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Junos<sup>®</sup> OS

## Access Privilege Configuration Guide

Release  
11.2



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# About This Guide

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

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

## Junos OS Documentation and Release Notes

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

If the information in the latest release notes differs from the information in the documentation, follow the *Junos OS Release Notes*.

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

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## Objectives

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

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



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

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

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

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## Audience

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

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

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## Supported Platforms

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

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

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## Documentation Conventions

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

Table 1: Notice Icons




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

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

Table 2: Text and Syntax Conventions

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

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

Convention	Description	Examples
(pipe symbol)	Indicates a choice between the mutually exclusive keywords or variables on either side of the symbol. The set of choices is often enclosed in parentheses for clarity.	<b>broadcast   multicast</b>  <i>(string1   string2   string3)</i>
# (pound sign)	Indicates a comment specified on the same line as the configuration statement to which it applies.	<b>rsvp { # Required for dynamic MPLS only</b>
[ ] (square brackets)	Enclose a variable for which you can substitute one or more values.	<b>community name members [ community-ids ]</b>
Indentation and braces ( { } )	Identify a level in the configuration hierarchy.	<b>[edit]</b> <b>routing-options {</b> <b>static {</b> <b>route default {</b> <b>nexthop address;</b> <b>retain;</b> <b>}</b> <b>}</b> <b>}</b>
;(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> .

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- Document or topic name
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- Product warranties—For product warranty information, visit <http://www.juniper.net/support/warranty/> .
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- 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/>
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- Open a case online in the CSC Case Management tool: <http://www.juniper.net/cm/>

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



## PART 1

# Configuring Access Privileges

- [Configuring and Customizing Access Privileges on page 3](#)
- [User Permission Flags on page 17](#)



## CHAPTER 1

# Configuring and Customizing Access Privileges

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

- Junos OS Access Privilege Levels Overview on page 3
- Configuring Access Privilege Levels on page 9
- Example: Configuring Access Privilege Levels on page 9
- Specifying Access Privileges for Junos OS Operational Mode Commands on page 9
- Example: Configuring Access Privileges for Operational Mode Commands on page 11
- Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 12
- Example: Specifying Access Privileges Using Allow or Deny Configuration with Regular Expressions on page 12

## Junos OS Access Privilege Levels Overview

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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 4
- Allowing or Denying Individual Commands for Junos OS Login Classes on page 7

## Junos OS Login Class Permission Flags

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

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

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

**Table 3: Login Class Permission Flags**

Permission Flag	Description
<b>access</b>	Can view the access configuration in configuration mode and with the <b>show configuration</b> operational mode command.
<b>access-control</b>	Can view and configure access information at the <b>[edit access]</b> hierarchy level.
<b>admin</b>	Can view user account information in configuration mode and with the <b>show configuration</b> operational mode command.
<b>admin-control</b>	Can view user accounts and configure them at the <b>[edit system login]</b> hierarchy level.
<b>all</b>	Has all permissions.
<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.

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

Permission Flag	Description
<b>floppy</b>	Can read from and write to the removable media.
<b>flow-tap</b>	Can view the flow-tap configuration in configuration mode.
<b>flow-tap-control</b>	Can view the flow-tap configuration in configuration mode and can configure flow-tap configuration information at the <b>[edit services flow-tap]</b> hierarchy level.
<b>flow-tap-operation</b>	<p>Can make flow-tap requests to the router or switch. For example, a Dynamic Tasking Control Protocol (DTCP) client must authenticate itself to the Junos OS as an administrative user. That account must have <b>flow-tap-operation</b> permission.</p> <p><b>NOTE:</b> The <b>flow-tap-operation</b> option is not included in the <b>all</b> permissions flag.</p>
<b>interface</b>	Can view the interface configuration in configuration mode and with the <b>show configuration</b> operational mode command.
<b>interface-control</b>	<p>Can view chassis, class of service (CoS), groups, forwarding options, and interfaces configuration information. Can edit configuration at the following hierarchy levels:</p> <ul style="list-style-type: none"> <li>• <b>[edit chassis]</b></li> <li>• <b>[edit class-of-service]</b></li> <li>• <b>[edit groups]</b></li> <li>• <b>[edit forwarding-options]</b></li> <li>• <b>[edit interfaces]</b></li> </ul>
<b>maintenance</b>	Can perform system maintenance, including starting a local shell on the router and becoming the superuser in the shell by using the <b>su root</b> command, and can halt and reboot the router by using the <b>request system</b> commands.
<b>network</b>	Can access the network by using the <b>ping</b> , <b>ssh</b> , <b>telnet</b> , and <b>traceroute</b> commands.
<b>pgcp-session-mirroring</b>	Can view <b>pgcp</b> session mirroring configuration.
<b>pgcp-session-mirroring-control</b>	Can modify <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.

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

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



---

**NOTE:**

- The all login class permission bits take precedence over extended regular expressions when a user with rollback permission issues the rollback command.
- Expressions used to allow and deny commands for users on RADIUS/TACACS+ servers have been simplified. Instead of a single, long expression with multiple commands (`allow-commands=cmd1 cmd2 ... cmdn`), you can specify each command as a separate expression. This new syntax is valid for `allow-configuration-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`.

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**Related Documentation**

- [Configuring Access Privilege Levels on page 9](#)

## Configuring Access Privilege Levels

Each top-level command-line interface (CLI) command and each configuration statement has 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 9
- Junos OS Access Privilege Levels Overview on page 3
- Specifying Access Privileges for Junos OS Operational Mode Commands on page 9
- Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 12
- Specifying Access Privileges for Junos OS Configuration Mode Hierarchies
- permissions
- permissions

## Example: Configuring Access Privilege Levels

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

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

### Related Documentation

- Configuring Access Privilege Levels on page 9

## Specifying Access Privileges for Junos OS Operational Mode Commands

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

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

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

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

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

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

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



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

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

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

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

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

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

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

is the longest match between **commit** and **commit-synchronize** and it is specified for **allow-commands**.

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

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

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

#### Related Documentation

- Example: Configuring Access Privileges for Operational Mode Commands on page 11
- Regular Expressions for Allowing and Denying Junos OS Operational Mode Commands
- allow-commands
- deny-commands
- allow-commands
- deny-commands

## Example: Configuring Access Privileges for Operational Mode Commands

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

```
[edit]
system {
  # This login class has operator privileges and the additional ability
  # to reboot the router.
  login {
    # This login class has operator privileges and the additional ability to reboot the
    # router 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 9

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## Specifying Access Privileges for Junos OS Configuration Mode Hierarchies

The **allow-configuration-regexps** and **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. The expressions are listed as a string with regular separators, such as white space or other regular expression delimiters. Each login class is assigned to specific users or user IDs.

You can include one **allow-configuration-regexps** and one **deny-configuration-regexps** statement in each login class. Access privileges configured using these statements override permissions set for a login class. If both of these statements are included in a class and there is overlap in the regular expressions defined for them, expressions denied with **deny-configuration-regexps** take precedence over expressions allowed with **allow-configuration-regexps**. You can configure as many regular expressions as needed to be allowed or denied in each class. Although every environment is different, as many as 3000 expressions have been configured in a test environment, and issuing a **show | compare rollback** command has taken only seconds to complete. You can use **allow-configuration-regexps** and **deny-configuration-regexps** configuration privileges statements in the same class with the **allow-commands** and **deny-commands** operational privileges statements.

These statements give the system administrator precise control over who can change specific configurations in the system.

**Related  
Documentation**

- Example: Specifying Access Privileges Using Allow or Deny Configuration with Regular Expressions on page 12

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### Example: Specifying Access Privileges Using Allow or Deny Configuration with Regular Expressions

- Requirements on page 13
- Overview on page 13
- Configuration on page 13
- Examples Using Allow or Deny Configurations with Regular Expressions on page 14

## Requirements

The minimum requirement for this feature is one Juniper Networks J Series, M Series, MX Series, or T Series device running Junos OS Release 11.2 or later, with 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 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. The expressions are listed as a string with regular separators, such as white space or other regular delimiters. Each login class is assigned to specific users or user IDs.

You can include one **deny-configuration-regexps** and one **allow-configuration-regexps** statement in each login class. Access privileges configured using these statements override permissions set for a login class. If both of these statements are included in a class and there is overlap in the regular expressions defined for them, expressions denied with **deny-configuration-regexps** take precedence over expressions allowed with **allow-configuration-regexps**. You can configure as many regular expressions as needed to be allowed or denied in each class. Although every environment is different, as many as 3000 expressions have been configured in a test environment, and issuing a **show | compare rollback** command took only seconds to complete. You can use **allow-configuration-regexps** and **deny-configuration-regexps** configuration privileges statements in the same class with the **allow-commands** and **deny-commands** operational privileges statements.

These statements give the system administrator precision control over who can change specific configurations in the system.

## Configuration

This procedure shows basic steps for setting up configuration access privileges using **allow-configuration-regexps** and **deny-configuration-regexps**.

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 **system login class** or the **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 **system** and **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";  
    }  
}  
}
```

**Verifying Access Privileges**

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**

- Example: Configuring Access Privilege Levels on page 9
- Junos OS Access Privilege Levels Overview on page 3
- Specifying Access Privileges for Junos OS Operational Mode Commands on page 9

## CHAPTER 2

# User Permission Flags

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

- Access Privilege User Permission Flags Overview on page 18
- access on page 19
- admin on page 20
- clear on page 20
- configure on page 72
- control on page 72
- field on page 72
- firewall on page 73
- flow-tap on page 74
- flow-tap-operation on page 74
- interface on page 74
- maintenance on page 75
- network on page 81
- pgcp-session-mirroring on page 82
- reset on page 83
- rollback on page 83
- routing on page 84
- security on page 87
- shell on page 90
- snmp on page 91
- system on page 91
- trace on page 93
- view on page 98
- view-configuration on page 172

## Access Privilege User Permission Flags Overview

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

For permission flags that grant access to configuration statements, the 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 statements for which that flag grants access.



