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Junos<sup>®</sup> OS

## Access Privilege Configuration Guide

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12.1



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Juniper Networks, Inc.  
1194 North Mathilda Avenue  
Sunnyvale, California 94089  
USA  
408-745-2000  
[www.juniper.net](http://www.juniper.net)

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*Junos® OS Access Privilege Configuration Guide*

12.1

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# About the Documentation

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## Documentation and Release Notes

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## Supported Platforms

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For the features described in this document, the following platforms are supported:

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

## Using the Examples in This Manual

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If you want to use the examples in this manual, you can use the **load merge** or the **load merge relative** command. These commands cause the software to merge the incoming

configuration into the current candidate configuration. The example does not become active until you commit the candidate configuration.

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

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

## Merging a Full Example

To merge a full example, follow these steps:

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

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

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

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

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

## Merging a Snippet

To merge a snippet, follow these steps:

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

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



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

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

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

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




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

For more information about the **load** command, see the [Junos OS CLI User Guide](#).

## 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:<br><br>user@host> <b>configure</b> |
| Fixed-width text like this | Represents output that appears on the terminal screen. | user@host> <b>show chassis alarms</b><br>No alarms currently active                                |

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

| Convention                     | Description  | Examples  |
|--------------------------------|--|---|
| <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:<br><br>[edit]<br>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.  | <b>stub</b> <default-metric <i>metric</i> >;  |
| (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><br><br>( <i>string1</i>   <i>string2</i>   <i>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.   | [edit]<br>routing-options {<br>static {<br>route default {<br>nexthop <i>address</i> ;<br>retain;<br>}<br>}<br>}  |
| ;(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

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

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- 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

# Overview

- [Introduction to Access Privileges on page 3](#)



## CHAPTER 1

# Introduction to Access Privileges

- [Understanding Junos OS Access Privilege Levels on page 3](#)
- [Junos OS Login Classes Overview on page 7](#)
- [Access Privilege User Permission Flags Overview on page 8](#)
- [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10](#)

## Understanding Junos OS Access Privilege Levels

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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 3](#)
- [Allowing or Denying Individual Commands for Junos OS Login Classes on page 6](#)

## Junos OS Login Class Permission Flags

The **permissions** statement specifies one or more of the permission flags listed in [Table 3 on page 4](#). Permission flags are not cumulative, so for each class you must list all the permission flags needed, including **view** to display information and **configure** to enter configuration mode. Two forms of 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.  |
| <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. |



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

| Permission Flag                       | Description   |
|---------------------------------------|---|
| <b>flow-tap-operation</b>             | 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.<br><br><b>NOTE:</b> The <b>flow-tap-operation</b> option is not included in the <b>all-control</b> permissions flag.                                       |
| <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>              | Can view chassis, class of service (CoS), groups, forwarding options, and interfaces configuration information. Can edit configuration at the following hierarchy levels: <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.  |
| <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.  |

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

| Permission Flag           | Description  |
|---------------------------|--|
| <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.   |
| <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 15](#)

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## Junos OS Login Classes Overview

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All users who can log in to the router or switch must be in a login class. With login classes, you define the following:

- Access privileges that users have when they are logged in to the router or switch
- Commands and statements that users can and cannot specify

- How long a login session can be idle before it times out and the user is logged out

You can define any number of login classes and then apply one login class to an individual user account.

The Junos OS contains a few predefined login classes, which are listed in [Table 4 on page 8](#). The predefined login classes cannot be modified.

**Table 4: Predefined System Login Classes**

| Login Class             | Permission Flag Set                    |
|-------------------------|--|
| operator                | clear, network, reset, trace, and view |
| read-only               | view                                   |
| superuser or super-user | all                                    |
| unauthorized            | None                                   |



**NOTE:**

- You cannot modify a predefined login class name. If you issue the `set` command on a predefined class name, the Junos OS appends `-local` to the login class name. The following message also appears:

warning: '<class-name>' is a predefined class name; changing to '<class-name>-local'

- You cannot issue the `rename` or `copy` command on a predefined login class. Doing so results in the following error message:

error: target '<class-name>' is a predefined class

**Related Documentation**

- Defining Junos OS Login Classes
- Defining Junos OS Login Classes
- Understanding QFabric Switch Login Classes

## 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 30](#)
- [access-control on page 31](#)
- [admin on page 31](#)
- [admin-control on page 32](#)
- [all-control on page 33](#)
- [clear on page 33](#)
- [configure on page 67](#)
- [control on page 67](#)
- [field on page 67](#)
- [firewall on page 68](#)
- [firewall-control on page 68](#)
- [floppy on page 69](#)
- [flow-tap on page 70](#)
- [flow-tap-operation on page 70](#)
- [idp-profiler-operation on page 71](#)
- [interface on page 71](#)
- [interface-control on page 72](#)
- [maintenance on page 73](#)
- [network on page 79](#)
- [pgcp-session-mirroring on page 81](#)
- [pgcp-session-mirroring-control on page 81](#)
- [reset on page 81](#)

- [rollback on page 82](#)
- [routing on page 83](#)
- [routing-control on page 87](#)
- [secret on page 91](#)
- [secret-control on page 92](#)
- [security on page 93](#)
- [security-control on page 96](#)
- [shell on page 100](#)
- [snmp on page 100](#)
- [system on page 100](#)
- [system-control on page 102](#)
- [trace on page 104](#)
- [trace-control on page 109](#)
- [view on page 114](#)
- [view-configuration on page 176](#)

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## Specifying Access Privileges for Junos OS Configuration Mode Hierarchies

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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 15](#)
- [Example: Configuring Access Privilege Levels on page 19](#)
- [Regular Expressions for Allowing and Denying Junos OS Configuration Mode Hierarchies](#)
- [Understanding Junos OS Access Privilege Levels on page 3](#)





## PART 2

# Configuration

- [Configuring Access Privileges on page 15](#)
- [Examples on page 19](#)
- [User Permission Flags Reference on page 29](#)



## CHAPTER 2

# Configuring Access Privileges

- [Configuring Access Privilege Levels on page 15](#)
- [Specifying Access Privileges for Junos OS Operational Mode Commands on page 15](#)
- [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 17](#)

## 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 19](#)
- [Understanding Junos OS Access Privilege Levels on page 3](#)
- [Specifying Access Privileges for Junos OS Operational Mode Commands on page 15](#)
- **permissions**

## 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 23](#)
- Regular Expressions for Allowing and Denying Junos OS Operational Mode Commands
- `allow-commands`
- `deny-commands`

## 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 15](#)
- [Example: Configuring Access Privilege Levels on page 19](#)

- Regular Expressions for Allowing and Denying Junos OS Configuration Mode Hierarchies
- [Understanding Junos OS Access Privilege Levels on page 3](#)

## CHAPTER 3

# Examples

- [Example: Configuring Access Privilege Levels on page 19](#)
- [Example: Specifying Access Privileges Using allow/deny-configuration-regexps Statements on page 19](#)
- [Example: Configuring Access Privileges for Operational Mode Commands on page 23](#)
- [Example: Specifying Access Privileges Using allow/deny-configuration-regexps Statements on page 24](#)

### 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 15](#)

### 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 20](#)
- [Overview on page 20](#)
- [Configuration on page 20](#)
- [Examples Using Allow or Deny Configurations with Regular Expressions on page 21](#)

