39XX/51XX Switches and Platforms

Command Reference

SAOS 6.21.2

What's inside...

New in this release
CLI fundamentals
Commands

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About this document

This document describes the operating system commands and syntax for this release of the Service Aware Operating System (SAOS).

These commands support the 39XX/51XX Switches and Platforms in this release.

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New in this release

The following summarizes documentation changes in *39XX/51XX Switches and Platforms Command Reference* for SAOS 6.21.2.

Updated

The following sections were updated:

- “Commands added” on page 2-24
- “Commands removed” on page 2-30
- LDP Graceful Restart timer change for four parameters “ldp” on page 3-194

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CLI fundamentals

The Command Line Interface (CLI) is a text-based command interface used to configure a device and to view system information.

The CLI allows a maximum of 459 characters, including spaces, to be entered in a command. Attempting to copy-and-paste a command longer than the maximum results in the command being truncated.

> ***Note:*** Not all commands or command options described in this document are available on all devices.

The CLI hides commands depending on user access level, installed licenses, and platform. When entering a command at the prompt, ensure that you have the appropriate access level.

CAUTION
Possible Service Disruption
Commands not documented in this document should not be used. If you choose to use them, you do so at your own risk as they can cause severe interruption of delivered services and access to the devices you are configuring.

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Navigating the CLI

At any prompt, press the Tab key for a list of commands in alphabetical order available from the current prompt. For example, pressing tab on the main level menu on a 3926 lists the following:

```
access-list                 device-archive              lldp
aggregation                 dhcp                        log
ais                         dhcpv6                      module
alarm                       dns-client                  mpls
arp                         dot1x                       mstp
attachment-circuit          eoam                        multicast-services
benchmark                   file                        ndp
bfd                         flow                        netconf
blade                       gmpls                       ntp
broadcast-containment       icl                         ospf
cfm                         interface                   bgp
chassis                     ip                          prefix-list
clear                       isis                        route-map
cli                         ldp                         community-list-standard
command-log                 linear-protection           community-list-expanded
configuration               l2-cft                      extcommunity-list-standard
```

Command schema

In order to provide consistency across all the commands, all CLI commands follow a basic underlying schema or syntax:

```
<object> [<subobject>] <action> [instance] [<attributes>]
```

An <object> can identify a feature (such as multicast, per, radius, and so on) or a basic object (such as module, VLAN, port, and so on). On the surface, these seem like completely mismatched entities, however, if a device is considered to have an instance of each of these entities, then both features and the basic system objects can be considered as objects.

A <subject> subdivides a feature. For example, multicast has many sub-features in it such as umf, epf, channel-stream, and so on.

An <action> is a verb that describes the type of action that will occur on the object/instance that is specified. Examples of actions are:

- create
- delete
- add
- remove
- set
- unset
- enable
- disable
- attach

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- detach

An <instance> defines an recurrence of an object. For example, ports have multiple instances. A feature like radius is an object but there is only a single instance of it. An instance is identified by a keyword and a value, such as “port 2.”

<attributes> are always a pairing of a keyword and a value. For example, the keyword “port” is followed by a value such as 3/1. A command may take multiple attributes and the attributes can be specified in any order relative to one another.

As an example, breaking down the command grammar of a command such as “`aggregation add agg Lag1 port 2`” yields the following:

- object = aggregation
- subject = none
- action = add
- instance = agg Lag1
- attribute = port 2

Sub-menus

Objects and sub-objects have sub-menus. For example, from the top-level prompt, if you enter “system,” the prompt changes to the system sub-menu and displays, `(system)>`. The same is true for sub-features, such as system shell. At the `(system)>` prompt, entering `shell` changes the prompt to the shell sub-menu under system and displays `(system/shell)>`. To return to the top-level prompt from any sub-menu, type `exit`, and press **Enter**.

Command completion

The CLI supports partial command recognition. This means that you can enter the first few characters that uniquely identify a command for the system to recognize it. For example, for the access-flow commands, +you can enter:

```
> ac
```

and the prompt will then change to:

```
(access-list)>
```

If you do not enter enough characters to uniquely identify the command, a shell parser error will occur. For example:

```
> s
SHELL PARSER FAILURE: 's' - ambiguous input
```


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This error occurs, because multiple commands begin with “s”. Pressing the **Tab** key partially completes the command and displays the available commands. For example:

```
> s<TAB>

sm-fabricsnmpsoftwaresshsub-portsyslogsystem
```

In addition, pressing **Space** and then **Tab** at the end of the command string (or partial command string) displays available actions, objects, or sub-objects. For example:

```
> arp

delete  flush   for set showunset
```

After specifying the object, action, instance, and even attributes, you can press **Space** and then **Tab** to display additional parameters. For example:

```
>arp for <Tab> ip
     ip <IPv4 Address>
```

Getting help

To get more detail about available commands, enter ? or help at any prompt. A command can also be followed by a space and a `?` or `help` and Enter to get a list of valid parameters for that command. For example, the following command lists all the valid parameters for the arp command:

```
> arp ? <Enter>
delete                          delete arp entry
flush                           flush arp cache for all interfaces
for                             check if the ip address is in use
set                             set arp options
show                            show arp information
<cr>                            Enter SubMenu
^C                              Kill Ongoing Display
q|quit|                         quit to Root Menu
end|exit                        Exit Current Submenu/Mode
```

In addition, you can display specific objects or search on specific keywords with the cli search and show commands described in “Commands”.

Command response

In general, errors are generated for a configuration command only when the command is unsuccessful. For example, if you run a delete command, the CLI responds without any message and returns to the CLI prompt. Even if the object does not exist, the command does not end in error, because the end result is that the specified object does not exist in the system. Similarly, if you attempt to set an attribute that is already set, the CLI responds by returning you to the CLI prompt. If you attempt to create an object that already exists, the CLI responds with an error to show the duplication.

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Understanding command syntax

A variety of symbols are used to indicate CLI command syntax. These symbols describe how to enter a command. They are not entered as part of the command itself. Table 2-1 summarizes command syntax symbols.

Table 2-1
Command Syntax Symbols

Symbol	Description
< >	Encloses a variable or literal value that must be specified. Some examples include: server <IpAddress> priority <NUMBER: 1-7> dns <on|off> description <String[31]> For server <IpAddress>, the attribute could be entered as server 10.10.11.100 or server www.ciena.com. With priority <NUMBER: 1-7> the text within <> indicates that 1 - 7 are valid values. In the example of dns <on|off>, either the literal value of on or off is valid, such as dns on. For description <String[31]>, any string of up to 31 characters is entered.
{ }	Encloses a required value or list of required arguments. One or more values or arguments can be specified. For example, in the syntax: cfm mip create {vlan <VlanId>} {port <PortNameList>} [level <NUMBER: 0-7>] The vlan and port arguments are required. The level argument is optional.
|	Separates mutually exclusive items in a list, only one of which can be entered. For example, in the syntax: dhcp client options set subnet <on|off> either on or off must be specified, for example: dhcp client options set subnet on
[ ]	Encloses an optional value or a list of optional arguments. One or more values or arguments can be specified. For example, in the syntax: arp show [interface <Interface>] you can enter a value for interface <Interface> or not. For example: arp show

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Specifying multiple objects with lists and ranges

To simplify configuration of multiple objects, some CLI commands allow actions to be specified on multiple ports or slots at once. This is done using object lists and ranges. Each command specifies the CLI variables it accepts.

A list of objects can be specified using a comma-delimited list (for example, x, y, z). A range of objects can be specified using a dash (-). For example, “x-z” would properly specify a range.

On a multi-module device, a command can apply to multiple modules by specifying a slot list or range. For example, “1,2,3” or “1-3”. Ports on the module are then specified relative to the module. For example, port 1/1 identifies the first port on module in slot 1. Port ranges are generally specified as: <port a>-<port b>. This range specifies all the ports between and including ports 'a' and 'b'. So the range “1/1 - 4/3” would include all the ports present on modules in slots 1, 2, 3 as well as the first 3 ports on the module in slot 4. Lists of ports can be specified as being comma delimited, e.g. “1/1, 1/3, 1/5”. Port lists and ranges can also be combined so that the following is valid, “1/1-1/5,1/7”.

For a single module device, ports are enumerated with a single ID, e.g. 1, 2, and 3. Lists of ports can be specified as being comma delimited, e.g. “1, 3, 5." Port lists and ranges can also be combined so that the following is valid, “1-4, 7."

Specifying IP addresses

An IP address is a string in dotted decimal format for IPv4 and for IPv6. In most cases, the CLI accepts either IPv4 or IPv6 format. For commands cases where only one or the other is accepted, the CLI returns an error if the incorrect IP address format is entered.

IPv4 address is represented by <NUMBER STRING: xxx.xxx.xxx.xxx, 0<=xxx<=255>

IPv4 addresses with “padded” zeros are equal to IP addresses without padded 0s. For instance the IP address 100.004.045.000 is the same as 100.4.45.0. You can enter either the IP address in either format and it will be treated the same. IP addresses are stored to configuration in the unpadded format.

An IPv6 address is represented by 8 groups of 16-bit hexadecimal values separated by colons (:). For example:

2001:0db8:85a3:0000:0000:8a2e:0370:7334

The hexadecimal digits are case-insensitive.

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<IPADDRESS_V6> := <NUMBER STRING: xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx>

An IPv6 address can be abbreviated with the following rules:

1 Omit leading zeroes in a 16-bit value.
2 Replace one group of consecutive zeroes by a double colon.

An IPADDRESS can be either and IPv4 address or IPv6 address.

You can also enter the IPv4 or IPv6 address with the corresponding subnet mask in the following formats:

Cisco Format:

<IPADDRESS>/<subnet-mask>

Example: 123.23.10.23/255.255.255.0

Juniper Format:

<IPADDRESS>/<subnet-bitmask>

Example: 123.23.10.23/24

It also accepts 1.2.3.4 alone, in which case it makes up a mask of 255.255.255.255.

<-ip-address-subnet-object> := ip <ip-address>/<subnet-bitmask> | ip <ip-address>/<subnet-mask> | ip <ip-address>

Entering names

When entering names or descriptions, the following rules apply:

- String length > 0
- First character may not be a space
- Last character may not be a space
- All characters are in the ASCII range 32-126
- The following characters are not allowed: " % * ? !
- Names are case-sensitive

Specifying common objects and attributes

<FileName>= <String> for example, /flash0/file.txt

<DirName> = <String[127]>

<MacAddress>= <xx:xx:xx:xx:xx:xx>

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Hidden and deprecated commands

Some commands are designated as deprecated (obsolete) or hidden. Deprecated and hidden commands are still supported by the CLI and work for configuration. Deprecated commands are identified in the command list with the text "(DEPRECATED)". Hidden commands do not appear in the command list. In a future release, deprecated and hidden commands may be phased out and no longer supported.

The following commands are hidden and/or deprecated in this release:

```
CN 3926> cli show hidden

aggregation lacpmib set agg admin-key
aggregation lacpmib set agg system-priority
aggregation lacpmib set port actor-admin-key
aggregation lacpmib set port actor-admin-state
aggregation lacpmib set port actor-port-priority
aggregation lacpmib set port actor-system-priority
aggregation lacpmib set port partner-admin-key
aggregation lacpmib set port partner-admin-state
aggregation lacpmib set port partner-port-priority
aggregation lacpmib set port partner-system-id
aggregation lacpmib set port partner-system-priority
aggregation show agg info
aggregation show port info
ais clear statistics
ais show statistics
alarm cutoff
benchmark set port
benchmark set role
benchmark set mode
benchmark unset port
benchmark unset role
benchmark unset mode
benchmark reflector set name advertise-mac
benchmark reflector set name advertise-mac-periodicity
benchmark reflector set vid
benchmark reflector set vendor-type
benchmark reflector set mac-validation
benchmark reflector unset name advertise-mac
benchmark reflector unset name advertise-mac-periodicity
benchmark reflector unset vid
benchmark reflector unset vendor-type
benchmark reflector unset mac-validation
benchmark reflector clear statistics
benchmark reflector show statistics
benchmark reflector show statistics active
benchmark reflector show throughput
benchmark generator pcp-bw-allocation-profile create name
benchmark generator pcp-bw-allocation-profile create name pcp
benchmark generator pcp-bw-allocation-profile create name pcp bandwidth
benchmark generator pcp-bw-allocation-profile delete name
benchmark generator pcp-bw-allocation-profile set name pcp
benchmark generator pcp-bw-allocation-profile set name pcp bandwidth
benchmark generator pcp-bw-allocation-profile show
benchmark generator pcp-bw-allocation-profile show name
benchmark generator pcp-bw-allocation-profile unset name pcp
```