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

### Related Documentation

- Junos OS Access Privilege Levels Overview on page 3
- access on page 19
- admin on page 20
- clear on page 20
- configure on page 72
- control on page 72
- field on page 72
- firewall on page 73
- flow-tap on page 74
- flow-tap-operation on page 74
- interface on page 74
- maintenance on page 75
- network on page 81
- pgcp-session-mirroring on page 82
- reset on page 83
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- routing on page 84

- security on page 87
- shell on page 90
- snmp on page 91
- system on page 91
- trace on page 93
- view on page 98
- view-configuration on page 172

## access

Can view the access configuration in configuration mode.

**Commands** No associated CLI commands.

### Statements

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

### Related Documentation

- Access Privilege User Permission Flags Overview on page 18
- Junos OS Access Privilege Levels Overview on page 3
- Configuring Access Privilege Levels on page 9
- Specifying Access Privileges for Junos OS Operational Mode Commands on page 9
- Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 12

## admin

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Can view user account information in configuration mode.

**Commands**      `show system audit`

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

- Related Documentation**
- Access Privilege User Permission Flags Overview on page 18
  - Junos OS Access Privilege Levels Overview on page 3
  - Configuring Access Privilege Levels on page 9
  - Specifying Access Privileges for Junos OS Operational Mode Commands on page 9
  - Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 12

## clear

---

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

**Commands**      `clear`  
`clear amt`  
`clear amt statistics`  
`clear amt tunnel`  
`clear amt tunnel gateway-address`  
`clear amt tunnel statistics`  
`clear amt tunnel statistics gateway-address`  
`clear amt tunnel statistics tunnel-interface`  
`clear amt tunnel tunnel-interface`  
`clear ancp`  
`clear ancp neighbor`  
`<clear-ancp-neighbor-connection>`  
  
`clear ancp subscriber`  
`clear ancp subscriber identifier`  
`<clear-ancp-subscriber-identifier-information>`  
  
`clear arp`  
`<clear-arp-table>`

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

clear bgp neighbor
  <clear-bgp-neighbor>

clear bgp table
  <clear-bgp-table>

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

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

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

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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  
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clear ddos-protection protocols dhcpv4 lease-unassigned statistics  
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clear ddos-protection protocols dhcpv4 lease-unknown

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clear ddos-protection protocols dhcpv4 lease-unknown statistics  
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clear ddos-protection protocols dhcpv4 nak

clear ddos-protection protocols dhcpv4 nak states  
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clear ddos-protection protocols dhcpv4 nak statistics  
clear-ddos-dhcpv4-nak-statistics

clear ddos-protection protocols dhcpv4 no-message-type

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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  
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clear ddos-protection protocols dhcpv4 request

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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  
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clear ddos-protection protocols dhcpv6 advertise statistics  
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clear ddos-protection protocols dhcpv6 aggregate

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clear-ddos-dhcpv6-aggregate-states

clear ddos-protection protocols dhcpv6 aggregate statistics  
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clear ddos-protection protocols dhcpv6 confirm

clear ddos-protection protocols dhcpv6 confirm states  
clear-ddos-dhcpv6-confirm-states

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clear ddos-protection protocols dhcpv6 decline

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clear ddos-protection protocols dhcpv6 information-request

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```

```
clear ddos-protection protocols dhcpv6 leasequery
```

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clear ddos-protection protocols dhcpv6 leasequery-data
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clear ddos-protection protocols dhcpv6 leasequery-reply
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clear ddos-protection protocols dhcpv6 rebind
```

clear ddos-protection protocols dhcpv6 rebind states  
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clear ddos-protection protocols dhcpv6 release

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clear-ddos-dhcpv6-statistics

clear ddos-protection protocols dhcpv6 unclassified

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clear-ddos-dhcpv6-unclass-states

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clear-ddos-dhcpv6-unclass-statistics

clear ddos-protection protocols diameter

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clear-ddos-esmc-states

clear ddos-protection protocols esmc statistics  
clear-ddos-esmc-statistics

clear ddos-protection protocols firewall-host

clear ddos-protection protocols firewall-host aggregate

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clear-ddos-fw-host-states

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clear-ddos-fw-host-statistics

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clear-ddos-fw-reject-statistics

clear ddos-protection protocols ftp

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clear-ddos-ftp-statistics

clear ddos-protection protocols ftpv6

clear ddos-protection protocols ftpv6 aggregate

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clear-ddos-gre-statistics

clear ddos-protection protocols icmp

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clear-ddos-igmp-states
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clear-ddos-igmp-snoop-states
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clear ddos-protection protocols igmpv4v6
```

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clear ddos-protection protocols igmpv4v6 aggregate statistics  
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clear ddos-protection protocols igmpv4v6 states  
clear-ddos-igmpv4v6-states

clear ddos-protection protocols igmpv4v6 statistics  
clear-ddos-igmpv4v6-statistics

clear ddos-protection protocols igmpv6

clear ddos-protection protocols igmpv6 aggregate

clear ddos-protection protocols igmpv6 aggregate states  
clear-ddos-igmpv6-aggregate-states

clear ddos-protection protocols igmpv6 aggregate statistics  
clear-ddos-igmpv6-aggregate-statistics

clear ddos-protection protocols igmpv6 states  
clear-ddos-igmpv6-states

clear ddos-protection protocols igmpv6 statistics  
clear-ddos-igmpv6-statistics

clear ddos-protection protocols ip-fragments

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clear-ddos-ip-frag-aggregate-states

clear ddos-protection protocols ip-fragments aggregate statistics  
clear-ddos-ip-frag-aggregate-statistics

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```
clear ddos-protection protocols ip-fragments first-fragment states
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```

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clear ddos-protection protocols ip-fragments first-fragment statistics
clear-ddos-ip-frag-first-frag-statistics
```

```
clear ddos-protection protocols ip-fragments states
clear-ddos-ip-frag-states
```

```
clear ddos-protection protocols ip-fragments statistics
clear-ddos-ip-frag-statistics
```

```
clear ddos-protection protocols ip-fragments trail-fragment
```

```
clear ddos-protection protocols ip-fragments trail-fragment states
clear-ddos-ip-frag-trail-frag-states
```

```
clear ddos-protection protocols ip-fragments trail-fragment statistics
clear-ddos-ip-frag-trail-frag-statistics
```

```
clear ddos-protection protocols ip-options
```

```
clear ddos-protection protocols ip-options aggregate
```

```
clear ddos-protection protocols ip-options aggregate states
clear-ddos-ip-opt-aggregate-states
```

```
clear ddos-protection protocols ip-options aggregate statistics
clear-ddos-ip-opt-aggregate-statistics
```

```
clear ddos-protection protocols ip-options router-alert
```

```
clear ddos-protection protocols ip-options router-alert states
clear-ddos-ip-opt-rt-alert-states
```

```
clear ddos-protection protocols ip-options router-alert statistics
clear-ddos-ip-opt-rt-alert-statistics
```

```
clear ddos-protection protocols ip-options states
clear-ddos-ip-opt-states
```

clear ddos-protection protocols ip-options statistics  
clear-ddos-ip-opt-statistics

clear ddos-protection protocols ip-options unclassified

clear ddos-protection protocols ip-options unclassified states  
clear-ddos-ip-opt-unclass-states

clear ddos-protection protocols ip-options unclassified statistics  
clear-ddos-ip-opt-unclass-statistics

clear ddos-protection protocols ipv4-unclassified

clear ddos-protection protocols ipv4-unclassified aggregate

clear ddos-protection protocols ipv4-unclassified aggregate states  
clear-ddos-ipv4-uncls-aggregate-states

clear ddos-protection protocols ipv4-unclassified aggregate statistics  
clear-ddos-ipv4-uncls-aggregate-statistics

clear ddos-protection protocols ipv4-unclassified states  
clear-ddos-ipv4-uncls-states

clear ddos-protection protocols ipv4-unclassified statistics  
clear-ddos-ipv4-uncls-statistics

clear ddos-protection protocols ipv6-unclassified

clear ddos-protection protocols ipv6-unclassified aggregate

clear ddos-protection protocols ipv6-unclassified aggregate states  
clear-ddos-ipv6-uncls-aggregate-states

clear ddos-protection protocols ipv6-unclassified aggregate statistics  
clear-ddos-ipv6-uncls-aggregate-statistics

clear ddos-protection protocols ipv6-unclassified states  
clear-ddos-ipv6-uncls-states

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clear ddos-protection protocols ipv6-unclassified statistics
clear-ddos-ipv6-uncls-statistics
```