## 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 15](#)
  - [Example: Configuring Access Privilege Levels on page 19](#)
  - [Regular Expressions for Allowing and Denying Junos OS Configuration Mode Hierarchies](#)
  - [Understanding Junos OS Access Privilege Levels on page 3](#)

## 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 15](#)

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## 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 24](#)
- [Overview on page 24](#)
- [Configuration on page 25](#)
- [Examples Using Allow or Deny Configurations with Regular Expressions on page 25](#)

### 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 15](#)
- [Example: Configuring Access Privilege Levels on page 19](#)
- Regular Expressions for Allowing and Denying Junos OS Configuration Mode Hierarchies
- [Understanding Junos OS Access Privilege Levels on page 3](#)



## CHAPTER 4

# User Permission Flags Reference

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- [system-control on page 102](#)
- [trace on page 104](#)
- [trace-control on page 109](#)
- [view on page 114](#)
- [view-configuration on page 176](#)

---

## 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 8](#)
- [Understanding Junos OS Access Privilege Levels on page 3](#)
- [Configuring Access Privilege Levels on page 15](#)
- [Specifying Access Privileges for Junos OS Operational Mode Commands on page 15](#)

- [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10](#)
- [access-control on page 31](#)

## 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 8](#)
- [Understanding Junos OS Access Privilege Levels on page 3](#)
- [Configuring Access Privilege Levels on page 15](#)
- [Specifying Access Privileges for Junos OS Operational Mode Commands on page 15](#)
- [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10](#)
- [access on page 30](#)

## 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 8](#)
- [Understanding Junos OS Access Privilege Levels on page 3](#)
- [Configuring Access Privilege Levels on page 15](#)
- [Specifying Access Privileges for Junos OS Operational Mode Commands on page 15](#)
- [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10](#)
- [admin-control on page 32](#)

---

**admin-control**

---

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

**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 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]

|                              |  |
|------------------------------|--|
| <b>Related Documentation</b> | <ul style="list-style-type: none"> <li>• <a href="#">Access Privilege User Permission Flags Overview on page 8</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 15</a></li> <li>• <a href="#">Specifying Access Privileges for Junos OS Operational Mode Commands on page 15</a></li> <li>• <a href="#">Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10</a></li> <li>• <a href="#">admin on page 31</a></li> </ul> |
|------------------------------|--|

## all-control

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

|                                       |  |
|---------------------------------------|--|
| <b>Commands</b>                       | All CLI commands.  |
| <b>Configuration Hierarchy Levels</b> | All 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 8</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 15</a></li> <li>• <a href="#">Specifying Access Privileges for Junos OS Operational Mode Commands on page 15</a></li> <li>• <a href="#">Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10</a></li> </ul> |