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```
benchmark generator set pcp-bw-allocation-profile
benchmark generator unset pcp-bw-allocation-profile
benchmark generator clear global-counters
benchmark profile show name statistics frameloss
benchmark profile show name statistics latency
benchmark profile show name throughput statistics last-iteration
benchmark profile show name statistics pdv
benchmark profile show name statistics
benchmark profile show name statistics throughput
benchmark profile disable name
benchmark profile enable name
benchmark profile start name
benchmark profile start name dst-mac
benchmark profile start name dstmac
benchmark profile start name vid
benchmark profile stop
benchmark profile stop name
benchmark profile trigger name connectivity-test
benchmark profile trigger name dst-mac
benchmark profile trigger name dstmac
benchmark profile trigger name vid
benchmark profile clear name statistics
benchmark profile configuration set name pcp-bw-allocation-profile
benchmark profile configuration unset name pcp-bw-allocation-profile
benchmark profile payload set name dstmac
benchmark profile payload set name vid
benchmark profile payload set name pcp
benchmark profile payload set name color
benchmark profile payload unset name dstmac
benchmark profile payload unset name vid
benchmark profile payload unset name pcp
benchmark profile payload unset name color
benchmark test show name throughput statistics last-iteration
bfd session create session tunnel
cfm delay clear service mepid
cfm delay cancel-mac service
cfm delay cancel-mac service port
cfm delay cancel-mac service port vlan
cfm delay cancel-mac service local-mepid vlan
cfm delay cancel-mac service local-mepid
cfm delay cancel-mac service mac
cfm delay send service repeat
cfm delay send-mac service port
cfm delay send-mac service port vlan
cfm delay send-mac service local-mepid vlan
cfm delay send-mac service local-mepid
cfm delay send-mac service mac
cfm delay send-mac service count
cfm delay send-mac service priority
cfm delay send-mac service repeat
cfm delay send-mac service delay-threshold
cfm delay send-mac service jitter-threshold
cfm delay send-mac service max-delay-threshold
cfm delay send-mac service max-jitter-threshold
cfm frame-loss clear service mepid
cfm frame-loss cancel-mac service port
cfm frame-loss cancel-mac service vlan
cfm frame-loss cancel-mac service local-mepid
cfm frame-loss cancel-mac service mac
cfm frame-loss send service repeat
```


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```
cfm frame-loss send-mac service port
cfm frame-loss send-mac service vlan
cfm frame-loss send-mac service local-mepid
cfm frame-loss send-mac service mac
cfm frame-loss send-mac service count
cfm frame-loss send-mac service priority
cfm frame-loss send-mac service repeat
cfm frame-loss send-mac service fln-threshold
cfm frame-loss send-mac service flf-threshold
cfm frame-loss send-mac service seq-threshold
cfm synthetic-loss clear service mepid
cfm synthetic-loss show service verbose
cfm mep set service ltm-priority(DEPRECATED)
cfm mip set(DEPRECATED) vlan port level
cfm mip set(DEPRECATED) vs level
cfm mip set(DEPRECATED) vs port
cfm mip set(DEPRECATED) vs vlan
cfm service set service dmm-interval
cfm service set service lmm-interval
cfm mef delay create service session-id
cfm mef synthetic-loss create service session-id
chassis set dying-gasp
chassis show attributes
chassis show dying-gasp
cli search keyword batch-mode-only
cli search keyword config-only
cli search keyword disabled-only
cli search keyword during-config
cli search keyword hidden-only
cli search keyword include-config-only
cli search keyword include-disabled
cli search keyword include-hidden
cli search keyword include-unlicensed
cli search keyword interactive-mode-only
cli search keyword interactive-only
cli search keyword unlicensed-only
cli show batch-mode-only
cli show config-only
cli show disabled-only
cli show during-config
cli show hidden-only
cli show include-config-only
cli show include-disabled
cli show include-hidden
cli show include-unlicensed
cli show interactive-mode-only
cli show interactive-only
cli show unlicensed-only
configuration augment login-id default-server password
configuration augment login-id default-ftp-server password
configuration augment login-id default-sftp-server password
configuration augment login-id ftp-server password
configuration augment login-id sftp-server password
configuration augment login-id default-server secret
configuration augment login-id default-ftp-server secret
configuration augment login-id default-sftp-server secret
configuration augment login-id ftp-server secret
configuration augment login-id sftp-server secret
configuration augment default-server sftp-passphrase
configuration augment default-sftp-server sftp-passphrase
```


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```
configuration augment sftp-server sftp-passphrase
configuration augment default-server secret-sftp-passphrase
configuration augment default-sftp-server secret-sftp-passphrase
configuration augment sftp-server secret-sftp-passphrase
configuration install login-id default-server password
configuration install login-id default-ftp-server password
configuration install login-id default-sftp-server password
configuration install login-id ftp-server password
configuration install login-id sftp-server password
configuration install login-id default-server secret
configuration install login-id default-ftp-server secret
configuration install login-id default-sftp-server secret
configuration install login-id ftp-server secret
configuration install login-id sftp-server secret
configuration install default-server sftp-passphrase
configuration install default-sftp-server sftp-passphrase
configuration install sftp-server sftp-passphrase
configuration install default-server secret-sftp-passphrase
configuration install default-sftp-server secret-sftp-passphrase
configuration install sftp-server secret-sftp-passphrase
configuration check login-id default-server password
configuration check login-id default-ftp-server password
configuration check login-id default-sftp-server password
configuration check login-id ftp-server password
configuration check login-id sftp-server password
configuration check login-id default-server secret
configuration check login-id default-ftp-server secret
configuration check login-id default-sftp-server secret
configuration check login-id ftp-server secret
configuration check login-id sftp-server secret
configuration check default-server sftp-passphrase
configuration check default-sftp-server sftp-passphrase
configuration check sftp-server sftp-passphrase
configuration check default-server secret-sftp-passphrase
configuration check default-sftp-server secret-sftp-passphrase
configuration check sftp-server secret-sftp-passphrase
configuration save include-default-settings
configuration save filename include-default-settings
configuration show include-default-settings
dhcp security set password
dhcp v6-client(DEPRECATED) clear statistics
dhcp v6-client(DEPRECATED) disable
dhcp v6-client(DEPRECATED) enable
dhcp v6-client(DEPRECATED) lease renew
dhcp v6-client(DEPRECATED) options set bootfile-url
dhcp v6-client(DEPRECATED) options set dns-servers
dhcp v6-client(DEPRECATED) options set domain-list
dhcp v6-client(DEPRECATED) options set ntp-servers
dhcp v6-client(DEPRECATED) options set posix-timezone
dhcp v6-client(DEPRECATED) options set tzdb-timezone
dhcp v6-client(DEPRECATED) options show
dhcp v6-client(DEPRECATED) options unset bootfile-url
dhcp v6-client(DEPRECATED) options unset dns-servers
dhcp v6-client(DEPRECATED) options unset domain-list
dhcp v6-client(DEPRECATED) options unset ntp-servers
dhcp v6-client(DEPRECATED) options unset posix-timezone
dhcp v6-client(DEPRECATED) options unset tzdb-timezone
dhcp v6-client(DEPRECATED) rapid-commit disable
dhcp v6-client(DEPRECATED) rapid-commit enable
dhcp v6-client(DEPRECATED) rapid-commit show
```


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```
dhcp v6-client(DEPRECATED) set interface
dhcp v6-client(DEPRECATED) set preferred-lifetime
dhcp v6-client(DEPRECATED) set valid-lifetime
dhcp v6-client(DEPRECATED) show
dhcp v6-client(DEPRECATED) show options
dhcp v6-client(DEPRECATED) show state
dhcp v6-client(DEPRECATED) show statistics
dhcp v6-client(DEPRECATED) unset interface
dhcp v6-client(DEPRECATED) unset preferred-lifetime
dhcp v6-client(DEPRECATED) unset valid-lifetime
dot1x auth set port supp-timeout
dot1x auth show stats
dot1x auth unset port supp-timeout
dot1x supp certificate show port
dot1x supp set port password
dot1x supp set port secret
dot1x supp show stats
dot1x supp unset port secret
file reboot
file reboot  <UnixArgs>
flow access-control create(DEPRECATED) port
flow access-control create(DEPRECATED) port forward-unlearned
flow access-control create(DEPRECATED) port max-dynamic-macs
flow access-control delete(DEPRECATED) port
flow cpu-rate-limit set port eprarp(DEPRECATED)
flow cpu-rate-limit set port inet(DEPRECATED)
flow cpu-rate-limit set port pearp(DEPRECATED)
flow cpu-rate-limit set port rstp(DEPRECATED)
flow cpu-rate-limit unset port eprarp(DEPRECATED)
flow cpu-rate-limit unset port inet(DEPRECATED)
flow cpu-rate-limit unset port pearp(DEPRECATED)
flow cpu-rate-limit unset port rstp(DEPRECATED)
gmpls tp-tunnel create rsvp-ingress-corout logical-id
gmpls tp-tunnel create rsvp-ingress-unidir logical-id
gmpls tp-tunnel create static-ingress-corout logical-id
gmpls tp-tunnel create static-ingress-corout cos-profile
gmpls tp-tunnel create static-egress-corout logical-id
gmpls tp-tunnel create static-transit-corout logical-id
gmpls tp-tunnel create static-ingress-unidir logical-id
gmpls tp-tunnel create static-egress-unidir logical-id
gmpls tp-tunnel create static-transit-unidir logical-id
gmpls tp-tunnel create static-ingress-assoc logical-id
interface create ip-interface subnet-mask
interface create ip-interface neighbor-ip
interface create ip-interface routing-domain
interface create ip-interface signal-only
interface create ip-interface data-only
interface create ip-interface te-profile
interface create ip-interface max-reservable-bandwidth
interface create loopback routing-domain
interface create te-profile min-bandwidth
interface create te-profile max-bandwidth
interface create te-profile priority
interface local set subnet
interface ip-acl add ip
interface ip-acl add netmask
interface ip-acl remove ip
interface ip-acl remove netmask
interface ip-acl set netmask
interface remote set subnet
```


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```
interface route add genmask
interface route remove genmask
interface set ip-interface subnet-mask
interface set ip-interface max-reservable-bandwidth
ip fib show details
ip fib show summary
ip fib interfaces show details
ip fib interfaces show summary
ip aib show details
ip aib show summary
ip route add genmask
ip route add routing-domain
ip route remove genmask
ip route remove metric
ip route remove routing-domain
ip route show routing-domain
isis instance create isis-instance logical-id
isis instance create isis-instance routing-domain
isis area-authentication set isis-instance password
isis area-authentication set isis-instance secret
isis domain-authentication set isis-instance secret
isis interface-authentication set ip-interface password
isis interface-authentication set ip-interface secret
ldp authentication set password
ldp authentication set secret
ldp show entity
log flash add filter max-severity
log flash add filter min-severity
log flash create filter max-severity
log flash create filter min-severity
log flash remove filter max-severity
log flash remove filter min-severity
log flash set filter max-severity
log flash set filter min-severity
log ram add filter max-severity
log ram add filter min-severity
log ram create filter max-severity
log ram create filter min-severity
log ram remove filter max-severity
log ram remove filter min-severity
log ram set filter max-severity
log ram set filter min-severity
log ram set global-notify
mpls tunnel-bandwidth-profile create bandwidth-profile logical-id
mpls tunnel-cos-profile create cos-profile logical-id
mpls traffic-eng resource-color-group create color-group logical-id
mpls tunnel create rsvp-ingress logical-id
mpls tunnel create static-ingress logical-id
mpls tunnel create static-egress logical-id
mpls tunnel create static-transit logical-id
mpls tunnel create bidir-ingress-assoc logical-id
mpls l2-vpn pw-vccv-profile create vccv-profile logical-id
mpls l2-vpn pw-cos-profile create cos-profile logical-id
mpls l2-vpn create static-vc service-delimiter-vid
mpls l2-vpn create static-vc service-delimiter-tpid
mpls l2-vpn create static-vc peer-group-id
mpls l2-vpn create dynamic-vc service-delimiter-vid
mpls l2-vpn create dynamic-vc service-delimiter-tpid
mpls l2-vpn set static-vc service-delimiter-vid
mpls l2-vpn set static-vc service-delimiter-tpid
```


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```
mpls l2-vpn set dynamic-vc service-delimiter-vid
mpls l2-vpn set dynamic-vc service-delimiter-tpid
mpls l2-vpn unset static-vc service-delimiter-vid
mpls l2-vpn unset static-vc service-delimiter-tpid
mpls l2-vpn unset dynamic-vc service-delimiter-vid
mpls l2-vpn unset dynamic-vc service-delimiter-tpid
mpls l2-vpn show matching-vc service-delimiter-vid
mpls l2-vpn show matching-vc service-delimiter-tpid
mpls l2-vpn show matching-vc detail
mpls l2-vpn show matching-vc internal
mpls l2-vpn show matching-vc-by-vs detail
mpls l2-vpn show matching-vc-by-vs internal
multicast-services igmp-snooping reset vlan default-router-port
multicast-services igmp-snooping reset vlan router-address-range
multicast-services igmp-snooping reset vs default-router-interface
multicast-services igmp-snooping reset vs router-address-range
multicast-services igmp-snooping set vlan compatibility-mode(DEPRECATED)
multicast-services igmp-snooping set vlan min-response-time(DEPRECATED)
multicast-services igmp-snooping set vs compatibility-mode(DEPRECATED)
multicast-services igmp-snooping set vs min-response-time(DEPRECATED)
ntp-client add server
ntp-client add server key-id
ntp-client add multicast-server
ntp-client clear drift
ntp-client disable
ntp-client disable server
ntp-client enable
ntp-client enable server
ntp-client md5-auth add key-id md5
ntp-client md5-auth disable
ntp-client md5-auth enable
ntp-client md5-auth import filename
ntp-client md5-auth remove key-id
ntp-client md5-auth secret key-id md5
ntp-client md5-auth show
ntp-client remove server
ntp-client remove multicast-server
ntp-client set mode
ntp-client set min-polling-interval
ntp-client set max-polling-interval
ntp-client set polling-interval
ntp-client set sync-change-notification
ntp-client set server key-id
ntp-client show
ntp-client show oper
ntp-client show state
ntp-client show keys
ntp-client show server
ntp authentication import login-id default-server password
ntp authentication import login-id default-ftp-server password
ntp authentication import login-id default-sftp-server password
ntp authentication import login-id ftp-server password
ntp authentication import login-id sftp-server password
ntp authentication import login-id default-server secret
ntp authentication import login-id default-ftp-server secret
ntp authentication import login-id default-sftp-server secret
ntp authentication import login-id ftp-server secret
ntp authentication import login-id sftp-server secret
ntp authentication import default-server sftp-passphrase
ntp authentication import default-sftp-server sftp-passphrase
```