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clear ddos-protection protocols isis
```

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clear ddos-protection protocols isis aggregate
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```
clear ddos-protection protocols isis aggregate states
clear-ddos-isis-aggregate-states
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clear ddos-protection protocols isis aggregate statistics
clear-ddos-isis-aggregate-statistics
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clear ddos-protection protocols isis states
clear-ddos-isis-states
```

```
clear ddos-protection protocols isis statistics
clear-ddos-isis-statistics
```

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clear ddos-protection protocols jfm
```

```
clear ddos-protection protocols jfm aggregate
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```
clear ddos-protection protocols jfm aggregate states
clear-ddos-jfm-aggregate-states
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```
clear ddos-protection protocols jfm aggregate statistics
clear-ddos-jfm-aggregate-statistics
```

```
clear ddos-protection protocols jfm states
clear-ddos-jfm-states
```

```
clear ddos-protection protocols jfm statistics
clear-ddos-jfm-statistics
```

```
clear ddos-protection protocols l2tp
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```
clear ddos-protection protocols l2tp aggregate
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```
clear ddos-protection protocols l2tp aggregate states
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clear-ddos-l2tp-aggregate-states

clear ddos-protection protocols l2tp aggregate statistics  
clear-ddos-l2tp-aggregate-statistics

clear ddos-protection protocols l2tp states  
clear-ddos-l2tp-states

clear ddos-protection protocols l2tp statistics  
clear-ddos-l2tp-statistics

clear ddos-protection protocols lacp

clear ddos-protection protocols lacp aggregate

clear ddos-protection protocols lacp aggregate states  
clear-ddos-lacp-aggregate-states

clear ddos-protection protocols lacp aggregate statistics  
clear-ddos-lacp-aggregate-statistics

clear ddos-protection protocols lacp states  
clear-ddos-lacp-states

clear ddos-protection protocols lacp statistics  
clear-ddos-lacp-statistics

clear ddos-protection protocols ldp

clear ddos-protection protocols ldp aggregate

clear ddos-protection protocols ldp aggregate states  
clear-ddos-ldp-aggregate-states

clear ddos-protection protocols ldp aggregate statistics  
clear-ddos-ldp-aggregate-statistics

clear ddos-protection protocols ldp states  
clear-ddos-ldp-states

clear ddos-protection protocols ldp statistics

clear-ddos-ldp-statistics

clear ddos-protection protocols ldpv6

clear ddos-protection protocols ldpv6 aggregate

clear ddos-protection protocols ldpv6 aggregate states  
clear-ddos-ldpv6-aggregate-states

clear ddos-protection protocols ldpv6 aggregate statistics  
clear-ddos-ldpv6-aggregate-statistics

clear ddos-protection protocols ldpv6 states  
clear-ddos-ldpv6-states

clear ddos-protection protocols ldpv6 statistics  
clear-ddos-ldpv6-statistics

clear ddos-protection protocols lldp

clear ddos-protection protocols lldp aggregate

clear ddos-protection protocols lldp aggregate states  
clear-ddos-lldp-aggregate-states

clear ddos-protection protocols lldp aggregate statistics  
clear-ddos-lldp-aggregate-statistics

clear ddos-protection protocols lldp states  
clear-ddos-lldp-states

clear ddos-protection protocols lldp statistics  
clear-ddos-lldp-statistics

clear ddos-protection protocols lmp

clear ddos-protection protocols lmp aggregate

clear ddos-protection protocols lmp aggregate states  
clear-ddos-lmp-aggregate-states

clear ddos-protection protocols lmp aggregate statistics  
clear-ddos-lmp-aggregate-statistics

clear ddos-protection protocols lmp states  
clear-ddos-lmp-states

clear ddos-protection protocols lmp statistics  
clear-ddos-lmp-statistics

clear ddos-protection protocols lmpv6

clear ddos-protection protocols lmpv6 aggregate

clear ddos-protection protocols lmpv6 aggregate states  
clear-ddos-lmpv6-aggregate-states

clear ddos-protection protocols lmpv6 aggregate statistics  
clear-ddos-lmpv6-aggregate-statistics

clear ddos-protection protocols lmpv6 states  
clear-ddos-lmpv6-states

clear ddos-protection protocols lmpv6 statistics  
clear-ddos-lmpv6-statistics

clear ddos-protection protocols mac-host

clear ddos-protection protocols mac-host aggregate

clear ddos-protection protocols mac-host aggregate states  
clear-ddos-mac-host-aggregate-states

clear ddos-protection protocols mac-host aggregate statistics  
clear-ddos-mac-host-aggregate-statistics

clear ddos-protection protocols mac-host states  
clear-ddos-mac-host-states

clear ddos-protection protocols mac-host statistics  
clear-ddos-mac-host-statistics

clear ddos-protection protocols mlp

clear ddos-protection protocols mlp aggregate

clear ddos-protection protocols mlp aggregate states  
clear-ddos-mlp-aggregate-states

clear ddos-protection protocols mlp aggregate statistics  
clear-ddos-mlp-aggregate-statistics

clear ddos-protection protocols mlp aging-exception

clear ddos-protection protocols mlp aging-exception states  
clear-ddos-mlp-aging-exc-states

clear ddos-protection protocols mlp aging-exception statistics  
clear-ddos-mlp-aging-exc-statistics

clear ddos-protection protocols mlp packets

clear ddos-protection protocols mlp packets states  
clear-ddos-mlp-packets-states

clear ddos-protection protocols mlp packets statistics  
clear-ddos-mlp-packets-statistics

clear ddos-protection protocols mlp states  
clear-ddos-mlp-states

clear ddos-protection protocols mlp statistics  
clear-ddos-mlp-statistics

clear ddos-protection protocols mlp unclassified

clear ddos-protection protocols mlp unclassified states  
clear-ddos-mlp-unclass-states

clear ddos-protection protocols mlp unclassified statistics  
clear-ddos-mlp-unclass-statistics

clear ddos-protection protocols msdp

clear ddos-protection protocols msdp aggregate

clear ddos-protection protocols msdp aggregate states  
clear-ddos-msdp-aggregate-states

clear ddos-protection protocols msdp aggregate statistics  
clear-ddos-msdp-aggregate-statistics

clear ddos-protection protocols msdp states  
clear-ddos-msdp-states

clear ddos-protection protocols msdp statistics  
clear-ddos-msdp-statistics

clear ddos-protection protocols msdpv6

clear ddos-protection protocols msdpv6 aggregate

clear ddos-protection protocols msdpv6 aggregate states  
clear-ddos-msdpv6-aggregate-states

clear ddos-protection protocols msdpv6 aggregate statistics  
clear-ddos-msdpv6-aggregate-statistics

clear ddos-protection protocols msdpv6 states  
clear-ddos-msdpv6-states

clear ddos-protection protocols msdpv6 statistics  
clear-ddos-msdpv6-statistics

clear ddos-protection protocols multicast-copy

clear ddos-protection protocols multicast-copy aggregate

clear ddos-protection protocols multicast-copy aggregate states  
clear-ddos-mcast-copy-aggregate-states

clear ddos-protection protocols multicast-copy aggregate statistics  
clear-ddos-mcast-copy-aggregate-statistics

clear ddos-protection protocols multicast-copy states  
clear-ddos-mcast-copy-states

clear ddos-protection protocols multicast-copy statistics  
clear-ddos-mcast-copy-statistics

clear ddos-protection protocols mvrp

clear ddos-protection protocols mvrp aggregate

clear ddos-protection protocols mvrp aggregate states  
clear-ddos-mvrp-aggregate-states

clear ddos-protection protocols mvrp aggregate statistics  
clear-ddos-mvrp-aggregate-statistics

clear ddos-protection protocols mvrp states  
clear-ddos-mvrp-states

clear ddos-protection protocols mvrp statistics  
clear-ddos-mvrp-statistics

clear ddos-protection protocols ntp

clear ddos-protection protocols ntp aggregate

clear ddos-protection protocols ntp aggregate states  
clear-ddos-ntp-aggregate-states

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clear-ddos-ntp-aggregate-statistics

clear ddos-protection protocols ntp states  
clear-ddos-ntp-states

clear ddos-protection protocols ntp statistics  
clear-ddos-ntp-statistics

clear ddos-protection protocols oam-lfm

clear ddos-protection protocols oam-lfm aggregate

clear ddos-protection protocols oam-lfm aggregate states  
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clear ddos-protection protocols oam-lfm aggregate statistics  
clear-ddos-oam-lfm-aggregate-statistics

clear ddos-protection protocols oam-lfm states  
clear-ddos-oam-lfm-states

clear ddos-protection protocols oam-lfm statistics  
clear-ddos-oam-lfm-statistics

clear ddos-protection protocols ospf

clear ddos-protection protocols ospf aggregate

clear ddos-protection protocols ospf aggregate states  
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clear ddos-protection protocols ospf aggregate statistics  
clear-ddos-ospf-aggregate-statistics

clear ddos-protection protocols ospf states  
clear-ddos-ospf-states

clear ddos-protection protocols ospf statistics  
clear-ddos-ospf-statistics

clear ddos-protection protocols ospfv3v6

clear ddos-protection protocols ospfv3v6 aggregate

clear ddos-protection protocols ospfv3v6 aggregate states  
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clear ddos-protection protocols ospfv3v6 aggregate statistics  
clear-ddos-ospfv3v6-aggregate-statistics