## clear

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

|                 |   |
|-----------------|---|
| <b>Commands</b> | <pre>clear clear amt clear amt statistics &lt;clear-amt-statistics&gt; clear amt tunnel clear-amt-tunnel clear amt tunnel gateway-address &lt;clear amt tunnel gateway-address&gt; clear amt tunnel statistics &lt;clear-amt-tunnel-statistics&gt; clear amt tunnel statistics gateway-address &lt;clear-amt-tunnel-gateway-address-statistics&gt; clear amt tunnel statistics tunnel-interface &lt;clear-amt-tunnel-interface-statistics&gt; clear amt tunnel tunnel-interface &lt;clear-amt-tunnel-interface&lt;&gt; clear ancp clear ancp neighbor</pre> |
|-----------------|---|

```
<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
clear-ddos-bfdv6-states
clear ddos-protection protocols bfdv6 statistics
clear-ddos-bfdv6-statistics
clear ddos-protection protocols bgp
clear ddos-protection protocols bgp aggregate
clear ddos-protection protocols bgp aggregate states
clear-ddos-bgp-aggregate-states
clear ddos-protection protocols bgp aggregate statistics
clear-ddos-bgp-aggregate-statistics
clear ddos-protection protocols bgp states
clear-ddos-bgp-states
clear ddos-protection protocols bgp statistics
clear-ddos-bgp-statistics
clear ddos-protection protocols bgpv6
clear ddos-protection protocols bgpv6 aggregate
clear ddos-protection protocols bgpv6 aggregate states
clear-ddos-bgpv6-aggregate-states
clear ddos-protection protocols bgpv6 aggregate statistics
clear-ddos-bgpv6-aggregate-statistics
clear ddos-protection protocols bgpv6 states
clear-ddos-bgpv6-states
clear ddos-protection protocols bgpv6 statistics
```

```
clear-ddos-bgpv6-statistics
clear ddos-protection protocols demux-autosense
clear ddos-protection protocols demux-autosense aggregate
clear ddos-protection protocols demux-autosense aggregate states
clear-ddos-demuxauto-aggregate-states
clear ddos-protection protocols demux-autosense aggregate statistics
clear-ddos-demuxauto-aggregate-statistics
clear ddos-protection protocols demux-autosense states
clear-ddos-demuxauto-states
clear ddos-protection protocols demux-autosense statistics
clear-ddos-demuxauto-statistics
clear ddos-protection protocols dhcpv4
clear ddos-protection protocols dhcpv4 ack
clear ddos-protection protocols dhcpv4 ack states
clear-ddos-dhcpv4-ack-states
clear ddos-protection protocols dhcpv4 ack statistics
clear-ddos-dhcpv4-ack-statistics
clear ddos-protection protocols dhcpv4 aggregate
clear ddos-protection protocols dhcpv4 aggregate states
clear-ddos-dhcpv4-aggregate-states
clear ddos-protection protocols dhcpv4 aggregate statistics
clear-ddos-dhcpv4-aggregate-statistics
clear ddos-protection protocols dhcpv4 bad-packets
clear ddos-protection protocols dhcpv4 bad-packets states
clear-ddos-dhcpv4-bad-pack-states
clear ddos-protection protocols dhcpv4 bad-packets statistics
clear-ddos-dhcpv4-bad-pack-statistics
clear ddos-protection protocols dhcpv4 bootp
clear ddos-protection protocols dhcpv4 bootp states
clear-ddos-dhcpv4-bootp-states
clear ddos-protection protocols dhcpv4 bootp statistics
clear-ddos-dhcpv4-bootp-statistics
clear ddos-protection protocols dhcpv4 decline
clear ddos-protection protocols dhcpv4 decline states
clear-ddos-dhcpv4-decline-states
clear ddos-protection protocols dhcpv4 decline statistics
clear-ddos-dhcpv4-decline-statistics
clear ddos-protection protocols dhcpv4 discover
clear ddos-protection protocols dhcpv4 discover states
clear-ddos-dhcpv4-discover-states
clear ddos-protection protocols dhcpv4 discover statistics
clear-ddos-dhcpv4-discover-statistics
clear ddos-protection protocols dhcpv4 force-renew
clear ddos-protection protocols dhcpv4 force-renew states
clear-ddos-dhcpv4-forcerenew-states
clear ddos-protection protocols dhcpv4 force-renew statistics
clear-ddos-dhcpv4-forcerenew-statistics
clear ddos-protection protocols dhcpv4 inform
clear ddos-protection protocols dhcpv4 inform states
clear-ddos-dhcpv4-inform-states
clear ddos-protection protocols dhcpv4 inform statistics
clear-ddos-dhcpv4-inform-statistics
clear ddos-protection protocols dhcpv4 lease-active
clear ddos-protection protocols dhcpv4 lease-active states
clear-ddos-dhcpv4-leaseact-states
clear ddos-protection protocols dhcpv4 lease-active statistics
```



```
clear-ddos-dhcpv4-leaseact-statistics
clear ddos-protection protocols dhcpv4 lease-query
clear ddos-protection protocols dhcpv4 lease-query states
clear-ddos-dhcpv4-leasequery-states
clear ddos-protection protocols dhcpv4 lease-query statistics
clear-ddos-dhcpv4-leasequery-statistics
clear ddos-protection protocols dhcpv4 lease-unassigned
clear ddos-protection protocols dhcpv4 lease-unassigned states
clear-ddos-dhcpv4-leaseuna-states
clear ddos-protection protocols dhcpv4 lease-unassigned statistics
clear-ddos-dhcpv4-leaseuna-statistics
clear ddos-protection protocols dhcpv4 lease-unknown
clear ddos-protection protocols dhcpv4 lease-unknown states
clear-ddos-dhcpv4-leaseunk-states
clear ddos-protection protocols dhcpv4 lease-unknown statistics
clear-ddos-dhcpv4-leaseunk-statistics
clear ddos-protection protocols dhcpv4 nak
clear ddos-protection protocols dhcpv4 nak states
clear-ddos-dhcpv4-nak-states
clear ddos-protection protocols dhcpv4 nak statistics
clear-ddos-dhcpv4-nak-statistics
clear ddos-protection protocols dhcpv4 no-message-type
clear ddos-protection protocols dhcpv4 no-message-type states
clear-ddos-dhcpv4-no-msgtype-states
clear ddos-protection protocols dhcpv4 no-message-type statistics
clear-ddos-dhcpv4-no-msgtype-statistics
clear ddos-protection protocols dhcpv4 offer
clear ddos-protection protocols dhcpv4 offer states
clear-ddos-dhcpv4-offer-states
clear ddos-protection protocols dhcpv4 offer statistics
clear-ddos-dhcpv4-offer-statistics
clear ddos-protection protocols dhcpv4 release
clear ddos-protection protocols dhcpv4 release states
clear-ddos-dhcpv4-release-states
clear ddos-protection protocols dhcpv4 release statistics
clear-ddos-dhcpv4-release-statistics
clear ddos-protection protocols dhcpv4 renew
clear ddos-protection protocols dhcpv4 renew states
clear-ddos-dhcpv4-renew-states
clear ddos-protection protocols dhcpv4 renew statistics
clear-ddos-dhcpv4-renew-statistics
clear ddos-protection protocols dhcpv4 request
clear ddos-protection protocols dhcpv4 request states
clear-ddos-dhcpv4-request-states
clear ddos-protection protocols dhcpv4 request statistics
clear-ddos-dhcpv4-request-statistics
clear ddos-protection protocols dhcpv4 states
clear-ddos-dhcpv4-states
clear ddos-protection protocols dhcpv4 statistics
clear-ddos-dhcpv4-statistics
clear ddos-protection protocols dhcpv4 unclassified
clear ddos-protection protocols dhcpv4 unclassified states
clear-ddos-dhcpv4-unclass-states
clear ddos-protection protocols dhcpv4 unclassified statistics
clear-ddos-dhcpv4-unclass-statistics
clear ddos-protection protocols dhcpv6
```

```
clear ddos-protection protocols dhcpv6 advertise
clear ddos-protection protocols dhcpv6 advertise states
clear-ddos-dhcpv6-advertise-states
clear ddos-protection protocols dhcpv6 advertise statistics
clear-ddos-dhcpv6-advertise-statistics
clear ddos-protection protocols dhcpv6 aggregate
clear ddos-protection protocols dhcpv6 aggregate states
clear-ddos-dhcpv6-aggregate-states
clear ddos-protection protocols dhcpv6 aggregate statistics
clear-ddos-dhcpv6-aggregate-statistics
clear ddos-protection protocols dhcpv6 confirm
clear ddos-protection protocols dhcpv6 confirm states
clear-ddos-dhcpv6-confirm-states
clear ddos-protection protocols dhcpv6 confirm statistics
clear-ddos-dhcpv6-confirm-statistics
clear ddos-protection protocols dhcpv6 decline
clear ddos-protection protocols dhcpv6 decline states
clear-ddos-dhcpv6-decline-states
clear ddos-protection protocols dhcpv6 decline statistics
clear-ddos-dhcpv6-decline-statistics
clear ddos-protection protocols dhcpv6 information-request
clear ddos-protection protocols dhcpv6 information-request states
clear-ddos-dhcpv6-info-req-states
clear ddos-protection protocols dhcpv6 information-request statistics
clear-ddos-dhcpv6-info-req-statistics
clear ddos-protection protocols dhcpv6 leasequery
clear ddos-protection protocols dhcpv6 leasequery states
clear-ddos-dhcpv6-leasequery-states
clear ddos-protection protocols dhcpv6 leasequery statistics
clear-ddos-dhcpv6-leasequery-statistics
clear ddos-protection protocols dhcpv6 leasequery-data
clear ddos-protection protocols dhcpv6 leasequery-data states
clear-ddos-dhcpv6-leaseq-da-states
clear ddos-protection protocols dhcpv6 leasequery-data statistics
clear-ddos-dhcpv6-leaseq-da-statistics
clear ddos-protection protocols dhcpv6 leasequery-done
clear ddos-protection protocols dhcpv6 leasequery-done states
clear-ddos-dhcpv6-leaseq-do-states
clear ddos-protection protocols dhcpv6 leasequery-done statistics
clear-ddos-dhcpv6-leaseq-do-statistics
clear ddos-protection protocols dhcpv6 leasequery-reply
clear ddos-protection protocols dhcpv6 leasequery-reply states
clear-ddos-dhcpv6-leaseq-re-states
clear ddos-protection protocols dhcpv6 leasequery-reply statistics
clear-ddos-dhcpv6-leaseq-re-statistics
clear ddos-protection protocols dhcpv6 rebind
clear ddos-protection protocols dhcpv6 rebind states
clear-ddos-dhcpv6-rebind-states
clear ddos-protection protocols dhcpv6 rebind statistics
clear-ddos-dhcpv6-rebind-statistics
clear ddos-protection protocols dhcpv6 reconfigure
clear ddos-protection protocols dhcpv6 reconfigure states
clear-ddos-dhcpv6-reconfig-states
clear ddos-protection protocols dhcpv6 reconfigure statistics
clear-ddos-dhcpv6-reconfig-statistics
clear ddos-protection protocols dhcpv6 relay-forward
```

