow/deny-configuration** form of the statements, using the same configuration options with the **allow/deny-configuration-regexps** form of the statements might not produce the same results.

- **Allow/deny-configuration** statements perform slower matching, with more flexibility, especially in wildcard matching. However, it can take a very long time to evaluate all of the possible statements if a great number of full path regular expressions or wildcard expressions are configured, possibly impacting performance. These statements were introduced before Junos OS Release 7.4.
- **Allow/deny-configuration-regexps** statements perform faster matching, with less flexibility. You configure a set of strings in which each string is a regular expression, with spaces between the terms of the string. This provides very fast matching. However, it is more tedious to use wildcard expressions in this form of the statement, because you must set up wildcards for each token (term) of the space-delimited string you want to match. These statements were introduced in Junos OS Release 11.2.

**Related Documentation**

- [Specifying Access Privileges for Junos OS Operational Mode Commands on page 8](#)
- [Example: Configuring Access Privilege Levels on page 8](#)
- [Regular Expressions for Allowing and Denying Junos OS Configuration Mode Hierarchies](#)
- [Understanding Junos OS Access Privilege Levels on page 3](#)

## Example: Specifying Access Privileges Using `allow/deny-configuration-regexps` Statements

---

This example shows how to set up configuration access privileges using the `allow-configuration-regexps` and `deny-configuration-regexps` statements.

- [Requirements on page 12](#)
- [Overview on page 12](#)
- [Configuration on page 12](#)
- [Examples Using Allow or Deny Configurations with Regular Expressions on page 13](#)

### Requirements

This example uses the following hardware and software components:

- One Juniper Networks J Series, M Series, MX Series, or T Series device
- Junos OS Release 11.2 or later
  - There must be at least one user assigned to a login class.
  - There can be more than one login class, each with varying permission configurations, and more than one user on the device.

### Overview

The `allow-configuration-regexps` and `deny-configuration-regexps` statements let you explicitly allow or deny users assigned to named user classes access privileges to portions of the configuration hierarchy, giving the system administrator precision control over who can change specific configurations in the system.



**NOTE:** The statements `allow-configuration-regexps` and `deny-configuration-regexps` perform similar functions as the statements `allow-configuration` and `deny-configuration`, except you can configure sets of strings in which the strings include spaces when using the first set of statements. You cannot use the two kinds of statements together.

### Configuration

To set up configuration access privileges:

1. To explicitly allow one or more individual configuration mode hierarchies that would otherwise be denied, include the `allow-configuration-regexps` statement at the `[edit system login class class-name]` hierarchy level, configured with the regular expressions to be allowed.

```
[edit system login class class-name]  
user@host# set allow-configuration-regexps "regular expression 1" "regular expression  
2" "regular expression 3" "regular expression 4" ...
```



2. To explicitly deny one or more individual configuration hierarchies that would otherwise be allowed, include the **deny-configuration-regexps** statement at the **[edit system login class class-name]** hierarchy level, configured with the regular expressions to be denied.

```
[edit system login class class-name]
user@host# set deny-configuration-regexps "regular expression 1" "regular-expression
2" "regular expression 3" "regular expression 4"...
```

3. Assign the login class to one or more users.

```
[edit system login]
user@host# set user username class class-name
```

4. Commit your changes.

Users assigned this login class have the permissions you have set for the class.

## Examples Using Allow or Deny Configurations with Regular Expressions

**Purpose** This section provides examples of access privilege configurations to give you ideas for creating configurations appropriate for your system. You can use combinations of privilege statements for configuration access and for operational mode commands to give precise control over classes of access privileges.

**Allow Configuration Changes** The following example login class lets the user make changes at the **[edit system services]** hierarchy level and issue configuration mode commands (such as **commit**), in addition to the permissions specified by the **configure** permissions flag, which allows the user to enter configuration mode using the **configure** command.

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

**Deny Configuration Changes** The following example login class lets the user perform all operations allowed by the **all** permissions flag. However, it denies modifying the configuration at the **[edit system services]** hierarchy level.

```
[edit system login class class-name]
user@host# set permissions all configure view view-configuration
user@host# set deny-configuration-regexps "system services"
```

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@host# 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@host# 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 the configuration or issue commands

(such as **commit**) at the **[edit system login class]** or the **[edit system services]** hierarchy levels:

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

#### Allow and Deny Configuration Changes

The following example login class lets the user perform all operations allowed by the **all** permissions flag, and explicitly grants configuration access to **[system "interfaces .\* unit .\* family inet address .\*" protocols]**. However, the user is denied configuration access to the SNMP hierarchy level.



**NOTE:** You can use the **\*** wildcard character when denoting regular expressions. However, it must be used as a portion of a regular expression. You cannot use **[ \* ]** or **[ .\* ]** alone.

```
[edit system login class class-name]
user@host# set permissions all configure view view-configuration
user@host# set allow-configuration-regexps system "interfaces .* unit .* family inet
address .*" protocols
user@host# set deny-configuration-regexps snmp
```

#### Allow and Deny Multiple Configuration Changes

The following example login class lets the user perform all operations allowed by the **all** permissions flag, and explicitly grants configuration access to multiple hierarchy levels for interfaces. It denies configuration access to the **[edit system]** and **[edit protocols]** hierarchy levels.



**NOTE:** You can configure as many regular expressions as needed to be allowed or denied. Regular expressions to be denied take precedence over configurations to be allowed.

```
[edit system login class class-name]
user@host# set permissions all configure view view-configuration
user@host# set allow-configuration-regexps "interfaces .* description .*" "interfaces .*
unit .* description .*" "interfaces .* unit .* family inet address .*" "interfaces .* disable"
user@host# set deny-configuration-regexps "system" "protocols"
```

#### Allow Configuration Changes and Deny Operations Commands

You can combine allow and deny configuration statements with allow and deny operational commands statements to fine-tune access privileges. The following example login class uses a combination of the **deny-commands** operational permissions statement and the **allow-configuration-regexps** configuration permissions statement to let the user configure and commit changes to the OSPF and BGP protocols. However, this class of user cannot issue the **show system statistics** or the **show bgp summary** commands.

```
[edit system login class class-name]
user@host# set permissions all configure view view-configuration
user@host# set deny-commands "(show system statistics)|(show bgp summary)"
user@host# set allow-configuration-regexps "protocols ospf|bgp"
```

The following shows permissions set 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";
    }
  }
}
```

**Verification** To verify that you have set the access privileges correctly:

1. Configure a login class and commit the changes.
2. Assign the login class to a *username*.
3. Log in as the *username* assigned with the new login class.
4. Attempt to perform the configurations that have been allowed or denied.
  - You should be able to perform configuration changes to hierarchy levels and regular expressions that have been allowed.
  - You should not be able to perform configuration changes to hierarchy levels and regular expressions that have been denied.
  - Denied expressions should take precedence over allowed expressions.
  - Any allowed or denied expressions should take precedence over any permissions granted with the **permissions** statement.

**Related Documentation**

- [Specifying Access Privileges for Junos OS Operational Mode Commands on page 8](#)
- [Example: Configuring Access Privilege Levels on page 8](#)
- Regular Expressions for Allowing and Denying Junos OS Configuration Mode Hierarchies
- [Understanding Junos OS Access Privilege Levels on page 3](#)



## CHAPTER 2

# User Permission Flags

The following topics provide details about the permission flags that grant access to operational mode commands and configuration hierarchy levels and statements.

- [Access Privilege User Permission Flags Overview on page 18](#)
- [access on page 20](#)
- [access-control on page 20](#)
- [admin on page 21](#)
- [admin-control on page 22](#)
- [all-control on page 23](#)
- [clear on page 23](#)
- [configure on page 56](#)
- [control on page 57](#)
- [field on page 57](#)
- [firewall on page 57](#)
- [firewall-control on page 58](#)
- [floppy on page 59](#)
- [flow-tap on page 59](#)
- [flow-tap-control on page 60](#)
- [flow-tap-operation on page 60](#)
- [idp-profiler-operation on page 61](#)
- [interface on page 61](#)
- [interface-control on page 62](#)
- [maintenance on page 62](#)
- [network on page 69](#)
- [pgcp-session-mirroring on page 70](#)
- [pgcp-session-mirroring-control on page 71](#)
- [reset on page 71](#)
- [rollback on page 72](#)
- [routing on page 72](#)

- [routing-control on page 76](#)
- [secret on page 80](#)
- [secret-control on page 81](#)
- [security on page 82](#)
- [security-control on page 86](#)
- [shell on page 89](#)
- [snmp on page 90](#)
- [snmp-control on page 90](#)
- [system on page 90](#)
- [system-control on page 92](#)
- [trace on page 94](#)
- [trace-control on page 99](#)
- [view on page 104](#)
- [view-configuration on page 166](#)

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## Access Privilege User Permission Flags Overview

---

Permission flags are used to grant a user access to operational mode commands and configuration hierarchy levels and 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 hierarchy levels and statements. To grant access to all commands and configuration statements, use the **all** permissions flag.

For permission flags that grant access to configuration hierarchy levels and statements, the flags grant 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 hierarchy levels and 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

- [Understanding Junos OS Access Privilege Levels on page 3](#)
- [access on page 20](#)
- [access-control on page 20](#)

- [admin](#) on page 21
- [admin-control](#) on page 22
- [all-control](#) on page 23
- [clear](#) on page 23
- [configure](#) on page 56
- [control](#) on page 57
- [field](#) on page 57
- [firewall](#) on page 57
- [firewall-control](#) on page 58
- [floppy](#) on page 59
- [flow-tap](#) on page 59
- [flow-tap-operation](#) on page 60
- [idp-profiler-operation](#) on page 61
- [interface](#) on page 61
- [interface-control](#) on page 62
- [maintenance](#) on page 62
- [network](#) on page 69
- [pgcp-session-mirroring](#) on page 70
- [pgcp-session-mirroring-control](#) on page 71
- [reset](#) on page 71
- [rollback](#) on page 72
- [routing](#) on page 72
- [routing-control](#) on page 76
- [secret](#) on page 80
- [secret-control](#) on page 81
- [security](#) on page 82
- [security-control](#) on page 86
- [shell](#) on page 89
- [snmp](#) on page 90
- [system](#) on page 90
- [system-control](#) on page 92
- [trace](#) on page 94
- [trace-control](#) on page 99

- [view on page 104](#)
- [view-configuration on page 166](#)

## access

Can view the access configuration in configuration mode.

**Commands** No associated CLI commands.

### Configuration Hierarchy Levels

```
[edit access]
[edit access ppp-options]
[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 Permission Flags Overview on page 18](#)
- [Understanding Junos OS Access Privilege Levels 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](#)
- [access-control on page 20](#)

## access-control

Can view access configuration information. Can edit access configuration at the **[edit access]**, **[edit logical-systems]**, **[edit routing-instances]**, and **[edit system services]** hierarchy levels.



## Configuration Hierarchy Levels

[\[edit access\]](#)  
[\[edit access ppp-options\]](#)  
[\[edit dynamic-profile\]](#)  
[\[edit logical-systems access\]](#)  
[\[edit logical-systems routing-instances instance system services static-subscribers access-profile\]](#)  
[\[edit logical-systems routing-instances instance system services static-subscribers dynamic-profile\]](#)  
[\[edit logical-systems routing-instances instance system services static-subscribers group access-profile\]](#)  
[\[edit logical-systems routing-instances instance system services static-subscribers group dynamic-profile\]](#)  
[\[edit logical-systems system services static-subscribers access-profile\]](#)  
[\[edit logical-systems system services static-subscribers dynamic-profile\]](#)  
[\[edit logical-systems system services static-subscribers group access-profile\]](#)  
[\[edit logical-systems system services static-subscribers group dynamic-profile\]](#)  
[\[edit routing-instances instance system services static-subscribers access-profile\]](#)  
[\[edit routing-instances instance system services static-subscribers dynamic-profile\]](#)  
[\[edit routing-instances instance system services static-subscribers group access-profile\]](#)  
[\[edit routing-instances instance system services static-subscribers group dynamic-profile\]](#)  
[\[edit system services static-subscribers access-profile\]](#)  
[\[edit system services static-subscribers dynamic-profile\]](#)  
[\[edit system services static-subscribers group access-profile\]](#)  
[\[edit system services static-subscribers group dynamic-profile\]](#)

## Related Documentation

- [Access Privilege User Permission Flags Overview on page 18](#)
- [Understanding Junos OS Access Privilege Levels 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](#)
- [access on page 20](#)

## admin

Can view user account information in configuration mode.

### Commands

[show system audit](#)

## Configuration Hierarchy Levels

[\[edit protocols uplink-failure-detection\]](#)  
[\[edit system\]](#)  
[\[edit system accounting\]](#)  
[\[edit system diag-port-authentication\]](#)  
[\[edit system extensions\]](#)  
[\[edit system login\]](#)  
[\[edit system pic-console-authentication\]](#)  
[\[edit system root-authentication\]](#)  
[\[edit system services ssh ciphers\]](#)  
[\[edit system services ssh client-alive-count-max\]](#)

```
[edit system services ssh client-alive-interval]]
[edit system services ssh hostkey-algorithm]
[edit system services ssh key-exchange]
[edit system services ssh macs]
[edit system services ssh max-sessions-per-connection]
[edit system services ssh no-tcp-fowarding]
[edit system services ssh protocol-version]
[edit system services ssh root-login]
[edit system services ssh tcp-fowarding]
```

- Related Documentation**
- [Access Privilege User Permission Flags Overview on page 18](#)
  - [Understanding Junos OS Access Privilege Levels 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-control on page 22](#)

## admin-control

Can view user account information and configure it at the **[edit system]** hierarchy level.

<b>Commands</b>	show system audit
<b>Configuration Hierarchy Levels</b>	<pre>[edit protocols uplink-failure-detection] [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 ciphers] [edit system services ssh hostkey-algorithm] [edit system services ssh key-exchange] [edit system services ssh macs] [edit system services ssh protocol-version] [edit system services ssh root-login]</pre>

- Related Documentation**
- [Access Privilege User Permission Flags Overview on page 18](#)
  - [Understanding Junos OS Access Privilege Levels 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 on page 21](#)

## all-control

---

Can access all operational mode commands and configuration mode commands. Can modify configuration in all the configuration hierarchy levels.