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clear ddos-protection protocols ospfv3v6 states  
clear-ddos-ospfv3v6-states
```

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clear ddos-protection protocols ospfv3v6 statistics  
clear-ddos-ospfv3v6-statistics
```

```
clear ddos-protection protocols pfe-alive
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clear ddos-protection protocols pfe-alive aggregate
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clear ddos-protection protocols pfe-alive aggregate states  
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clear ddos-protection protocols pfe-alive aggregate statistics  
clear-ddos-pfe-alive-aggregate-statistics
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clear ddos-protection protocols pfe-alive states  
clear-ddos-pfe-alive-states
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clear ddos-protection protocols pfe-alive statistics  
clear-ddos-pfe-alive-statistics
```

```
clear ddos-protection protocols pim
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```
clear ddos-protection protocols pim aggregate
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clear ddos-protection protocols pim aggregate states  
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clear-ddos-pim-aggregate-statistics
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clear ddos-protection protocols pim states  
clear-ddos-pim-states
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clear ddos-protection protocols pim statistics  
clear-ddos-pim-statistics
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```
clear ddos-protection protocols pmvrp
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clear ddos-protection protocols pmvrp aggregate
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clear-ddos-pmvrp-aggregate-statistics

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clear-ddos-pmvrp-states

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clear-ddos-pmvrp-statistics

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clear-ddos-pos-aggregate-statistics

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clear-ddos-pos-states

clear ddos-protection protocols pos statistics  
clear-ddos-pos-statistics

clear ddos-protection protocols ppp

clear ddos-protection protocols ppp aggregate

clear ddos-protection protocols ppp aggregate states  
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clear ddos-protection protocols ppp aggregate statistics  
clear-ddos-ppp-aggregate-statistics

clear ddos-protection protocols ppp authentication

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clear ddos-protection protocols ppp authentication states
clear-ddos-ppp-auth-states
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clear ddos-protection protocols ppp authentication statistics
clear-ddos-ppp-auth-statistics
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clear ddos-protection protocols ppp ipcp
```

```
clear ddos-protection protocols ppp ipcp states
clear-ddos-ppp-ipcp-states
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clear ddos-protection protocols ppp ipcp statistics
clear-ddos-ppp-ipcp-statistics
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```
clear ddos-protection protocols ppp ipv6cp
```

```
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```

```
clear ddos-protection protocols ppp ipv6cp statistics
clear-ddos-ppp-ipv6cp-statistics
```

```
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```

```
clear ddos-protection protocols ppp isis states
clear-ddos-ppp-isis-states
```

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clear ddos-protection protocols ppp isis statistics
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```

```
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```

```
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```

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clear-ddos-ppp-states

clear ddos-protection protocols ppp statistics  
clear-ddos-ppp-statistics

clear ddos-protection protocols pppoe

clear ddos-protection protocols pppoe aggregate

clear ddos-protection protocols pppoe aggregate states  
clear-ddos-pppoe-aggregate-states

clear ddos-protection protocols pppoe aggregate statistics  
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clear ddos-protection protocols pppoe padn

clear ddos-protection protocols pppoe padn states

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clear ddos-protection protocols pppoe padr

clear ddos-protection protocols pppoe padr states  
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clear-ddos-pppoe-padr-statistics

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clear-ddos-pppoe-pads-statistics

clear ddos-protection protocols pppoe padt

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clear ddos-protection protocols pppoe padt statistics  
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clear ddos-protection protocols pppoe states  
clear-ddos-pppoe-states

clear ddos-protection protocols pppoe statistics

clear-ddos-pppoe-statistics

clear ddos-protection protocols ptp

clear ddos-protection protocols ptp aggregate

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clear-ddos-ptp-aggregate-states

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clear ddos-protection protocols ptp states  
clear-ddos-ptp-states

clear ddos-protection protocols ptp statistics  
clear-ddos-ptp-statistics

clear ddos-protection protocols pvstp

clear ddos-protection protocols pvstp aggregate

clear ddos-protection protocols pvstp aggregate states  
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clear ddos-protection protocols pvstp aggregate statistics  
clear-ddos-pvstp-aggregate-statistics

clear ddos-protection protocols pvstp states  
clear-ddos-pvstp-states

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clear-ddos-pvstp-statistics

clear ddos-protection protocols radius

clear ddos-protection protocols radius accounting

clear ddos-protection protocols radius accounting states  
clear-ddos-radius-account-states

clear ddos-protection protocols radius accounting statistics  
clear-ddos-radius-account-statistics

clear ddos-protection protocols radius aggregate

clear ddos-protection protocols radius aggregate states  
clear-ddos-radius-aggregate-states

clear ddos-protection protocols radius aggregate statistics  
clear-ddos-radius-aggregate-statistics

clear ddos-protection protocols radius authorization

clear ddos-protection protocols radius authorization states  
clear-ddos-radius-auth-states

clear ddos-protection protocols radius authorization statistics  
clear-ddos-radius-auth-statistics

clear ddos-protection protocols radius server

clear ddos-protection protocols radius server states  
clear-ddos-radius-server-states

clear ddos-protection protocols radius server statistics  
clear-ddos-radius-server-statistics

clear ddos-protection protocols radius states  
clear-ddos-radius-states

clear ddos-protection protocols radius statistics  
clear-ddos-radius-statistics

clear ddos-protection protocols redirect

clear ddos-protection protocols redirect aggregate

clear ddos-protection protocols redirect aggregate states  
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clear ddos-protection protocols redirect aggregate statistics  
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clear ddos-protection protocols redirect states  
clear-ddos-redirect-states

clear ddos-protection protocols redirect statistics  
clear-ddos-redirect-statistics

clear ddos-protection protocols rip

clear ddos-protection protocols rip aggregate

clear ddos-protection protocols rip aggregate states  
clear-ddos-rip-aggregate-states

clear ddos-protection protocols rip aggregate statistics  
clear-ddos-rip-aggregate-statistics

clear ddos-protection protocols rip states  
clear-ddos-rip-states

clear ddos-protection protocols rip statistics  
clear-ddos-rip-statistics

clear ddos-protection protocols ripv6

clear ddos-protection protocols ripv6 aggregate

clear ddos-protection protocols ripv6 aggregate states  
clear-ddos-ripv6-aggregate-states

clear ddos-protection protocols ripv6 aggregate statistics  
clear-ddos-ripv6-aggregate-statistics

clear ddos-protection protocols ripv6 states  
clear-ddos-ripv6-states

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clear ddos-protection protocols rsvp

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clear-ddos-rsvp-states

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clear-ddos-rsvp-statistics

clear ddos-protection protocols rsvpv6

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clear ddos-protection protocols rsvpv6 statistics  
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clear ddos-protection protocols services

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clear ddos-protection protocols services states  
clear-ddos-services-states

clear ddos-protection protocols services statistics  
clear-ddos-services-statistics

clear ddos-protection protocols snmp

clear ddos-protection protocols snmp aggregate

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clear-ddos-snmp-aggregate-statistics

clear ddos-protection protocols snmp states  
clear-ddos-snmp-states

clear ddos-protection protocols snmp statistics  
clear-ddos-snmp-statistics

clear ddos-protection protocols snmpv6

clear ddos-protection protocols snmpv6 aggregate

clear ddos-protection protocols snmpv6 aggregate states  
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clear-ddos-snmpv6-aggregate-statistics

clear ddos-protection protocols snmpv6 states  
clear-ddos-snmpv6-states

clear ddos-protection protocols snmpv6 statistics  
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clear ddos-protection protocols ssh

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clear-ddos-ssh-statistics

clear ddos-protection protocols sshv6

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clear-ddos-stp-states

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clear-ddos-tacacs-statistics

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clear-ddos-tcp-flags-initial-statistics

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clear-ddos-tcp-flags-states

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clear-ddos-tcp-flags-statistics

clear ddos-protection protocols tcp-flags unclassified

clear ddos-protection protocols tcp-flags unclassified states  
clear-ddos-tcp-flags-unclass-states

clear ddos-protection protocols tcp-flags unclassified statistics  
clear-ddos-tcp-flags-unclass-statistics

clear ddos-protection protocols telnet

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clear-ddos-telnet-states

clear ddos-protection protocols telnet statistics

clear-ddos-telnet-statistics

clear ddos-protection protocols telnetv6

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clear ddos-protection protocols ttl

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clear-ddos-ttl-states

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clear-ddos-ttl-statistics

clear ddos-protection protocols tunnel-fragment

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clear ddos-protection protocols tunnel-fragment aggregate statistics  
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clear ddos-protection protocols tunnel-fragment statistics  
clear-ddos-tun-frag-statistics

clear ddos-protection protocols virtual-chassis

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clear-ddos-vchassis-aggregate-statistics

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clear-ddos-vchassis-statistics