clear ddos-protection protocols dhcpv6 relay-forward states  
clear-ddos-dhcpv6-relay-for-states  
clear ddos-protection protocols dhcpv6 relay-forward statistics  
clear-ddos-dhcpv6-relay-for-statistics  
clear ddos-protection protocols dhcpv6 relay-reply  
clear ddos-protection protocols dhcpv6 relay-reply states  
clear-ddos-dhcpv6-relay-rep-states  
clear ddos-protection protocols dhcpv6 relay-reply statistics  
clear-ddos-dhcpv6-relay-rep-statistics  
clear ddos-protection protocols dhcpv6 release  
clear ddos-protection protocols dhcpv6 release states  
clear-ddos-dhcpv6-release-states  
clear ddos-protection protocols dhcpv6 release statistics  
clear-ddos-dhcpv6-release-statistics  
clear ddos-protection protocols dhcpv6 renew  
clear ddos-protection protocols dhcpv6 renew states  
clear-ddos-dhcpv6-renew-states  
clear ddos-protection protocols dhcpv6 renew statistics  
clear-ddos-dhcpv6-renew-statistics  
clear ddos-protection protocols dhcpv6 reply  
clear ddos-protection protocols dhcpv6 reply states  
clear-ddos-dhcpv6-reply-states  
clear ddos-protection protocols dhcpv6 reply statistics  
clear-ddos-dhcpv6-reply-statistics  
clear ddos-protection protocols dhcpv6 request  
clear ddos-protection protocols dhcpv6 request states  
clear-ddos-dhcpv6-request-states  
clear ddos-protection protocols dhcpv6 request statistics  
clear-ddos-dhcpv6-request-statistics  
clear ddos-protection protocols dhcpv6 solicit  
clear ddos-protection protocols dhcpv6 solicit states  
clear-ddos-dhcpv6-solicit-states  
clear ddos-protection protocols dhcpv6 solicit statistics  
clear-ddos-dhcpv6-solicit-statistics  
clear ddos-protection protocols dhcpv6 states  
clear-ddos-dhcpv6-states  
clear ddos-protection protocols dhcpv6 statistics  
clear-ddos-dhcpv6-statistics  
clear ddos-protection protocols dhcpv6 unclassified  
clear ddos-protection protocols dhcpv6 unclassified states  
clear-ddos-dhcpv6-unclass-states  
clear ddos-protection protocols dhcpv6 unclassified statistics  
clear-ddos-dhcpv6-unclass-statistics  
clear ddos-protection protocols diameter  
clear ddos-protection protocols diameter aggregate  
clear ddos-protection protocols diameter aggregate states  
clear-ddos-diameter-aggregate-states  
clear ddos-protection protocols diameter aggregate statistics  
clear-ddos-diameter-aggregate-statistics  
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clear ddos-protection protocols radius authorization
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clear ddos-protection protocols radius server
```

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clear ddos-protection protocols rsvpv6 aggregate

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clear-ddos-snmp-states
```



```
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```
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clear ddos-protection protocols tcp-flags initial statistics
clear-ddos-tcp-flags-initial-statistics
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```

```
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clear-ddos-vchassis-control-lo-states
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clear ddos-protection protocols vrrp aggregate statistics
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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 lockout
< clear-system-login-lockout>

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 8](#)
  - [Understanding Junos OS Access Privilege Levels on page 3](#)
  - [Configuring Access Privilege Levels on page 15](#)
  - [Specifying Access Privileges for Junos OS Operational Mode Commands on page 15](#)
  - [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10](#)

## 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 8](#)
- [Understanding Junos OS Access Privilege Levels on page 3](#)
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- [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10](#)

## 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 8](#)
- [Understanding Junos OS Access Privilege Levels on page 3](#)
- [Configuring Access Privilege Levels on page 15](#)
- [Specifying Access Privileges for Junos OS Operational Mode Commands on page 15](#)
- [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10](#)

## 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 8](#)
- [Understanding Junos OS Access Privilege Levels on page 3](#)

- [Configuring Access Privilege Levels on page 15](#)
- [Specifying Access Privileges for Junos OS Operational Mode Commands on page 15](#)
- [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10](#)

## firewall

---

Can view the firewall filter configuration in configuration mode.

|                                |   |
|--------------------------------|---|
| Commands                       | show firewall   |
|                                | <get-firewall-information>  |
|                                | show firewall counter   |
|                                | <get-firewall-counter-information>  |
|                                | show firewall filter  |
|                                | <get-firewall-filter-information>   |
|                                | show firewall filter version  |
| Configuration Hierarchy Levels | <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>   |
| Related Documentation          | [edit dynamic-profiles firewall]  |
|                                | [edit firewall]   |
|                                | [edit logical-systems firewall]   |
|                                | • <a href="#">Access Privilege User Permission Flags Overview on page 8</a>                           |
|                                | • <a href="#">Understanding Junos OS Access Privilege Levels on page 3</a>                            |
|                                | • <a href="#">Configuring Access Privilege Levels on page 15</a>                                      |
|                                | • <a href="#">Specifying Access Privileges for Junos OS Operational Mode Commands on page 15</a>      |
|                                | • <a href="#">Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10</a> |
|                                | • <a href="#">firewall-control on page 68</a>   |

## firewall-control

---

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

|          |                            |
|----------|----------------------------|
| Commands | show firewall              |
|          | <get-firewall-information> |



|   |   |
|---|---|
|   | show firewall counter<br><get-firewall-counter-information>   |
|   | show firewall filter<br><get-firewall-filter-information>   |
|   | show firewall filter version<br><get-filter-version>  |
|   | show firewall log<br><get-firewall-log-information>   |
|   | show firewall prefix-action-stats<br><get-firewall-prefix-action-information>   |
|   | show policer  |
| <b>Configuration<br/>Hierarchy Levels</b> | [edit dynamic-profiles firewall]<br>[edit firewall]<br>[edit logical-systems firewall]  |
| <b>Related<br/>Documentation</b>          | <ul style="list-style-type: none"> <li>• <a href="#">Access Privilege User Permission Flags Overview on page 8</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 15</a></li> <li>• <a href="#">Specifying Access Privileges for Junos OS Operational Mode Commands on page 15</a></li> <li>• <a href="#">Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10</a></li> <li>• <a href="#">firewall on page 68</a></li> </ul> |

## floppy

|   |  |
|---|--|
|   | Can read from and write to the removable media.  |
| <b>Commands</b>                           | No associated CLI commands.  |
| <b>Configuration<br/>Hierarchy Levels</b> | No associated CLI configuration hierarchy levels and statements.   |
| <b>Related<br/>Documentation</b>          | <ul style="list-style-type: none"> <li>• <a href="#">Access Privilege User Permission Flags Overview on page 8</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 15</a></li> <li>• <a href="#">Specifying Access Privileges for Junos OS Operational Mode Commands on page 15</a></li> <li>• <a href="#">Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10</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> | <code>[edit services flow-tap]</code><br><code>[edit services radius-flow-tap]</code><br><code>[edit system services flow-tap-dtcp]</code>   |
| <b>Related Documentation</b>          | <ul style="list-style-type: none"><li>• <a href="#">Access Privilege User Permission Flags Overview on page 8</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 15</a></li><li>• <a href="#">Specifying Access Privileges for Junos OS Operational Mode Commands on page 15</a></li><li>• <a href="#">Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10</a></li><li>• <a href="#">flow-tap-control on page 70</a></li></ul> |

## flow-tap-control

---

|                                       |  |
|---------------------------------------|--|
|                                       | Can view the flow-tap configuration in configuration mode and can configure flow-tap configuration information at the <code>[edit services flow-tap]</code> , <code>[edit services radius-flow-tap]</code> , and <code>[edit system services flow-tap-dtcp]</code> hierarchy levels.   |
| <b>Commands</b>                       | No associated CLI commands.  |
| <b>Configuration Hierarchy Levels</b> | <code>[edit services flow-tap]</code><br><code>[edit services radius-flow-tap]</code><br><code>[edit system services flow-tap-dtcp]</code>   |
| <b>Related Documentation</b>          | <ul style="list-style-type: none"><li>• <a href="#">Access Privilege User Permission Flags Overview on page 8</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 15</a></li><li>• <a href="#">Specifying Access Privileges for Junos OS Operational Mode Commands on page 15</a></li><li>• <a href="#">Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10</a></li><li>• <a href="#">flow-tap on page 70</a></li></ul> |