**Commands** All CLI commands.

**Configuration Hierarchy Levels** All CLI configuration hierarchy levels and statements.

- Related Documentation**
- [Access Privilege User Permission Flags Overview on page 18](#)
  - [Understanding Junos OS Access Privilege Levels 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-statistics>
clear amt tunnel
clear-amt-tunnel
clear amt tunnel gateway-address
<clear amt tunnel gateway-address>
clear amt tunnel statistics
<clear-amt-tunnel-statistics>
clear amt tunnel statistics gateway-address
<clear-amt-tunnel-gateway-address-statistics>
clear amt tunnel statistics tunnel-interface
<clear-amt-tunnel-interface-statistics>
clear amt tunnel tunnel-interface
<clear-amt-tunnel-interface<>
clear ancp
clear ancp neighbor
<clear-ancp-neighbor-connection>
clear ancp subscriber
<clear-ancp-subscriber-connection>
clear arp
<clear-arp-table>
clear auto-configuration
clear auto-configuration interfaces
<clear-auto-configuration-interfaces>
clear bfd
clear bfd adaptation
<clear-bfd-adaptation-information>
```

```
clear bfd adaptation address
<clear-bfd-adaptation-address>
clear bfd adaptation discriminator
<clear-bfd-adaptation-discriminator>
clear bfd session
<clear-bfd-session-information>
clear bfd session address
<clear-bfd-session-address>
clear bfd session discriminator
<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 appqos-counter
clear appqos-rate-limiter-statistics
clear appqos-rule-statistics
clear cli
clear cli logical-system
<clear-cli-logical-system>
clear database-replication
clear database-replication statistics
<clear-database-replication-statistics-information>
clear ddos-protection
clear ddos-protection protocols
clear ddos-protection protocols ancp
clear ddos-protection protocols ancp aggregate
clear ddos-protection protocols ancp aggregate states
clear ddos-protection protocols ancp aggregate statistics
<clear-ddos-ancp-aggregate-statistics>
clear ddos-protection protocols ancp states
<clear-ddos-ancp-states>
clear ddos-protection protocols ancp statistics
<clear-ddos-ancp-statistics>
clear ddos-protection protocols ancpv6
clear ddos-protection protocols ancpv6 aggregate
clear ddos-protection protocols ancpv6 aggregate states
<clear-ddos-arp-aggregate-states>
clear ddos-protection protocols arp aggregate statistics
clear-ddos-arp-aggregate-statistics
clear ddos-protection protocols arp states
clear-ddos-arp-states
clear ddos-protection protocols arp statistics
clear-ddos-arp-statistics
clear ddos-protection protocols atm
clear ddos-protection protocols atm aggregate
clear ddos-protection protocols atm aggregate states
clear-ddos-atm-aggregate-states
```

```
clear ddos-protection protocols atm aggregate statistics
clear-ddos-atm-aggregate-statistics
clear ddos-protection protocols atm states
clear-ddos-atm-states
clear ddos-protection protocols atm statistics
clear-ddos-atm-statistics
clear ddos-protection protocols bfd
clear ddos-protection protocols bfd aggregate
clear ddos-protection protocols bfd aggregate states
clear-ddos-bfd-aggregate-states
clear ddos-protection protocols bfd aggregate statistics
clear-ddos-bfd-aggregate-statistics
clear ddos-protection protocols bfd states
clear-ddos-bfd-states
clear ddos-protection protocols bfd statistics
clear-ddos-bfd-statistics
clear ddos-protection protocols bfdv6
clear ddos-protection protocols bfdv6 aggregate
clear ddos-protection protocols bfdv6 aggregate states
clear-ddos-bfdv6-aggregate-states
clear ddos-protection protocols bfdv6 aggregate statistics
clear-ddos-bfdv6-aggregate-statistics
clear ddos-protection protocols bfdv6 states
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clear-ddos-mac-host-states
clear ddos-protection protocols mac-host statistics
clear-ddos-mac-host-statistics
clear ddos-protection protocols mlp
clear ddos-protection protocols mlp aggregate
clear ddos-protection protocols mlp aggregate states
clear-ddos-mlp-aggregate-states
clear ddos-protection protocols mlp aggregate statistics
clear-ddos-mlp-aggregate-statistics
clear ddos-protection protocols mlp aging-exception
clear ddos-protection protocols mlp aging-exception states
clear-ddos-mlp-aging-exc-states
clear ddos-protection protocols mlp aging-exception statistics
clear-ddos-mlp-aging-exc-statistics
clear ddos-protection protocols mlp packets
clear ddos-protection protocols mlp packets states
clear-ddos-mlp-packets-states
```

```
clear ddos-protection protocols mlp packets statistics
clear-ddos-mlp-packets-statistics
clear ddos-protection protocols mlp states
clear-ddos-mlp-states
clear ddos-protection protocols mlp statistics
clear-ddos-mlp-statistics
clear ddos-protection protocols mlp unclassified
clear ddos-protection protocols mlp unclassified states
clear-ddos-mlp-unclass-states
clear ddos-protection protocols mlp unclassified statistics
clear-ddos-mlp-unclass-statistics
clear ddos-protection protocols msdp
clear ddos-protection protocols msdp aggregate
clear ddos-protection protocols msdp aggregate states
clear-ddos-msdp-aggregate-states
clear ddos-protection protocols msdp aggregate statistics
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clear-ddos-msdp-states
clear ddos-protection protocols msdp statistics
clear-ddos-msdp-statistics
clear ddos-protection protocols msdpv6
clear ddos-protection protocols msdpv6 aggregate
clear ddos-protection protocols msdpv6 aggregate states
clear-ddos-msdpv6-aggregate-states
clear ddos-protection protocols msdpv6 aggregate statistics
clear-ddos-msdpv6-aggregate-statistics
clear ddos-protection protocols msdpv6 states
clear-ddos-msdpv6-states
clear ddos-protection protocols msdpv6 statistics
clear-ddos-msdpv6-statistics
clear ddos-protection protocols multicast-copy
clear ddos-protection protocols multicast-copy aggregate
clear ddos-protection protocols multicast-copy aggregate states
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clear-ddos-mcast-copy-aggregate-statistics
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clear-ddos-mcast-copy-statistics
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clear-ddos-mvrp-aggregate-statistics
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clear-ddos-mvrp-states
clear ddos-protection protocols mvrp statistics
clear-ddos-mvrp-statistics
clear ddos-protection protocols ndpv6
clear ddos-protection protocols ndpv6 aggregate
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clear ddos-protection protocols ndpv6 aggregate statistics
clear ddos-protection protocols ndpv6 states
```



```
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clear-ddos-ntp-aggregate-statistics
clear ddos-protection protocols ntp states
clear-ddos-ntp-states
clear ddos-protection protocols ntp statistics
clear-ddos-ntp-statistics
clear ddos-protection protocols oam-lfm
clear ddos-protection protocols oam-lfm aggregate
clear ddos-protection protocols oam-lfm aggregate states
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clear ddos-protection protocols oam-lfm aggregate statistics
clear-ddos-oam-lfm-aggregate-statistics
clear ddos-protection protocols oam-lfm states
clear-ddos-oam-lfm-states
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clear-ddos-pfe-alive-aggregate-statistics
clear ddos-protection protocols pfe-alive states
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clear ddos-protection protocols pfe-alive statistics
clear-ddos-pfe-alive-statistics
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clear-ddos-pim-aggregate-states
clear ddos-protection protocols pim aggregate statistics
```

```
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clear ddos-protection protocols pimv6 statistics
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clear-ddos-pmvrp-aggregate-states
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clear-ddos-pmvrp-aggregate-statistics
clear ddos-protection protocols pmvrp states
clear-ddos-pmvrp-states
clear ddos-protection protocols pmvrp statistics
clear-ddos-pmvrp-statistics
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clear ddos-protection protocols pos aggregate
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clear-ddos-pos-states
clear ddos-protection protocols pos statistics
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clear-ddos-ppp-ipv6cp-statistics
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clear ddos-protection protocols ppp isis statistics
```

```
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clear ddos-protection protocols ppp mplscp
clear ddos-protection protocols ppp mplscp states
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clear ddos-protection protocols ppp states
clear-ddos-ppp-states
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clear-ddos-ppp-statistics
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clear-ddos-pppoe-padr-statistics
clear ddos-protection protocols pppoe pads
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clear ddos-protection protocols pppoe padt
```

```
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clear ddos-protection protocols ptp states
clear-ddos-ntp-states
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clear ddos-protection protocols radius aggregate states
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clear ddos-protection protocols radius aggregate statistics
clear-ddos-radius-aggregate-statistics
clear ddos-protection protocols radius authorization
clear ddos-protection protocols radius authorization states
clear-ddos-radius-auth-states
clear ddos-protection protocols radius authorization statistics
clear-ddos-radius-auth-statistics
clear ddos-protection protocols radius server
clear ddos-protection protocols radius server states
clear-ddos-radius-server-states
clear ddos-protection protocols radius server statistics
clear-ddos-radius-server-statistics
clear ddos-protection protocols radius states
clear-ddos-radius-states
clear ddos-protection protocols radius statistics
clear-ddos-radius-statistics
clear ddos-protection protocols redirect
clear ddos-protection protocols redirect aggregate
clear ddos-protection protocols redirect aggregate states
```

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clear-ddos-redirect-states  
clear ddos-protection protocols redirect statistics  
clear-ddos-redirect-statistics  
clear ddos-protection protocols reject  
clear ddos-protection protocols reject aggregate  
clear ddos-protection protocols reject aggregate states  
clear ddos-protection protocols reject aggregate statistics  
clear ddos-protection protocols reject states  
clear ddos-protection protocols reject statistics  
clear ddos-protection protocols rip  
clear ddos-protection protocols rip aggregate  
clear ddos-protection protocols rip aggregate states  
clear-ddos-rip-aggregate-states  
clear ddos-protection protocols rip aggregate statistics  
clear-ddos-rip-aggregate-statistics  
clear ddos-protection protocols rip states  
clear-ddos-rip-states  
clear ddos-protection protocols rip statistics  
clear-ddos-rip-statistics  
clear ddos-protection protocols ripv6  
clear ddos-protection protocols ripv6 aggregate  
clear ddos-protection protocols ripv6 aggregate states  
clear-ddos-ripv6-aggregate-states  
clear ddos-protection protocols ripv6 aggregate statistics  
clear-ddos-ripv6-aggregate-statistics  
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clear-ddos-ripv6-states  
clear ddos-protection protocols ripv6 statistics  
clear-ddos-ripv6-statistics  
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clear ddos-protection protocols rsvp aggregate statistics  
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clear-ddos-rsvp-states  
clear ddos-protection protocols rsvp statistics  
clear-ddos-rsvp-statistics  
clear ddos-protection protocols rsvpv6  
clear ddos-protection protocols rsvpv6 aggregate  
clear ddos-protection protocols rsvpv6 aggregate states  
clear-ddos-rsvpv6-aggregate-states  
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clear-ddos-rsvpv6-aggregate-statistics  
clear ddos-protection protocols rsvpv6 states  
clear-ddos-rsvpv6-states  
clear ddos-protection protocols rsvpv6 statistics  
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clear ddos-protection protocols sample aggregate  
clear ddos-protection protocols sample aggregate states

```
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clear-ddos-services-aggregate-statistics
clear ddos-protection protocols services states
clear-ddos-services-states
clear ddos-protection protocols services statistics
clear-ddos-services-statistics
clear ddos-protection protocols snmp
clear ddos-protection protocols snmp aggregate
clear ddos-protection protocols snmp aggregate states
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clear ddos-protection protocols snmp aggregate statistics
clear-ddos-snmp-aggregate-statistics
clear ddos-protection protocols snmp states
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clear ddos-protection protocols snmp statistics
clear-ddos-snmp-statistics
clear ddos-protection protocols snmpv6
clear ddos-protection protocols snmpv6 aggregate
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clear-ddos-snmpv6-aggregate-states
clear ddos-protection protocols snmpv6 aggregate statistics
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clear ddos-protection protocols snmpv6 states
clear-ddos-snmpv6-states
clear ddos-protection protocols snmpv6 statistics
```

```
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clear ddos-protection protocols ssh aggregate states
clear-ddos-ssh-aggregate-states
clear ddos-protection protocols ssh aggregate statistics
clear-ddos-ssh-aggregate-statistics
clear ddos-protection protocols ssh states
clear-ddos-ssh-states
clear ddos-protection protocols ssh statistics
clear-ddos-ssh-statistics
clear ddos-protection protocols sshv6
clear ddos-protection protocols sshv6 aggregate
clear ddos-protection protocols sshv6 aggregate states
clear-ddos-sshv6-aggregate-states
clear ddos-protection protocols sshv6 aggregate statistics
clear-ddos-sshv6-aggregate-statistics
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clear-ddos-sshv6-states
clear ddos-protection protocols sshv6 statistics
clear-ddos-sshv6-statistics
clear ddos-protection protocols states
clear-ddos-protocols-states
clear ddos-protection protocols statistics
clear-ddos-protocols-statistics
clear ddos-protection protocols stp
clear ddos-protection protocols stp aggregate
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clear ddos-protection protocols tacacs statistics
clear-ddos-tacacs-statistics
clear ddos-protection protocols tcp-flags
clear ddos-protection protocols tcp-flags aggregate
clear ddos-protection protocols tcp-flags aggregate states
clear-ddos-tcp-flags-aggregate-states
clear ddos-protection protocols tcp-flags aggregate statistics
clear-ddos-tcp-flags-aggregate-statistics
clear ddos-protection protocols tcp-flags established
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clear-ddos-tcp-flags-establish-states
clear ddos-protection protocols tcp-flags established statistics
clear-ddos-tcp-flags-establish-statistics
```

```
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clear ddos-protection protocols tcp-flags initial states
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clear ddos-protection protocols tcp-flags initial statistics
clear-ddos-tcp-flags-initial-statistics
clear ddos-protection protocols tcp-flags states
clear-ddos-tcp-flags-states
clear ddos-protection protocols tcp-flags statistics
clear-ddos-tcp-flags-statistics
clear ddos-protection protocols tcp-flags unclassified
clear ddos-protection protocols tcp-flags unclassified states
clear-ddos-tcp-flags-unclass-states
clear ddos-protection protocols tcp-flags unclassified statistics
clear-ddos-tcp-flags-unclass-statistics
clear ddos-protection protocols telnet
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clear ddos-protection protocols telnet states
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clear ddos-protection protocols telnetv6 statistics
clear-ddos-telnetv6-statistics
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clear-ddos-ttl-states
clear ddos-protection protocols ttl statistics
clear-ddos-ttl-statistics
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clear ddos-protection protocols tunnel-fragment aggregate
clear ddos-protection protocols tunnel-fragment aggregate states
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clear ddos-protection protocols tunnel-fragment states
clear-ddos-tun-frag-states
clear ddos-protection protocols tunnel-fragment statistics
clear-ddos-tun-frag-statistics
clear ddos-protection protocols unclassified
clear ddos-protection protocols unclassified aggregate
```



```
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clear ddos-protection protocols virtual-chassis aggregate statistics
clear-ddos-vchassis-aggregate-statistics
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clear-ddos-vchassis-control-hi-states
clear ddos-protection protocols virtual-chassis control-high statistics
clear-ddos-vchassis-control-hi-statistics
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clear ddos-protection protocols virtual-chassis control-low statistics
clear-ddos-vchassis-control-lo-statistics
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clear-ddos-vchassis-vc-packets-states
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clear-ddos-vrrp-aggregate-statistics
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clear-ddos-vrrp-states
clear ddos-protection protocols vrrp statistics
clear-ddos-vrrp-statistics
clear ddos-protection protocols vrrpv6
clear ddos-protection protocols vrrpv6 aggregate
clear ddos-protection protocols vrrpv6 aggregate states
clear-ddos-vrrpv6-aggregate-states
clear ddos-protection protocols vrrpv6 aggregate statistics
clear-ddos-vrrpv6-aggregate-statistics
```

```
clear ddos-protection protocols vrrpv6 states
clear-ddos-vrrpv6-states
clear ddos-protection protocols vrrpv6 statistics
clear-ddos-vrrpv6-statistics
clear dhcp
clear dhcp relay
clear dhcp relay binding
<clear-dhcp-relay-binding-information>
```

```
clear dhcp relay binding interface
<clear-dhcp-interface-bindings>
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-binding-interface>
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<clear-server-statistics-information>
clear dhcp statistics
<clear-dhcp-service-statistics-information>
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clear dhcpv6 relay binding interface
clear dhcpv6 relay statistics
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clear dhcpv6 server binding interface
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clear dhcpv6 server statistics
<clear-dhcpv6-server-statistics-information>
clear dhcpv6 statistics
<clear-dhcpv6-service-statistics-information>
clear diameter
```

```
clear diameter function
<clear-diameter-function>
```

```
clear diameter peer
<clear-diameter-peer>
<clear-dhcp-binding-information>
```

```
<clear-dhcp-conflict-information>
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```
<clear-dhcp-statistics-information>
```

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

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

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

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