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clear-ddos-vchassis-unclass-statistics

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clear ddos-protection protocols vrrp

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clear-ddos-vrrp-states

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clear-ddos-vrrp-statistics

clear ddos-protection protocols vrrpv6

clear ddos-protection protocols vrrpv6 aggregate

clear ddos-protection protocols vrrpv6 aggregate states  
clear-ddos-vrrpv6-aggregate-states

clear ddos-protection protocols vrrpv6 aggregate statistics  
clear-ddos-vrrpv6-aggregate-statistics

clear ddos-protection protocols vrrpv6 states  
clear-ddos-vrrpv6-states

clear ddos-protection protocols vrrpv6 statistics  
clear-ddos-vrrpv6-statistics

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

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

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

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

clear diameter function  
    <clear-diameter-function>

clear diameter peer  
    <clear-diameter-peer>

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

<clear-dhcp-conflict-information>

<clear-dhcp-statistics-information>

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

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

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

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

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

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

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

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

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

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

clear ipv6 router-advertisement
clear lacp
clear lacp statistics
clear l2-learning
clear l2-learning mac-move-buffer
clear l2-learning-redundancy-group
clear l2-learning remote-backbone-edge-bridges
clear ldp
clear ldp statistics
clear ldp statistics interface
clear ldp neighbor
clear ldp session
clear lldp
clear lldp neighbors
clear lldp neighbors interface
clear lldp statistics
clear lldp statistics interface
clear mld
clear mld membership
clear mld statistics
clear mobile-ip
clear mobile-ip binding
clear mobile-ip binding all
  <clear-binding-all>

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

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

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

clear mobile-ip visitor ip-address
```

```
<clear-visitor-ip>

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

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

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

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

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

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

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

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

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

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

clear oam
clear oam ethernet
clear oam ethernet connectivity-fault-management
clear oam ethernet connectivity-fault-management continuity-measurement
  <clear-cfm-continuity-measurement>
```

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

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

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

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

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

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

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

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

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

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

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

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

clear passive-monitoring
  <clear-passive-monitoring>
clear passive-monitoring statistics
  <clear-passive-monitoring-statistics>
clear pgm
```

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

clear pppoe
clear pppoe sessions
clear pppoe statistics
clear pppoe statistics interfaces
clear protection-group
  <clear protection-group>
clear protection-group ethernet-ring
  <clear-ethernet-ring-information>>
clear protection-group ethernet-ring statistics
  <clear-ethernet-ring-information>>
clear r2cp
clear r2cp radio
  <clear-r2cp-radio>
clear r2cp session
  <clear-r2cp-session>
clear r2cp statistics
  <clear-r2cp-statistics>
clear r2cp statistics radio
clear r2cp statistics sessionclear rip
clear rip general-statistics
clear rip statistics
clear ripng
clear ripng general-statistics
clear ripng statistics
clear rsvp
clear rsvp session
  <clear-rsvp-session-information>

clear rsvp statistics
  < clear-rsvp-counters-information>
clear services
clear services alg

clear services application-aware-access-list
clear services application-aware-access-list statistics
  <clear-application-aware-access-list-statistics-interface>
clear services application-aware-access-list statistics interface
  <clear-application-aware-access-list-statistics-interface>
clear services application-aware-access-list statistics subscriber
  <clear-application-aware-access-list-statistics-subscriber>
clear services application-identification
clear services application-identification application-system-cache
  <clear-appid-application-system-cache>

clear services application-identification counter
```

```

<clear-appid-counter>

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

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

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

clear services border-signaling-gateway name-resolution-cache by-fqdn
clear services border-signaling-gateway statistics
  <clear-service-border-signaling-gateway-statistics>
clear services captive-portal-content-delivery
clear services captive-portal-content-delivery statistics
clear services captive-portal-content-delivery statistics interface
  <clear-cpcdd-interface-statistics>
clear services ipsec-vpn ike
clear services ipsec-vpn ike security-associations
clear services l2tp
clear services l2tp multilink
clear services l2tp session
clear services l2tp destination
clear services l2tp tunnel
clear services l2tp user
clear services local-policy-decision-function
clear services local-policy-decision-function statistics
clear services local-policy-decision-function statistics 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 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 services subscriber
clear services subscriber sessions
  <get-services-subscriber-sessions>
clear services software
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 snmp
clear snmp history
  <clear-snmp-history>
clear snmp statistics
  <clear-snmp-statistics>
clear spanning-tree
clear spanning-tree protocol-migration
clear spanning-tree protocol-migration interface
  <clear-interface-stp-protocol-migration>
clear spanning-tree statistics
  <clear-stp-interface-statistics>
clear spanning-tree statistics interface
clear spanning-tree statistics routing-instance
  <clear-stp-routing-instance-statistics>
clear spanning-tree topology-change-counter
  <clear-stp-topology-change-counter>
clear synchronous-ethernet
clear synchronous-ethernet esmc
clear synchronous-ethernet esmc statistics
clear system
clear system login
clear system login logout
  <clear-system-login-logout>

clear vpls
clear vpls mac-address
clear vpls mac-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
```

**Statements** No associated CLI configuration statements.

- Related Documentation**
- Access Privilege User Permission Flags Overview on page 18
  - Junos OS Access Privilege Levels Overview on page 3
  - Configuring Access Privilege Levels on page 9
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## configure

Can enter configuration mode.

**Commands**      `configure`  
                  `request snmp`

**Statements** No associated CLI configuration statements.

- Related Documentation**
- Access Privilege User Permission Flags Overview on page 18
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## control

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

**Commands**      `test configuration`

**Statements** No associated CLI configuration statements.

- Related Documentation**
- Access Privilege User Permission Flags Overview on page 18
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## field

Can view field debug commands.

**Commands** No associated CLI commands.

**Statements** No associated CLI configuration statements.

- Related Documentation**
- Access Privilege User Permission Flags Overview on page 18
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## firewall

Can view the firewall filter configuration in configuration mode.

**Commands**

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

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

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

show firewall filter version
  <get-filter-version>

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

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

show policer
```

**Statements**

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

- Related Documentation**
- Access Privilege User Permission Flags Overview on page 18
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  - Specifying Access Privileges for Junos OS Operational Mode Commands on page 9
  - Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 12

## flow-tap

---

Can view the flow-tap configuration in configuration mode.

**Commands** No associated CLI commands.

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

**Related Documentation**

- Access Privilege User Permission Flags Overview on page 18
- Junos OS Access Privilege Levels Overview on page 3
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## flow-tap-operation

---

Can make flow-tap requests to the router.

**Commands** No associated CLI commands.

**Statements** No associated CLI configuration statements.

**Related Documentation**

- Access Privilege User Permission Flags Overview on page 18
- Junos OS Access Privilege Levels Overview on page 3
- Configuring Access Privilege Levels on page 9
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## interface

---

Can view the interface configuration in configuration mode.

**Commands** No associated CLI commands.

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

```

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

```

#### Related Documentation

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## maintenance

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

#### Commands

```

clear system reboot
<clear-reboot>

clear-system-services-reverse-information
file archive
monitor traffic
request chassis beacon
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 feb
<request-feb>

request chassis fpc
request chassis mcs
request chassis mic

```

```

request chassis pcg
request chassis pic
request chassis redundancy
request chassis redundancy feb
  <request-redundancy-feb>

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

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

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

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

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

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

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

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

request security key-pair
request security pki
request security pki ca-certificate

```

```
request security pki ca-certificate enroll
request security pki ca-certificate load
  <load-pki-ca-certificate>
request security pki ca-certificate verify
  <verify-pki-ca-certificate>
request security pki 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 services fips
request services fips authorize
request services fips authorize pic
request services fips zeroize
request services fips zeroize pic
request services flow-collector
request services flow-collector change-destination
  <request-services-flow-collector-destination>

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

request system snapshot
  <request-snapshot>

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

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

```

request system software delete
  <request-package-delete>

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

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

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

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

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

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

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

```

## Statements

```

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

```

## Related Documentation

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

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

traceroute clns
traceroute ethernet
  <request-traceroute-ethernet>

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

**Statements** No associated CLI configuration statements.

- Related Documentation**
- Access Privilege User Permission Flags Overview on page 18
  - Junos OS Access Privilege Levels Overview on page 3
  - Configuring Access Privilege Levels on page 9
  - Specifying Access Privileges for Junos OS Operational Mode Commands on page 9
  - Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 12

---

## pgcp-session-mirroring

---

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

**Commands** show services pgcp gates gate-way display session-mirroring

**Statements** [edit services pgcp gateway session-mirroring]  
[edit services pgcp session-mirroring]

- Related Documentation**
- Access Privilege User Permission Flags Overview on page 18
  - Junos OS Access Privilege Levels Overview on page 3
  - Configuring Access Privilege Levels on page 9
  - Specifying Access Privileges for Junos OS Operational Mode Commands on page 9
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## reset

---

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

**Commands**

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

**Statements** No associated CLI configuration statements.

- Related Documentation**
- Access Privilege User Permission Flags Overview on page 18
  - Junos OS Access Privilege Levels Overview on page 3
  - Configuring Access Privilege Levels on page 9
  - Specifying Access Privileges for Junos OS Operational Mode Commands on page 9
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## rollback

---

Can roll back to previous configurations.

**Commands** `rollback`

**Statements**