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```
ntp authentication import sftp-server sftp-passphrase
ntp authentication import default-server secret-sftp-passphrase
ntp authentication import default-sftp-server secret-sftp-passphrase
ntp authentication import sftp-server secret-sftp-passphrase
ntp authentication secret key-id md5
ntp authentication secret key-id sha1
ospf instance create ospf-instance routing-domain
ospf interface set ip-interface authentication-type password
ospf interface set ip-interface authentication-type password-
secret(DEPRECATED)
ospf interface set ip-interface authentication-type secret
pm bulkstats create bulkstats-collector logical-id
pm bulkstats create bulkstats-collector login-id ftp-server password
pm bulkstats create bulkstats-collector login-id sftp-server password
pm bulkstats create bulkstats-collector login-id ftp-server secret
pm bulkstats create bulkstats-collector login-id sftp-server secret
pm bulkstats create bulkstats-collector sftp-server sftp-passphrase
pm bulkstats create bulkstats-collector sftp-server secret-sftp-passphrase
pm bulkstats create bulkstats-instance format <ascii-csv>
pm bulkstats create bulkstats-instance logical-id
pm bulkstats set bulkstats-collector login-id ftp-server password
pm bulkstats set bulkstats-collector login-id sftp-server password
pm bulkstats set bulkstats-collector login-id ftp-server secret
pm bulkstats set bulkstats-collector login-id sftp-server secret
pm bulkstats set bulkstats-collector sftp-server sftp-passphrase
pm bulkstats set bulkstats-collector sftp-server secret-sftp-passphrase
pm create port pm-instance logical-id
pm create port-queue-group pm-instance logical-id
pm create tdm-port pm-instance logical-id
pm create tdm-vc pm-instance logical-id
pm threshold create interval-profile logical-id
port monitor active
port monitor delay
port monitor scale
port tdm set oc12-SJB-enabled
port tdm oc3-stm1 reset oc3-stm1
port tdm oc12-stm4 reset oc12-stm4
port tdm ds3-e3 reset ds3-e3
radius disable server
radius enable server
radius show stats
radius add server
radius add server priority
radius add server udp-port
radius add server use-for
radius remove server
radius set key
radius set retries
radius set search-method
radius set secret
radius set timeout
radius set server priority
radius set server udp-port
radius set server use-for
radius unset key
radius unset secret
radius user-login set secret
radius user-login unset key
radius user-login unset secret
radius user-acct set secret
```


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radius user-acct unset key
radius user-acct unset secret
radius dot1x-auth set secret
radius dot1x-auth unset key
radius dot1x-auth unset secret
radius dot1x-acct set secret
radius dot1x-acct unset key
radius dot1x-acct unset secret
ring-protection logical-ring create logical-ring-name WTR
ring-protection logical-ring set ring WTR
ring-protection logical-ring unset ring WTR
rmon alarm add alarm-index index
rmon alarm add data-source
rmon alarm add falling-event-index
rmon alarm add falling-threshold
rmon alarm add index
rmon alarm add interval
rmon alarm add owner
rmon alarm add rising-event-index
rmon alarm add rising-threshold
rmon alarm add sample-type
rmon alarm add startup-alarm
rmon alarm remove index
rmon event add community(DEPRECATED)
rmon event add owner(DEPRECATED)
rmon event add description(DEPRECATED)
rmon event add index(DEPRECATED)
rmon event add type(DEPRECATED)
rmon event remove index
rmon set(DEPRECATED) file(DEPRECATED) name
rmon set(DEPRECATED) file(DEPRECATED) interval
rmon set(DEPRECATED) file(DEPRECATED) push-local
rmon set(DEPRECATED) file(DEPRECATED) num-files
rmon set(DEPRECATED) file(DEPRECATED) remote-file-dir
rmon set(DEPRECATED) file(DEPRECATED) server
rmon set(DEPRECATED) file(DEPRECATED) state
rmon set(DEPRECATED) file(DEPRECATED) default-server
rmon set(DEPRECATED) file(DEPRECATED) default-tftp-server
rmon set(DEPRECATED) file(DEPRECATED) default-ftp-server
rmon set(DEPRECATED) file(DEPRECATED) default-sftp-server
rmon set(DEPRECATED) file(DEPRECATED) tftp-server
rmon set(DEPRECATED) file(DEPRECATED) ftp-server
rmon set(DEPRECATED) file(DEPRECATED) sftp-server
rmon set(DEPRECATED) file(DEPRECATED) server server-port
rmon set(DEPRECATED) file(DEPRECATED) default-server server-port
rmon set(DEPRECATED) file(DEPRECATED) default-tftp-server server-port
rmon set(DEPRECATED) file(DEPRECATED) default-ftp-server server-port
rmon set(DEPRECATED) file(DEPRECATED) default-sftp-server server-port
rmon set(DEPRECATED) file(DEPRECATED) tftp-server server-port
rmon set(DEPRECATED) file(DEPRECATED) ftp-server server-port
rmon set(DEPRECATED) file(DEPRECATED) sftp-server server-port
rmon set(DEPRECATED) file(DEPRECATED) default-server login-id
rmon set(DEPRECATED) file(DEPRECATED) default-ftp-server login-id
rmon set(DEPRECATED) file(DEPRECATED) default-sftp-server login-id
rmon set(DEPRECATED) file(DEPRECATED) ftp-server login-id
rmon set(DEPRECATED) file(DEPRECATED) sftp-server login-id
rmon set(DEPRECATED) file(DEPRECATED) login-id default-server echoless-
password
rmon set(DEPRECATED) file(DEPRECATED) login-id default-ftp-server echoless-
password
```


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```
rmon set(DEPRECATED) file(DEPRECATED) login-id default-sftp-server echoless-
password
rmon set(DEPRECATED) file(DEPRECATED) login-id ftp-server echoless-password
rmon set(DEPRECATED) file(DEPRECATED) login-id sftp-server echoless-password
rmon set(DEPRECATED) file(DEPRECATED) login-id default-server password
rmon set(DEPRECATED) file(DEPRECATED) login-id default-ftp-server password
rmon set(DEPRECATED) file(DEPRECATED) login-id default-sftp-server password
rmon set(DEPRECATED) file(DEPRECATED) login-id ftp-server password
rmon set(DEPRECATED) file(DEPRECATED) login-id sftp-server password
rmon set(DEPRECATED) file(DEPRECATED) login-id default-server secret
rmon set(DEPRECATED) file(DEPRECATED) login-id default-ftp-server secret
rmon set(DEPRECATED) file(DEPRECATED) login-id default-sftp-server secret
rmon set(DEPRECATED) file(DEPRECATED) login-id ftp-server secret
rmon set(DEPRECATED) file(DEPRECATED) login-id sftp-server secret
rmon set(DEPRECATED) file(DEPRECATED) default-server echoless-sftp-passphrase
rmon set(DEPRECATED) file(DEPRECATED) default-sftp-server echoless-sftp-
passphrase
rmon set(DEPRECATED) file(DEPRECATED) sftp-server echoless-sftp-passphrase
rmon set(DEPRECATED) file(DEPRECATED) default-server sftp-passphrase
rmon set(DEPRECATED) file(DEPRECATED) default-sftp-server sftp-passphrase
rmon set(DEPRECATED) file(DEPRECATED) sftp-server sftp-passphrase
rmon set(DEPRECATED) file(DEPRECATED) default-server secret-sftp-passphrase
rmon set(DEPRECATED) file(DEPRECATED) default-sftp-server secret-sftp-
passphrase
rmon set(DEPRECATED) file(DEPRECATED) sftp-server secret-sftp-passphrase
rmon set(DEPRECATED) history auto-configure
rmon set(DEPRECATED) history interval
rmon set(DEPRECATED) history num-buckets
rmon set(DEPRECATED) history owner
rmon set(DEPRECATED) history file-logging
rmon set(DEPRECATED) history statistics
rmon set(DEPRECATED) history stats
rmon history add hist-index data-source
rmon history add data-source
rmon history add file-logging
rmon history add index
rmon history add interval
rmon history add num-buckets
rmon history add owner
rmon history remove index
rmon file(DEPRECATED) name
rmon file(DEPRECATED) interval
rmon file(DEPRECATED) remote-file-dir
rmon file(DEPRECATED) server
rmon file(DEPRECATED) state
rmon show alarm-table
rmon show config
rmon show event-table
rmon show file-persistence
rmon show user-history
rmon statistics add data-source
rmon statistics add index
rmon statistics add owner
rmon statistics remove index
rmon transfer set login-id default-server password
rmon transfer set login-id default-ftp-server password
rmon transfer set login-id default-sftp-server password
rmon transfer set login-id ftp-server password
rmon transfer set login-id sftp-server password
rmon transfer set login-id default-server secret
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rmon transfer set login-id default-ftp-server secret
rmon transfer set login-id default-sftp-server secret
rmon transfer set login-id ftp-server secret
rmon transfer set login-id sftp-server secret
rmon transfer set default-server sftp-passphrase
rmon transfer set default-sftp-server sftp-passphrase
rmon transfer set sftp-server sftp-passphrase
rmon transfer set default-server secret-sftp-passphrase
rmon transfer set default-sftp-server secret-sftp-passphrase
rmon transfer set sftp-server secret-sftp-passphrase
rmon unset(DEPRECATED) file name
rmon unset(DEPRECATED) file remote-file-dir
rmon unset(DEPRECATED) file server
rmon unset(DEPRECATED) file tftp-server
rmon unset(DEPRECATED) file ftp-server
rmon unset(DEPRECATED) file login-id
rmon unset(DEPRECATED) file password
rmon unset(DEPRECATED) file secret
rmon usr-history add-control(DEPRECATED) buckets
rmon usr-history add-control(DEPRECATED) file-logging
rmon usr-history add-control(DEPRECATED) index
rmon usr-history add-control(DEPRECATED) interval
rmon usr-history add-control(DEPRECATED) num-buckets
rmon usr-history add-control(DEPRECATED) owner
rmon usr-history add-object(DEPRECATED) index
rmon usr-history add-object(DEPRECATED) object
rmon usr-history add-object(DEPRECATED) sample-type
rmon usr-history add-object(DEPRECATED) control-index
rmon usr-history remove-control(DEPRECATED) index
rmon usr-history remove-object(DEPRECATED) index
rmon usr-history remove-object(DEPRECATED) control-Index
routing-domain show routing-domain
rsvp-te authentication set authentication-type password
rsvp-te authentication set authentication-type message-digest-secret
rsvp-te set ip-interface authentication-type password
rsvp-te set ip-interface authentication-type message-digest-secret
rsvp-te path create rsvp-path logical-id
snmp show targetParams
software upgrade server
software upgrade ipv6-server
software upgrade user
software upgrade retries
software upgrade retry-interval
software upgrade connection-timeout
software upgrade server server-port
software upgrade login-id default-server password
software upgrade login-id default-ftp-server password
software upgrade login-id default-sftp-server password
software upgrade login-id ftp-server password
software upgrade login-id sftp-server password
software upgrade login-id default-server secret
software upgrade login-id default-ftp-server secret
software upgrade login-id default-sftp-server secret
software upgrade login-id ftp-server secret
software upgrade login-id sftp-server secret
software upgrade default-server sftp-passphrase
software upgrade default-sftp-server sftp-passphrase
software upgrade sftp-server sftp-passphrase
software upgrade default-server secret-sftp-passphrase
software upgrade default-sftp-server secret-sftp-passphrase
```


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```
software upgrade sftp-server secret-sftp-passphrase
software install server
software install server server-port
software install login-id default-server password
software install login-id default-ftp-server password
software install login-id default-sftp-server password
software install login-id ftp-server password
software install login-id sftp-server password
software install login-id default-server secret
software install login-id default-ftp-server secret
software install login-id default-sftp-server secret
software install login-id ftp-server secret
software install login-id sftp-server secret
software install default-server sftp-passphrase
software install default-sftp-server sftp-passphrase
software install sftp-server sftp-passphrase
software install default-server secret-sftp-passphrase
software install default-sftp-server secret-sftp-passphrase
software install sftp-server secret-sftp-passphrase
software license install server
software license install server server-port
software license install login-id default-server password
software license install login-id default-ftp-server password
software license install login-id default-sftp-server password
software license install login-id ftp-server password
software license install login-id sftp-server password
software license install login-id default-server secret
software license install login-id default-ftp-server secret
software license install login-id default-sftp-server secret
software license install login-id ftp-server secret
software license install login-id sftp-server secret
software license install default-server sftp-passphrase
software license install default-sftp-server sftp-passphrase
software license install sftp-server sftp-passphrase
software license install default-server secret-sftp-passphrase
software license install default-sftp-server secret-sftp-passphrase
software license install sftp-server secret-sftp-passphrase
software report-sequence install server
software report-sequence install server server-port
software report-sequence install login-id default-server password
software report-sequence install login-id default-ftp-server password
software report-sequence install login-id default-sftp-server password
software report-sequence install login-id ftp-server password
software report-sequence install login-id sftp-server password
software report-sequence install login-id default-server secret
software report-sequence install login-id default-ftp-server secret
software report-sequence install login-id default-sftp-server secret
software report-sequence install login-id ftp-server secret
software report-sequence install login-id sftp-server secret
software report-sequence install default-server sftp-passphrase
software report-sequence install default-sftp-server sftp-passphrase
software report-sequence install sftp-server sftp-passphrase
software report-sequence install default-server secret-sftp-passphrase
software report-sequence install default-sftp-server secret-sftp-passphrase
software report-sequence install sftp-server secret-sftp-passphrase
software report-sequence run server
software report-sequence run server server-port
software report-sequence run login-id default-server password
software report-sequence run login-id default-ftp-server password
software report-sequence run login-id default-sftp-server password
```