```
clear interfaces mac-database
<clear-interfaces-mac-database>
clear interfaces mac-database statistics
<clear-interface-mac-database-statistics>
clear interfaces mac-database statistics all
<clear-interface-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-ipsec-security-associations>
clear ipv6
clear ipv6 neighbors
<clear-ipv6-nd-information>

clear ipv6 neighbors all
<clear-ipv6-all-neighbors>
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 ipv6 router-advertisement
clear lacp
clear lacp statistics
clear l2-learning
clear l2-learning mac-move-buffer
<clear-l2-learning-mac-move-buffer>
clear-l2-learning-redundancy-group
<clear-l2-learning-redundancy-group-statistics>
clear l2-learning remote-backbone-edge-bridges
<clear-l2-learning-remote-backbone-edge-bridges>
clear ldp
clear ldp statistics
<clear-ldp-statistics>
clear ldp statistics interface
<clear-ldp-interface-hello-statistics>
clear ldp neighbor
<clear-ldp-neighbors>
clear ldp session
<clear-ldp-sessions>
clear lldp
clear lldp neighbors
<clear-lldp-neighbors>
```

```
clear lldp neighbors interface
<clear-lldp-interface-neighbors>
clear lldp statistics
<clear-lldp-statistics>
clear lldp statistics interface
<clear-lldp-interface-statistics>
clear mld
clear mld membership
<clear-mld-membership>
clear mld statistics
<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-mpls-traceroute-database-ldp>
clear msdp
clear msdp cache
<clear-msdp-cache>
clear msdp statistics
<clear-msdp-statistics>
clear multicast
clear multicast bandwidth-admission
<clear-multicast-bandwidth-admission>
clear multicast scope
<clear-multicast-scope-statistics>
clear multicast sessions
<clear-multicast-sessions>
clear multicast statistics
```

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

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-cfm-policer-statistics>
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-lfmd-state>
clear oam ethernet link-fault-management statistics
<clear-lfmd-statistics>
clear oam ethernet link-fault-management statistics action-profile
```

```
<clear-lfmd-action-profile-statistics>
clear oam ethernet lmi
clear oam ethernet lmi statistics
<clear-elmi-statistics>

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

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 database-protection
<clear-ospf-database-protection>
clear ospf3 io-statistics
<clear-ospf3-io-statistics-information>
clear ospf3 neighbor
<clear-ospf3-neighbor-information>

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

clear ospf3 statistics
<clear-ospf3-io-statistics-information>
clear pfe
clear pfe statistics
clear pfe statistics fabric
clear passive-monitoring
<clear-passive-monitoring>
clear passive-monitoring statistics
<clear-passive-monitoring-statistics>
clear pgm
clear pgm negative-acknowledgments
<clear-pgm-negative-acknowledgments>
clear pgm source-path-messages
<clear-pgm-source-path-messages>
clear pgm statistics
<clear-pgm-statistics>
clear pim
clear pim join
<clear-pim-join-state>
clear pim join-distribution
```

```
<clear-pim-join-distribution>
clear pim register
<clear-pim-register-state>
clear pim statistics
<clear-pim-statistics>
clear ppp
clear ppp statistics
<clear-ppp-statistics-information>

clear pppoe
clear pppoe lockout
<clear-pppoe-lockout-timers>
clear pppoe sessions
<clear-pppoe-sessions-information>
clear pppoe statistics
<clear-pppoe-statistics-information>
clear pppoe statistics interfaces
<clear-pppoe-statistics-interface-information>
clear protection-group
<clear protection-group>
clear protection-group ethernet-ring
<clear-ethernet-ring-information>>
clear protection-group ethernet-ring statistics
<clear-ethernet-ring-information>>
clear r2cp
clear r2cp radio
<clear-r2cp-radio>
clear r2cp session
<clear-r2cp-session>
clear r2cp statistics
<clear-r2cp-statistics>
clear r2cp statistics radio
clear r2cp statistics session
clear rip
clear rip general-statistics
<clear-rip-general-statistics>
clear rip statistics
<clear-rip-statistics>
clear rip statistics peer
<clear-rip-peer-statistics>
clear ripng
clear ripng general-statistics
<clear-ripng-general-statistic>
clear ripng 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 alg statistics
<clear-services-alg-statistics>
clear services application-aware-access-list
clear services application-aware-access-list statistics
```



```
<clear-application-aware-access-list-statistics-interface>
clear services application-aware-access-list statistics interface
<clear-application-aware-access-list-statistics-interface>
clear services application-aware-access-list statistics subscriber
<clear-application-aware-access-list-statistics-subscriber>
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 application-identification counter ssl-encrypted-sessions
<clear-appid-counter-encrypted>
clear services application-identification statistics
<clear-appid-application-statistics>
clear services application-identification statistics cumulative
<clear-appid-application-statistics-cumulative>
clear services application-identification statistics interval
<clear-appid-application-statistics-interval>
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 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-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-cpcdd-interface-statistics>
clear services cos
clear services cos statistics
<clear-services-cos-statistics>
clear services crtp
clear services crtp statistics
<clear-services-crtp-statistics>
clear services dynamic-flow-capture
clear services dynamic-flow-capture criteria
<clear-services-dynamic-flow-capture-criteria>
clear services dynamic-flow-capture sequence-number
clear services flow-collector
<clear-services-flow-collector-information>
clear services flow-collector statistics
<clear-services-flow-collector-statistics>
clear-service-msp-flow-ipaction-table
clear services ids
<clear-services-ids-tables>
clear services ids destination-table
<clear-services-ids-destination-table>
```

```
clear services ids pair-table
<clear-services-ids-pair-table>
clear services ids source-table
<clear-services-ids-source-table>
clear services inline
clear services inline nat
clear services inline nat pool
<clear-inline-nat-pool-information>
clear services inline nat statistics
<clear-inline-nat-statistics>
clear services inline software
clear services inline software statistics
<clear-inline-software-statistics>
clear services ipsec-vpn
clear services ipsec-vpn ipsec
clear services ipsec-vpn ipsec security-associations
<clear-services-ipsec-vpn-security-associations>
clear services ipsec-vpn ike
clear services ipsec-vpn ike security-associations
<clear-services-ike-security-associations>
clear services ipsec-vpn ipsec statistics
<clear-ipsec-vpn-statistics>
clear services l2tp
<clear-l2tp-destinations-information>
clear services l2tp disconnect-cause-summary
<clear-l2tp-disconnect-cause-summary>
clear services l2tp multilink
<clear-l2tp-multilink-information>
clear services l2tp session
<clear-l2tp-session-information>
clear services l2tp destination
<clear-l2tp-destinations-information>
clear services l2tp disconnect-cause-summary
<clear-l2tp-disconnect-cause-summary>
clear services l2tp tunnel
<clear-l2tp-tunnel-information>
clear services l2tp user
<clear-l2tp-user-session-information>
clear services local-policy-decision-function
clear services local-policy-decision-function statistics
clear services local-policy-decision-function statistics interface
<clear-local-policy-decision-function-statistics-interface>
clear services local-policy-decision-function statistics subscriber
<clear-local-policy-decision-function-statistics-subscriber>
clear services server-load-balance
clear services server-load-balance external-manager-statistics
<clear-external-manager-statistics>
clear services server-load-balance hash-table
<clear-hash-table-information>
clear services server-load-balance health-monitor-statistics
<clear-health-monitor-statistics>
clear services server-load-balance real-server-group-statistics
<clear-real-server-group-statistics>
clear services server-load-balance real-server-statistics
<clear-real-server-statistics>
clear services server-load-balance sticky
```

```
<clear-sticky-table>
clear services server-load-balance virtual-server-statistics>
<clear-virtual-server-statistics>
clear services service-sets statistics syslog
<clear-service-set-syslog-statistics>
clear services stateful-firewall flow-analysis
<clear-service-flow-analysis>
clear services stateful-firewall flows
<clear-service-sfw-flow-table-information>
clear services stateful-firewall sip-call
<clear-service-sfw-sip-call-information>
clear services stateful-firewall sip-register
<clear-service-sfw-sip-register-information>
clear services stateful-firewall statistics
<clear-stateful-firewall-statistics>
clear services stateful-firewall subscriber-analysis
<clear-service-subs-analysis>
clear services subscriber
clear services subscriber sessions
<get-services-subscriber-sessions>
clear services software
clear services software statistics
<clear-services-software-statistics>
clear services stateful-firewall
clear services stateful-firewall flow-analysis
<clear-service-flow-analysis>
clear services stateful-firewall flows
<clear-service-sfw-flow-table-information>
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 twamp-information
clear twamp-server-information
clear twamp-server-connection-information
clear snmp
clear snmp history
<clear-snmp-history>
clear snmp statistics
<clear-snmp-statistics>
clear spanning-tree
clear spanning-tree protocol-migration
clear spanning-tree protocol-migration interface
<clear-interface-stp-protocol-migration>
clear spanning-tree statistics
<clear-stp-interface-statistics>
clear spanning-tree statistics interface
clear spanning-tree statistics routing-instance
```

```
<clear-stp-routing-instance-statistics>
clear spanning-tree topology-change-counter
<clear-stp-topology-change-counter>
clear synchronous-ethernet
clear synchronous-ethernet esmc
clear synchronous-ethernet esmc statistics
clear system
clear system login
clear system login logout
< clear-system-login-logout>
```

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

```
clear vpls mac-table interface
<clear-vpls-interface-mac-table>
request interface rebalance
request pppoe
request pppoe connect
request pppoe disconnect
request snmp
<request-snmp-utility-mib-clear>
<request-snmp-utility-mib-set>
clear vrrp
clear vrrp interface
request services ipsec-vpn ipsec
request services ipsec-vpn ipsec switch
request services ipsec-vpn ipsec switch tunnel
```

**Configuration Hierarchy Levels** No associated CLI configuration hierarchy levels and statements.

- Related Documentation**
- [Access Privilege User Permission Flags Overview on page 18](#)
  - [Understanding Junos OS Access Privilege Levels 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
request-snmp-utility-mib-clear
request-snmp-utility-mib-set
```

**Configuration Hierarchy Levels** No associated CLI configuration hierarchy levels and statements.

- Related Documentation**
- [Access Privilege User Permission Flags Overview on page 18](#)
  - [Understanding Junos OS Access Privilege Levels 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

**Configuration Hierarchy Levels** No associated CLI configuration hierarchy levels and statements.

- Related Documentation**
- [Access Privilege User Permission Flags Overview on page 18](#)
  - [Understanding Junos OS Access Privilege Levels 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](#)

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## field

Can view field debug commands.

**Commands** No associated CLI commands.

**Configuration Hierarchy Levels** No associated CLI configuration hierarchy levels and statements.

- Related Documentation**
- [Access Privilege User Permission Flags Overview on page 18](#)
  - [Understanding Junos OS Access Privilege Levels 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](#)

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## firewall

Can view the firewall filter configuration in configuration mode.

<b>Commands</b>	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 <get-policer-information>
<b>Configuration Hierarchy Levels</b>	[edit dynamic-profiles firewall] [edit firewall] [edit logical-systems firewall]
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <a href="#">Access Privilege User Permission Flags Overview on page 18</a></li><li>• <a href="#">Understanding Junos OS Access Privilege Levels on page 3</a></li><li>• <a href="#">Configuring Access Privilege Levels on page 8</a></li><li>• <a href="#">Specifying Access Privileges for Junos OS Operational Mode Commands on page 8</a></li><li>• <a href="#">Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11</a></li><li>• <a href="#">firewall-control on page 58</a></li></ul>

---

## firewall-control

Can view and configure firewall filter information at the [edit dynamic-profiles firewall], [edit firewall], and [edit logical-systems firewall] hierarchy levels.

<b>Commands</b>	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
<b>Configuration Hierarchy Levels</b>	[edit dynamic-profiles firewall] [edit firewall] [edit logical-systems firewall]
<b>Related Documentation</b>	<ul style="list-style-type: none"> <li>• <a href="#">Access Privilege User Permission Flags Overview on page 18</a></li> <li>• <a href="#">Understanding Junos OS Access Privilege Levels on page 3</a></li> <li>• <a href="#">Configuring Access Privilege Levels on page 8</a></li> <li>• <a href="#">Specifying Access Privileges for Junos OS Operational Mode Commands on page 8</a></li> <li>• <a href="#">Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11</a></li> <li>• <a href="#">firewall on page 57</a></li> </ul>

## floppy

	Can read from and write to the removable media.
<b>Commands</b>	No associated CLI commands.
<b>Configuration Hierarchy Levels</b>	No associated CLI configuration hierarchy levels and statements.
<b>Related Documentation</b>	<ul style="list-style-type: none"> <li>• <a href="#">Access Privilege User Permission Flags Overview on page 18</a></li> <li>• <a href="#">Understanding Junos OS Access Privilege Levels on page 3</a></li> <li>• <a href="#">Configuring Access Privilege Levels on page 8</a></li> <li>• <a href="#">Specifying Access Privileges for Junos OS Operational Mode Commands on page 8</a></li> <li>• <a href="#">Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11</a></li> </ul>

## flow-tap

	Can view the flow-tap configuration in configuration mode.
<b>Commands</b>	No associated CLI commands.
<b>Configuration Hierarchy Levels</b>	[edit services flow-tap] [edit services radius-flow-tap] [edit system services flow-tap-dtcp]
<b>Related Documentation</b>	<ul style="list-style-type: none"> <li>• <a href="#">Access Privilege User Permission Flags Overview on page 18</a></li> </ul>

- [Understanding Junos OS Access Privilege Levels 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-control on page 60](#)

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## 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]**, **[edit services radius-flow-tap]**, and **[edit system services flow-tap-dtcp]** hierarchy levels.

**Commands** No associated CLI commands.

**Configuration Hierarchy Levels** **[edit services flow-tap]**  
**[edit services radius-flow-tap]**  
**[edit system services flow-tap-dtcp]**

**Related Documentation**

- [Access Privilege User Permission Flags Overview on page 18](#)
- [Understanding Junos OS Access Privilege Levels 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 on page 59](#)

---

## flow-tap-operation

Can make flow-tap requests to the router.

**Commands** No associated CLI commands.

**Configuration Hierarchy Levels** No associated CLI configuration hierarchy levels and statements.

**Related Documentation**

- [Access Privilege User Permission Flags Overview on page 18](#)
- [Understanding Junos OS Access Privilege Levels 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](#)



## idp-profiler-operation

---

Can view profiler data.

**Commands** No associated CLI commands.

**CLI Configuration Hierarchy Levels** No associated CLI configuration hierarchy levels and statements.

## interface

---

Can view the interface configuration in configuration mode.

**Commands** No associated CLI commands.

**Configuration Hierarchy Levels**

- [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 Permission Flags Overview on page 18](#)
- [Understanding Junos OS Access Privilege Levels 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-control on page 62](#)

## interface-control

---

Can view chassis, class of service (CoS), groups, forwarding options, and interfaces configuration information. Can edit configuration at the **[edit chassis]**, **[edit class-of-service]**, **[edit groups]**, **[edit forwarding-options]**, and **[edit interfaces]** hierarchy levels.

**Commands** No associated CLI commands.

**Configuration Hierarchy Levels**

- [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 Permission Flags Overview on page 18](#)
  - [Understanding Junos OS Access Privilege Levels 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 on page 61](#)

## 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 <file-archive> monitor traffic request chassis beacon <request-chassis-beacon> request chassis ccg <request-chassis-ccg> request chassis cb request chassis cfeb request chassis cfeb master request chassis cip request chassis fabric request chassis fabric device request chassis fabric plane request chassis fabric upgrade-bandwidth request chassis fabric upgrade-bandwidth fpc request chassis fabric upgrade-bandwidth info 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 routing-engine request chassis routing-engine hard-disk-test request chassis routing-engine master 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 force request chassis synchronization force automatic-switching request chassis synchronization force mark-failed request chassis synchronization force unmark-failed request chassis synchronization switch request chassis tfeb request chassis vcpu request chassis vnpu request l2circuit-switchover request mpls