```
[edit]
```

- Related Documentation**
- Access Privilege User Permission Flags Overview on page 18
  - Junos OS Access Privilege Levels Overview on page 3
  - Configuring Access Privilege Levels on page 9
  - Specifying Access Privileges for Junos OS Operational Mode Commands on page 9
  - Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 12

## routing

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

**Commands** No associated CLI commands.

**Statements**

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

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

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

```
[edit routing-instances instance protocols bgp group traceoptions]
[edit routing-instances instance protocols bgp traceoptions]
[edit routing-instances instance protocols esis traceoptions]
[edit routing-instances instance protocols isis traceoptions]
[edit routing-instances instance protocols l2vpn traceoptions]
[edit routing-instances instance protocols ldp traceoptions]
[edit routing-instances instance protocols msdp group peer traceoptions]
[edit routing-instances instance protocols msdp group traceoptions]
[edit routing-instances instance protocols msdp peer traceoptions]
[edit routing-instances instance protocols msdp traceoptions]
[edit routing-instances instance protocols mvpn traceoptions]
[edit routing-instances instance protocols ospf traceoptions]
[edit routing-instances instance protocols pim traceoptions]
[edit routing-instances instance protocols rip traceoptions]
[edit routing-instances instance protocols ripng traceoptions]
[edit routing-instances instance protocols router-discovery traceoptions]
[edit routing-instances instance protocols vpls traceoptions]
[edit routing-instances instance routing-options]
[edit routing-instances instance routing-options multicast traceoptions]
[edit routing-instances instance routing-options traceoptions]
[edit routing-instances instance service-groups]
[edit routing-instances instance switch-options]
[edit routing-options]
[edit routing-options multicast traceoptions]
[edit routing-options traceoptions]
[edit switch-options]
```

#### Related Documentation

- Access Privilege User Permission Flags Overview on page 18
- Junos OS Access Privilege Levels Overview on page 3
- Configuring Access Privilege Levels on page 9
- Specifying Access Privileges for Junos OS Operational Mode Commands on page 9
- Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 12

## 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 key-pair
request security pki
request security pki ca-certificate

```

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

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

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

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

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

```

**Statements**

```

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

```

- Related Documentation**
- Access Privilege User Permission Flags Overview on page 18
  - Junos OS Access Privilege Levels Overview on page 3
  - Configuring Access Privilege Levels on page 9
  - Specifying Access Privileges for Junos OS Operational Mode Commands on page 9
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## shell

Can start a local shell on the router.

**Commands**

```

start shell
start shell user

```

**Statements** No associated CLI configuration statements.

- Related Documentation**
- Access Privilege User Permission Flags Overview on page 18
  - Junos OS Access Privilege Levels Overview on page 3
  - Configuring Access Privilege Levels on page 9
  - Specifying Access Privileges for Junos OS Operational Mode Commands on page 9
  - Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 12

## snmp

Can view Simple Network Management Protocol (SNMP) configuration.

**Commands** No associated CLI commands.

**Statements** [edit snmp]

- Related Documentation**
- Access Privilege User Permission Flags Overview on page 18
  - Junos OS Access Privilege Levels Overview on page 3
  - Configuring Access Privilege Levels on page 9
  - Specifying Access Privileges for Junos OS Operational Mode Commands on page 9
  - Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 12

## system

Can view system-level configuration information.

**Commands** request chassis synchronization  
request chassis synchronization switch

**Statements** [edit applications]  
[edit chassis system-domains]  
[edit dynamic-profiles routing-instances instance forwarding-options helpers tftp]  
[edit dynamic-profiles routing-instances instance routing-options fate-sharing]  
[edit forwarding-options helpers bootp]  
[edit forwarding-options helpers domain]  
[edit forwarding-options helpers port]  
[edit forwarding-options helpers tftp]  
[edit logical-systems]  
[edit logical-systems routing-instances instance forwarding-options helpers bootp]  
[edit logical-systems routing-instances instance forwarding-options helpers domain]  
[edit logical-systems routing-instances instance forwarding-options helpers port]  
[edit logical-systems routing-instances instance forwarding-options helpers tftp]  
[edit logical-systems routing-instances instance routing-options fate-sharing]  
[edit logical-systems routing-options fate-sharing]  
[edit logical-systems system]  
[edit routing-instances instance forwarding-options helpers bootp]

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

**Related Documentation**

- Access Privilege User Permission Flags Overview on page 18
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## trace

Can view trace file settings and configure trace file properties.

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

```
[edit dynamic-profiles routing-instances instance protocols msdp peer traceoptions]
[edit dynamic-profiles routing-instances instance protocols msdp traceoptions]
[edit dynamic-profiles routing-instances instance protocols mvpn traceoptions]
[edit dynamic-profiles routing-instances instance protocols ospf traceoptions]
[edit dynamic-profiles routing-instances instance protocols pim traceoptions]
[edit dynamic-profiles routing-instances instance protocols rip traceoptions]
[edit dynamic-profiles routing-instances instance protocols ripng traceoptions]
[edit dynamic-profiles routing-instances instance protocols router-discovery traceoptions]
[edit dynamic-profiles routing-instances instance protocols vpls traceoptions]
[edit dynamic-profiles routing-instances instance routing-options multicast traceoptions]
[edit dynamic-profiles routing-instances instance routing-options traceoptions]
[edit dynamic-profiles routing-instances instance services mobile-ip traceoptions]
[edit dynamic-profiles routing-instances instance system services dhcp-local-server
traceoptions]
[edit dynamic-profiles routing-options multicast traceoptions]
[edit fabric protocols bgp group neighbor traceoptions]
[edit fabric protocols bgp group traceoptions]
[edit fabric protocols bgp traceoptions]
[edit fabric routing-instances instance routing-options traceoptions]
[edit fabric routing-options traceoptions]
[edit forwarding-options dhcp-relay traceoptions]
[edit forwarding-options dhcp-relay interface-traceoptions]
[edit jnx-example traceoptions]
[edit logical-systems bridge-domains domain forwarding-options dhcp-relay
traceoptions]
[edit logical-systems bridge-domains domain forwarding-options dhcp-relay
interface-traceoptions]
[edit logical-systems bridge-domains domain multicast-snooping-options traceoptions]
[edit logical-systems bridge-domains domain protocols igmp-snooping traceoptions]
[edit logical-systems forwarding-options dhcp-relay traceoptions]
[edit logical-systems protocols ancp traceoptions]
[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 dot1x 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 ilmi traceoptions]
[edit logical-systems protocols isis traceoptions]
[edit logical-systems protocols l2circuit traceoptions]
[edit logical-systems protocols l2iw traceoptions]
[edit logical-systems protocols lacp traceoptions]
[edit logical-systems protocols layer2-control traceoptions]
[edit logical-systems protocols ldp traceoptions]
[edit logical-systems protocols mld traceoptions]
[edit logical-systems protocols mld-host traceoptions]
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```

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[edit security pki traceoptions]  
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[edit services l2tp traceoptions]  
[edit services logging traceoptions]  
[edit services mobile-ip traceoptions]  
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[edit system ddos-protection traceoptions]  
[edit system license traceoptions]  
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[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]  
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[edit system services service-deployment traceoptions]  
[edit system services subscriber-management traceoptions]  
[edit system services subscriber-management-helper traceoptions]

**Related Documentation**

- Access Privilege User Permission Flags Overview on page 18
- Junos OS Access Privilege Levels Overview on page 3
- Configuring Access Privilege Levels on page 9
- Specifying Access Privileges for Junos OS Operational Mode Commands on page 9
- Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 12

---

**view**

---

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

**Commands**

```
clear ipv6 router-advertisement
show
show accounting

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

```
show chassis  
show chassis alarms  
  <get-alarm-information>  
show chassis beacon  
  <get-chassis-beacon-information>  
show chassis beacon cb  
  <get-chassis-cb-beacon-information>  
show chassis beacon fpc  
  <get-chassis-fpc-beacon-information>
```

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

```
show chassis fabric spray-weights from
show chassis fabric spray-weights to
show chassis fabric summary
  <get-fm-state-information>

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

show chassis feb detail
  <get-feb-information>

show chassis firmware
  <get-firmware-information>

show chassis forwarding
  <get-fwdd-information>

show chassis fpc
  <get-fpc-information>

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

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

show chassis hardware
  <get-chassis-inventory>

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

show chassis lccs
  <get-fru-information>

show chassis location
  <get-chassis-location>

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

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

show chassis network-services
  <network-services>

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

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

show chassis power sequence
show chassis power upgrade

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

show chassis psd
  <get-psd-information>

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

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

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

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

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

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

show chassis sfm
  <get-sfm-information>

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

show chassis spmb
  <get-spmb-information>

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

show chassis ssb
  <get-ssb-information>

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

show chassis synchronization backup
show chassis synchronization master
show chassis temperature-thresholds
```