## flow-tap-operation

---

Can make flow-tap requests to the router.

|                                       |  |
|---------------------------------------|--|
| <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 8</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 15</a></li> <li>• <a href="#">Specifying Access Privileges for Junos OS Operational Mode Commands on page 15</a></li> <li>• <a href="#">Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10</a></li> </ul> |

## idp-profiler-operation

---

|   |  |
|---|--|
|   | Can view profiler data.  |
| <b>Commands</b>                           | No associated CLI commands.                                      |
| <b>CLI Configuration Hierarchy Levels</b> | No associated CLI configuration hierarchy levels and statements. |

## interface

---

|                                       |   |
|---------------------------------------|---|
|                                       | Can view the interface configuration in configuration mode.   |
| <b>Commands</b>                       | No associated CLI commands.   |
| <b>Configuration Hierarchy Levels</b> | <ul style="list-style-type: none"> <li>[edit accounting-options]</li> <li>[edit chassis]</li> <li>[edit class-of-service]</li> <li>[edit class-of-service interfaces]</li> <li>[edit dynamic-profiles class-of-service]</li> <li>[edit dynamic-profiles class-of-service interfaces]</li> <li>[edit dynamic-profiles interfaces]</li> <li>[edit dynamic-profiles routing-instances instance system services dhcp-local-server]</li> <li>[edit dynamic-profiles routing-instances instance system services static-subscribers group]</li> <li>[edit forwarding-options]</li> <li>[edit interfaces]</li> <li>[edit jnx-example]</li> <li>[edit logical-systems forwarding-options]</li> <li>[edit logical-systems interfaces]</li> <li>[edit logical-systems routing-instances instance system services dhcp-local-server]</li> <li>[edit logical-systems routing-instances instance system services static-subscribers group]</li> <li>[edit logical-systems system services dhcp-local-server]</li> <li>[edit logical-systems system services static-subscribers group]</li> <li>[edit routing-instances instance system services dhcp-local-server]</li> <li>[edit routing-instances instance system services static-subscribers group]</li> <li>[edit services logging]</li> <li>[edit services radius-flow-tap]</li> </ul> |

[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 8](#)
- [Understanding Junos OS Access Privilege Levels on page 3](#)
- [Configuring Access Privilege Levels on page 15](#)
- [Specifying Access Privileges for Junos OS Operational Mode Commands on page 15](#)
- [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10](#)
- [interface-control on page 72](#)

---

## 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 8](#)
  - [Understanding Junos OS Access Privilege Levels on page 3](#)
  - [Configuring Access Privilege Levels on page 15](#)
  - [Specifying Access Privileges for Junos OS Operational Mode Commands on page 15](#)
  - [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10](#)
  - [interface on page 71](#)

## **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 8](#)
- [Understanding Junos OS Access Privilege Levels on page 3](#)
- [Configuring Access Privilege Levels on page 15](#)
- [Specifying Access Privileges for Junos OS Operational Mode Commands on page 15](#)
- [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10](#)

## 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 mrinfo
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 8](#)
  - [Understanding Junos OS Access Privilege Levels on page 3](#)

- [Configuring Access Privilege Levels on page 15](#)
- [Specifying Access Privileges for Junos OS Operational Mode Commands on page 15](#)
- [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10](#)

## 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]<br>[edit services pgcp session-mirroring]  |
| <b>Related Documentation</b>          | <ul style="list-style-type: none"> <li>• <a href="#">Access Privilege User Permission Flags Overview on page 8</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 15</a></li> <li>• <a href="#">Specifying Access Privileges for Junos OS Operational Mode Commands on page 15</a></li> <li>• <a href="#">Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10</a></li> <li>• <a href="#">pgcp-session-mirroring-control on page 81</a></li> </ul> |

## 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]<br>[edit services pgcp session-mirroring]  |
| <b>Related Documentation</b>          | <ul style="list-style-type: none"> <li>• <a href="#">Access Privilege User Permission Flags Overview on page 8</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 15</a></li> <li>• <a href="#">Specifying Access Privileges for Junos OS Operational Mode Commands on page 15</a></li> <li>• <a href="#">Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10</a></li> <li>• <a href="#">pgcp-session-mirroring on page 81</a></li> </ul> |

## 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>                       | <code>request chassis cfeb master switch</code><br><code>request chassis cfeb master switch no-confirm</code><br><code>request chassis routing-engine master acquire</code><br><code>request chassis routing-engine master acquire force</code><br><code>request chassis routing-engine master acquire force no-confirm</code><br><code>request chassis routing-engine master acquire no-confirm</code><br><code>request chassis routing-engine master release</code><br><code>request chassis routing-engine master release no-confirm</code><br><code>request chassis routing-engine master switch</code><br><code>request chassis routing-engine master switch no-confirm</code><br><code>request chassis sfm master switch</code><br><code>request chassis sfm master switch no-confirm</code><br><code>request chassis ssb master switch</code><br><code>request chassis ssb master switch no-confirm</code><br><code>restart</code><br><code>restart kernel-replication</code><br><code>&lt;restart-kernel-replication&gt;</code><br><code>restart-named-service</code><br><code>restart routing</code><br><code>&lt;routing-restart&gt;</code><br><code>restart services</code><br><code>restart services border-signaling-gateway</code><br><code>&lt;restart-border-signaling-gateway-service&gt;</code><br><code>restart services pgcp</code><br><code>&lt;restart-pgcp-service&gt;</code><br><code>restart web-management</code><br><code>&lt;restart-web-management&gt;</code> |
| <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 8</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 15</a></li><li>• <a href="#">Specifying Access Privileges for Junos OS Operational Mode Commands on page 15</a></li><li>• <a href="#">Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10</a></li></ul>   |

---

## rollback

---

|                                       |   |
|---------------------------------------|---|
|                                       | Can roll back to previous configurations.   |
| <b>Commands</b>                       | <code>rollback</code>   |
| <b>Configuration Hierarchy Levels</b> | [edit]  |
| <b>Related Documentation</b>          | <ul style="list-style-type: none"><li>• <a href="#">Access Privilege User Permission Flags Overview on page 8</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 15</a></li></ul> |

- [Specifying Access Privileges for Junos OS Operational Mode Commands on page 15](#)
- [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10](#)