```
request mpls lsp
request mpls lsp adjust-autobandwidth
<request-mpls-lsp-autobandwidth-adjust>
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 idp storage-cleanup
<request-idp-storage-cleanup>
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 crl
request security pki crl load
<load-pki-crl>
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 security pki verify-integrity-status
<verify-integrity-status>
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 commit
request system commit server
request system commit server pause
  <request-commit-server-pause>
request system commit server queue
request system commit server queue cleanup
  <request-commit-server-cleanup>
request system commit server start
  <request-commit-server-start>
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 firmware
request system firmware downgrade
request system firmware downgrade feb
request system firmware downgrade fpc
request system firmware downgrade pic
request system firmware downgrade poe
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 poe
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 recovery-package
request system software recovery-package add
request system software recovery-package delete
request system software recovery-package extract
request system software recovery-package extract ex-8200-package
request system software recovery-package extract ex-xre200-package
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 storage cleanup qfabric
  <remove-qfabric-repository-contents>
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>
get-test-services-l2tp-tunnel-result

```

## Configuration Hierarchy Levels

```

[edit event-options]
[edit security ipsec internal]
[edit security ipsec trusted-channel]
[edit services dynamic-flow-capture traceoptions]
[edit services ggsn]
[edit system fips]
[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 Permission Flags Overview on page 18](#)
- [Understanding Junos OS Access Privilege Levels 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 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>
request routing-engine login other-routing-engine
<request-login-to-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-ldp>
traceroute mpls rsvp
<traceroute-mpls-rsvp>
```

**Configuration Hierarchy Levels** No associated CLI configuration hierarchy levels and statements.

- Related Documentation**
- [Access Privilege User Permission Flags Overview on page 18](#)
  - [Understanding Junos OS Access Privilege Levels 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](#)

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## pgcp-session-mirroring

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

<b>Commands</b>	show services pgcp gates gate-way display session-mirroring
<b>Configuration Hierarchy Levels</b>	[edit services pgcp gateway session-mirroring] [edit services pgcp session-mirroring]

<b>Related Documentation</b>	• <a href="#">Access Privilege User Permission Flags Overview on page 18</a>
	• <a href="#">Understanding Junos OS Access Privilege Levels on page 3</a>
	• <a href="#">Configuring Access Privilege Levels on page 8</a>
	• <a href="#">Specifying Access Privileges for Junos OS Operational Mode Commands on page 8</a>
	• <a href="#">Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11</a>
	• <a href="#">pgcp-session-mirroring-control on page 71</a>

## pgcp-session-mirroring-control

Can modify PGCP session mirroring configuration

<b>Commands</b>	show services pgcp gates gate-way display session-mirroring
<b>Configuration Hierarchy Levels</b>	[edit services pgcp gateway session-mirroring] [edit services pgcp session-mirroring]
<b>Related Documentation</b>	• <a href="#">Access Privilege User Permission Flags Overview on page 18</a>
	• <a href="#">Understanding Junos OS Access Privilege Levels on page 3</a>
	• <a href="#">Configuring Access Privilege Levels on page 8</a>
	• <a href="#">Specifying Access Privileges for Junos OS Operational Mode Commands on page 8</a>
	• <a href="#">Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11</a>
	• <a href="#">pgcp-session-mirroring on page 70</a>

## reset

Can restart software processes by using the **restart** command and can configure whether software processes configured at the **[edit system processes]** hierarchy level are enabled or disabled.

<b>Commands</b>	request chassis cfeb master switch
	request chassis cfeb master switch no-confirm
	request chassis routing-engine master acquire
	request chassis routing-engine master acquire force
	request chassis routing-engine master acquire force no-confirm
	request chassis routing-engine master acquire no-confirm
	request chassis routing-engine master release
	request chassis routing-engine master release no-confirm
	request chassis routing-engine master switch
	request chassis routing-engine 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-kernel-replication>
restart-named-service
restart routing
  <routing-restart>
restart services
restart services border-signaling-gateway
  <restart-border-signaling-gateway-service>
restart services pgcp
  <restart-pgcp-service>
restart web-management
  <restart-web-management>
```

**Configuration Hierarchy Levels** No associated CLI configuration hierarchy levels and statements.

- Related Documentation**
- [Access Privilege User Permission Flags Overview on page 18](#)
  - [Understanding Junos OS Access Privilege Levels 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](#)

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## rollback

Can roll back to previous configurations.

**Commands** rollback

**Configuration Hierarchy Levels** [edit]

- Related Documentation**
- [Access Privilege User Permission Flags Overview on page 18](#)
  - [Understanding Junos OS Access Privilege Levels 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](#)

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## routing

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

**Commands** No associated CLI commands.

**Configuration Hierarchy Levels** [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 rip 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 lsp-set]
[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 connections][edit protocols dot1x]
[edit protocols dvmrp traceoptions]
[edit protocols esis traceoptions]
[edit protocols igmp traceoptions]
[edit protocols igmp-host traceoptions]
[edit protocols igmp-snooping]
[edit protocols isis traceoptions]
[edit protocols l2circuit traceoptions]
[edit protocols l2iw traceoptions]
[edit protocols ldp traceoptions]
[edit protocols lldp]
[edit protocols lldp-med]
[edit protocols mld traceoptions]
[edit protocols mld-host traceoptions]
[edit protocols msdp group peer traceoptions]
[edit protocols msdp group traceoptions]
[edit protocols msdp peer traceoptions]
[edit protocols msdp traceoptions]
[edit protocols mstp]
[edit protocols mvrp]
[edit protocols oam]
[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]
[edit protocols sflow]
[edit protocols stp]
[edit protocols uplink-failure-detection]
[edit protocols vstp]
[edit routing-instances]
[edit routing-instances instance bridge-domains]
[edit routing-instances instance bridge-domains domain multicast-snooping-options]
[edit routing-instances instance bridge-domains domain multicast-snooping-options
traceoptions]
[edit routing-instances instance multicast-snooping-options]
[edit routing-instances instance multicast-snooping-options traceoptions]
[edit routing-instances instance pbb-options]
[edit routing-instances instance protocols]
```

```
[edit routing-instances instance protocols bgp group neighbor traceoptions]
[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 isis traceoptions]
[edit routing-instances instance protocols l2vpn traceoptions]
[edit routing-instances instance protocols ldp traceoptions]
[edit routing-instances instance protocols msdp group peer traceoptions]
[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 Permission Flags Overview on page 18](#)
  - [Understanding Junos OS Access Privilege Levels 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-control on page 76](#)

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## 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.

**Commands** No associated CLI commands.

**Configuration Hierarchy Levels**

```
[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 rip 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 dvmp 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-instances 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 connections][edit protocols dot1x]
[edit protocols dvmrp traceoptions]
[edit protocols esis traceoptions]
[edit protocols igmp traceoptions]
[edit protocols igmp-host traceoptions]
[edit protocols igmp-snooping]
[edit protocols isis traceoptions]
[edit protocols l2circuit traceoptions]
[edit protocols l2iw traceoptions]
[edit protocols ldp traceoptions]
[edit protocols lldp]
[edit protocols lldp-med]
[edit protocols mld traceoptions]
[edit protocols mld-host traceoptions]
[edit protocols msdp group peer traceoptions]
[edit protocols msdp group traceoptions]
[edit protocols msdp peer traceoptions]
[edit protocols msdp traceoptions]
[edit protocols mstp]
[edit protocols mvrp]
[edit protocols oam]
[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]
[edit protocols sflow]
[edit protocols stp]
[edit protocols uplink-failure-detection]
[edit protocols vstp]
[edit routing-instances]
[edit routing-instances instance bridge-domains]
[edit routing-instances instance bridge-domains domain multicast-snooping-options]
[edit routing-instances instance bridge-domains domain multicast-snooping-options
traceoptions]
[edit routing-instances instance multicast-snooping-options]
[edit routing-instances instance multicast-snooping-options traceoptions]
[edit routing-instances instance pbb-options]
[edit routing-instances instance protocols]
[edit routing-instances instance protocols bgp group neighbor traceoptions]
[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 isis traceoptions]
[edit routing-instances instance protocols l2vpn traceoptions]
[edit routing-instances instance protocols ldp traceoptions]
[edit routing-instances instance protocols msdp group peer traceoptions]
[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 Permission Flags Overview on page 18](#)
  - [Understanding Junos OS Access Privilege Levels 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 on page 72](#)

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## secret

---

Can view passwords and other authentication keys in the configuration.

**Commands** No associated CLI commands.

**Configuration Hierarchy Levels**

```
[edit access profile client chap-secret]
[edit access profile client firewall-user password]
[edit access profile client l2tp shared-secret]
[edit access profile client pap-password]
[edit access profile radius-server secret]
[edit access radius-disconnect secret]
[edit dynamic-profiles interfaces interface ppp-options chap default-chap-secret]
[edit dynamic-profiles interfaces interface ppp-options pap default-password]
[edit dynamic-profiles interfaces interface ppp-options pap local-password]
[edit dynamic-profiles interfaces interface unit ppp-options chap default-chap-secret]
[edit dynamic-profiles interfaces interface unit ppp-options pap default-password]
[edit dynamic-profiles interfaces interface unit ppp-options pap local-password]
[edit interfaces interface ppp-options chap default-chap-secret]
```

```
[edit interfaces interface ppp-options pap default-password]
[edit interfaces interface ppp-options pap local-password]
[edit interfaces interface unit ppp-options chap default-chap-secret]
[edit interfaces interface unit ppp-options pap default-password]
[edit interfaces interface unit ppp-options pap local-password]
[edit logical-systems interfaces interface unit ppp-options chap]
[edit logical-systems interfaces interface unit ppp-options pap default-password]
[edit logical-systems interfaces interface unit ppp-options pap local-password]
[edit logical-systems routing-instances instance system services static-subscribers
authentication password]
[edit logical-systems routing-instances instance system services static-subscribers group
authentication password]
[edit logical-systems system services static-subscribers authentication password]
[edit logical-systems system services static-subscribers group authentication password]
[edit routing-instances instance system services static-subscribers authentication
password]
[edit routing-instances instance system services static-subscribers group authentication
password]
[edit services ggsn apn radius accounting server secret]
[edit services ggsn apn radius authentication server secret]
[edit services ggsn radius server secret]
[edit system accounting destination radius server secret]
[edit system accounting destination tacplus server secret]
[edit system radius-server secret]
[edit system services outbound-ssh client secret]
[edit system services packet-triggered-subscribers partition-radius
accounting-shared-secret]
[edit system services static-subscribers authentication password]
[edit system services static-subscribers group authentication password]
[edit system tacplus-server secret]
```

- Related Documentation**
- [Access Privilege User Permission Flags Overview on page 18](#)
  - [Understanding Junos OS Access Privilege Levels 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](#)
  - [secret-control on page 81](#)

## secret-control

Can view passwords and other authentication keys in the configuration and can modify them in configuration mode.

**Commands** No associated CLI commands.

**Configuration Hierarchy Levels**

```
[edit access profile client chap-secret]
[edit access profile client firewall-user password]
[edit access profile client l2tp shared-secret]
[edit access profile client pap-password]
[edit access profile radius-server secret]
```

```
[edit access radius-disconnect secret]
[edit dynamic-profiles interfaces interface ppp-options chap default-chap-secret]
[edit dynamic-profiles interfaces interface ppp-options pap default-password]
[edit dynamic-profiles interfaces interface ppp-options pap local-password]
[edit dynamic-profiles interfaces interface unit ppp-options chap default-chap-secret]
[edit dynamic-profiles interfaces interface unit ppp-options pap default-password]
[edit dynamic-profiles interfaces interface unit ppp-options pap local-password]
[edit interfaces interface ppp-options chap default-chap-secret]
[edit interfaces interface ppp-options pap default-password]
[edit interfaces interface ppp-options pap local-password]
[edit interfaces interface unit ppp-options chap default-chap-secret]
[edit interfaces interface unit ppp-options pap default-password]
[edit interfaces interface unit ppp-options pap local-password]
[edit logical-systems interfaces interface unit ppp-options chap]
[edit logical-systems interfaces interface unit ppp-options pap default-password]
[edit logical-systems interfaces interface unit ppp-options pap local-password]
[edit logical-systems routing-instances instance system services static-subscribers
authentication password]
[edit logical-systems routing-instances instance system services static-subscribers group
authentication password]
[edit logical-systems system services static-subscribers authentication password]
[edit logical-systems system services static-subscribers group authentication password]
[edit routing-instances instance system services static-subscribers authentication
password]
[edit routing-instances instance system services static-subscribers group authentication
password]
[edit services ggsn apn radius accounting server secret]
[edit services ggsn apn radius authentication server secret]
[edit services ggsn radius server secret]
[edit system accounting destination radius server secret]
[edit system accounting destination tacplus server secret]
[edit system radius-server secret]
[edit system services outbound-ssh client secret]
[edit system services packet-triggered-subscribers partition-radius
accounting-shared-secret]
[edit system services static-subscribers authentication password]
[edit system services static-subscribers group authentication password]
[edit system tacplus-server secret]
```

**Related  
Documentation**

- [Access Privilege User Permission Flags Overview on page 18](#)
- [Understanding Junos OS Access Privilege Levels 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](#)
- [secret on page 80](#)

---

## security

Can view security configuration.

**Commands**

```

clear security
clear security alarms
  <clear-security-alarm-information>
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 log
  <clear-security-log-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 idp storage-cleanup
  <request-idp-storage-cleanup>
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 crl
request security pki crl load
  <request security pki crl 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 verify-integrity-status
  <verify-integrity-status>
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 alarms
  <get-security-alarm-information>
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 description
  <get-idp-attack-description-information>
```



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

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

show security idp logical-system
show security idp logical-system policy-association
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>
  <get-idp-predefined-attack-groups>
  <get-idp-predefined-attack-group-filters>
  <get-idp-predefined-attacks>
  <get-idp-predefined-attack-filters>
  <get-idp-recent-security-package-information>
show security idp policy-commit-status
  <get-idp-policy-commit-status>

<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 keychain
  <get-hakr-keychain-information>
show security log
  <get-security-log-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>
```

	<code>show security pki local-certificate</code> <code>&lt;get-pki-local-certificate&gt;</code>
<b>Configuration Hierarchy Levels</b>	<code>[edit security]</code> <code>[edit security alarms]</code> <code>[edit security log]</code>
<b>Related Documentation</b>	<ul style="list-style-type: none"><li>• <a href="#">Access Privilege User Permission Flags Overview on page 18</a></li><li>• <a href="#">Understanding Junos OS Access Privilege Levels on page 3</a></li><li>• <a href="#">Configuring Access Privilege Levels on page 8</a></li><li>• <a href="#">Specifying Access Privileges for Junos OS Operational Mode Commands on page 8</a></li><li>• <a href="#">Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11</a></li><li>• <a href="#">security-control on page 86</a></li></ul>

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## security-control

---

Can view and configure security information at the **[edit security]** hierarchy level.