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```
software report-sequence run login-id ftp-server password
software report-sequence run login-id sftp-server password
software report-sequence run login-id default-server secret
software report-sequence run login-id default-ftp-server secret
software report-sequence run login-id default-sftp-server secret
software report-sequence run login-id ftp-server secret
software report-sequence run login-id sftp-server secret
software report-sequence run default-server sftp-passphrase
software report-sequence run default-sftp-server sftp-passphrase
software report-sequence run sftp-server sftp-passphrase
software report-sequence run default-server secret-sftp-passphrase
software report-sequence run default-sftp-server secret-sftp-passphrase
software report-sequence run sftp-server secret-sftp-passphrase
software report-sequence upgrade server
software report-sequence upgrade user
software report-sequence upgrade connection-timeout
software report-sequence upgrade retries
software report-sequence upgrade retry-interval
software report-sequence upgrade server server-port
software report-sequence upgrade login-id default-server password
software report-sequence upgrade login-id default-ftp-server password
software report-sequence upgrade login-id default-sftp-server password
software report-sequence upgrade login-id ftp-server password
software report-sequence upgrade login-id sftp-server password
software report-sequence upgrade login-id default-server secret
software report-sequence upgrade login-id default-ftp-server secret
software report-sequence upgrade login-id default-sftp-server secret
software report-sequence upgrade login-id ftp-server secret
software report-sequence upgrade login-id sftp-server secret
software report-sequence upgrade default-server sftp-passphrase
software report-sequence upgrade default-sftp-server sftp-passphrase
software report-sequence upgrade sftp-server sftp-passphrase
software report-sequence upgrade default-server secret-sftp-passphrase
software report-sequence upgrade default-sftp-server secret-sftp-passphrase
software report-sequence upgrade sftp-server secret-sftp-passphrase
software run server
software run server server-port
software run login-id default-server password
software run login-id default-ftp-server password
software run login-id default-sftp-server password
software run login-id ftp-server password
software run login-id sftp-server password
software run login-id default-server secret
software run login-id default-ftp-server secret
software run login-id default-sftp-server secret
software run login-id ftp-server secret
software run login-id sftp-server secret
software run default-server sftp-passphrase
software run default-sftp-server sftp-passphrase
software run sftp-server sftp-passphrase
software run default-server secret-sftp-passphrase
software run default-sftp-server secret-sftp-passphrase
software run sftp-server secret-sftp-passphrase
ssh-server add client
ssh-server disable
ssh-server enable
ssh-server key generate
ssh-server remove client
ssh-server set authentication-retries
ssh-server set listener-port
```


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```
ssh-server show
ssh-server unset authentication-retries
ssh-server unset listener-port
ssh client key generate user passphrase
ssh client key install user login-id default-server password
ssh client key install user login-id default-ftp-server password
ssh client key install user login-id default-sftp-server password
ssh client key install user login-id ftp-server password
ssh client key install user login-id sftp-server password
ssh client key install user login-id default-server secret
ssh client key install user login-id default-ftp-server secret
ssh client key install user login-id default-sftp-server secret
ssh client key install user login-id ftp-server secret
ssh client key install user login-id sftp-server secret
ssh client key install user default-server sftp-passphrase
ssh client key install user default-sftp-server sftp-passphrase
ssh client key install user sftp-server sftp-passphrase
ssh client key install user default-server secret-sftp-passphrase
ssh client key install user default-sftp-server secret-sftp-passphrase
ssh client key install user sftp-server secret-sftp-passphrase
ssh client key export user passphrase
ssh client key export user login-id default-server password
ssh client key export user login-id default-ftp-server password
ssh client key export user login-id default-sftp-server password
ssh client key export user login-id ftp-server password
ssh client key export user login-id sftp-server password
ssh client key export user login-id default-server secret
ssh client key export user login-id default-ftp-server secret
ssh client key export user login-id default-sftp-server secret
ssh client key export user login-id ftp-server secret
ssh client key export user login-id sftp-server secret
ssh client key export user default-server sftp-passphrase
ssh client key export user default-sftp-server sftp-passphrase
ssh client key export user sftp-server sftp-passphrase
ssh client key export user default-server secret-sftp-passphrase
ssh client key export user default-sftp-server secret-sftp-passphrase
ssh client key export user sftp-server secret-sftp-passphrase
ssh server key install user login-id default-server password
ssh server key install user login-id default-ftp-server password
ssh server key install user login-id default-sftp-server password
ssh server key install user login-id ftp-server password
ssh server key install user login-id sftp-server password
ssh server key install user login-id default-server secret
ssh server key install user login-id default-ftp-server secret
ssh server key install user login-id default-sftp-server secret
ssh server key install user login-id ftp-server secret
ssh server key install user login-id sftp-server secret
ssh server key install user default-server sftp-passphrase
ssh server key install user default-sftp-server sftp-passphrase
ssh server key install user sftp-server sftp-passphrase
ssh server key install user default-server secret-sftp-passphrase
ssh server key install user default-sftp-server secret-sftp-passphrase
ssh server key install user sftp-server secret-sftp-passphrase
ssh server show key
syslog add collector max-severity <critical>
syslog add collector min-severity <critical>
syslog set collector max-severity <critical>
syslog set collector min-severity <critical>
system ftp set mode
system ftp set connection-timeout
```


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```
system ftp set retries
system ftp set retry-interval
system ftp set server
system ftp set user
system ftp set password
system ftp show
system ps show blockId(DEPRECATED)
system set time-zone
system security ca-certificate show
system security ca-certificate show ca-cert-hash
system security crl show
system security crl show crl-hash
system shell session set time-zone
system shell session show time-zone
system shell session show time-zones
system shell session unset time-zone
system shell set login-banner-file(DEPRECATED)
system shell set welcome-banner-file(DEPRECATED)
system shell set global-login-timeout
system shell set global-login-timer
system shell set more
system shell set more-lines
system shell unset login-banner-file(DEPRECATED)
system shell unset welcome-banner-file(DEPRECATED)
system shell unset more
system shell unset more-lines
system show load-query(DEPRECATED)
system show memory-usage
system show time-zone
system show time-zones
system state-dump login-id default-server password
system state-dump login-id default-ftp-server password
system state-dump login-id default-sftp-server password
system state-dump login-id ftp-server password
system state-dump login-id sftp-server password
system state-dump login-id default-server secret
system state-dump login-id default-ftp-server secret
system state-dump login-id default-sftp-server secret
system state-dump login-id ftp-server secret
system state-dump login-id sftp-server secret
system state-dump default-server sftp-passphrase
system state-dump default-sftp-server sftp-passphrase
system state-dump sftp-server sftp-passphrase
system state-dump default-server secret-sftp-passphrase
system state-dump default-sftp-server secret-sftp-passphrase
system state-dump sftp-server secret-sftp-passphrase
system state-dump exclude-linux-files
system state-dump include-optics
system unset time-zone
system xftp set ftp-server password
system xftp set ftp-server secret
system xftp set sftp-server password
system xftp set sftp-server secret
system xftp set sftp-server sftp-passphrase
system xftp set sftp-server secret-sftp-passphrase
system xftp set secret-sftp-passphrase
system xftp getfile login-id default-server password
system xftp getfile login-id default-ftp-server password
system xftp getfile login-id default-sftp-server password
system xftp getfile login-id ftp-server password
```


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```
system xftp getfile login-id sftp-server password
system xftp getfile login-id url password
system xftp getfile login-id default-server secret
system xftp getfile login-id default-ftp-server secret
system xftp getfile login-id default-sftp-server secret
system xftp getfile login-id ftp-server secret
system xftp getfile login-id sftp-server secret
system xftp getfile login-id url secret
system xftp getfile default-server sftp-passphrase
system xftp getfile default-sftp-server sftp-passphrase
system xftp getfile sftp-server sftp-passphrase
system xftp getfile default-server secret-sftp-passphrase
system xftp getfile default-sftp-server secret-sftp-passphrase
system xftp getfile sftp-server secret-sftp-passphrase
system xftp putfile login-id default-server password
system xftp putfile login-id default-ftp-server password
system xftp putfile login-id default-sftp-server password
system xftp putfile login-id ftp-server password
system xftp putfile login-id sftp-server password
system xftp putfile login-id url password
system xftp putfile login-id default-server secret
system xftp putfile login-id default-ftp-server secret
system xftp putfile login-id default-sftp-server secret
system xftp putfile login-id ftp-server secret
system xftp putfile login-id sftp-server secret
system xftp putfile login-id url secret
system xftp putfile default-server sftp-passphrase
system xftp putfile default-sftp-server sftp-passphrase
system xftp putfile sftp-server sftp-passphrase
system xftp putfile default-server secret-sftp-passphrase
system xftp putfile default-sftp-server secret-sftp-passphrase
system xftp putfile sftp-server secret-sftp-passphrase
system xftp sftp-client algorithm compression disable algorithm
system xftp sftp-client algorithm compression enable algorithm
system xftp sftp-client algorithm compression set algorithm
system xftp sftp-client algorithm compression set priority
system xftp sftp-client algorithm compression show
system xftp sftp-client algorithm compression unset algorithm
system xftp sftp-client algorithm compression unset priority
system xftp sftp-client algorithm encryption disable algorithm
system xftp sftp-client algorithm encryption enable algorithm
system xftp sftp-client algorithm encryption set algorithm
system xftp sftp-client algorithm encryption set priority
system xftp sftp-client algorithm encryption show
system xftp sftp-client algorithm encryption unset algorithm
system xftp sftp-client algorithm encryption unset priority
system xftp sftp-client algorithm kex disable algorithm
system xftp sftp-client algorithm kex enable algorithm
system xftp sftp-client algorithm kex set algorithm
system xftp sftp-client algorithm kex set priority
system xftp sftp-client algorithm kex show
system xftp sftp-client algorithm kex unset algorithm
system xftp sftp-client algorithm kex unset priority
system xftp sftp-client algorithm mac disable algorithm
system xftp sftp-client algorithm mac enable algorithm
system xftp sftp-client algorithm mac set algorithm
system xftp sftp-client algorithm mac set priority
system xftp sftp-client algorithm mac show
system xftp sftp-client algorithm mac unset algorithm
system xftp sftp-client algorithm mac unset priority
```


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```
system xftp sftp-client algorithm server-host-key disable algorithm
system xftp sftp-client algorithm server-host-key enable algorithm
system xftp sftp-client algorithm server-host-key set algorithm
system xftp sftp-client algorithm server-host-key set priority
system xftp sftp-client algorithm server-host-key show
system xftp sftp-client algorithm server-host-key unset algorithm
system xftp sftp-client algorithm server-host-key unset priority
system xftp sftp-client algorithm show
tacacs set retries(DEPRECATED)
tacacs set secret
tacacs unset secret
telnet-server disable
telnet-server enable
telnet-server set max-limited-users
telnet-server set max-admin-users
telnet-server set max-super-users
telnet-server show
traffic-profiling set port meter-pool
traffic-profiling show meter-pool
virtual-switch cpu-if set vs tag-vid
virtual-switch cpu-if show
virtual-switch ethernet add vs port service-vlan-tpid
virtual-switch ethernet set port vs service-vlan-tpid
virtual-switch l2-cft clear statistics
virtual-switch l2-cft disable vs
virtual-switch l2-cft enable vs
virtual-switch l2-cft l2pt-mac set mac-name mac-addr
virtual-switch l2-cft l2pt-mac unset mac-name
virtual-switch l2-cft l2pt-mac show
virtual-switch l2-cft protocol add vs ctrl-protocol <rstp>
virtual-switch l2-cft protocol add vs disposition
virtual-switch l2-cft protocol remove vs ctrl-protocol <rstp>
virtual-switch l2-cft protocol set vs ctrl-protocol <rstp>
virtual-switch l2-cft protocol set vs disposition
virtual-switch l2-cft set vs priority
virtual-switch l2-cft set vs tunnel-method
virtual-switch l2-cft set mode
```

Command differences in SAOS 6.21.2

The following lists provide the commands added and removed in SAOS 6.21.2.

Commands added