## routing

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

**Commands** No associated CLI commands.

|                                       |  |
|---------------------------------------|--|
| <b>Configuration Hierarchy Levels</b> | <p>[edit bridge-domains]</p> <p>[edit bridge-domains domain multicast-snooping-options]</p> <p>[edit bridge-domains domain multicast-snooping-options traceoptions]</p> <p>[edit dynamic-profiles protocols igmp traceoptions]</p> <p>[edit dynamic-profiles protocols mld traceoptions]</p> <p>[edit dynamic-profiles protocols router-advertisement traceoptions]</p> <p>[edit dynamic-profiles routing-instances]</p> <p>[edit dynamic-profiles routing-instances instance bridge-domains]</p> <p>[edit dynamic-profiles routing-instances instance bridge-domains domain multicast-snooping-options]</p> <p>[edit dynamic-profiles routing-instances instance bridge-domains domain multicast-snooping-options traceoptions]</p> <p>[edit dynamic-profiles routing-instances instance multicast-snooping-options]</p> <p>[edit dynamic-profiles routing-instances instance multicast-snooping-options traceoptions]</p> <p>[edit dynamic-profiles routing-instances instance pbb-options]</p> <p>[edit dynamic-profiles routing-instances instance protocols]</p> <p>[edit dynamic-profiles routing-instances instance protocols bgp group neighbor traceoptions]</p> <p>[edit dynamic-profiles routing-instances instance protocols bgp group traceoptions]</p> <p>[edit dynamic-profiles routing-instances instance protocols bgp traceoptions]</p> <p>[edit dynamic-profiles routing-instances instance protocols esis traceoptions]</p> <p>[edit dynamic-profiles routing-instances instance protocols isis traceoptions]</p> <p>[edit dynamic-profiles routing-instances instance protocols l2vpn traceoptions]</p> <p>[edit dynamic-profiles routing-instances instance protocols ldp traceoptions]</p> <p>[edit dynamic-profiles routing-instances instance protocols msdp group peer traceoptions]</p> <p>[edit dynamic-profiles routing-instances instance protocols msdp group traceoptions]</p> <p>[edit dynamic-profiles routing-instances instance protocols msdp peer traceoptions]</p> <p>[edit dynamic-profiles routing-instances instance protocols msdp traceoptions]</p> <p>[edit dynamic-profiles routing-instances instance protocols mvpn traceoptions]</p> <p>[edit dynamic-profiles routing-instances instance protocols ospf traceoptions]</p> <p>[edit dynamic-profiles routing-instances instance protocols pim traceoptions]</p> <p>[edit dynamic-profiles routing-instances instance protocols rip traceoptions]</p> <p>[edit dynamic-profiles routing-instances instance protocols ripng traceoptions]</p> <p>[edit dynamic-profiles routing-instances instance protocols router-discovery traceoptions]</p> <p>[edit dynamic-profiles routing-instances instance protocols vpls traceoptions]</p> <p>[edit dynamic-profiles routing-instances instance routing-options]</p> <p>[edit dynamic-profiles routing-instances instance routing-options multicast traceoptions]</p> <p>[edit dynamic-profiles routing-instances instance routing-options traceoptions]</p> <p>[edit dynamic-profiles routing-instances instance service-groups]</p> <p>[edit dynamic-profiles routing-instances instance switch-options]</p> <p>[edit dynamic-profiles routing-options multicast traceoptions]</p> <p>[edit jnx-example]</p> |
|---------------------------------------|--|

```
[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]
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[edit logical-systems protocols msdp peer traceoptions]
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[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]
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[edit logical-systems routing-instances instance bridge-domains domain
multicast-snooping-options traceoptions]
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[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]  
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[edit logical-systems routing-instances instance service-groups]  
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[edit logical-systems routing-options traceoptions]  
[edit logical-systems switch-options]  
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[edit policy-options]  
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[edit protocols bgp group traceoptions]  
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[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]  
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[edit protocols l2iw traceoptions]  
[edit protocols ldp traceoptions]  
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[edit protocols mld-host traceoptions]  
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[edit protocols msdp traceoptions]  
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[edit protocols ospf traceoptions]  
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[edit protocols rip traceoptions]  
[edit protocols ripng traceoptions]  
[edit protocols router-advertisement traceoptions]

```
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[edit protocols sflow]
[edit protocols stp]
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[edit protocols vstp]
[edit routing-instances]
[edit routing-instances instance bridge-domains]
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[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 8](#)
- [Understanding Junos OS Access Privilege Levels on page 3](#)
- [Configuring Access Privilege Levels on page 15](#)
- [Specifying Access Privileges for Junos OS Operational Mode Commands on page 15](#)
- [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10](#)
- [routing-control on page 87](#)

## 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.

|                                       |  |
|---------------------------------------|--|
| <b>Configuration Hierarchy Levels</b> | <ul style="list-style-type: none"> <li>[edit bridge-domains]</li> <li>[edit bridge-domains domain multicast-snooping-options]</li> <li>[edit bridge-domains domain multicast-snooping-options traceoptions]</li> <li>[edit dynamic-profiles protocols igmp traceoptions]</li> <li>[edit dynamic-profiles protocols mld traceoptions]</li> <li>[edit dynamic-profiles protocols router-advertisement traceoptions]</li> <li>[edit dynamic-profiles routing-instances]</li> <li>[edit dynamic-profiles routing-instances instance bridge-domains]</li> <li>[edit dynamic-profiles routing-instances instance bridge-domains domain multicast-snooping-options]</li> <li>[edit dynamic-profiles routing-instances instance bridge-domains domain multicast-snooping-options traceoptions]</li> <li>[edit dynamic-profiles routing-instances instance multicast-snooping-options]</li> <li>[edit dynamic-profiles routing-instances instance multicast-snooping-options traceoptions]</li> <li>[edit dynamic-profiles routing-instances instance pbb-options]</li> <li>[edit dynamic-profiles routing-instances instance protocols]</li> <li>[edit dynamic-profiles routing-instances instance protocols bgp group neighbor traceoptions]</li> <li>[edit dynamic-profiles routing-instances instance protocols bgp group traceoptions]</li> <li>[edit dynamic-profiles routing-instances instance protocols bgp traceoptions]</li> <li>[edit dynamic-profiles routing-instances instance protocols esis traceoptions]</li> <li>[edit dynamic-profiles routing-instances instance protocols isis traceoptions]</li> <li>[edit dynamic-profiles routing-instances instance protocols l2vpn traceoptions]</li> <li>[edit dynamic-profiles routing-instances instance protocols ldp traceoptions]</li> <li>[edit dynamic-profiles routing-instances instance protocols msdp group peer traceoptions]</li> <li>[edit dynamic-profiles routing-instances instance protocols msdp group traceoptions]</li> <li>[edit dynamic-profiles routing-instances instance protocols msdp peer traceoptions]</li> <li>[edit dynamic-profiles routing-instances instance protocols msdp traceoptions]</li> <li>[edit dynamic-profiles routing-instances instance protocols mvpn traceoptions]</li> <li>[edit dynamic-profiles routing-instances instance protocols ospf traceoptions]</li> <li>[edit dynamic-profiles routing-instances instance protocols pim traceoptions]</li> <li>[edit dynamic-profiles routing-instances instance protocols rip traceoptions]</li> <li>[edit dynamic-profiles routing-instances instance protocols ripng traceoptions]</li> <li>[edit dynamic-profiles routing-instances instance protocols router-discovery traceoptions]</li> <li>[edit dynamic-profiles routing-instances instance protocols vpls traceoptions]</li> <li>[edit dynamic-profiles routing-instances instance routing-options]</li> <li>[edit dynamic-profiles routing-instances instance routing-options multicast traceoptions]</li> <li>[edit dynamic-profiles routing-instances instance routing-options traceoptions]</li> <li>[edit dynamic-profiles routing-instances instance service-groups]</li> <li>[edit dynamic-profiles routing-instances instance switch-options]</li> <li>[edit dynamic-profiles routing-options multicast traceoptions]</li> <li>[edit jnx-example]</li> <li>[edit fabric protocols]</li> </ul> |
|---------------------------------------|--|

```
[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]
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[edit logical-systems protocols msdp traceoptions]
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[edit logical-systems protocols ripng traceoptions]
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[edit logical-systems protocols router-discovery traceoptions]
[edit logical-systems protocols rsvp traceoptions]
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[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 8](#)
- [Understanding Junos OS Access Privilege Levels on page 3](#)
- [Configuring Access Privilege Levels on page 15](#)
- [Specifying Access Privileges for Junos OS Operational Mode Commands on page 15](#)
- [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10](#)
- [routing on page 83](#)

## 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 8](#)
- [Understanding Junos OS Access Privilege Levels on page 3](#)

- [Configuring Access Privilege Levels on page 15](#)
- [Specifying Access Privileges for Junos OS Operational Mode Commands on page 15](#)
- [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10](#)
- [secret-control on page 92](#)

---

## secret-control

---

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

**Commands** No associated CLI commands.

|                                       |   |
|---------------------------------------|---|
| <b>Configuration Hierarchy Levels</b> | <pre>[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]</pre> |
|---------------------------------------|---|



[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 8](#)
- [Understanding Junos OS Access Privilege Levels on page 3](#)
- [Configuring Access Privilege Levels on page 15](#)
- [Specifying Access Privileges for Junos OS Operational Mode Commands on page 15](#)
- [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10](#)
- [secret on page 91](#)

## 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
```