### Commands

```
clear security
clear security alarms
  <clear-security-alarm-information>
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 log
  <clear-security-log-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 idp storage-cleanup
  <request-idp-storage-cleanup>
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 crl
request security pki crl load
  <request security pki crl 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 alarms
    <get-security-alarm-information>
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 description
    <get-idp-attack-description-information>
show security idp attack detail
    <get-idp-attack-detail-information>
show security idp attack table
    <get-idp-attack-table-information>

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

show security idp logical-system
show security idp logical-system policy-association
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>
    <get-idp-predefined-attack-groups>
    <get-idp-predefined-attack-group-filters>
    <get-idp-predefined-attacks>
    <get-idp-predefined-attack-filters>
    <get-idp-recent-security-package-information>
show security idp policy-commit-status
    <get-idp-policy-commit-status>

<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>

```

	<pre>show security idp ssl-inspection session-id-cache   &lt;get-idp-ssl-session-cache-information&gt;  show security idp status   &lt;get-idp-status-information&gt;  show security idp status detail   &lt;get-idp-detail-status-information&gt; show security keychain   &lt;get-hakr-keychain-information&gt; show security log   &lt;get-security-log-information&gt;  show security pki show security pki ca-certificate   &lt;get-pki-ca-certificate&gt; show security pki certificate-request   &lt;get-pki-certificate-request&gt; show security pki crl   &lt;get-pki-crl&gt; show security pki local-certificate   &lt;get-pki-local-certificate&gt;</pre>
<b>Configuration Hierarchy Levels</b>	<pre>[edit security] [edit security alarms] [edit security log]</pre>
<b>Related Documentation</b>	<ul style="list-style-type: none"> <li>• <a href="#">Access Privilege User Permission Flags Overview on page 18</a></li> <li>• <a href="#">Understanding Junos OS Access Privilege Levels on page 3</a></li> <li>• <a href="#">Configuring Access Privilege Levels on page 8</a></li> <li>• <a href="#">Specifying Access Privileges for Junos OS Operational Mode Commands on page 8</a></li> <li>• <a href="#">Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11</a></li> <li>• <a href="#">security on page 82</a></li> </ul>

## shell

	Can start a local shell on the router.
<b>Commands</b>	<pre>start shell start shell user</pre>
<b>Configuration Hierarchy Levels</b>	No associated CLI configuration hierarchy levels and statements.
<b>Related Documentation</b>	<ul style="list-style-type: none"> <li>• <a href="#">Access Privilege User Permission Flags Overview on page 18</a></li> <li>• <a href="#">Understanding Junos OS Access Privilege Levels on page 3</a></li> <li>• <a href="#">Configuring Access Privilege Levels on page 8</a></li> </ul>

- [Specifying Access Privileges for Junos OS Operational Mode Commands on page 8](#)
- [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 11](#)

## snmp

---

Can view Simple Network Management Protocol (SNMP) configuration.

**Commands** No associated CLI commands.

**Configuration  
Hierarchy Levels** [\[edit snmp\]](#)

**Related  
Documentation**

- [Access Privilege User Permission Flags Overview on page 18](#)
- [Understanding Junos OS Access Privilege Levels 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](#)
- [snmp-control on page 90](#)

## snmp-control

---

Can view SNMP configuration information and can modify SNMP configuration at the [\[edit snmp\]](#) hierarchy level.

**Commands** No associated CLI commands.

**Configuration  
Hierarchy Levels** [\[edit snmp\]](#)

**Related  
Documentation**

- [Access Privilege User Permission Flags Overview on page 18](#)
- [Understanding Junos OS Access Privilege Levels 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](#)
- [snmp on page 90](#)

## system

---

Can view system-level configuration information.

**Commands** request chassis synchronization  
request chassis synchronization force  
request chassis synchronization force automatic-switching

	request chassis synchronization force mark-failed
	request chassis synchronization force unmark-failed
	request chassis synchronization switch
<b>Configuration Hierarchy Levels</b>	[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 ethernet-switching-options] [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 logical-systems system syslog]  [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-rollbacks]

```
[edit system max-configurations-on-flash]
[edit system mirror-flash-on-disk]
[edit system no-debugger-on-alt-break>
[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 auxiliary port-type]
[edit system ports console log-out-on-disconnect]
[edit system ports console port-type]
[edit system processes]
[edit system proxy]
[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]
[edit virtual-chassis]
[edit vlans]
```

- Related Documentation**
- [Access Privilege User Permission Flags Overview on page 18](#)
  - [Understanding Junos OS Access Privilege Levels 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](#)
  - [system-control on page 92](#)

---

## system-control

Can view system-level configuration information and configure it at the **[edit system]** hierarchy level.

<b>Configuration Hierarchy Levels</b>	<pre>[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 ethernet-switching-options] [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]</pre>
---------------------------------------	---



```
[edit logical-systems system]
[edit poe]
[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]
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[edit system internet-options no-tcp-rfc1323]
[edit system internet-options no-tcp-rfc1323-paws]
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[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 auxiliary port-type]
[edit system ports console log-out-on-disconnect]
[edit system ports console port-type]
[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]
[edit virtual-chassis]
[edit vlans]
```

**Related Documentation**

- [Access Privilege User Permission Flags Overview on page 18](#)
- [Understanding Junos OS Access Privilege Levels 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](#)
- [system on page 90](#)

---

**trace**

---

Can view trace file settings and configure trace file properties.

**Commands**

```
clear log
  <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
  <get-log>
show log user
  <get-syslog-events>
```

**Configuration Hierarchy Levels**

```
[edit bridge-domains domain multicast-snooping-options traceoptions]
[edit bridge-domains domain protocols igmp-snooping]
[edit bridge-domains domain forwarding-options dhcp-relay traceoptions]
[edit bridge-domains domain protocols igmp-snooping 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 class-of-service application-traffic-control traceoptions]
[edit demux traceoptions]
[edit dynamic-profiles protocols igmp traceoptions]
[edit dynamic-profiles protocols mld traceoptions]
[edit dynamic-profiles class-of-service application-traffic-control traceoptions]
[edit dynamic-profiles protocols oam ethernet link-fault-management traceoptions]
[edit 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]  
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[edit dynamic-profiles routing-instances instance protocols pim traceoptions]  
[edit dynamic-profiles routing-instances instance protocols rip traceoptions]  
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[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 multicast traceoptions]  
[edit dynamic-profiles routing-instances instance routing-options traceoptions]  
[edit dynamic-profiles routing-instances instance services mobile-ip traceoptions]  
[edit dynamic-profiles routing-instances instance system services dhcp-local-server traceoptions]  
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[edit logical-systems bridge-domains domain protocols igmp-snooping 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]  
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[edit logical-systems protocols mld-host traceoptions]
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[edit logical-systems protocols oam ethernet link-fault-management traceoptions]
[edit logical-systems protocols oam ethernet lmi traceoptions]
[edit logical-systems protocols ospf traceoptions]
[edit logical-systems protocols pim traceoptions]
[edit logical-systems protocols ppp monitor-session]
[edit logical-systems protocols ppp traceoptions]
[edit logical-systems protocols ppp-service traceoptions]
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[edit logical-systems protocols rip traceoptions]
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[edit logical-systems protocols router-discovery traceoptions]
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```
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[edit logical-systems routing-instances instance routing-options traceoptions]
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traceoptions]
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[edit protocols oam ethernet lmi traceoptions]
[edit protocols ospf traceoptions]
[edit protocols pim traceoptions]
[edit protocols ppp monitor-session]
[edit protocols ppp traceoptions]
[edit protocols ppp-service traceoptions]
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[edit protocols rip traceoptions]
[edit protocols ripng traceoptions]
```

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traceoptions]
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traceoptions]
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[edit routing-instances instance protocols bgp group neighbor traceoptions]
[edit routing-instances instance protocols bgp group traceoptions]
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[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]
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[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]
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[edit routing-options multicast traceoptions]
[edit routing-options traceoptions]
[edit security idp traceoptions]
[edit security pki traceoptions]
[edit services adaptive-services-pics traceoptions]
[edit services captive-portal-content-delivery]
[edit services l2tp traceoptions]
[edit services server-load-balance 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 ddos-protection traceoptions]
[edit system license traceoptions]
[edit system processes datapath-trace-service traceoptions]
[edit system processes dhcp-service interface-traceoptions]
[edit system processes dhcp-service traceoptions]
[edit system processes diameter-service traceoptions]
[edit system processes general-authentication-service traceoptions]
[edit system processes mac-validation traceoptions]
[edit system processes mag-service 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 local-policy-decision-function traceoptions]  
 [edit system services outbound-ssh traceoptions]  
 [edit system services service-deployment traceoptions]  
 [edit system services subscriber-management traceoptions]  
 [edit system services subscriber-management-helper traceoptions]

**Related  
Documentation**

- [Access Privilege User Permission Flags Overview on page 18](#)
- [Understanding Junos OS Access Privilege Levels 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](#)
- [trace-control on page 99](#)

## trace-control

Can modify trace file settings and configure trace file properties

**Configuration  
Hierarchy Levels**

[edit bridge-domains domain forwarding-options dhcp-relay interface-traceoptions]  
 [edit bridge-domains domain forwarding-options dhcp-relay 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]  
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 [dynamic-profiles protocols oam ethernet lmi]  
 [edit dynamic-profiles protocols router-advertisement traceoptions]  
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 [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]  
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 [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]

```
traceoptions]
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[edit dynamic-profiles routing-instances instance protocols msdp peer traceoptions]
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[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]
[edit dynamic-profiles routing-instances instance protocols vpls traceoptions]
[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 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 interface-traceoptions]
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[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]  
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[edit system services service-deployment traceoptions]  
[edit system services subscriber-management traceoptions]  
[edit system services subscriber-management-helper traceoptions]

**Related Documentation**

- [Access Privilege User Permission Flags Overview on page 18](#)
- [Understanding Junos OS Access Privilege Levels 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](#)
- [trace on page 94](#)

---

**view**

---

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

**Commands**

```
clear ipv6 router-advertisement
<clear-ipv6-router-advertisement-information>
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
  <get-amt-tunnel-gateway-address>
show amt tunnel tunnel-interface
  <get-amt-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
```

```
<get-ancp-subscriber-identifier-information>
show ancp subscriber neighbor
show aps
  <get-aps-information>

show aps group
  <get-aps-group-information>
show aps interface
  <get-aps-interface-information>
show arp
  <get-arp-table-information>

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

show bfd session address
  <get-bfd-session-address>
show bfd session discriminator
  <get-bfd-session-discriminator>
show bfd session prefix
  <get-bfd-session-prefix>
show bgp
show bgp bmp
  <get-bgp-monitoring-protocol-statistics>
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
  <get-bgp-replication-information>
show bgp summary
  <get-bgp-summary-information>

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

show bridge domain operational
```

```

<get-operational-bridge-instance-information>
<get-bridge-flood-information>
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
  <get-bridge-interface-mac-table>

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

show chassis
show chassis alarms
  <get-alarm-information>
show chassis alarms fpc
  <get-fpc-alarm-information>
show chassis beacon
  <get-chassis-beacon-information>
show chassis beacon cb
  <get-chassis-cb-beacon-information>
show chassis environment ccg
  <get-environment-ccg-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 pdu
  <get-environment-pdu-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
  <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 connectivity
  <get-chassis-fabric-connectivity-information>
show chassis fabric destinations
  <get-fm-fabric-destinations-state>
show chassis fabric errors
show chassis fabric errors autoheal
  <get-fm-plane-autoheal-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 reachability
  <get-fm-fabric-reachability-information>
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 fabric unreachable-destinations
  <get-fm-unreachable-dest-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 firmware detail
  <get-firmware-information-detail>
show chassis forwarding
  <get-fwdd-information>

show chassis fpc
  <get-fpc-information>

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 hss
show chassis hss link-quality
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 mac-addresses
show chassis multicast-loadbalance
  <get-chassis-ae-lb-information>

show chassis network-services
  <network-services>

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

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

show chassis power detail
  <get-power-usage-information-detail>
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 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 application-traffic-control
show class-of-service application-traffic-control counter
show class-of-service application-traffic-control statistics
show class-of-service application-traffic-control statistics rate-limiter
show class-of-service application-traffic-control statistics rule
  <get-appqos-rule-statistics>
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 loss-priority-rewrite
  <get-cos-loss-priority-rewrite-table-information>
show class-of-service forwarding-table loss-priority-rewrite mapping
  <get-cos-loss-priority-rewrite-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>
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```
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 loss-priority-rewrite
  <get-cos-loss-priority-rewrite-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
  <get-ccc-information>
show database-replication
show database-replication statistics
  <get-database-replication-statistics-information>

show database-replication summary
  <get-database-replication-summary-information>
show ddos-protection
show ddos-protection protocols
  <get-ddos-protocols-information>

show ddos-protection protocols ancp
  <get-ddos-ancp-information>

show ddos-protection protocols ancp aggregate
  <get-ddos-ancp-aggregate>

show ddos-protection protocols ancp parameters
  <get-ddos-ancp-parameters>

show ddos-protection protocols ancp statistics
  <get-ddos-ancp-statistics>

show ddos-protection protocols ancp violations
  <get-ddos-ancp-violations>

show ddos-protection protocols ancpv6
  <get-ddos-ancpv6-information>
show ddos-protection protocols ancpv6 aggregate
  get-ddos-ancpv6-aggregate
show ddos-protection protocols ancpv6 parameters
  get-ddos-ancpv6-parameters
show ddos-protection protocols ancpv6 statistics
  get-ddos-ancpv6-statistics
show ddos-protection protocols ancpv6 violations
  get-ddos-ancpv6-violations
show ddos-protection protocols arp
  get-ddos-arp-information
show ddos-protection protocols arp aggregate
  get-ddos-arp-aggregate
show ddos-protection protocols arp parameters
  get-ddos-arp-parameters
show ddos-protection protocols arp statistics
  get-ddos-arp-statistics
show ddos-protection protocols arp violations
  get-ddos-arp-violations
```

```
show ddos-protection protocols atm
  get-ddos-atm-information
show ddos-protection protocols atm aggregate
  get-ddos-atm-aggregate
show ddos-protection protocols atm parameters
  get-ddos-atm-parameters
show ddos-protection protocols atm statistics
  get-ddos-atm-statistics
show ddos-protection protocols atm violations
  get-ddos-atm-violations
show ddos-protection protocols bfd
  get-ddos-bfd-information
show ddos-protection protocols bfd aggregate
  get-ddos-bfd-aggregate
show ddos-protection protocols bfd parameters
  get-ddos-bfd-parameters
show ddos-protection protocols bfd statistics
  get-ddos-bfd-statistics
show ddos-protection protocols bfd violations
  get-ddos-bfd-violations
show ddos-protection protocols bfdv6
  get-ddos-bfdv6-information
show ddos-protection protocols bfdv6 aggregate
  get-ddos-bfdv6-aggregate
show ddos-protection protocols bfdv6 parameters
  get-ddos-bfdv6-parameters
show ddos-protection protocols bfdv6 statistics
  get-ddos-bfdv6-statistics
show ddos-protection protocols bfdv6 violations
  get-ddos-bfdv6-violations
show ddos-protection protocols bgp
  get-ddos-bgp-information
show ddos-protection protocols bgp aggregate
  get-ddos-bgp-aggregate
show ddos-protection protocols bgp parameters
  get-ddos-bgp-parameters
show ddos-protection protocols bgp statistics
  get-ddos-bgp-statistics
show ddos-protection protocols bgp violations
  get-ddos-bgp-violations
show ddos-protection protocols bgpv6
  get-ddos-bgpv6-information
show ddos-protection protocols bgpv6 aggregate
  get-ddos-bgpv6-aggregate
show ddos-protection protocols bgpv6 parameters
  get-ddos-bgpv6-parameters
show ddos-protection protocols bgpv6 statistics
  get-ddos-bgpv6-statistics
show ddos-protection protocols bgpv6 violations
  get-ddos-bgpv6-violations
show ddos-protection protocols demux-autosense
  get-ddos-demuxauto-information
show ddos-protection protocols demux-autosense aggregate
  get-ddos-demuxauto-aggregate
show ddos-protection protocols demux-autosense parameters
  get-ddos-demuxauto-parameters
```