```
ldp graceful-restart set reconnect-time <#90..1200>
ldp graceful-restart set recovery-time <#90..1200>
ldp graceful-restart set max-peer-reconnect <#90..1200>
ldp graceful-restart set max-peer-recovery <#90..1200>
mpls l2-vpn set static-vc <VcMplsStatic> mtu <#1500..9128>
mpls l2-vpn set dynamic-vc <VcMplsDynamic> mtu <#1500..9536>
aggregation set agg <LagPort> admin-key <#2049..8191>
bfd set vccv-hw-acceleration <off|on>
bfd dampening disable
bfd dampening enable
bfd dampening profile create profile <NameString>
bfd dampening profile create profile <NameString> suppress-threshold
<#1..120000>
```


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```
bfd dampening profile create profile <NameString> reuse-threshold
<#1..120000>
bfd dampening profile create profile <NameString> max-suppress-time
<#501..3600000>
bfd dampening profile create profile <NameString> decay-half-life
<#500..1800000>
bfd dampening profile create profile <NameString> mode <test|full>
bfd dampening profile delete profile <BfdDampProfile>
bfd dampening profile set profile <BfdDampProfile> suppress-threshold
<#1..120000>
bfd dampening profile set profile <BfdDampProfile> reuse-threshold
<#1..120000>
bfd dampening profile set profile <BfdDampProfile> max-suppress-time
<#501..3600000>
bfd dampening profile set profile <BfdDampProfile> decay-half-life
<#500..1800000>
bfd dampening profile set profile <BfdDampProfile> mode <test|full>
bfd dampening profile unset profile <BfdDampProfile> suppress-threshold
bfd dampening profile unset profile <BfdDampProfile> reuse-threshold
bfd dampening profile unset profile <BfdDampProfile> max-suppress-time
bfd dampening profile unset profile <BfdDampProfile> decay-half-life
bfd dampening profile unset profile <BfdDampProfile> mode
bfd dampening profile show
bfd dampening profile show profile <BfdDampProfile>
bfd dampening session show
bfd dampening session show suppressed
bfd dampening session show session <BfdSession> statistics
broadcast-containment add filter <BcastFilter> vs <VirtualSwitch>
broadcast-containment clear statistics
broadcast-containment clear filter <BcastFilter> statistics
broadcast-containment create filter <NameString> vs <VirtualSwitch>
broadcast-containment remove filter <BcastFilter> vs <VirtualSwitch>
broadcast-containment show filter <BcastFilter> statistics
broadcast-containment show port <PortList> vs <VirtualSwitch>
broadcast-containment show resources
broadcast-containment show vs <VirtualSwitch> port <Port>
cfm service set service <CfmService> y-protection-monitoring <on|off>
gmpls tp-tunnel create static-ingress-corout <NameString> bfd-dampening
<on|off>
gmpls tp-tunnel create static-ingress-corout <NameString> bfd-dampening-
profile <BfdDampProfile>
gmpls tp-tunnel create static-egress-corout <NameString> bfd-dampening
<on|off>
gmpls tp-tunnel create static-egress-corout <NameString> bfd-dampening-
profile <BfdDampProfile>
gmpls tp-tunnel set static-ingress-corout <MplsIngressStaticTpTunl> bfd-
dampening <on|off>
gmpls tp-tunnel set static-ingress-corout <MplsIngressStaticTpTunl> bfd-
dampening-profile <BfdDampProfile>
gmpls tp-tunnel set static-egress-corout <MplsEgressStaticTpTunl> bfd-
dampening <on|off>
gmpls tp-tunnel set static-egress-corout <MplsEgressStaticTpTunl> bfd-
dampening-profile <BfdDampProfile>
gmpls tp-tunnel unset static-ingress-corout <MplsIngressStaticTpTunl> bfd-
dampening
gmpls tp-tunnel unset static-ingress-corout <MplsIngressStaticTpTunl> bfd-
dampening-profile
gmpls tp-tunnel unset static-egress-corout <MplsEgressStaticTpTunl> bfd-
dampening
```


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```
gmpls tp-tunnel unset static-egress-corout <MplsEgressStaticTpTunl> bfd-
dampening-profile
gmpls tp-tunnel show static-ingress-corout <MplsIngressStaticTpTunl>
statistics
gmpls tp-tunnel show static-egress-corout <MplsEgressStaticTpTunl> statistics
gmpls tp-tunnel clear static-ingress-corout <MplsIngressStaticTpTunl>
statistics
gmpls tp-tunnel clear static-egress-corout <MplsEgressStaticTpTunl>
statistics
interface set ip-interface <Interface> network-type <broadcast|point-to-
point>
interface unset ip-interface <Interface> network-type
ip fast-reroute enable
ip fast-reroute disable
ip fast-reroute set src-proto <isis>
ip fast-reroute set src-proto <isis> level <L1|L2>
ip fast-reroute set route-map <String>
ip fast-reroute set lfa-calc-max-delay <#0..2147483647>
ip fast-reroute set lfa-reserved-ip <IpAddressWithMask>
ip fast-reroute unset src-proto <isis>
ip fast-reroute unset src-proto <isis> level
ip fast-reroute unset route-map
ip fast-reroute unset lfa-calc-max-delay
ip fast-reroute unset lfa-reserved-ip
ip fast-reroute show
ip fast-reroute show lfa-summary
ip fast-reroute show lfa-path-table
ip fast-reroute show lfa-path-table prefix <IpAddressWithMask>
ip fast-reroute interface enable ip-interface <Interface>
ip fast-reroute interface disable ip-interface <Interface>
ip fast-reroute interface show
isis instance set isis-instance <IsisInstance> uloop-prevention-timer
<#0..4294967295>
isis instance unset isis-instance <IsisInstance> uloop-prevention-timer
isis interface set ip-interface <Interface> network-type <broadcast|point-to-
point>
isis interface unset ip-interface <Interface> network-type
isis administrative-distance set distance <#1..255>
isis administrative-distance unset distance
mpls ping vc <VcMpls> seg-pw-id <#1..2147483647>
prefix-list create list-name <NameString>
prefix-list delete list-name <PrefixList>
prefix-list add list-name <PrefixList> seq <#1..4294967295>
prefix-list add list-name <PrefixList> action <permit|deny>
prefix-list add list-name <PrefixList> ipaddress/mask <IpAddressWithMask>
prefix-list add list-name <PrefixList> ge <#1..32>
prefix-list add list-name <PrefixList> le <#1..32>
prefix-list remove list-name <PrefixList> seq <#1..4294967295>
prefix-list show
route-map create map-name <NameString>
route-map delete map-name <RouteMap>
route-map remove map-name <RouteMap> seq <#10..65535>
route-map show
route-map show map-name <RouteMap>
route-map match-address add map-name <RouteMap> seq <#10..65535>
route-map match-address add map-name <RouteMap> action <permit|deny>
route-map match-address add map-name <RouteMap> prefix-list-name <String>
route-map match-address remove map-name <RouteMap> seq <#10..65535>
route-map match-address remove map-name <RouteMap> action <permit|deny>
```


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```
pm threshold create interval-profile <NameString> profile-type <basic|crc-
drop|queue-drop>
pm threshold set interval-profile <PerfMonIntervalProfile> crc
pm threshold set interval-profile <PerfMonIntervalProfile> crc crc-alert-
boundary <#1..2147483647>
pm threshold unset interval-profile <PerfMonIntervalProfile> crc
pm threshold unset interval-profile <PerfMonIntervalProfile> crc crc-alert-
boundary
port set port <PortList> y-protection <none|primary|secondary>
port unset port <PortList> y-protection
resource-manager pool set feature <accelerated-cfm-over-pbt|access-
list|broadcast-cont...>
snmp check community <String>
snmp check target <String>
snmp check user <String>
snmp check user <String> engine-id <SnmpEngineId>
snmp clear statistics
snmp clear statistics snmp-target <IpAddress>
snmp clear statistics snmp-target <IpAddress> snmp-target-port <#0..65535>
snmp clear statistics snmp-target-port <#0..65535> snmp-target-port
<#0..65535>
snmp clear statistics snmp-target <IpAddress> snmp-target <IpAddress>
snmp clear statistics snmp-target-port <#0..65535> snmp-target <IpAddress>
snmp clear statistics snmp-target-port <#0..65535>
snmp context-map attach context <String> isis-instance <IsisInstance>
snmp context-map attach context <String> ospf-instance <OspfInstance>
snmp context-map detach context <String> isis-instance <IsisInstance>
snmp context-map detach context <String> ospf-instance <OspfInstance>
snmp create access-entry <String> context-prefix <String>
snmp create access-entry <String> notify-view <SnmpViewTree>
snmp create access-entry <String> read-view <SnmpViewTree>
snmp create access-entry <String> sec-level <authWithPriv|authNoPriv|noAuth>
snmp create access-entry <String> sec-model <v1|v2c|v3>
snmp create access-entry <String> write-view <SnmpViewTree>
snmp create community-index <String> community <String>
snmp create community-index <String> context-name <String>
snmp create community-index <String> transport-tag <String>
snmp create community-index <String> sec-name <String>
snmp create context <String>
snmp create notify <String> notify-tag <String>
snmp create notify <String> notify-type <inform|trap>
snmp create target <String> addr <IpMaskHost>
snmp create target <String> param-name <String>
snmp create target <String> retry-count <#0..255>
snmp create target <String> retry-timeout <#0..65535>
snmp create target <String> tag <String>
snmp create target <String> transport-domain <snmp-udp|v4-udp|v6-udp>
snmp create target <String> udp-port <#0..65535>
snmp create target-param <String> sec-level <authWithPriv|authNoPriv|noAuth>
snmp create target-param <String> sec-model <v1|v2c|v3>
snmp create target-param <String> sec-name <String>
snmp create user <String> auth-protocol <md5|noAuth|sha>
snmp create user <String> auth-secret <SecretString>
snmp create user <String> echoless-auth-password
snmp create user <String> echoless-priv-password
snmp create user <String> engine-id <SnmpEngineId>
snmp create user <String> priv-protocol <aes-128|des|3des|noPriv>
snmp create user <String> priv-secret <SecretString>
snmp create viewtree <String> mask <OctetString>
snmp create viewtree <String> sub-tree <String>
```


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```
snmp create viewtree <String> type <exclude|include>
snmp delete access-entry <String> context-prefix <String>
snmp delete access-entry <String> sec-level <authWithPriv|authNoPriv|noAuth>
snmp delete access-entry <String> sec-model <v1|v2c|v3>
snmp delete community-index <String>
snmp delete context <String>
snmp delete notify <SnmpNotify>
snmp delete target <SnmpTarget>
snmp delete target-param <String>
snmp delete user <SnmpUser>
snmp delete user <SnmpUser> engine-id <SnmpEngineId>
snmp delete viewtree <SnmpViewTree> sub-tree <String>
snmp disable
snmp enable
snmp notification ciena CIENA-CES-OSPF-MIB enable notification-name
<CIENADashCESDashOSPFDashMIB>
snmp notification ciena CIENA-CES-OSPF-MIB disable notification-name
<CIENADashCESDashOSPFDashMIB>
snmp notification standard ISIS-MIB enable notification-name <ISISDashMIB>
snmp notification standard ISIS-MIB disable notification-name <ISISDashMIB>
snmp port-traps disable port <PortList> link-up-down-trap <enhanced|standard>
snmp port-traps enable port <PortList> link-up-down-trap <enhanced|standard>
snmp security-to-group attach user <String> sec-model <v1|v2c|v3>
snmp set bulk-repetitions <#0..1024>
snmp set contact <String_AllChar>
snmp set location <String_AllChar>
snmp set max-inform-queue-length <#0..30000>
snmp set pdu-size <#256..9216>
snmp set preferred-source-address <default|loopback>
snmp set notify <SnmpNotify> notify-tag <String>
snmp set notify <SnmpNotify> notify-type <trap>
snmp set preferred-source-ip <Interface>
snmp set user <SnmpUser> auth-protocol <md5|noAuth|sha>
snmp set user <SnmpUser> auth-secret <SecretString>
snmp set user <SnmpUser> echoless-auth-password
snmp set user <SnmpUser> echoless-priv-password
snmp set user <SnmpUser> engine-id <SnmpEngineId>
snmp set user <SnmpUser> priv-protocol <aes-128|des|3des|noPriv>
snmp set user <SnmpUser> priv-secret <SecretString>
snmp show bulk-repetitions
snmp show context
snmp show context-map
snmp show max-inform-queue-length
snmp show pdu-size
snmp show statistics
snmp show statistics snmp-target <IpAddress>
snmp show statistics snmp-target <IpAddress> snmp-target-port <#0..65535>
snmp show statistics snmp-target-port <#0..65535> snmp-target-port
<#0..65535>
snmp show statistics snmp-target <IpAddress> snmp-target <IpAddress>
snmp show statistics snmp-target-port <#0..65535> snmp-target <IpAddress>
snmp show statistics snmp-target-port <#0..65535>
snmp unset bulk-repetitions
snmp unset pdu-size
snmp unset preferred-source-address
snmp unset preferred-source-ip
snmp wizard create community <String>
snmp wizard create community <String> community-index <String>
snmp wizard create community <String> context-name <String>
snmp wizard create community <String> group-name <String>
```


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```
snmp wizard create community <String> notify-view <SnmpViewTree>
snmp wizard create community <String> read-view <SnmpViewTree>
snmp wizard create community <String> sec-model <v1|v2c>
snmp wizard create community <String> sec-name <String>
snmp wizard create community <String> transport-tag <String>
snmp wizard create community <String> write-view <SnmpViewTree>
snmp wizard create inform-server <IpHost>
snmp wizard create inform-server <IpHost> notify-tag <String>
snmp wizard create inform-server <IpHost> param-name <String>
snmp wizard create inform-server <IpHost> retry-count <#0..255>
snmp wizard create inform-server <IpHost> retry-timeout <#0..65535>
snmp wizard create inform-server <IpHost> sec-level
<authWithPriv|authNoPriv|noAuth>
snmp wizard create inform-server <IpHost> sec-model <v1|v2c|v3>
snmp wizard create inform-server <IpHost> sec-name <String>
snmp wizard create inform-server <IpHost> target-name <String>
snmp wizard create inform-server <IpHost> transport-domain <snmp-udp|v4-
udp|v6-udp>
snmp wizard create inform-server <IpHost> udp-port <#0..65535>
snmp wizard create trap-server <IpHost>
snmp wizard create trap-server <IpHost> notify-tag <String>
snmp wizard create trap-server <IpHost> param-name <String>
snmp wizard create trap-server <IpHost> sec-level
<authWithPriv|authNoPriv|noAuth>
snmp wizard create trap-server <IpHost> sec-model <v1|v2c|v3>
snmp wizard create trap-server <IpHost> sec-name <String>
snmp wizard create trap-server <IpHost> target-name <String>
snmp wizard create trap-server <IpHost> transport-domain <snmp-udp|v4-udp|v6-
udp>
snmp wizard create trap-server <IpHost> udp-port <#0..65535>
snmp wizard create user <String>
snmp wizard create user <String> auth-protocol <noAuth|md5|sha>
snmp wizard create user <String> echoless-auth-password
snmp wizard create user <String> priv-protocol <aes-128|des|3des|noPriv>
snmp wizard create user <String> echoless-priv-password
snmp wizard create user <String> auth-secret <String>
snmp wizard create user <String> priv-secret <String>
snmp wizard create user <String> engine-id <SnmpEngineId>
snmp wizard create user <String> group-name <String>
snmp wizard create user <String> read-view <SnmpViewTree>
snmp wizard create user <String> write-view <SnmpViewTree>
snmp wizard create user <String> notify-view <SnmpViewTree>
tunnel decap create static-lsp <String> label <#16..1048575>
tunnel decap delete lsp <TunnelDecapStatic>
tunnel decap set static-lsp <TunnelDecapStatic> label <#16..1048575>
tunnel decap show
tunnel decap show lsp <TunnelDecap>
tunnel encap create static-lsp <String> encap-cos-policy <fixed|vc-
inherit|vs-inherit>
tunnel encap create static-lsp <String> encap-fixed-exp <#0..7>
tunnel encap create static-lsp <String> ip <IpAddress>
tunnel encap create static-lsp <String> label <#16..1048575>
tunnel encap create static-lsp <String> ttl-policy <pipe|uniform>
tunnel encap delete lsp <TunnelEncap>
tunnel encap delete backup-rsvp-lsp <TunnelEncapRsvpLspBkup>
tunnel encap disable lsp <TunnelEncap>
tunnel encap disable backup-rsvp-lsp <TunnelEncapRsvpLspBkup>
tunnel encap enable lsp <TunnelEncap>
tunnel encap enable backup-rsvp-lsp <TunnelEncapRsvpLspBkup>
```