|                                   |   |
|-----------------------------------|---|
|                                   | <pre>&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> |
| Configuration<br>Hierarchy Levels | <pre>[edit security] [edit security alarms] [edit security log]</pre>   |
| Related<br>Documentation          | <ul style="list-style-type: none"><li>• <a href="#">Access Privilege User Permission Flags Overview on page 8</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 15</a></li><li>• <a href="#">Specifying Access Privileges for Junos OS Operational Mode Commands on page 15</a></li><li>• <a href="#">Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10</a></li><li>• <a href="#">security-control on page 96</a></li></ul>  |

---

## 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>

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>
show security pki local-certificate
  <get-pki-local-certificate>

```

**Configuration  
Hierarchy Levels**

```

[edit security]
[edit security alarms]
[edit security log]

```

**Related  
Documentation**

- [Access Privilege User Permission Flags Overview on page 8](#)
- [Understanding Junos OS Access Privilege Levels on page 3](#)
- [Configuring Access Privilege Levels on page 15](#)
- [Specifying Access Privileges for Junos OS Operational Mode Commands on page 15](#)
- [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10](#)

- [security on page 93](#)

---

## shell

---

Can start a local shell on the router.

|                                       |  |
|---------------------------------------|--|
| <b>Commands</b>                       | <code>start shell</code><br><code>start shell user</code>  |
| <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 8</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 15</a></li><li>• <a href="#">Specifying Access Privileges for Junos OS Operational Mode Commands on page 15</a></li><li>• <a href="#">Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10</a></li></ul> |

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## snmp

---

Can view Simple Network Management Protocol (SNMP) configuration.

|                                       |  |
|---------------------------------------|--|
| <b>Commands</b>                       | No associated CLI commands.  |
| <b>Configuration Hierarchy Levels</b> | <code>[edit snmp]</code>   |
| <b>Related Documentation</b>          | <ul style="list-style-type: none"><li>• <a href="#">Access Privilege User Permission Flags Overview on page 8</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 15</a></li><li>• <a href="#">Specifying Access Privileges for Junos OS Operational Mode Commands on page 15</a></li><li>• <a href="#">Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10</a></li><li>• <code>snmp-control</code></li></ul> |

---

## system

---

Can view system-level configuration information.

|                 |   |
|-----------------|---|
| <b>Commands</b> | <code>request chassis synchronization</code><br><code>request chassis synchronization force</code><br><code>request chassis synchronization force automatic-switching</code><br><code>request chassis synchronization force mark-failed</code><br><code>request chassis synchronization force unmark-failed</code><br><code>request chassis synchronization switch</code> |
|-----------------|---|



## Configuration Hierarchy Levels

```
[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-rollback]
[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 8](#)
- [Understanding Junos OS Access Privilege Levels on page 3](#)
- [Configuring Access Privilege Levels on page 15](#)
- [Specifying Access Privileges for Junos OS Operational Mode Commands on page 15](#)
- [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10](#)
- [system-control on page 102](#)

---

## system-control

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

**Configuration Hierarchy Levels**

```
[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 poe]
[edit routing-instances instance forwarding-options helpers bootp]
[edit routing-instances instance forwarding-options helpers domain]
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[edit services]
[edit services ggsn charging charging-log traceoptions]
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[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]
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[edit system internet-options no-tcp-rfc1323-paws]
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[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 8](#)
  - [Understanding Junos OS Access Privilege Levels on page 3](#)

- [Configuring Access Privilege Levels on page 15](#)
- [Specifying Access Privileges for Junos OS Operational Mode Commands on page 15](#)
- [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10](#)
- [system on page 100](#)

---

## 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

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[edit bridge-domains domain protocols igmp-snooping]
[edit bridge-domains domain forwarding-options dhcp-relay traceoptions]
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traceoptions]
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[edit services l2tp traceoptions]
[edit services server-load-balance traceoptions]
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- Related Documentation**
- [Access Privilege User Permission Flags Overview on page 8](#)
  - [Understanding Junos OS Access Privilege Levels on page 3](#)
  - [Configuring Access Privilege Levels on page 15](#)
  - [Specifying Access Privileges for Junos OS Operational Mode Commands on page 15](#)
  - [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10](#)
  - [trace-control on page 109](#)

## trace-control

Can modify trace file settings and configure trace file properties

### Configuration Hierarchy Levels

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 [dynamic-profiles protocols oam ethernet lmi]  
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 [edit dynamic-profiles routing-instances instance bridge-domains domain protocols igmp-snooping traceoptions]  
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[edit routing-instances instance protocols msdp group traceoptions]  
[edit routing-instances instance protocols msdp peer traceoptions]  
[edit routing-instances instance protocols msdp traceoptions]  
[edit routing-instances instance protocols mvpn traceoptions]  
[edit routing-instances instance protocols ospf traceoptions]  
[edit routing-instances instance protocols pim traceoptions]  
[edit routing-instances instance protocols rip traceoptions]  
[edit routing-instances instance protocols ripng traceoptions]  
[edit routing-instances instance protocols router-discovery traceoptions]  
[edit routing-instances instance protocols vpls traceoptions]  
[edit routing-instances instance routing-options multicast traceoptions]  
[edit routing-instances instance routing-options traceoptions]  
[edit routing-instances instance system services dhcp-local-server interface-traceoptions]  
[edit routing-instances instance system services dhcp-local-server traceoptions]  
[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 system ddos-protection traceoptions]  
[edit services l2tp traceoptions]  
[edit services logging traceoptions]  
[edit services mobile-ip traceoptions]  
[edit services server-load-balance traceoptions]  
[edit services ssl traceoptions]  
[edit system accounting traceoptions]  
[edit system auto-configuration traceoptions]  
[edit system license traceoptions]  
[edit system processes datapath-trace-service traceoptions]  
[edit system processes diameter-service traceoptions]  
[edit system processes general-authentication-service traceoptions]  
[edit system processes mac-validation traceoptions]  
[edit system processes process-monitor traceoptions]  
[edit system processes resource-cleanup traceoptions]  
[edit system processes sdk-service traceoptions]  
[edit system processes static-subscribers traceoptions]  
[edit system services database-replication traceoptions]  
[edit system services dhcp traceoptions]  
[edit system services dhcp-local-server traceoptions]  
[edit system services dhcp-local-server interface-traceoptions]  
[edit system services local-policy-decision-function traceoptions]  
[edit system services outbound-ssh traceoptions]  
[edit system services service-deployment traceoptions]  
[edit system services subscriber-management traceoptions]  
[edit system services subscriber-management-helper traceoptions]

**Related Documentation**

- [Access Privilege User Permission Flags Overview on page 8](#)
- [Understanding Junos OS Access Privilege Levels on page 3](#)
- [Configuring Access Privilege Levels on page 15](#)
- [Specifying Access Privileges for Junos OS Operational Mode Commands on page 15](#)
- [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10](#)
- [trace on page 104](#)

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**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>
```

```
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
```