```
<get-temperature-threshold-information>

show chassis vcpu
  <get-vcpu-information>

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

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

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

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

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

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

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

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

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

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

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

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

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

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

show class-of-service forwarding-table forwarding-class-map mapping
```

```
<get-cos-forwarding-class-map-interface-table-information>

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

```

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

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

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

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

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

show cli directory
show cli history
show configuration
show connections
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

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get-ddos-services-aggregate

show ddos-protection protocols services parameters  
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show ddos-protection protocols services statistics  
get-ddos-services-statistics

show ddos-protection protocols services violations  
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show ddos-protection protocols snmp  
get-ddos-snmp-information

show ddos-protection protocols snmp aggregate  
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show ddos-protection protocols snmp parameters  
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show ddos-protection protocols snmp statistics  
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show ddos-protection protocols snmp violations  
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show ddos-protection protocols snmpv6  
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show ddos-protection protocols snmpv6 aggregate  
get-ddos-snmpv6-aggregate

show ddos-protection protocols snmpv6 parameters  
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show ddos-protection protocols snmpv6 statistics

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show ddos-protection protocols snmpv6 violations  
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show ddos-protection protocols ssh  
get-ddos-ssh-information

show ddos-protection protocols ssh aggregate  
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show ddos-protection protocols ssh parameters  
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show ddos-protection protocols sshv6  
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get-ddos-sshv6-statistics

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get-ddos-protocols-statistics

show ddos-protection protocols stp  
get-ddos-stp-information

show ddos-protection protocols stp aggregate

get-ddos-stp-aggregate

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get-ddos-stp-parameters

show ddos-protection protocols stp statistics  
get-ddos-stp-statistics

show ddos-protection protocols stp violations  
get-ddos-stp-violations

show ddos-protection protocols tacacs  
get-ddos-tacacs-information

show ddos-protection protocols tacacs aggregate  
get-ddos-tacacs-aggregate

show ddos-protection protocols tacacs parameters  
get-ddos-tacacs-parameters

show ddos-protection protocols tacacs statistics  
get-ddos-tacacs-statistics

show ddos-protection protocols tacacs violations  
get-ddos-tacacs-violations

show ddos-protection protocols tcp-flags  
get-ddos-tcp-flags-information

show ddos-protection protocols tcp-flags aggregate  
get-ddos-tcp-flags-aggregate

show ddos-protection protocols tcp-flags established  
get-ddos-tcp-flags-establish

show ddos-protection protocols tcp-flags initial  
get-ddos-tcp-flags-initial

show ddos-protection protocols tcp-flags parameters  
get-ddos-tcp-flags-parameters

show ddos-protection protocols tcp-flags statistics

get-ddos-tcp-flags-statistics

show ddos-protection protocols tcp-flags unclassified  
get-ddos-tcp-flags-unclass

show ddos-protection protocols tcp-flags violations  
get-ddos-tcp-flags-violations

show ddos-protection protocols telnet  
get-ddos-telnet-information

show ddos-protection protocols telnet aggregate  
get-ddos-telnet-aggregate

show ddos-protection protocols telnet parameters  
get-ddos-telnet-parameters

show ddos-protection protocols telnet statistics  
get-ddos-telnet-statistics

show ddos-protection protocols telnet violations  
get-ddos-telnet-violations

show ddos-protection protocols telnetv6  
get-ddos-telnetv6-information

show ddos-protection protocols telnetv6 aggregate  
get-ddos-telnetv6-aggregate

show ddos-protection protocols telnetv6 parameters  
get-ddos-telnetv6-parameters

show ddos-protection protocols telnetv6 statistics  
get-ddos-telnetv6-statistics

show ddos-protection protocols telnetv6 violations  
get-ddos-telnetv6-violations

show ddos-protection protocols ttl  
get-ddos-ttl-information

show ddos-protection protocols ttl aggregate

get-ddos-ttl-aggregate

show ddos-protection protocols ttl parameters  
get-ddos-ttl-parameters

show ddos-protection protocols ttl statistics  
get-ddos-ttl-statistics

show ddos-protection protocols ttl violations  
get-ddos-ttl-violations

show ddos-protection protocols tunnel-fragment  
get-ddos-tun-frag-information

show ddos-protection protocols tunnel-fragment aggregate  
get-ddos-tun-frag-aggregate

show ddos-protection protocols tunnel-fragment parameters  
get-ddos-tun-frag-parameters

show ddos-protection protocols tunnel-fragment statistics  
get-ddos-tun-frag-statistics

show ddos-protection protocols tunnel-fragment violations  
get-ddos-tun-frag-violations

show ddos-protection protocols violations  
get-ddos-protocols-violations

show ddos-protection protocols virtual-chassis  
get-ddos-vchassis-information

show ddos-protection protocols virtual-chassis aggregate  
get-ddos-vchassis-aggregate

show ddos-protection protocols virtual-chassis control-high  
get-ddos-vchassis-control-hi

show ddos-protection protocols virtual-chassis control-low  
get-ddos-vchassis-control-lo

show ddos-protection protocols virtual-chassis parameters

get-ddos-vchassis-parameters

show ddos-protection protocols virtual-chassis statistics  
get-ddos-vchassis-statistics

show ddos-protection protocols virtual-chassis unclassified  
get-ddos-vchassis-unclass

show ddos-protection protocols virtual-chassis vc-packets  
get-ddos-vchassis-vc-packets

show ddos-protection protocols virtual-chassis vc-ttl-errors  
get-ddos-vchassis-vc-ttl-err

show ddos-protection protocols virtual-chassis violations  
get-ddos-vchassis-violations

show ddos-protection protocols vrrp  
get-ddos-vrrp-information

show ddos-protection protocols vrrp aggregate  
get-ddos-vrrp-aggregate

show ddos-protection protocols vrrp parameters  
get-ddos-vrrp-parameters

show ddos-protection protocols vrrp statistics  
get-ddos-vrrp-statistics

show ddos-protection protocols vrrp violations  
get-ddos-vrrp-violations

show ddos-protection protocols vrrpv6  
get-ddos-vrrpv6-information

show ddos-protection protocols vrrpv6 aggregate  
get-ddos-vrrpv6-aggregate

show ddos-protection protocols vrrpv6 parameters  
get-ddos-vrrpv6-parameters

show ddos-protection protocols vrrpv6 statistics

get-ddos-vrrpv6-statistics

show ddos-protection protocols vrrpv6 violations  
get-ddos-vrrpv6-violations

show ddos-protection statistics  
get-ddos-statistics-information

show ddos-protection version  
get-ddos-version

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

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

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

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

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

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<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 dvmp
show dvmp interfaces
  <get-dvmp-interfaces-information>

show dvmp neighbors
  <get-dvmp-neighbors-information>

show dvmp prefix
  <get-dvmp-prefix-information>

show dvmp prunes
  <get-dvmp-prunes-information>

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

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

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

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

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

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

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

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

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

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

show extension-provider system virtual-memory
  <get-mspinfo-virtual-memory>
  <get-mac-ip-binding-information>
  <get-mc-ccpc-src-mod-filters>
  <get-core-key-list>
  <get-mc-edge-map-to-key-binding>
  <get-key-vg-binding>
  <get-mc-edge-key-to-map-binding>
  <get-mc-edge-vg-portmap>
  <get-mc-root-map-to-key-binding>
  <get-mc-root-key-to-map-binding>
  <get-mc-root-vg-pfemap>
  <get-mc-vccpdf-adjacency-database>
  <get-vlan-domain-map-information>

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

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

show iccp
  <get-inter-chassis-control-protocol-information>
show igmp
show igmp group
  <get-igmp-group-information>

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

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

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

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

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

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

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

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

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

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

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

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

show interfaces mc-ae
  <get-mc-ae-interface-information>
```

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

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

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

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

show ipsec certificates crt
  <get-crt-information>

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

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

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

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

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

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

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

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

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

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

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

show l2cpd
show l2cpd task
show l2cpd task io
  <get-l2cpd-tasks-io-statistics>
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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
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>
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show link-management routing peer
  <get-lm-routing-peer-information>

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

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

show lldp
  <get-lldp-information>

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

show network-access aaa subscribers session-id

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

show network-access address-assignment
show network-access address-assignment pool
  <get-address-assignment-pool-table>
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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-infromation>
show oam ethernet link-fault-management
  <get-lfmd-information>

show oam ethernet lmi
  <get-elmi-information>
```

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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
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<get-ospf3-backup-spf-information>

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

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

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

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

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

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

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

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

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

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

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

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

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

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

show pfe
show pfe cfeb
show pfe feb
show pfe fpc
show pfe fwdd
show pfe lcc
show pfe next-hop
show pfe pfem
show pfe pfem detail
show pfe pfem extensive
show pfe route
show pfe route clnp
```

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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 ip
show pfe statistics ip6
show pfe statistics traffic
    <get-pfe-statistics>

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

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

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

show pgm statistics
    <get-pgm-statistics>

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

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

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

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

show pim mdt data-mdt-joins
    <get-pim-data-mdt-join-information>
show pim mvpn
    <get-pim-mvpn-information>

show pim neighbors

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```
<get-pim-neighbors-information>