```
show ddos-protection protocols demux-autosense statistics
  get-ddos-demuxauto-statistics
show ddos-protection protocols demux-autosense violations
  get-ddos-demuxauto-violations
show ddos-protection protocols dhcpv4
  get-ddos-dhcpv4-information
show ddos-protection protocols dhcpv4 ack
  get-ddos-dhcpv4-ack
show ddos-protection protocols dhcpv4 aggregate
  get-ddos-dhcpv4-aggregate
show ddos-protection protocols dhcpv4 bad-packets
  get-ddos-dhcpv4-bad-pack
show ddos-protection protocols dhcpv4 bootp
  get-ddos-dhcpv4-bootp
show ddos-protection protocols dhcpv4 decline
  get-ddos-dhcpv4-decline
show ddos-protection protocols dhcpv4 discover
  get-ddos-dhcpv4-discover
show ddos-protection protocols dhcpv4 force-renew
  get-ddos-dhcpv4-forcerenew
show ddos-protection protocols dhcpv4 inform
  get-ddos-dhcpv4-inform
show ddos-protection protocols dhcpv4 lease-active
  get-ddos-dhcpv4-leaseact
show ddos-protection protocols dhcpv4 lease-query
  get-ddos-dhcpv4-leasequery
show ddos-protection protocols dhcpv4 lease-unassigned
  get-ddos-dhcpv4-leaseuna
show ddos-protection protocols dhcpv4 lease-unknown
  get-ddos-dhcpv4-leaseunk
show ddos-protection protocols dhcpv4 nak
  get-ddos-dhcpv4-nak
show ddos-protection protocols dhcpv4 no-message-type
  get-ddos-dhcpv4-no-msgtype
show ddos-protection protocols dhcpv4 offer
  get-ddos-dhcpv4-offer
show ddos-protection protocols dhcpv4 parameters
  get-ddos-dhcpv4-parameters
show ddos-protection protocols dhcpv4 release
  get-ddos-dhcpv4-release
show ddos-protection protocols dhcpv4 renew
  get-ddos-dhcpv4-renew
show ddos-protection protocols dhcpv4 request
  get-ddos-dhcpv4-request
show ddos-protection protocols dhcpv4 statistics
  get-ddos-dhcpv4-statistics
show ddos-protection protocols dhcpv4 unclassified
  get-ddos-dhcpv4-unclass
show ddos-protection protocols dhcpv4 violations
  get-ddos-dhcpv4-violations
show ddos-protection protocols dhcpv6
  get-ddos-dhcpv6-information
show ddos-protection protocols dhcpv6 advertise
  get-ddos-dhcpv6-advertise
show ddos-protection protocols dhcpv6 aggregate
  get-ddos-dhcpv6-aggregate
```

```
show ddos-protection protocols dhcpv6 confirm
  get-ddos-dhcpv6-confirm
show ddos-protection protocols dhcpv6 decline
  get-ddos-dhcpv6-decline
show ddos-protection protocols dhcpv6 information-request
  get-ddos-dhcpv6-info-req
show ddos-protection protocols dhcpv6 leasequery
  get-ddos-dhcpv6-leasequery
show ddos-protection protocols dhcpv6 leasequery-data
  get-ddos-dhcpv6-leaseq-da
show ddos-protection protocols dhcpv6 leasequery-done
  get-ddos-dhcpv6-leaseq-do
show ddos-protection protocols dhcpv6 leasequery-reply
  get-ddos-dhcpv6-leaseq-re
show ddos-protection protocols dhcpv6 parameters
  get-ddos-dhcpv6-parameters
show ddos-protection protocols dhcpv6 rebind
  get-ddos-dhcpv6-rebind
show ddos-protection protocols dhcpv6 reconfigure
  get-ddos-dhcpv6-reconfig
show ddos-protection protocols dhcpv6 relay-forward
  get-ddos-dhcpv6-relay-for
show ddos-protection protocols dhcpv6 relay-reply
  get-ddos-dhcpv6-relay-rep
show ddos-protection protocols dhcpv6 release
  get-ddos-dhcpv6-release
show ddos-protection protocols dhcpv6 renew
  get-ddos-dhcpv6-renew
show ddos-protection protocols dhcpv6 reply
  get-ddos-dhcpv6-reply
show ddos-protection protocols dhcpv6 request
  get-ddos-dhcpv6-request
show ddos-protection protocols dhcpv6 solicit
  get-ddos-dhcpv6-solicit
show ddos-protection protocols dhcpv6 statistics
  get-ddos-dhcpv6-statistics
show ddos-protection protocols dhcpv6 unclassified
  get-ddos-dhcpv6-unclass
show ddos-protection protocols dhcpv6 violations
  get-ddos-dhcpv6-violations
show ddos-protection protocols diameter
  get-ddos-diameter-information
show ddos-protection protocols diameter aggregate
  get-ddos-diameter-aggregate
show ddos-protection protocols diameter parameters
  get-ddos-diameter-parameters
show ddos-protection protocols diameter statistics
  get-ddos-diameter-statistics
show ddos-protection protocols diameter violations
  get-ddos-diameter-violations
show ddos-protection protocols dns
  get-ddos-dns-information
show ddos-protection protocols dns aggregate
  get-ddos-dns-aggregate
show ddos-protection protocols dns parameters
  get-ddos-dns-parameters
```



```
show ddos-protection protocols dns statistics
  get-ddos-dns-statistics
show ddos-protection protocols dns violations
  get-ddos-dns-violations
show ddos-protection protocols dtcp
  get-ddos-dtcp-information
show ddos-protection protocols dtcp aggregate
  get-ddos-dtcp-aggregate
show ddos-protection protocols dtcp parameters
  get-ddos-dtcp-parameters
show ddos-protection protocols dtcp statistics
  get-ddos-dtcp-statistics
show ddos-protection protocols dtcp violations
  get-ddos-dtcp-violations
show ddos-protection protocols dynamic-vlan
  get-ddos-dynvlan-information
show ddos-protection protocols dynamic-vlan aggregate
  get-ddos-dynvlan-aggregate
show ddos-protection protocols dynamic-vlan parameters
  get-ddos-dynvlan-parameters
show ddos-protection protocols dynamic-vlan statistics
  get-ddos-dynvlan-statistics
show ddos-protection protocols dynamic-vlan violations
  get-ddos-dynvlan-violations
show ddos-protection protocols egpv6
  get-ddos-egpv6-information
show ddos-protection protocols egpv6 aggregate
  get-ddos-egpv6-aggregate
show ddos-protection protocols egpv6 parameters
  get-ddos-egpv6-parameters
show ddos-protection protocols egpv6 statistics
  get-ddos-egpv6-statistics
show ddos-protection protocols egpv6 violations
  get-ddos-egpv6-violations
show ddos-protection protocols eoam
  get-ddos-eoam-information
show ddos-protection protocols eoam aggregate
  get-ddos-eoam-aggregate
show ddos-protection protocols eoam parameters
  get-ddos-eoam-parameters
show ddos-protection protocols eoam statistics
  get-ddos-eoam-statistics
show ddos-protection protocols eoam violations
  get-ddos-eoam-violations
show ddos-protection protocols esmc
  get-ddos-esmc-information
show ddos-protection protocols esmc aggregate
  get-ddos-esmc-aggregate
show ddos-protection protocols esmc parameters
  get-ddos-esmc-parameters
show ddos-protection protocols esmc statistics
  get-ddos-esmc-statistics
show ddos-protection protocols esmc violations
  get-ddos-esmc-violations
show ddos-protection protocols fab-probe
<get-ddos-fab-probe-information>
```

```
show ddos-protection protocols fab-probe aggregate
<get-ddos-fab-probe-aggregate>
show ddos-protection protocols fab-probe parameters
<get-ddos-fab-probe-parameters>
show ddos-protection protocols fab-probe statistics
<get-ddos-fab-probe-statistics>
show ddos-protection protocols fab-probe violations
<get-ddos-fab-probe-violations>
show ddos-protection protocols firewall-host
  get-ddos-fw-host-information
show ddos-protection protocols firewall-host aggregate
  get-ddos-fw-host-aggregate
show ddos-protection protocols firewall-host parameters
  get-ddos-fw-host-parameters
show ddos-protection protocols firewall-host statistics
  get-ddos-fw-host-statistics
show ddos-protection protocols firewall-host violations
  get-ddos-fw-host-violations
```

```
show ddos-protection protocols ftp
  get-ddos-ftp-information
show ddos-protection protocols ftp aggregate
  get-ddos-ftp-aggregate
show ddos-protection protocols ftp parameters
  get-ddos-ftp-parameters
show ddos-protection protocols ftp statistics
  get-ddos-ftp-statistics
show ddos-protection protocols ftp violations
  get-ddos-ftp-violations
show ddos-protection protocols ftpv6
  get-ddos-ftp6-information
show ddos-protection protocols ftpv6 aggregate
  get-ddos-ftp6-aggregate
show ddos-protection protocols ftpv6 parameters
  get-ddos-ftp6-parameters
show ddos-protection protocols ftpv6 statistics
  get-ddos-ftp6-statistics
show ddos-protection protocols ftpv6 violations
  get-ddos-ftp6-violations
show ddos-protection protocols gre
  get-ddos-gre-information
show ddos-protection protocols gre aggregate
  get-ddos-gre-aggregate
show ddos-protection protocols gre parameters
  get-ddos-gre-parameters
show ddos-protection protocols gre statistics
  get-ddos-gre-statistics
show ddos-protection protocols gre violations
  get-ddos-gre-violations
show ddos-protection protocols icmp
  get-ddos-icmp-information
show ddos-protection protocols icmp aggregate
  get-ddos-icmp-aggregate
show ddos-protection protocols icmp parameters
  get-ddos-icmp-parameters
```

```
show ddos-protection protocols icmp statistics
  get-ddos-icmp-statistics
show ddos-protection protocols icmp violations
  get-ddos-icmp-violations
show ddos-protection protocols icmpv6
<get-ddos-icmpv6-information>
show ddos-protection protocols icmpv6 aggregate
<get-ddos-icmpv6-aggregate>
show ddos-protection protocols icmpv6 parameters
<get-ddos-icmpv6-parameters>
show ddos-protection protocols icmpv6 statistics
<get-ddos-icmpv6-statistics>
show ddos-protection protocols icmpv6 violations
<get-ddos-icmpv6-violations>
show ddos-protection protocols igmp
  get-ddos-igmp-information
show ddos-protection protocols igmp aggregate
  get-ddos-igmp-aggregate
show ddos-protection protocols igmp parameters
  get-ddos-igmp-parameters
show ddos-protection protocols igmp statistics
  get-ddos-igmp-statistics
show ddos-protection protocols igmp violations
  get-ddos-igmp-violations
show ddos-protection protocols igmp-snoop
  get-ddos-igmp-snoop-information
show ddos-protection protocols igmp-snoop aggregate
  get-ddos-igmp-snoop-aggregate
show ddos-protection protocols igmp-snoop parameters
  get-ddos-igmp-snoop-parameters
show ddos-protection protocols igmp-snoop statistics
  get-ddos-igmp-snoop-statistics
show ddos-protection protocols igmp-snoop violations
  get-ddos-igmp-snoop-violations
show ddos-protection protocols igmpv4v6
  get-ddos-igmpv4v6-information
show ddos-protection protocols igmpv4v6 aggregate
  get-ddos-igmpv4v6-aggregate
show ddos-protection protocols igmpv4v6 parameters
  get-ddos-igmpv4v6-parameters
show ddos-protection protocols igmpv4v6 statistics
  get-ddos-igmpv4v6-statistics
show ddos-protection protocols igmpv4v6 violations
  get-ddos-igmpv4v6-violations
show ddos-protection protocols igmpv6
  get-ddos-igmpv6-information
show ddos-protection protocols igmpv6 aggregate
  get-ddos-igmpv6-aggregate
show ddos-protection protocols igmpv6 parameters
  get-ddos-igmpv6-parameters
show ddos-protection protocols igmpv6 statistics
  get-ddos-igmpv6-statistics
show ddos-protection protocols igmpv6 violations
  get-ddos-igmpv6-violations
show ddos-protection protocols ip-fragments
  get-ddos-ip-frag-information
```

```
show ddos-protection protocols ip-fragments aggregate
  get-ddos-ip-frag-aggregate
show ddos-protection protocols ip-fragments first-fragment
  get-ddos-ip-frag-first-frag
show ddos-protection protocols ip-fragments parameters
  get-ddos-ip-frag-parameters
show ddos-protection protocols ip-fragments statistics
  get-ddos-ip-frag-statistics
show ddos-protection protocols ip-fragments trail-fragment
  get-ddos-ip-frag-trail-frag
show ddos-protection protocols ip-fragments violations
  get-ddos-ip-frag-violations
show ddos-protection protocols ip-options
  get-ddos-ip-opt-information
show ddos-protection protocols ip-options aggregate
  get-ddos-ip-opt-aggregate
show ddos-protection protocols ip-options non-v4v6
<get-ddos-ip-opt-non-v4v6>
show ddos-protection protocols ip-options parameters
  get-ddos-ip-opt-parameters
show ddos-protection protocols ip-options router-alert
  get-ddos-ip-opt-rt-alert
show ddos-protection protocols ip-options statistics
  get-ddos-ip-opt-statistics
show ddos-protection protocols ip-options unclassified
  get-ddos-ip-opt-unclass
show ddos-protection protocols ip-options violations
  get-ddos-ip-opt-violations
show ddos-protection protocols ipv4-unclassified
  get-ddos-ipv4-uncls-information
show ddos-protection protocols ipv4-unclassified aggregate
  get-ddos-ipv4-uncls-aggregate
show ddos-protection protocols ipv4-unclassified parameters
  get-ddos-ipv4-uncls-parameters
show ddos-protection protocols ipv4-unclassified statistics
  get-ddos-ipv4-uncls-statistics
show ddos-protection protocols ipv4-unclassified violations
  get-ddos-ipv4-uncls-violations
show ddos-protection protocols ipv6-unclassified
  get-ddos-ipv6-uncls-information
show ddos-protection protocols ipv6-unclassified aggregate
  get-ddos-ipv6-uncls-aggregate
show ddos-protection protocols ipv6-unclassified parameters
  get-ddos-ipv6-uncls-parameters
show ddos-protection protocols ipv6-unclassified statistics
  get-ddos-ipv6-uncls-statistics
show ddos-protection protocols ipv6-unclassified violations
  get-ddos-ipv6-uncls-violations
show ddos-protection protocols isis
  get-ddos-isis-information
show ddos-protection protocols isis aggregate
  get-ddos-isis-aggregate
show ddos-protection protocols isis parameters
  get-ddos-isis-parameters
show ddos-protection protocols isis statistics
  get-ddos-isis-statistics
```

```
show ddos-protection protocols isis violations
  get-ddos-isis-violations
show ddos-protection protocols jfm
  get-ddos-jfm-information
show ddos-protection protocols jfm aggregate
  get-ddos-jfm-aggregate
show ddos-protection protocols jfm parameters
  get-ddos-jfm-parameters
show ddos-protection protocols jfm statistics
  get-ddos-jfm-statistics
show ddos-protection protocols jfm violations
  get-ddos-jfm-violations
show ddos-protection protocols l2tp
  get-ddos-l2tp-information
show ddos-protection protocols l2tp aggregate
  get-ddos-l2tp-aggregate
show ddos-protection protocols l2tp parameters
  get-ddos-l2tp-parameters
show ddos-protection protocols l2tp statistics
  get-ddos-l2tp-statistics
show ddos-protection protocols l2tp violations
  get-ddos-l2tp-violations
show ddos-protection protocols lacp
  get-ddos-lacp-information
show ddos-protection protocols lacp aggregate
  get-ddos-lacp-aggregate
show ddos-protection protocols lacp parameters
  get-ddos-lacp-parameters
show ddos-protection protocols lacp statistics
  get-ddos-lacp-statistics
show ddos-protection protocols lacp violations
  get-ddos-lacp-violations
show ddos-protection protocols ldp
  get-ddos-ldp-information
show ddos-protection protocols ldp aggregate
  get-ddos-ldp-aggregate
show ddos-protection protocols ldp parameters
  get-ddos-ldp-parameters
show ddos-protection protocols ldp statistics
  get-ddos-ldp-statistics
show ddos-protection protocols ldp violations
  get-ddos-ldp-violations
show ddos-protection protocols ldpv6
  get-ddos-ldpv6-information
show ddos-protection protocols ldpv6 aggregate
  get-ddos-ldpv6-aggregate
show ddos-protection protocols ldpv6 parameters
  get-ddos-ldpv6-parameters
show ddos-protection protocols ldpv6 statistics
  get-ddos-ldpv6-statistics
show ddos-protection protocols ldpv6 violations
  get-ddos-ldpv6-violations
show ddos-protection protocols lldp
  get-ddos-lldp-information
show ddos-protection protocols lldp aggregate
  get-ddos-lldp-aggregate
```