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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
```



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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>
```

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<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>
```

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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>
```



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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
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<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
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<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

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<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
```



<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-ptp-clock>
show ptp global-information
  get-ptp-global-information>
show ptp hybrid
show ptp hybrid config
  <get-ptp-hybrid-mapping>
show ptp hybrid status
  <get-ptp-hybrid-status>
show ptp last-tod-update
  <get-last-tod-update>
```

```
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>
```

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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
```

```
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
```

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

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

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

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

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

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

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

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

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

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

show services local-policy-decision-function
show services local-policy-decision-function flows
show services local-policy-decision-function flows interface
  <get-local-policy-decision-function-flows-interface>
show services local-policy-decision-function flows subscriber
  <get-local-policy-decision-function-flows-subscriber>
show services local-policy-decision-function statistics
show services local-policy-decision-function statistics interface
  <get-local-policy-decision-function-statistics-interface>
show services local-policy-decision-function statistics subscriber
```

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<get-local-policy-decision-function-statistics-subscriber>
show services logging
show services logging history
show services logging history client
show services logging logfiles
show services nat
show services nat ipv6-multicast-interfaces
  <get-service-nat-ipv6-multicast-information>

show services nat deterministic-nat
show services nat deterministic-nat internal-host
show services nat deterministic-nat nat-port-block
show services nat mappings
  <get-service-nat-mapping-address-pooling-paired>
show services nat mappings brief
  <get-service-nat-mapping-brief>
show services nat mappings detail
show services nat mappings endpoint-independent
  <get-service-nat-mapping-endpoint-independent>
show services nat mappings brief
  <get-service-nat-mapping-brief>
show services nat mappings detail
  <get-service-nat-mapping-detail>
show services nat mappings summary
  <get-service-nat-mapping-summary>
show services nat pool
  <get-service-nat-pool-information>

show services pgcp
show services pgcp active-configuration
  <get-pgcpd-active-configuration>

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

show services rpm twamp
  <twamp-information>
show services rpm twamp server
  <twamp-server-information>
show services rpm twamp server connection
  <twamp-server-connection-information>
show services rpm twamp server session
  <twamp-server-session-information>
show services server-load-balance
show services server-load-balance external-manager
show services server-load-balance external-manager information
show services server-load-balance external-manager statistics
  <get-external-manager-statistics-information>
show services server-load-balance hash-table
  <get-hash-table-information>
show services server-load-balance health-monitor
show services server-load-balance health-monitor information
  <get-real-server-health-monitor-information>
show services server-load-balance health-monitor statistics
  <get-real-server-health-monitor-statistics-information>
show services server-load-balance real-server
show services server-load-balance real-server statistics
  <get-real-server-statistics-information>
show services server-load-balance real-server-group
show services server-load-balance real-server-group information
```

```
<get-real-server-group-information>
show services server-load-balance real-server-group statistics
<get-real-server-group-statistics-information>
show services server-load-balance sticky
<get-sticky-table-information>
show services server-load-balance virtual-server
show services server-load-balance virtual-server information
<get-virtual-server-information>
show services server-load-balance virtual-server statistics
<get-virtual-server-statistics-information>
show services service-identification
show services service-identification header-redirect
show services service-identification header-redirect statistics
<get-header-redirect-set-statistics-information>

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

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

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

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

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

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

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

show services service-sets summary
<get-service-set-summary-information>

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

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

show services software flows
<get-service-fwnat-flow-table-information>

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

show services stateful-firewall flows
  <get-service-sfw-flow-table-information>
show services stateful-firewall redundancy-statistics
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[edit logical-systems services mobile-ip home-agent enable-service]
[edit routing-instances instance services mobile-ip home-agent enable-service]
[edit services mobile-ip home-agent enable-service]
```

**Related  
Documentation**

- [Access Privilege User Permission Flags Overview on page 8](#)
- [Understanding Junos OS Access Privilege Levels on page 3](#)
- [Configuring Access Privilege Levels on page 15](#)
- [Specifying Access Privileges for Junos OS Operational Mode Commands on page 15](#)
- [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10](#)

---

**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 8](#)
  - [Understanding Junos OS Access Privilege Levels on page 3](#)
  - [Configuring Access Privilege Levels on page 15](#)
  - [Specifying Access Privileges for Junos OS Operational Mode Commands on page 15](#)
  - [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 10](#)



## PART 3

# Administration

- [Operational Mode Commands on page 181](#)





## CHAPTER 5

# Operational Mode Commands

## show cli authorization

**Syntax** show cli authorization

**Release Information** Command introduced before Junos OS Release 7.4.

**Description** Display the permissions for the current user.

```
user@host> show cli authorization
Current user: 'root' login: 'boojum' class '(root)'
Permissions:
Permissions:
  admin          -- Can view user accounts
  admin-control-- Can modify user accounts
  clear          -- Can clear learned network info
  configure      -- Can enter configuration mode
  control        -- Can modify any config
  edit           -- Can edit full files
  field          -- Can use field debug commands
  floppy         -- Can read and write the floppy
  interface      -- Can view interface configuration
  interface-control-- Can modify interface configuration
  network        -- Can access the network
  reset          -- Can reset/restart interfaces and daemons
  routing        -- Can view routing configuration
  routing-control-- Can modify routing configuration
  shell          -- Can start a local shell
  snmp           -- Can view SNMP configuration
  snmp-control-- Can modify SNMP configuration
  system         -- Can view system configuration
  system-control-- Can modify system configuration
  trace          -- Can view trace file settings
  trace-control-- Can modify trace file settings
  view           -- Can view current values and statistics
  maintenance    -- Can become the super-user
  firewall       -- Can view firewall configuration
  firewall-control-- Can modify firewall configuration
  secret         -- Can view secret statements
  secret-control-- Can modify secret statements
  rollback       -- Can rollback to previous configurations
  security       -- Can view security configuration
  security-control-- Can modify security configuration
  access         -- Can view access configuration
  access-control-- Can modify access configuration
  view-configuration-- Can view all configuration (not including secrets)
  flow-tap       -- Can view flow-tap configuration
  flow-tap-control-- Can modify flow-tap configuration
  idp-profiler-operation-- Can Profiler data
  pgcp-session-mirroring-- Can view pgcp session mirroring configuration
  pgcp-session-mirroring-control-- Can modify pgcp session mirroring configuration
  storage        -- Can view fibre channel storage protocol configuration
  storage-control-- Can modify fibre channel storage protocol configuration
  all-control    -- Can modify any configuration
```

**Required Privilege Level** view

- Related Documentation**
- [show cli](#)
  - [show cli directory](#)



## PART 4

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