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```
tunnel encap set static-lsp <TunnelEncapStatic> encap-cos-policy <fixed|vc-
inherit|vs-inherit>
tunnel encap set static-lsp <TunnelEncapStatic> encap-fixed-exp <#0..7>
tunnel encap set static-lsp <TunnelEncapStatic> ip <IpAddress>
tunnel encap set static-lsp <TunnelEncapStatic> label <#16..1048575>
tunnel encap set static-lsp <TunnelEncapStatic> ttl-policy <pipe|uniform>
tunnel encap show
tunnel encap show lsp <TunnelEncap>
tunnel encap show backup-rsvp-lsp <TunnelEncapRsvpLspBkup>
tunnel rename lsp <Tunnel> name <String>
tunnel set fixed-ttl <#2..255>
tunnel show
tunnel show statistics
tunnel show lsp <Tunnel>
virtual-link-loss-indication add instance-group <VlliService> vc-instance
<VcMplsEther>
irtual-link-loss-indication add action-group <VlliAction> action <port-
shut|port-unshut|ccm-stop|ccm-resume|mac-flush|...>
virtual-link-loss-indication remove instance-group <VlliService> vc-instance
<VcMplsEther>
virtual-link-loss-indication remove action-group <VlliAction> action <port-
shut|port-unshut|ccm-stop|ccm-resume|mac-flush|...>
virtual-link-loss-indication set instance-group <VlliService> vc-instance
<VcMplsEther>
virtual-link-loss-indication unset instance-group <VlliService> vc-instance
<VcMplsEther>
```

Commands removed

```
ldp graceful-restart set reconnect-time <#90..360>
ldp graceful-restart set recovery-time <#90..360>
ldp graceful-restart set max-peer-reconnect <#90..360>
ldp graceful-restart set max-peer-recovery <#90..360>
aggregation set agg <LagPort> admin-key <#2049..4095>
bfd set vccv-hw-acceleration <on>
mpls ping vc <VcMpls> seg-pw-id <#1..4294967295>
pm threshold create interval-profile <NameString> profile-type <basic|queue-
drop>
resource-manager pool set feature <access-list|broadcast-
containment|cfm|loss-measurem...>
snmp check user <String>
snmp check user <String> engine-id <SnmpEngineId>
snmp check community <String>
snmp check target <String>
snmp wizard create user <String>
snmp wizard create user <String> auth-protocol <noAuth|md5|sha>
snmp wizard create user <String> echoless-auth-password
snmp wizard create user <String> priv-protocol <aes-128|des|3des|noPriv>
snmp wizard create user <String> echoless-priv-password
snmp wizard create user <String> auth-secret <String>
snmp wizard create user <String> priv-secret <String>
snmp wizard create user <String> engine-id <SnmpEngineId>
snmp wizard create user <String> group-name <String>
snmp wizard create user <String> read-view <SnmpViewTree>
snmp wizard create user <String> write-view <SnmpViewTree>
snmp wizard create user <String> notify-view <SnmpViewTree>
snmp wizard create community <String>
snmp wizard create community <String> community-index <String>
snmp wizard create community <String> sec-name <String>
```


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```
snmp wizard create community <String> transport-tag <String>
snmp wizard create community <String> context-name <String>
snmp wizard create community <String> sec-model <v1|v2c>
snmp wizard create community <String> group-name <String>
snmp wizard create community <String> read-view <SnmpViewTree>
snmp wizard create community <String> write-view <SnmpViewTree>
snmp wizard create community <String> notify-view <SnmpViewTree>
snmp wizard create inform-server <IpHost>
snmp wizard create inform-server <IpHost> target-name <String>
snmp wizard create inform-server <IpHost> param-name <String>
snmp wizard create inform-server <IpHost> udp-port <#0..65535>
snmp wizard create inform-server <IpHost> transport-domain <snmp-udp|v4-
udp|v6-udp>
snmp wizard create inform-server <IpHost> retry-count <#0..255>
snmp wizard create inform-server <IpHost> retry-timeout <#0..65535>
snmp wizard create inform-server <IpHost> sec-name <String>
snmp wizard create inform-server <IpHost> sec-model <v1|v2c|v3>
snmp wizard create inform-server <IpHost> sec-level
<noAuth|authNoPriv|authWithPriv>
snmp wizard create inform-server <IpHost> notify-tag <String>
snmp wizard create trap-server <IpHost>
snmp wizard create trap-server <IpHost> target-name <String>
snmp wizard create trap-server <IpHost> param-name <String>
snmp wizard create trap-server <IpHost> udp-port <#0..65535>
snmp wizard create trap-server <IpHost> transport-domain <snmp-udp|v4-udp|v6-
udp>
snmp wizard create trap-server <IpHost> sec-name <String>
snmp wizard create trap-server <IpHost> sec-model <v1|v2c|v3>
snmp wizard create trap-server <IpHost> sec-level
<noAuth|authNoPriv|authWithPriv>
snmp wizard create trap-server <IpHost> notify-tag <String>
snmp create user <String> auth-protocol <noAuth|md5|sha>
snmp create user <String> echoless-auth-password
snmp create user <String> priv-protocol <aes-128|des|3des|noPriv>
snmp create user <String> echoless-priv-password
snmp create user <String> auth-secret <SecretString>
snmp create user <String> priv-secret <SecretString>
snmp create user <String> engine-id <SnmpEngineId>
snmp create viewtree <String> sub-tree <String>
snmp create viewtree <String> mask <OctetString>
snmp create viewtree <String> type <include|exclude>
snmp create access-entry <String> sec-model <v1|v2c|v3>
snmp create access-entry <String> sec-level <noAuth|authNoPriv|authWithPriv>
snmp create access-entry <String> read-view <SnmpViewTree>
snmp create access-entry <String> write-view <SnmpViewTree>
snmp create access-entry <String> notify-view <SnmpViewTree>
snmp create access-entry <String> context-prefix <String>
snmp create context <String>
snmp create notify <String> notify-tag <String>
snmp create notify <String> notify-type <trap|inform>
snmp create target <String> addr <IpMaskHost>
snmp create target <String> param-name <String>
snmp create target <String> tag <String>
snmp create target <String> udp-port <#0..65535>
snmp create target <String> transport-domain <snmp-udp|v4-udp|v6-udp>
snmp create target <String> retry-count <#0..255>
snmp create target <String> retry-timeout <#0..65535>
snmp create target-param <String> sec-name <String>
snmp create target-param <String> sec-model <v1|v2c|v3>
snmp create target-param <String> sec-level <noAuth|authNoPriv|authWithPriv>
```