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

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

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

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

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

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

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

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

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

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

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

show pppoe version
  <get-pppoe-version>

show protection-group
show protection-group ethernet-aps
  <show-protection-group-ethernet-aps>
show protection-group ethernet-ring
show protection-group ethernet-ring aps
  <get-raps-pdu-information>
show protection-group ethernet-ring data-channel
  <get-ring-data-channel-information>
show protection-group ethernet-ring interface
  <get-ring-interface-information>
show protection-group ethernet-ring node-state
  <get-raps-state-machine-information>
show protection-group ethernet-ring node-state
```

```
show protection-group ethernet-ring statistics
  <get-ring-tatistics>
show protection-group ethernet-ring vlan
  <get-ring-vlan-information>
show ptp
show ptp clock
  get-ntp-clock>
show ptp global-information
  get-ntp-global-information>
show ptp lock-status
  get-ntp-lock-status>
show ptp master
  <get-ntp-master>
show ptp port
  <get-ntp-port>
show ptp slave
  <get-ntp-slave>
show ptp statistics
  <get-ntp-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 power-supply
show redundant-power-system status
show redundant-power-system version
show rip
show rip general-statistics
  <get-rip-general-statistics-information>

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

show services application-identification counter
```

```
<get-appid-counter>

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

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

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

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

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

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

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

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

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

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

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

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

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

show services border-signaling-gateway name-resolution-cache by-fqdn
show services border-signaling-gateway status
  <get-service-bsg-status-information>
show services captive-portal-content-delivery
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```
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>

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

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

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

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

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

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

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

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

show services flow-table
show services flow-table statistics
```

```
<get-flow-table-statistics-information>

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

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

show services ggsn statistics
  <get-ggsn-statistics>

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

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

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

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

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

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

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

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

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

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

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

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

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

show services ids pair-table
```

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

show services l2tp user
show services link-services
```

```
show services link-services cpu-usage
  <get-link-services-cpu-usage>

show services local-policy-decision-function
show services local-policy-decision-function flows
show services local-policy-decision-function flows interface
  <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
  <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 mappings
show services nat mappings brief
  <get-service-nat-mapping-brief>
show services nat mappings detail
  <get-service-nat-mapping-detail>
show services nat mappings summary
  <get-service-nat-mapping-summary>
show services nat pool
  <get-service-nat-pool-information>

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

show services service-sets memory-usage
```

```
<get-service-set-memory-statistics>

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

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

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

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

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

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

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

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

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

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

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

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

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

show services stateful-firewall statistics application-protocol
show services subscriber
show services subscriber bandwidth
show services subscriber bandwidth client-id
  <get-services-subscriber-bandwidth-by-session-id>
```

```
show services subscriber bandwidth interface
  <get-services-subscriber-bandwidth-by-interface>
show services subscriber bandwidth ip-address
  <get-services-subscriber-bandwidth-by-ip-address>
show services subscriber bandwidth service-interface
  <get-services-subscriber-bandwidth-by-service-interface>
show services subscriber dynamic-policies
  <get-services-subscriber-dynamic-policies>
show services subscriber flows
  <get-services-subscriber-flows>
show services subscriber sessions
  <get-services-subscriber-session>
show services subscriber statistics
  <get-services-subscriber-statistics>
show snmp
show snmp health-monitor
  <get-health-monitor-information>

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

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

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

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

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

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

show snmp rmon
  <get-rmon-information>

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

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

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

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

show snmp statistics
  <get-snmp-information>

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

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

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

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

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

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

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

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

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

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

show snmp v3 users
  <get-snmp-v3-usm-user-information>

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

show synchronous-ethernet
show synchronous-ethernet esmc
show synchronous-ethernet esmc statistics
```

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

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

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

show system configuration rescue
  <get-rescue-information>

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

show system directory-usage
  <get-directory-usage-information>

show system firmware
  <get-system-firmware-information>

show system license
  <get-license-summary-information>

show system license installed
  <get-license-information>

show system license keys
  <get-license-key-information>

show system license usage
  <get-license-usage-summary>
show system login
show system login lockout
  <get-system-login-lockout-information>
show system processes
show system processes brief
show system processes extensive
show system processes health
  <get-process-health-information>

show system processes providers
show system processes resource-limits
show system processes summary
show system queues
show system reboot
show system resource-cleanup
```

```
show system resource-cleanup processes
  <get-system-resource-cleanup-processes-information>
```

```
show system rollback
  <get-rollback-information>
```

```
show system services
show system services dhcp
show system services dhcp binding
  <get-dhcp-binding-information>
```

```
show system services dhcp conflict
  <get-dhcp-conflict-information>
```

```
show system services dhcp global
  <get-dhcp-global-information>
```

```
show system services dhcp pool
  <get-dhcp-pool-information>
```

```
show system services dhcp statistics
  <get-dhcp-statistics-information>
```

```
show system services reverse
  <get-system-services-reverse-information>
```

```
show system services service-deployment
  <get-service-deployment-service-information>
```

```
show system snapshot
  <get-snapshot-information>
```

```
show system software
show system software backup
  <get-package-backup-information>
```

```
<get-software-installation-status>
```

```
show system statistics
  <get-statistics-information>
```

```
show system statistics bridge
show system statistics vpls
show system storage
  <get-system-storage>
show system storage partitions
  <get-system-storage-partitions>
show system subscriber-management
show system subscriber-management summary
show system switchover
  <get-switchover-information>
```

```
show system uptime
  <get-system-uptime-information>
```

```
show system users
```

```
<get-system-users-information>

show system virtual-memory
show task
show task io
show task memory
show task replication
show task snooping
show task snooping io
show task snooping memory
show ted
show ted database
  <get-ted-database-information>

show ted link
  <get-ted-link-information>

show ted protocol
  <get-ted-protocol-information>

show version
  <get-software-information>

show vpls
show vpls connections
  <get-vpls-connection-information>

show vpls flood
show vpls flood event-queue
  <get-vpls-event-queue-information>

show vpls flood route
show vpls flood route all-ce-flood
  <get-vpls-all-ce-flood-route-information>

show vpls flood route all-flood
  <get-vpls-all-flood-route-information>

show vpls flood route alt-root-flood
  <get-vpls-alt-root-flood-route-information>

show vpls flood route ce-flood
  <get-vpls-ce-flood-route-information>

show vpls flood route mlp-flood
  <get-vpls-mlp-flood-route-information>

show vpls flood route re-flood
  <get-vpls-re-flood-route-information>

show vpls mac-table
  <get-vpls-mac-table>

show vpls mac-table interface
  <get-vpls-interface-mac-table>
```

```
show vpls statistics
  <get-vpls-statistics-information>
```

```
show vrrp
show vrrp interface
show vrrp track
test interface
test interface fdl-line-loop
test interface fdl-line-loop ansi
test interface fdl-line-loop ansi initiate
test interface fdl-line-loop ansi terminate
test interface fdl-line-loop bellcore
test interface fdl-line-loop bellcore initiate
test interface fdl-line-loop bellcore terminate
test interface fdl-payload-loop
test interface fdl-payload-loop ansi
test interface fdl-payload-loop ansi initiate
test interface fdl-payload-loop ansi terminate
test interface fdl-payload-loop bellcore
test interface fdl-payload-loop bellcore initiate
test interface fdl-payload-loop bellcore terminate
test interface inband-line-loop
test interface inband-line-loop ansi
test interface inband-line-loop ansi initiate
test interface inband-line-loop ansi terminate
test interface inband-line-loop bellcore
test interface inband-line-loop bellcore initiate
test interface inband-line-loop bellcore terminate
test interface inband-line-loop initiate
test interface inband-line-loop terminate
test interface inband-payload-loop
test interface inband-payload-loop ansi
test interface inband-payload-loop ansi initiate
test interface inband-payload-loop ansi terminate
test interface inband-payload-loop bellcore
test interface inband-payload-loop bellcore initiate
test interface inband-payload-loop bellcore terminate
test msdp
test msdp dependent-peers
test msdp rpf-peer
test policy
```

<b>Statements</b>	<pre>[edit dynamic-profiles routing-instances instance services mobile-ip home-agent enable-service] [edit logical-systems routing-instances instance services mobile-ip home-agent enable-service] [edit logical-systems services mobile-ip home-agent enable-service] [edit routing-instances instance services mobile-ip home-agent enable-service] [edit services mobile-ip home-agent enable-service]</pre>
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<b>Related Documentation</b>	<ul style="list-style-type: none"> <li>• <a href="#">Access Privilege User Permission Flags Overview on page 18</a></li> <li>• <a href="#">Junos OS Access Privilege Levels Overview on page 3</a></li> <li>• <a href="#">Configuring Access Privilege Levels on page 9</a></li> </ul>
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- [Specifying Access Privileges for Junos OS Operational Mode Commands on page 9](#)
- [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 12](#)

---

## view-configuration

---

Can view all of the configuration (not including secrets).

**Commands**      No associated CLI commands.

**Statements**      No associated CLI configuration statements.

- Related Documentation**
- [Access Privilege User Permission Flags Overview on page 18](#)
  - [Junos OS Access Privilege Levels Overview on page 3](#)
  - [Configuring Access Privilege Levels on page 9](#)
  - [Specifying Access Privileges for Junos OS Operational Mode Commands on page 9](#)
  - [Specifying Access Privileges for Junos OS Configuration Mode Hierarchies on page 12](#)

## PART 2

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