```
show ddos-protection protocols lldp parameters
  get-ddos-lldp-parameters
show ddos-protection protocols lldp statistics
  get-ddos-lldp-statistics
show ddos-protection protocols lldp violations
  get-ddos-lldp-violations
show ddos-protection protocols lmp
  get-ddos-lmp-information
show ddos-protection protocols lmp aggregate
  get-ddos-lmp-aggregate
show ddos-protection protocols lmp parameters
  get-ddos-lmp-parameters
show ddos-protection protocols lmp statistics
  get-ddos-lmp-statistics
show ddos-protection protocols lmp violations
  get-ddos-lmp-violations
show ddos-protection protocols lmpv6
  get-ddos-lmpv6-information
show ddos-protection protocols lmpv6 aggregate
  get-ddos-lmpv6-aggregate
show ddos-protection protocols lmpv6 parameters
  get-ddos-lmpv6-parameters
show ddos-protection protocols lmpv6 statistics
  get-ddos-lmpv6-statistics
show ddos-protection protocols lmpv6 violations
  get-ddos-lmpv6-violations
show ddos-protection protocols mac-host
  get-ddos-mac-host-information
show ddos-protection protocols mac-host aggregate
  get-ddos-mac-host-aggregate
show ddos-protection protocols mac-host parameters
  get-ddos-mac-host-parameters
show ddos-protection protocols mac-host statistics
  get-ddos-mac-host-statistics
show ddos-protection protocols mac-host violations
  get-ddos-mac-host-violations
show ddos-protection protocols mlp
  get-ddos-mlp-information
show ddos-protection protocols mlp aggregate
  get-ddos-mlp-aggregate
show ddos-protection protocols mlp aging-exception
  get-ddos-mlp-aging-exc
show ddos-protection protocols mlp packets
  get-ddos-mlp-packets
show ddos-protection protocols mlp parameters
  get-ddos-mlp-parameters
show ddos-protection protocols mlp statistics
  get-ddos-mlp-statistics
show ddos-protection protocols mlp unclassified
  get-ddos-mlp-unclass
show ddos-protection protocols mlp violations
  get-ddos-mlp-violations
show ddos-protection protocols msdp
  get-ddos-msdp-information
show ddos-protection protocols msdp aggregate
  get-ddos-msdp-aggregate
```

```
show ddos-protection protocols msdp parameters
  get-ddos-msdp-parameters
show ddos-protection protocols msdp statistics
  get-ddos-msdp-statistics
show ddos-protection protocols msdp violations
  get-ddos-msdp-violations
show ddos-protection protocols msdpv6
  get-ddos-msdpv6-information
show ddos-protection protocols msdpv6 aggregate
  get-ddos-msdpv6-aggregate
show ddos-protection protocols msdpv6 parameters
  get-ddos-msdpv6-parameters
show ddos-protection protocols msdpv6 statistics
  get-ddos-msdpv6-statistics
show ddos-protection protocols msdpv6 violations
  get-ddos-msdpv6-violations
show ddos-protection protocols multicast-copy
  get-ddos-mcast-copy-information
show ddos-protection protocols multicast-copy aggregate
  get-ddos-mcast-copy-aggregate
show ddos-protection protocols multicast-copy parameters
  get-ddos-mcast-copy-parameters
show ddos-protection protocols multicast-copy statistics
  get-ddos-mcast-copy-statistics
show ddos-protection protocols multicast-copy violations
  get-ddos-mcast-copy-violations
show ddos-protection protocols mvrp
  get-ddos-mvrp-information
show ddos-protection protocols mvrp aggregate
  get-ddos-mvrp-aggregate
show ddos-protection protocols mvrp parameters
  get-ddos-mvrp-parameters
show ddos-protection protocols mvrp statistics
  get-ddos-mvrp-statistics
show ddos-protection protocols mvrp violations
  get-ddos-mvrp-violations
show ddos-protection protocols ntp
  get-ddos-ntp-information
show ddos-protection protocols ntp aggregate
  get-ddos-ntp-aggregate
show ddos-protection protocols ntp parameters
  get-ddos-ntp-parameters
show ddos-protection protocols ntp statistics
  get-ddos-ntp-statistics
show ddos-protection protocols ntp violations
  get-ddos-ntp-violations
show ddos-protection protocols oam-lfm
  get-ddos-oam-lfm-information
show ddos-protection protocols oam-lfm aggregate
  get-ddos-oam-lfm-aggregate
show ddos-protection protocols oam-lfm parameters
  get-ddos-oam-lfm-parameters
show ddos-protection protocols oam-lfm statistics
  get-ddos-oam-lfm-statistics
show ddos-protection protocols oam-lfm violations
  get-ddos-oam-lfm-violations
```

```
show ddos-protection protocols ospf
  get-ddos-ospf-information
show ddos-protection protocols ospf aggregate
  get-ddos-ospf-aggregate
show ddos-protection protocols ospf parameters
  get-ddos-ospf-parameters
show ddos-protection protocols ospf statistics
  get-ddos-ospf-statistics
show ddos-protection protocols ospf violations
  get-ddos-ospf-violations
show ddos-protection protocols ospfv3v6
  get-ddos-ospfv3v6-information
show ddos-protection protocols ospfv3v6 aggregate
  get-ddos-ospfv3v6-aggregate
show ddos-protection protocols ospfv3v6 parameters
  get-ddos-ospfv3v6-parameters
show ddos-protection protocols ospfv3v6 statistics
  get-ddos-ospfv3v6-statistics
show ddos-protection protocols ospfv3v6 violations
  get-ddos-ospfv3v6-violations
show ddos-protection protocols parameters
  get-ddos-protocols-parameters
show ddos-protection protocols pfe-alive
  get-ddos-pfe-alive-information
show ddos-protection protocols pfe-alive aggregate
  get-ddos-pfe-alive-aggregate
show ddos-protection protocols pfe-alive parameters
  get-ddos-pfe-alive-parameters
show ddos-protection protocols pfe-alive statistics
  get-ddos-pfe-alive-statistics
show ddos-protection protocols pfe-alive violations
  get-ddos-pfe-alive-violations
show ddos-protection protocols pim
  get-ddos-pim-information
show ddos-protection protocols pim aggregate
  get-ddos-pim-aggregate
show ddos-protection protocols pim parameters
  get-ddos-pim-parameters
show ddos-protection protocols pim statistics
  get-ddos-pim-statistics
show ddos-protection protocols pim violations
  get-ddos-pim-violations

show ddos-protection protocols pimv6
  <get-ddos-pimv6-information>
show ddos-protection protocols pimv6 aggregate
  <get-ddos-pimv6-aggregate>
show ddos-protection protocols pimv6 parameters
  <get-ddos-pimv6-parameters>
show ddos-protection protocols pimv6 statistics
  <get-ddos-pimv6-statistics>
show ddos-protection protocols pimv6 violations
  <get-ddos-pimv6-violations>
```



```
show ddos-protection protocols pmvrp
  get-ddos-pmvrp-information
show ddos-protection protocols pmvrp aggregate
  get-ddos-pmvrp-aggregate
show ddos-protection protocols pmvrp parameters
  get-ddos-pmvrp-parameters
show ddos-protection protocols pmvrp statistics
  get-ddos-pmvrp-statistics
show ddos-protection protocols pmvrp violations
  get-ddos-pmvrp-violations
show ddos-protection protocols pos
  get-ddos-pos-information
show ddos-protection protocols pos aggregate
  get-ddos-pos-aggregate
show ddos-protection protocols pos parameters
  get-ddos-pos-parameters
show ddos-protection protocols pos statistics
  get-ddos-pos-statistics
show ddos-protection protocols pos violations
  get-ddos-pos-violations
show ddos-protection protocols ppp
  get-ddos-ppp-information
show ddos-protection protocols ppp aggregate
  get-ddos-ppp-aggregate
show ddos-protection protocols ppp authentication
  get-ddos-ppp-auth
show ddos-protection protocols ppp ipcp
  get-ddos-ppp-ipcp
show ddos-protection protocols ppp ipv6cp
  get-ddos-ppp-ipv6cp
show ddos-protection protocols ppp isis
  get-ddos-ppp-isis
show ddos-protection protocols ppp lcp
  get-ddos-ppp-lcp
show ddos-protection protocols ppp mplscp
  get-ddos-ppp-mplscp
show ddos-protection protocols ppp parameters
  get-ddos-ppp-parameters
show ddos-protection protocols ppp statistics
  get-ddos-ppp-statistics
show ddos-protection protocols ppp unclassified
  <get-ddos-ppp-unclass>
show ddos-protection protocols ppp violations
  get-ddos-ppp-violations
show ddos-protection protocols pppoe
  get-ddos-pppoe-information
show ddos-protection protocols pppoe aggregate
  get-ddos-pppoe-aggregate
show ddos-protection protocols pppoe padi
  get-ddos-pppoe-padi
show ddos-protection protocols pppoe padm
  get-ddos-pppoe-padm
show ddos-protection protocols pppoe padn
  get-ddos-pppoe-padn
show ddos-protection protocols pppoe pado
  get-ddos-pppoe-pado
```

```
show ddos-protection protocols pppoe padr
  get-ddos-pppoe-padr
show ddos-protection protocols pppoe pads
  get-ddos-pppoe-pads
show ddos-protection protocols pppoe padt
  get-ddos-pppoe-padt
show ddos-protection protocols pppoe parameters
  get-ddos-pppoe-parameters
show ddos-protection protocols pppoe statistics
  get-ddos-pppoe-statistics
show ddos-protection protocols pppoe violations
  get-ddos-pppoe-violations
show ddos-protection protocols ptp
  get-ddos-ntp-information
show ddos-protection protocols ptp aggregate
  get-ddos-ntp-aggregate
show ddos-protection protocols ptp parameters
  get-ddos-ntp-parameters
show ddos-protection protocols ptp statistics
  get-ddos-ntp-statistics
show ddos-protection protocols ptp violations
  get-ddos-ntp-violations
show ddos-protection protocols pvstp
  get-ddos-pvstp-information
show ddos-protection protocols pvstp aggregate
  get-ddos-pvstp-aggregate
show ddos-protection protocols pvstp parameters
  get-ddos-pvstp-parameters
show ddos-protection protocols pvstp statistics
  get-ddos-pvstp-statistics
show ddos-protection protocols pvstp violations
  get-ddos-pvstp-violations
show ddos-protection protocols radius
  get-ddos-radius-information
show ddos-protection protocols radius accounting
  get-ddos-radius-account
show ddos-protection protocols radius aggregate
  get-ddos-radius-aggregate
show ddos-protection protocols radius authorization
  get-ddos-radius-auth
show ddos-protection protocols radius parameters
  get-ddos-radius-parameters
show ddos-protection protocols radius server
  get-ddos-radius-server
show ddos-protection protocols radius statistics
  get-ddos-radius-statistics
show ddos-protection protocols radius violations
  get-ddos-radius-violations
show ddos-protection protocols redirect
  get-ddos-redirect-information
show ddos-protection protocols redirect aggregate
  get-ddos-redirect-aggregate
show ddos-protection protocols redirect parameters
  get-ddos-redirect-parameters
show ddos-protection protocols redirect statistics
  get-ddos-redirect-statistics
```

```
show ddos-protection protocols redirect violations
  get-ddos-redirect-violations
```

```
show ddos-protection protocols reject
  <get-ddos-reject-information>
show ddos-protection protocols reject aggregate
  <get-ddos-reject-aggregate>
show ddos-protection protocols reject parameters
  <get-ddos-reject-parameters>
show ddos-protection protocols reject statistics
  <get-ddos-reject-statistics>
show ddos-protection protocols reject violations
  <get-ddos-reject-violations>
```

```
show ddos-protection protocols rip
  get-ddos-rip-information
show ddos-protection protocols rip aggregate
  get-ddos-rip-aggregate
show ddos-protection protocols rip parameters
  get-ddos-rip-parameters
show ddos-protection protocols rip statistics
  get-ddos-rip-statistics
show ddos-protection protocols rip violations
  get-ddos-rip-violations
show ddos-protection protocols ripv6
  get-ddos-ripv6-information
show ddos-protection protocols ripv6 aggregate
  get-ddos-ripv6-aggregate
show ddos-protection protocols ripv6 parameters
  get-ddos-ripv6-parameters
show ddos-protection protocols ripv6 statistics
  get-ddos-ripv6-statistics
show ddos-protection protocols ripv6 violations
  get-ddos-ripv6-violations
show ddos-protection protocols rsvp
  get-ddos-rsvp-information
show ddos-protection protocols rsvp aggregate
  get-ddos-rsvp-aggregate
show ddos-protection protocols rsvp parameters
  get-ddos-rsvp-parameters
show ddos-protection protocols rsvp statistics
  get-ddos-rsvp-statistics
show ddos-protection protocols rsvp violations
  get-ddos-rsvp-violations
show ddos-protection protocols rsvp6
  get-ddos-rsvpv6-information
show ddos-protection protocols rsvpv6 aggregate
  get-ddos-rsvpv6-aggregate
show ddos-protection protocols rsvpv6 parameters
  get-ddos-rsvpv6-parameters
show ddos-protection protocols rsvpv6 statistics
  get-ddos-rsvpv6-statistics
show ddos-protection protocols rsvpv6 violations
  get-ddos-rsvpv6-violations
show ddos-protection protocols sample
```

```
<get-ddos-sample-information>
show ddos-protection protocols sample aggregate
<get-ddos-sample-aggregate>
show ddos-protection protocols sample host
<get-ddos-sample-host>
show ddos-protection protocols sample parameters
<get-ddos-sample-parameters>
show ddos-protection protocols sample pfe
<get-ddos-sample-pfe>
show ddos-protection protocols sample statistics
<get-ddos-sample-statistics>
show ddos-protection protocols sample syslog
show ddos-protection protocols sample tap
<get-ddos-sample-tap>
show ddos-protection protocols sample violations
<get-ddos-sample-violations>
show ddos-protection protocols services
  get-ddos-services-information
show ddos-protection protocols services aggregate
  get-ddos-services-aggregate
show ddos-protection protocols services parameters
  get-ddos-services-parameters
show ddos-protection protocols services statistics
  get-ddos-services-statistics
show ddos-protection protocols services violations
  get-ddos-services-violations
show ddos-protection protocols snmp
  get-ddos-snmp-information
show ddos-protection protocols snmp aggregate
  get-ddos-snmp-aggregate
show ddos-protection protocols snmp parameters
  get-ddos-snmp-parameters
show ddos-protection protocols snmp statistics
  get-ddos-snmp-statistics
show ddos-protection protocols snmp violations
  get-ddos-snmp-violations
show ddos-protection protocols snmpv6
  get-ddos-snmpv6-information
show ddos-protection protocols snmpv6 aggregate
  get-ddos-snmpv6-aggregate
show ddos-protection protocols snmpv6 parameters
  get-ddos-snmpv6-parameters
show ddos-protection protocols snmpv6 statistics
  get-ddos-snmpv6-statistics
show ddos-protection protocols snmpv6 violations
  get-ddos-snmpv6-violations
show ddos-protection protocols ssh
  get-ddos-ssh-information
show ddos-protection protocols ssh aggregate
  get-ddos-ssh-aggregate
show ddos-protection protocols ssh parameters
  get-ddos-ssh-parameters
show ddos-protection protocols ssh statistics
  get-ddos-ssh-statistics
show ddos-protection protocols ssh violations
  get-ddos-ssh-violations
```