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```
snmp create community-index <String> community <String>
snmp create community-index <String> sec-name <String>
snmp create community-index <String> transport-tag <String>
snmp create community-index <String> context-name <String>
snmp set user <SnmpUser> auth-protocol <noAuth|md5|sha>
snmp set user <SnmpUser> echoless-auth-password
snmp set user <SnmpUser> priv-protocol <aes-128|des|3des|noPriv>
snmp set user <SnmpUser> echoless-priv-password
snmp set user <SnmpUser> auth-secret <SecretString>
snmp set user <SnmpUser> priv-secret <SecretString>
snmp set user <SnmpUser> engine-id <SnmpEngineId>
snmp set notify <SnmpNotify> notify-tag <String>
snmp set notify <SnmpNotify> notify-type <trap>
snmp set preferred-source-ip <Interface>
snmp set contact <String_AllChar>
snmp set location <String_AllChar>
snmp set bulk-repetitions <#0..1024>
snmp set pdu-size <#256..9216>
snmp set max-inform-queue-length <#0..30000>
snmp set preferred-source-address <loopback|default>
snmp delete user <SnmpUser>
snmp delete user <SnmpUser> engine-id <SnmpEngineId>
snmp delete viewtree <SnmpViewTree> sub-tree <String>
snmp delete notify <SnmpNotify>
snmp delete target <SnmpTarget>
snmp delete target-param <String>
snmp delete access-entry <String> sec-model <v1|v2c|v3>
snmp delete access-entry <String> sec-level <noAuth|authNoPriv|authWithPriv>
snmp delete access-entry <String> context-prefix <String>
snmp delete community-index <String>
snmp delete context <String>
snmp disable
snmp enable
snmp port-traps disable port <PortList> link-up-down-trap <standard|enhanced>
snmp port-traps enable port <PortList> link-up-down-trap <standard|enhanced>
snmp security-to-group attach user <String> sec-model <v1|v2c|v3>
snmp context-map attach context <String> ospf-instance <OspfInstance>
snmp context-map attach context <String> isis-instance <IsisInstance>
snmp context-map detach context <String> ospf-instance <OspfInstance>
snmp context-map detach context <String> isis-instance <IsisInstance>
snmp show context
snmp show context-map
snmp show bulk-repetitions
snmp show pdu-size
snmp show max-inform-queue-length
snmp unset preferred-source-address
snmp unset preferred-source-ip
snmp unset bulk-repetitions
snmp unset pdu-size
virtual-link-loss-indication add action-group <VlliAction> action <port-
shut|port-unshut|ccm-stop|ccm-resume|mac-flush>
virtual-link-loss-indication remove action-group <VlliAction> action <port-
shut|port-unshut|ccm-stop|ccm-resume|mac-flush>
```


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Commands

access-list

Access Control Lists

Command	Access	Description
access-list enable	admin	Enable ACL functionality

Command	Access	Description
access-list disable	admin	Disable ACL functionality

Command	Access	Description
access-list set	admin	Set global ACL parameters, set attributes of an ACL rule on the specified profile or set the default filter action on the profile
[filter-mode <l2-l3-combo | l3-only>]		The global ACL device mode - default mode is l2-l3-combo

Command	Access	Description
access-list unset	admin	Unset global ACL parameters or unset an attribute of an ACL rule on the specified profile
[filter-mode]		The global ACL device mode - default mode is l2-l3-combo

Command	Access	Description
access-list create	admin	Create an ACL profile
acl-profile <acl-profile>		ACL profile name

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{default-filter-action <allow | deny>}		The default filter action on the profile

Command	**Access**	**Description**
access-list create	super	Create an ACL action
acl-augment-action <acl-augment-action>		ACL action name
{ingress-capture <Ingress Capture Profile>}		Action for ingress packet capture

Command	**Access**	**Description**
access-list delete	admin	Delete an ACL profile
profile <profile>		ACL profile name

Command	**Access**	**Description**
access-list delete	super	Delete an ACL action
acl-augment-action <acl-augment-action>		ACL action name

Command	**Access**	**Description**
access-list enable	admin	Enable an ACL profile
profile <profile>		ACL profile name

Command	**Access**	**Description**
access-list disable	admin	Disable an ACL profile
profile <profile>		ACL profile name

Command	**Access**	**Description**
access-list add	admin	Add an ACL rule to the specified profile
profile <profile>		ACL profile name
rule <rule>		ACL rule name
{precedence <NUMBER: 0-254>}		The unique precedence of the rule within the profile: 0 (highest) - 255 (lowest). Note that 255 precedence is reserved for the default rule.

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{filter-action <allow | deny>}		The rule filter action
[src-mac <MAC address with mask>]		Source MAC address with mask
[dst-mac <MAC address with mask>]		Destination MAC address with mask
[base-etype <Etype value in hex>]		EtherType
[vtag-stack <vid[/mask]>.<pcp[/mask]>.<dei>]		VID/PCP/DEI values
[src-ip <IP address in CIDR notation>]		IP source address
[dst-ip <IP address in CIDR notation>]		IP destination address
[dscp <DSCP with Mask>]		DSCP with mask
[ip-protocol <NUMBER: 0-255>]		IP protocol type
[is-fragment <yes | no>]		Match fragmented or unfragmented/head-fragment packets
[l4-src-port <L4 Port Number(-Range)>]		IP L4 source port - single or range (only in l2-l3-combo mode)
[l4-dst-port <L4 Port Number(-Range)>]		IP L4 destination port - single or range (only in l2-l3-combo mode)
[l4-dst-protocol <bootp-client | bootp-server | bgp | dhcpv6-client | dhcpv6-server | dhcp-client | dhcp-server | dns | ftp | http | ldp | ntp | olsr | rip | rpc | snmp | snmptrap | ssh | syslog | tacacs | telnet | tftp | twampctl>]		IP L4 destination protocol name
[tcp-flags <String List>]		TCP flags
[any]		Any frames
[augment-action <ACL Action List>]	super	Augment Action
[none]		Qualifying no frame

Command	**Access**	**Description**
access-list remove	admin	Remove a list of ACL rules or all rules from the specified profile
profile <profile>		ACL profile name
rule <rule>		ACL rule list or all

Command	**Access**	**Description**
access-list set	admin	Set an attribute of an ACL rule on the specified profile or the default filter action on the profile
profile <profile>		ACL profile name
{rule <ACL Rule>}		The ACL rule name
{default-filter-action <allow | deny>}		The default filter action on the profile

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[precedence <NUMBER: 0-254>]		The unique precedence of the rule within the profile: 0 (highest) - 255 (lowest). Note that 255 precedence is reserved for the default rule.
[filter-action <allow | deny>]		The rule filter action
[src-mac <MAC address with mask>]		Source MAC address with mask
[dst-mac <MAC address with mask>]		Destination MAC address with mask
[base-etype <Etype value in hex>]		EtherType
[vtag-stack <vid[/mask]>.<pcp[/mask]>.<dei>]		VID/PCP/DEI values
[src-ip <IP address in CIDR notation>]		IP source address
[dst-ip <IP address in CIDR notation>]		IP destination address
[dscp <DSCP with Mask>]		DSCP with mask
[ip-protocol <NUMBER: 0-255>]		IP protocol type
[is-fragment <yes | no>]		Match fragmented or unfragmented/head-fragment packets
[l4-src-port <L4 Port Number(-Range)>]		IP L4 source port range
[l4-dst-port <L4 Port Number(-Range)>]		IP L4 destination port range
[l4-dst-protocol <bootp-client | bootp-server | bgp | dhcpv6-client | dhcpv6-server | dhcp-client | dhcp-server | dns | ftp | http | ldp | ntp | olsr | rip | rpc | snmp | snmptrap | ssh | syslog | tacacs | telnet | tftp | twampctl>]		IP L4 destination protocol name
[tcp-flags <String List>]		TCP flags
[augment-action <ACL Action List>]	super	Augment Action

Command	**Access**	**Description**
access-list set	super	Set an ACL Augment action
acl-augment-action <acl-augment-action>		ACL action name
{ingress-capture}		Action for ingress packet capture

Command	**Access**	**Description**
access-list unset	admin	Unset a filter term of an ACL rule on the specified profile
profile <profile>		ACL profile name
rule <rule>		ACL rule name
[src-mac]		Source MAC address with mask
[dst-mac]		Destination MAC address with mask
[base-etype]		EtherType

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[vtag-stack]		VID/PCP/DEI values
[src-ip]		IP source address
[dst-ip]		IP destination address
[dscp]		DSCP with mask
[ip-protocol]		IP protocol type
[is-fragment]		Match fragmented or unfragmented/head-fragment packets
[l4-src-port]		IP L4 source port range
[l4-dst-port]		IP L4 destination port range
[l4-dst-protocol]		IP L4 destination protocol name
[tcp-flags]		TCP flags
[augment-action]	super	Augment Action

Command	**Access**	**Description**
access-list show	limited	Display global ACL configuration and configured profiles or optionally the ACL resource usage or all augment action configured profiles
[all-augment-actions]	super	Display all ACL augment actions
[resources]		Display ACL resource usage

Command	**Access**	**Description**
access-list show	limited	Display ACL profile and rule configuration info with optional global/instance statistics (brief and/or active)
profile <profile>		ACl profile name
[statistics]		Statistics
[port <Port list>]		list of ports
[vlan <VLAN ID List>]		list of VLANs
[vs <Virtual Switch Ethernet Name>]		VS name
[ip-interface <Interface Name>]		IP Interface name
[interface <remote | local>]		Local or Remote interface
[all-instances]		All attached interfaces
[active]		Active rules only (non-zero stats)
[brief]		Summarized output (no filter terms)
[interfaces]		Attached interfaces

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Command	Access	Description
access-list show	super	Display ACL Augment action(s)
acl-augment-action <acl-augment-action>		List of ACL action names

Command	Access	Description
access-list clear	admin	Clear ACL profile global/instance rule statistics
profile <profile>		ACl profile name
{statistics}		Statistics
[port <Port list>]		list of ports
[vlan <VLAN ID List>]		list of VLANs
[vs <Virtual Switch Ethernet Name>]		VS name
[ip-interface <Interface Name>]		IP Interface name
[interface <remote | local>]		Local or Remote interface

aggregation

link aggregation

Command	Access	Description
aggregation add	admin	add ports to an aggregation group
agg <agg>		aggregation port
{port <Physical port list>}		ports to add to the aggregation
{protection-port <Physical port list>}		protection ports to add to the aggregation

Command	Access	Description
aggregation create	admin	create an aggregation group
{agg <Name (no ,) String>}		aggregation port name

Command	Access	Description
aggregation create	admin	create an enhanced hash profile
enhanced-hash-profile <enhanced-hash-profile>		enhanced hash profile name
{hash-function <NUMBER: 0-4>}		Hash function to use when hashing mode set to enhanced.

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{hash-offset <NUMBER: 0-15>}		Hash offset to use when hashing mode is set to enhanced.

Command	Access	Description
aggregation clear	admin	clear agg statistics
{statistics}		agg statistics

Command	Access	Description
aggregation clear	admin	clear statistics
agg <agg>		aggregation port
{statistics}		Agg statistics

Command	Access	Description
aggregation clear	admin	clear statistics
port <port>		physical port
{statistics}		port LACP statistics

Command	Access	Description
aggregation delete	admin	delete an aggregation group
agg <agg>		aggregation port name

Command	Access	Description
aggregation delete	admin	delete an enhanced hash profile
enhanced-hash-profile <enhanced-hash-profile>		enhanced hash profile name

Command	Access	Description
aggregation disable	admin	disable aggregation

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Command	Access	Description
aggregation enable	admin	enable aggregation (default)

Command	Access	Description
aggregation remove	admin	remove ports from an aggregation group
agg <agg>		aggregation port
{port <Physical port list>}		ports to remove from the aggregation

Command	Access	Description
aggregation set	admin	set enhanced hash profile attributes
enhanced-hash-profile <enhanced-hash-profile>		enhanced hash profile name
{name <String[16]>}		enhanced hash profile name
{hash-function <NUMBER: 0-4>}		Hash function to use when hashing mode set to enhanced.
{hash-offset <NUMBER: 0-15>}		Hash offset to use when hashing mode set to enhanced.

Command	Access	Description
aggregation set	admin	set aggregation attributes
{flood-hash <enhanced | simplified>}		hashing mode for non known unicast frames, default: simplified
{marker-timeout <MILLISECONDS: 0-1000>}		set marker timeout, default: 50(ms)

Command	Access	Description
aggregation set	admin	set aggregation group attributes
agg <agg>		aggregation port
{admin-key <NUMBER: 2049-8191>}		MC-LAG redundancy group admin-key
{hash <mac-addr-based | ip-addr-based | enhanced>}		hashing mode for known unicast frames, default: mac-addr-based
{icl <Inter Chassis Link Name>}		Inter-chassis link used by MC-LAG
{min-link-aggregation <on | off>}		set min-link-aggregation mode, default: off
{min-link-threshold <NUMBER: 1-8>}		set min-link-threshold, default: 1

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{mode <lacp | manual>}		aggregation mode, default: lacp
[multi-chassis]		Convert a LAG to a MC-LAG
{protection-mode <proprietary | standard>}		aggregation protection mode, default: proprietary
{revert-delay <MILLISECONDS: 0-720000>}		set revert-delay, LAG default: 5000, MC-LAG default: 300000
{revert-protection <off | on>}		set revert-protection, LAG default: off, MC-LAG default: on
[system-mac <MAC address: XX:XX:XX:XX:XX:XX>]		MC-LAG redundancy group MAC
{system-priority <NUMBER: 0-65535>}		set system priority

Command	**Access**	**Description**
aggregation set	admin	set physical port aggregation attributes
port <port>		physical port list
{activity <active | passive>}		set activity mode
{agg-mode <lacp | manual>}		set aggregation mode, default: lacp
{timeout <long | short>}		set timeout mode
[cfm-service <CFM Service Name>]		CFM service name
[enhanced-hash-profile <Enhanced Hash Profile>]		enhanced hash profile name

Command	**Access**	**Description**
aggregation switchover	admin	forced switchover from MC-LAG active node to inactive node
agg <agg>		MC-LAG port

Command	**Access**	**Description**
aggregation show	limited	show aggregation

Command	**Access**	**Description**
aggregation show	admin	show enhanced hash profile
enhanced-hash-profile <enhanced-hash-profile>		Enhanced hash profile

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Command	Access	Description
aggregation show	limited	show aggregation group information
agg <agg>		aggregation port to show
{mode}		show aggregation mode

Command	Access	Description
aggregation show	limited	show physical port aggregation information
port <port>		physical ports to show aggregation
{agg-mode}		show aggregation mode

Command	Access	Description
aggregation show	limited	show aggregation state
{member}		show aggregation member info
{multi-chassis}		show MC-LAG info
{state}		show aggregation state

Command	Access	Description
aggregation unset	admin	unset aggregation attributes
{flood-hash}		hashing mode for non known unicast frames
{marker-timeout}		marker timeout

Command	Access	Description
aggregation unset	admin	unset enhanced hash profile attributes
enhanced-hash-profile <enhanced-hash-profile>		enhanced hash profile name
{hash-function}		Reset hash function value back to default
{hash-offset}		Reset hash offset value back to default

Command	Access	Description
aggregation unset	admin	unset aggregation/MC-LAG attributes

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agg <agg>		aggregation port
{hash}		hashing mode
{icl}		Inter-chassis link used by MC-LAG
{min-link-aggregation}		reset min-link-aggregation mode to default
{min-link-threshold}		reset min-link-threshold to default
{mode}		aggregation mode
{multi-chassis}		convert MC-LAG to LAG
{protection-mode}		agg protection mode
{revert-delay}		set revert timeout to default
{revert-protection}		set revert protection to default
{system-priority}		set system priority

Command	**Access**	**Description**
aggregation unset	admin	set physical port aggregation attributes
port <port>		physical port list
{activity}		set activity mode
{agg-mode}		set aggregation mode
{timeout}		set timeout mode
{cfm-service}		disassociate CFM service from a LAG member
{enhanced-hash-profile}		disassociate enhanced hash profile from a link

ais

alarm indication signal (AIS)

Command	**Access**	**Description**
ais profile create	admin	create an AIS profile
profile <profile>		AIS profile name
[ais-rdi <disable | enable>]		ais-rdi set, default: enabled
[refresh-timer <SECONDS: 1-20>]		refresh timer for AIS LDI messages, default: 10
[tlv-mode <single-byte | double-byte>]		ais tlv size mode
[service-degrade <enable | disable>]		enable servce degrade capability

Command	**Access**	**Description**
ais profile delete	admin	delete an AIS profile
profile <profile>		AIS profile name

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Command	Access	Description
ais profile set	admin	set AIS profile parameters
profile <profile>		AIS profile name
[ais-rdi <disable | enable>]		ais-rdi set, default: enabled
[refresh-timer <SECONDS: 1-20>]		refresh timer for AIS LDI messages, default: 10