```
show ddos-protection protocols sshv6
  get-ddos-sshv6-information
show ddos-protection protocols sshv6 aggregate
  get-ddos-sshv6-aggregate
show ddos-protection protocols sshv6 parameters
  get-ddos-sshv6-parameters
show ddos-protection protocols sshv6 statistics
  get-ddos-sshv6-statistics
show ddos-protection protocols sshv6 violations
  get-ddos-sshv6-violations
show ddos-protection protocols statistics
  get-ddos-protocols-statistics
show ddos-protection protocols stp
  get-ddos-stp-information
show ddos-protection protocols stp aggregate
  get-ddos-stp-aggregate
show ddos-protection protocols stp parameters
  get-ddos-stp-parameters
show ddos-protection protocols stp statistics
  get-ddos-stp-statistics
show ddos-protection protocols stp violations
  get-ddos-stp-violations
show ddos-protection protocols tacacs
  get-ddos-tacacs-information
show ddos-protection protocols tacacs aggregate
  get-ddos-tacacs-aggregate
show ddos-protection protocols tacacs parameters
  get-ddos-tacacs-parameters
show ddos-protection protocols tacacs statistics
  get-ddos-tacacs-statistics
show ddos-protection protocols tacacs violations
  get-ddos-tacacs-violations
show ddos-protection protocols tcp-flags
  get-ddos-tcp-flags-information
show ddos-protection protocols tcp-flags aggregate
  get-ddos-tcp-flags-aggregate
show ddos-protection protocols tcp-flags established
  get-ddos-tcp-flags-establish
show ddos-protection protocols tcp-flags initial
  get-ddos-tcp-flags-initial
show ddos-protection protocols tcp-flags parameters
  get-ddos-tcp-flags-parameters
show ddos-protection protocols tcp-flags statistics
  get-ddos-tcp-flags-statistics
show ddos-protection protocols tcp-flags unclassified
  get-ddos-tcp-flags-unclass
show ddos-protection protocols tcp-flags violations
  get-ddos-tcp-flags-violations
show ddos-protection protocols telnet
  get-ddos-telnet-information
show ddos-protection protocols telnet aggregate
  get-ddos-telnet-aggregate
show ddos-protection protocols telnet parameters
  get-ddos-telnet-parameters
show ddos-protection protocols telnet statistics
  get-ddos-telnet-statistics
```

```
show ddos-protection protocols telnet violations
  get-ddos-telnet-violations
show ddos-protection protocols telnetv6
  get-ddos-telnetv6-information
show ddos-protection protocols telnetv6 aggregate
  get-ddos-telnetv6-aggregate
show ddos-protection protocols telnetv6 parameters
  get-ddos-telnetv6-parameters
show ddos-protection protocols telnetv6 statistics
  get-ddos-telnetv6-statistics
show ddos-protection protocols telnetv6 violations
  get-ddos-telnetv6-violations
show ddos-protection protocols ttl
  get-ddos-ttl-information
show ddos-protection protocols ttl aggregate
  get-ddos-ttl-aggregate
show ddos-protection protocols ttl parameters
  get-ddos-ttl-parameters
show ddos-protection protocols ttl statistics
  get-ddos-ttl-statistics
show ddos-protection protocols ttl violations
  get-ddos-ttl-violations
show ddos-protection protocols tunnel-fragment
  get-ddos-tun-frag-information
show ddos-protection protocols tunnel-fragment aggregate
  get-ddos-tun-frag-aggregate
show ddos-protection protocols tunnel-fragment parameters
  get-ddos-tun-frag-parameters
show ddos-protection protocols tunnel-fragment statistics
  get-ddos-tun-frag-statistics
show ddos-protection protocols tunnel-fragment violations
  get-ddos-tun-frag-violations
show ddos-protection protocols unclassified
  <get-ddos-uncls-information>
show ddos-protection protocols unclassified aggregate
  <get-ddos-uncls-aggregate>
show ddos-protection protocols unclassified parameters
  <get-ddos-uncls-parameters>
show ddos-protection protocols unclassified statistics
  <get-ddos-uncls-statistics>
show ddos-protection protocols unclassified violations
  <get-ddos-uncls-violations>
show ddos-protection protocols violations
  get-ddos-protocols-violations
show ddos-protection protocols virtual-chassis
  get-ddos-vchassis-information
show ddos-protection protocols virtual-chassis aggregate
  get-ddos-vchassis-aggregate
show ddos-protection protocols virtual-chassis control-high
  get-ddos-vchassis-control-hi
show ddos-protection protocols virtual-chassis control-low
  get-ddos-vchassis-control-lo
show ddos-protection protocols virtual-chassis parameters
  get-ddos-vchassis-parameters
show ddos-protection protocols virtual-chassis statistics
  get-ddos-vchassis-statistics
```

```
show ddos-protection protocols virtual-chassis unclassified
  get-ddos-vchassis-unclass
show ddos-protection protocols virtual-chassis vc-packets
  get-ddos-vchassis-vc-packets
show ddos-protection protocols virtual-chassis vc-ttl-errors
  get-ddos-vchassis-vc-ttl-err
show ddos-protection protocols virtual-chassis violations
  get-ddos-vchassis-violations
show ddos-protection protocols vrrp
  get-ddos-vrrp-information
show ddos-protection protocols vrrp aggregate
  get-ddos-vrrp-aggregate
show ddos-protection protocols vrrp parameters
  get-ddos-vrrp-parameters
show ddos-protection protocols vrrp statistics
  get-ddos-vrrp-statistics
show ddos-protection protocols vrrp violations
  get-ddos-vrrp-violations
show ddos-protection protocols vrrpv6
  get-ddos-vrrpv6-information
show ddos-protection protocols vrrpv6 aggregate
  get-ddos-vrrpv6-aggregate
show ddos-protection protocols vrrpv6 parameters
  get-ddos-vrrpv6-parameters
show ddos-protection protocols vrrpv6 statistics
  get-ddos-vrrpv6-statistics
show ddos-protection protocols vrrpv6 violations
  get-ddos-vrrpv6-violations
show ddos-protection statistics
  get-ddos-statistics-information
show ddos-protection version
  get-ddos-version
show dhcp
show dhcp relay
show dhcp relay binding
  <get-dhcp-relay-binding-information>

show dhcp relay binding interface
  <get-dhcp-relay-interface-bindings>
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
  <get-dhcp-relay-binding-interface>
show dhcp server statistics
  <get-dhcp-server-statistics-information>
show dhcp statistics
  get-dhcp-service-statistics-information>
show dhcpv6
show dhcpv6 relay
show dhcpv6 relay binding
  <get-dhcpv6-relay-binding-information>
```

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

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

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
  <get-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-scripts-policies>

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

show extension-provider system packages
  <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>
  <get-mac-ip-binding-information>
  <get-mc-ccpc-src-mod-filters>
```

```
<get-core-key-list>
<get-mc-edge-map-to-key-binding>
<get-key-vg-binding>
<get-mc-edge-key-to-map-binding>
<get-mc-edge-vg-portmap>
<get-mc-nsf>
<get-mc-root-map-to-key-binding>
<get-mc-root-key-to-map-binding>
<get-mc-root-vg-pfemap>
<get-mc-vccpdf-adjacency-database>
<get-fabric-summary-information>
get-fabric-statistics
get-fabric-summary-information
<get-vlan-domain-map-information>
show forwarding-options
show forwarding-options next-hop-group
<get-forwarding-options-next-hop-group>
show forwarding-options port-mirroring
<get-forwarding-options-port-mirroring>
show helper
show helper statistics
<get-helper-statistics-information>

show iccp
<get-inter-chassis-control-protocol-information>
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
<get-igmp-snooping-bridge-domain-interface>
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
<get-igmp-snooping-bridge-domain-membership>
show igmp statistics
<get-igmp-statistics-information>

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

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

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

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

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

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

show interfaces interval
  <show-interfaces-interval>
show interfaces load-balancing
  <interface-load-balancing>
show interfaces mac-database
  <get-mac-database>

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

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

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

```
show interfaces source-class all
<get-all-source-class-statistics>
show interfaces targeting
<get-targeting-information>
show ipsec
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>

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

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

show l2-learning
show l2-learning backbone-instance
  <get-l2-learning-backbone-instance>
show l2-learning global-information
  <get-l2-learning-global-information>
show l2-learning global-mac-count
  <get-l2-learning-global-mac-count>
show l2-learning instance
  <get-l2-learning-routing-instances>
show l2-learning interface
  <get-l2-learning-interface-information>
show l2-learning mac-move-buffer
  <get-l2-learning-mac-move-buffer-information>
show l2-learning provider-instance
  <get-l2-learning-provider-instance>
show l2-learning redundancy-groups
  <get-l2-learning-redundancy-groups>
show l2-learning remote-backbone-edge-bridges
  <get-l2-learning-remote-backbone-edge-bridges>
show l2circuit
show l2circuit connections
  <get-l2ckt-connection-information>

show l2cpd
show l2cpd task
  <get-l2cpd-task-information>
show l2cpd task io
  <get-l2cpd-tasks-io-statistics>
show l2cpd task memory
  <get-l2cpd-task-memory>
show l2cpd task replication
  <get-l2cpd-replication-information>
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
    <get-ldp-oam-information>
show ldp overview
    <get-ldp-overview-information>
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
  <get-lldp-interface-neighbors>
show lldp remote-global-statistics
  <get-lldp-remote-global-statistics>

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

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

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

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

show mac-rewrite
show mac-rewrite interface
  <get-mac-rewrite-interface-information>
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
  <get-mip-tunnel-information>
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
  <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 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 autobandwidth
  <get-mpls-lsp-autobandwidth>
show mpls srlg
  <get-mpls-srlg-information>
show oam ethernet fnp
show oam ethernet fnp interface
```



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show oam ethernet fnp messages
show oam ethernet fnp status
  <get-fnp-status>
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
  <get-mpls-traceroute-database-ldp>
show msdp
  <get-msdp-information>
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
  <get-multicast-backup-pe-group-information>
show multicast flow-map
  <get-multicast-flow-maps-information>

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>
```

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

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

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

show network-access
show network-access aaa
show network-access aaa radius-servers
  <get-radius-servers-table>
show network-access aaa statistics
  <get-aaa-module-statistics>

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

```

```
<get-address-assignment-pool-statistics>
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 aaa terminate-code
  <get-aaa-terminate-code>
show network-access aaa terminate-code aaa
  <get-aaa-terminate-code-aaa>
show network-access aaa terminate-code dhcp
  <get-aaa-terminate-code-dhcp>
show network-access aaa terminate-code l2tp
  <get-aaa-terminate-code-l2tp>
show network-access aaa terminate-code ppp
  <get-aaa-terminate-code-ppp>
show network-access aaa terminate-code reverse
  <get-aaa-terminate-code-reverse>
show network-access aaa terminate-code reverse aaa
  <get-aaa-terminate-code-reverse-aaa>
show network-access aaa terminate-code reverse dhcp
  <get-aaa-terminate-code-reverse-dhcp>
show network-access aaa terminate-code reverse l2tp
  <get-aaa-terminate-code-reverse-l2tp>
show network-access aaa terminate-code reverse ppp
  <get-aaa-terminate-code-reverse-ppp>
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  
    <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 clnp
show pfe route clnp table
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 fabric
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
```

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<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 bidirectional
show pim bidirectional df-election
  <get-pim-bidir-df-election-information>
show pim bidirectional df-election interface
  <get-pim-bidir-df-election-interface-information>
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 mdt data-mdt-joins
  <get-pim-data-mdt-join-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 lockout
  <get-pppoe-lockout-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
  <get-raps-pdu-information>
show protection-group ethernet-ring data-channel
  <get-ring-data-channel-information>
show protection-group ethernet-ring interface
  <get-ring-interface-information>
show protection-group ethernet-ring node-state
  <get-raps-state-machine-information>
show protection-group ethernet-ring node-state
show protection-group ethernet-ring statistics
  <get-ring-tatistics>
show protection-group ethernet-ring vlan
  <get-ring-vlan-information>
show ptp
show ptp clock
  get-ntp-clock>
show ptp global-information
  get-ntp-global-information>
show ptp hybrid
show ptp hybrid config
  <get-ntp-hybrid-mapping>
show ptp hybrid status
  <get-ntp-hybrid-status>
show ptp last-tod-update
  <get-last-tod-update>
```



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show ptp lock-status
  get-ptp-lock-status>
show ptp master
  <get-ptp-master>
show ptp port
  <get-ptp-port>
show ptp quality-level-mapping
  <get-ptp-quality-level-mapping>
show ptp slave
  <get-ptp-slave>
show ptp statistics
  <get-ptp-statistics>
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 multi-backup
  <get-rps-scale-information>
show redundant-power-system network
  <get-rps-network-information>
show redundant-power-system power-supply
show redundant-power-system status
show redundant-power-system upgrade
  <get-rps-upgrade-information>
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 rip statistics peer
  <get-rip-peer-information>
show ripng
show ripng general-statistics
  <get-ripng-general-statistics-information>

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

show route export
  <get-rtexport-table-information>
```

```
show route export instance
  <get-rtexport-instance-information>

show route localization
  <get-fib-localization-information>
show route export vrf-target
  <get-rtexport-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
  <get-route-martians>
show route resolution
  <get-route-resolution-information>
show route resolution summary
  <get-route-resolution-summary>
show route resolution unresolved
show route rib-groups
  <get-route-rib-groups>
show route snooping
  <get-route-snooping-information>
show route snooping summary
  <get-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 sip-globals
  <get-service-msp-alg-sip-globals-information>
show services alg statistics
show services application-aware-access-list
show services application-aware-access-list flows
```

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show services application-aware-access-list flows interface
  <get-application-aware-access-list-flows-interface>
show services application-aware-access-list flows subscriber
  <get-application-aware-access-list-flows-subscriber>
show services application-aware-access-list statistics
show services application-aware-access-list statistics interface
  <get-application-aware-access-list-statistics-interface>
show services application-aware-access-list statistics subscriber
  <get-application-aware-access-list-statistics-subscriber>
show services application-identification
show services application-identification application
show services application-identification application detail
  <get-appid-application-signature-detail>
show services application-identification application summary
  <get-appid-application-signature-summary>
show services application-identification application-system-cache
  <get-appid-application-system-cache>

show services application-identification counter
  <get-appid-counter>
show services application-identification counter ssl-encrypted-sessions
  <get-appid-counter-encrypted>
show services application-identification group
show services application-identification group detail
  <get-appid-application-group-detail>
show services application-identification group summary
  <get-appid-application-group-summary>
show services application-identification statistics
show services application-identification statistics application-groups
  <get-appid-application-group-statistics>
show services application-identification statistics applications
  <get-appid-application-statistics>
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>
```

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

show services border-signaling-gateway 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

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
  <get-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
  <get-cpcd-pic-information>
show services captive-portal-content-delivery profile
  <get-cpcd-profile>
show services captive-portal-content-delivery rule
  <get-cpcd-rule>
show services captive-portal-content-delivery ruleset
  <get-cpcd-rule-set>
show services captive-portal-content-delivery sset
  <get-cpcd-service-set>
show services captive-portal-content-delivery statistics
  <get-cpcd-pic-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>
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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
  <get-services-dfc-statistics-information>
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>

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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 inline
show services inline nat
show services inline nat pool
    <get-inline-nat-pool-information>
show services inline nat statistics
    <get-inline-nat-statistics-information>
show services inline software
show services inline software statistics
    <get-inline-service-sw-statistics-information>
show services ipsec-vpn
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 disconnect-cause-summary<
  <get-l2tp-disconnect-cause-summary>
show services l2tp multilink
  <get-l2tp-multilink-information>

show services l2tp radius
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**Configuration  
Hierarchy Levels**

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```

**Related  
Documentation**

- [Access Privilege User Permission Flags Overview on page 18](#)
- [Understanding Junos OS Access Privilege Levels 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.

**Configuration Hierarchy Levels** No associated CLI configuration hierarchy levels and statements.

- Related Documentation**
- [Access Privilege User Permission Flags Overview on page 18](#)
  - [Understanding Junos OS Access Privilege Levels 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](#)



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