[tlv-mode <single-byte | double-byte>]		ais tlv size mode
[service-degrade <enable | disable>]		enable servce degrade capability

Command	Access	Description
ais profile show	limited	show AIS profile configuration

Command	Access	Description
ais profile show	limited	show a AIS profile
profile <profile>		AIS profile name

Command	Access	Description
ais profile unset	admin	unset AIS profile parameters
profile <profile>		AIS profile name
[ais-rdi]		refresh timer for AIS LDI messages, default: 10, default: enabled
[refresh-timer]		refresh, default: active
[tlv-mode]		ais tlv size mode
[service-degrade]		service degrade capability

Command	Access	Description
ais statistics show	limited	show ais statistics

Command	Access	Description
ais statistics show	limited	show AIS statistics

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{tp-associated <MPLS assoc tp-tunnel>}		associated tp tunnels
{static-egress-corout <MPLS egress tp-corout-tunnel>}		egress corouted tunnel list
{static-ingress-corout <MPLS ingress tp-corout-tunnel>}		ingress corouted tunnel list
{static-transit-corout <MPLS static transit tp-tunnel>}		transit corouted tunnel list
{static-transit-unidirectional <MPLS static transit unidir tp-tunnel>}		transit unidirectional tunnel list

Command	Access	Description
ais statistics clear	admin	clear AIS

Command	Access	Description
ais disable	admin	disable AIS globally

Command	Access	Description
ais enable	admin	enable AIS globally

Command	Access	Description
ais show	limited	show AIS global configuration

Command	Access	Description
ais show	hidden	show AIS

alarm

alarm

Command	Access	Description
alarm acknowledge	admin	acknowledge all alarms

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Command	Access	Description
alarm acknowledge	admin	acknowledge alarm(s)
alarm-instance-id <alarm-instance-id>		alarm instance ID(s)

Command	Access	Description
alarm clear	admin	clear alarm history
{history}		alarm history log

Command	Access	Description
alarm delete	admin	delete alarm(s)
alarm-instance-id <alarm-instance-id>		alarm instance ID(s)

Command	Access	Description
alarm disable	admin	disable (new) alarm(s)
alarm-table-id <alarm-table-id>		alarm object

Command	Access	Description
alarm disable	admin	disable alarms based on severity
[visible-severity <critical | major | minor>]		disable visual alarms based on severity
[warning-severity]		disable warning severity alarms

Command	Access	Description
alarm enable	admin	enable (new) alarm(s)
alarm-table-id <alarm-table-id>		alarm object

Command	Access	Description
alarm enable	admin	enable alarms based on severity
[visible-severity <critical | major | minor>]		enable visual alarms based on severity
[warning-severity]		enable warning severity alarms

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Command	Access	Description
alarm set	admin	set alarm options
alarm-table-id <alarm-table-id>		alarm table object(s)
{cap <NUMBER: 0-9999>}		counter cap value
{criticalat <NUMBER-9999>}		critical escalation threshold
{description <String[25]>}		alarm description
{every <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		counter leak rate (N[yMwdhms]...)
{leak <NUMBER: 0-9999>}		counter leak value
{majorat <NUMBER-9999>}		major escalation threshold
{minorat <NUMBER-9999>}		minor escalation threshold
{severity <critical | major | minor | warning>}		alarm severity
{threshold <NUMBER: 1-9999>}		activation threshold
{tocritical <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		escalation time to critical (N[yMwdhms]...)
{tomajor <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		escalation time to major (N[yMwdhms]...)
{tominor <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		escalation time to minor (N[yMwdhms]...)
{sense <open | closed>}		external alarm sense
{trigger <forced | cleared>}		external alarm trigger

Command	Access	Description
alarm show	limited	show active alarm table
active-alarms		active alarm table
{alarm-table-id <NUMBER: 1-9999>}		specified alarm table ID only
{from-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>}		entries from date
{from-time <time: hh:mm:ss or hh:mm>}		entries from time
{last <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		recent entries in the active table
{recent}		recent entries in the active table
[severity <critical | major | minor | warning>]		severity
{today}		today's entries in the active table
{to-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>}		entries to date
{to-time <time: hh:mm:ss or hh:mm>}		entries to time
{yesterday}		yesterday's entries in the active table

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Command	Access	Description
alarm show	limited	show defined alarm table
defined-alarms		alarm table
[severity <critical | major | minor | warning>]		filter by severity

Command	Access	Description
alarm show	limited	show defined alarm details
alarm-table-id <alarm-table-id>		alarm details

Command	Access	Description
alarm show	limited	show alarm history
history		alarm history log
{alarm-table-id <NUMBER: 1-9999>}		specified alarm table ID only
{from-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>}		entries from date (inclusive)
{from-time <time: hh:mm:ss or hh:mm>}		entries from time (inclusive)
{last <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		recent entries into the history log (N[yMwdhms]...)
{recent}		recent entries into the history log
[severity <critical | major | minor | warning | config | info>]		severity
{since-activated}		from system start or failover
{tail <NUMBER: 1-4294967295>}		latest entries to show
{today}		today's entries in the history log
{to-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>}		entries to date (inclusive)
{to-time <time: hh:mm:ss or hh:mm>}		entries to time (inclusive)
{yesterday}		yesterday's entries in the history log

Command	Access	Description
alarm show	limited	show alarm summary
[statistics]		statistics
[status]		status
[sense]		sense

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[forced-alarms]		forced external alarms

Command	Access	Description
alarm unset	admin	unset alarm options
alarm-table-id <alarm-table-id>		alarm table object(s)
{cap}		counter cap value
{criticalat}		critical escalation threshold
{description}		alarm description
{every}		counter leak rate
{leak}		counter leak value
{majorat}		major escalation threshold
{minorat}		minor escalation threshold
{severity}		alarm severity
{threshold}		activation threshold
{tocritical}		escalation time to critical
{tomajor}		escalation time to major
{tominor}		escalation time to minor
{sense}		external alarm sense
{trigger}		external alarm trigger

arp

Address Resolution Protocol (ARP)

Command	Access	Description
arp static add	admin	add new entry
{destination <IP address>}		destination Host IP Address
{mac <MAC address: XX:XX:XX:XX:XX:XX>}		destination MAC address
{ip-interface <Interface Name>}		destination reachable via IP Interface

Command	Access	Description
arp static remove	admin	remove existing entry
{destination <IP address>}		destination host IP Address
{ip-interface <Interface Name>}		destination reachable via IP Interface

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Command	Access	Description
arp static remove-all	admin	remove all static ARP entries

Command	Access	Description
arp static show	limited	display static ARP entries

Command	Access	Description
arp delete	admin	delete ARP entry
ip <ip>		IPv4 address

Command	Access	Description
arp flush	admin	flush ARP cache for all interfaces

Command	Access	Description
arp flush	admin	flush ARP cache for specified interface
intf <intf>		Interface to flush

Command	Access	Description
arp flush	admin	flush ARP cache for specified ip-interface
{ip-interface <Interface Name>}		Ip interface to flush

Command	Access	Description
arp for	limited	check if the IP address is in use
ip <ip>		IPv4 address
{interface <remote | local>}		interface to check

Command	Access	Description

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arp set	admin	set ARP cache options
{cachetime <SECONDS: 60-3600>}		cache timeout in seconds, default: 60 seconds

Command	**Access**	**Description**
arp show	limited	show ARP information

Command	**Access**	**Description**
arp show	limited	show ARP information for interface
intf <intf>		interface to display

Command	**Access**	**Description**
arp unset	admin	unset ARP options
{cachetime}		cache timeout set to default 300 seconds

attachment-circuit

Attachment circuit

Command	**Access**	**Description**
attachment-circuit satop create	admin	create a satop tdm attachment circuit
ac <ac>		satop tdm attachment circuit name
{port <TDM Port Name>}		tdm port
[channel <TDM timeslot values and ranges>]		channel list
[channel-type <ds1-e1 | none>]		channel type
[rtp <on | off>]		flag indicating that the rtp header is added

Command	**Access**	**Description**
attachment-circuit satop set	admin	change the attributes of the satop tdm attachment circuit
ac <ac>		satop tdm attachment circuit name
[rtp <on | off>]		flag indicating that the rtp header is added

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Command	Access	Description
attachment-circuit satop unset	admin	change the attributes of the satop tdm attachment circuit
ac <ac>		satop tdm attachment circuit name
[rtp]		set flag indicating that the rtp header is added to default value off

Command	Access	Description
attachment-circuit satop delete	admin	delete a satop tdm attachment circuit
ac <ac>		satop tdm attachment circuit name

Command	Access	Description
attachment-circuit satop show	limited	Show all satop tdm attachment circuits

Command	Access	Description
attachment-circuit satop show	limited	Show a satop tdm attachment circuit
ac <ac>		satop tdm attachment circuit name

Command	Access	Description
attachment-circuit cesop create	admin	create a cesop tdm attachment circuit
ac <ac>		cesop tdm attachment circuit name
{port <TDM Port Name>}		tdm port
{channel <TDM timeslot values and ranges>}		channel list
[channel-type <ds0-e0 | ds1-e1 | sts1-vc3 | sts12c-vc4-4c | sts3c-vc4c | sts48c-vc4-16c>]		channel type
[master-clock-src <on | off>]		flag indicating that this circuit will be the master clock source in adaptive clock mode, default is off
[rtp <on | off>]		flag indicating that the rtp header is added

Command	Access	Description

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attachment-circuit cesop set	admin	change the attributes of the cesop tdm attachment circuit
ac <ac>		cesop tdm attachment circuit name
[master-clock-src <on | off>]		flag indicating that this circuit will be the master clock source in adaptive clock mod, default is off
[rtp <on | off>]		flag indicating that the rtp header is added

Command	**Access**	**Description**
attachment-circuit cesop unset	admin	change the attributes of the cesop tdm attachment circuit
ac <ac>		cesop tdm attachment circuit name
[master-clock-src]		set flag indicating that this circuit will be the master clock source in adaptive clock mode back to its default value off
[rtp]		set flag indicating that the rtp header is added to default value off; only applies to PWE module ports

Command	**Access**	**Description**
attachment-circuit cesop delete	admin	delete a cesop tdm attachment circuit
ac <ac>		cesop tdm attachment circuit name

Command	**Access**	**Description**
attachment-circuit cesop show	limited	Show all cesop tdm attachment circuits

Command	**Access**	**Description**
attachment-circuit cesop show	limited	Show a cesop tdm attachment circuit
ac <ac>		cesop tdm attachment circuit name

Command	**Access**	**Description**
attachment-circuit cesop add	admin	add channel(s) to cesop tdm attachment circuit
ac <ac>		cesop tdm attachment circuit name

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{channel <TDM timeslot values and ranges>}		list of channels to add

Command	Access	Description
attachment-circuit cesop remove	admin	remove channel(s) from the cesop tdm attachment circuit
ac <ac>		cesop tdm attachment circuit name
{channel <TDM timeslot values and ranges>}		list of channels to remove

Command	Access	Description
attachment-circuit show	limited	show all attachment-circuits currently configured

benchmark

benchmark test management

Command	Access	Description
benchmark reflector set	admin	set benchmark attributes
name <name>		name of reflector instance to set
{mode <in-service | out-of-service | vid-out-of-service>}		set service mode, default: in-service
{vendor-type <ciena | other>}		select the generator vendor, default: ciena
{mac-validation <on | off>}		turns on or off validation of MAC address(es) for test frames, default: on

Command	Access	Description
benchmark reflector unset	admin	unset benchmark attributes
name <name>		name of reflector instance to unset
{mode}		unset the service mode to default of in-service
{vendor-type}		select the generator vendor, default: ciena
{mac-validation}		turn on validation of MAC address(es) on test traffic to reflect

Command	Access	Description

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benchmark reflector clear	admin	clear reflector statistics
name <name>		name of reflector instance to clear statistics for
{statistics}	admin	global counters and entity port statistics

Command	Access	Description
benchmark reflector enable	admin	enable benchmark reflector globally
name <name>		name of reflector instance to enable

Command	Access	Description
benchmark reflector disable	admin	disable benchmark reflector globally
name <name>		name of reflector instance to disable
{all-test-instances}		disable all test instances for the selected reflector

Command	Access	Description
benchmark reflector show	limited	show summary of all reflector objects

Command	Access	Description
benchmark reflector show	limited	show reflector port information
name <name>		name of reflector instance to clear statistics for
{statistics}		show statistics

Command	Access	Description
benchmark reflector delete	admin	delete benchmark test instance(s)
name <name>		name of reflector instance
{all-test-instances}		delete all test instances for the selected reflector

Command	Access	Description
benchmark generator emix-sequence create	admin	create a new emix-sequence
name <name>		name of EMIX sequence to create

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[sequence <String[16]>]		user-defined sequence for new emix-sequence
[u-frame-size <NUMBER: 64-9216>]		user-defined custom frame size

Command	Access	Description
benchmark generator emix-sequence delete	admin	delete one of the existing emix sequences
name <name>		name of existing emix-sequence to delete

Command	Access	Description
benchmark generator emix-sequence set	admin	change an existing custom emix-sequence
name <name>		name of existing emix-sequence to be set
[sequence <String[16]>]		user-defined sequence for this emix-sequence
[u-frame-size <NUMBER: 64-9216>]		user-defined custom frame size

Command	Access	Description
benchmark generator emix-sequence unset	admin	unset an existing emix-sequence
name <name>		name of existing emix-sequence to be unset
[u-frame-size]		user-defined custom frame size

Command	Access	Description
benchmark generator emix-sequence show	limited	show existing emix-sequence(s)

Command	Access	Description
benchmark generator emix-sequence show	limited	show existing emix-sequence(s)
name <name>		name of existing emix-sequence to be shown in detail

Command	Access	Description
benchmark generator kpi-profile create	admin	create a new kpi profile
name <name>		user-defined name for new kpi-profile
[pcp <NUMBER>]	admin	list of PCP(s) which the kpi-profile will use

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[untagged]	admin	KPIs for the untagged session
[throughput-min <String[8]>]	admin	largest negative deviation from throughput as a percentage of the profile bandwidth for throughput test to pass, valid range 0.0001 - 99.9999
[frameloss-max <String[8]>]	admin	maximum percentage of frame lost for frame loss test to pass, valid range 0.0001 - 99.9999
[latency-max <NUMBER: 1-999>]	admin	maximum latency in ms for latency test to pass
[pdv-max <NUMBER: 1-999>]	admin	maximum delay variation in ms for PDV test to pass
[single-outage-max <NUMBER: 1-10000>]	admin	maximum duration of a single outage detected in milliseconds
[sum-outages-max <NUMBER: 1-30000>]	admin	maximum duration sum of all outages detected during the test in milliseconds
[max-num-outages <NUMBER: 0-128>]	admin	maximum number of outages detected during the test

Command	**Access**	**Description**
benchmark generator kpi-profile delete	admin	delete a kpi profile
name <name>		name of existing kpi-profile to delete

Command	**Access**	**Description**
benchmark generator kpi-profile set	admin	set one or more kpi(s) in the specified kpi-profile
name <name>		name of existing kpi-profile to be set
{pcp <NUMBER>}	admin	list of PCP(s) which the kpi-profile will use
{untagged}	admin	KPIs for the untagged session
[throughput-min <String[8]>]	admin	largest negative deviation from throughput as a percentage of the profile bandwidth for throughput test to pass, valid range 0.0001 - 99.9999
[frameloss-max <String[8]>]	admin	maximum percentage of frame lost for frame loss test to pass, valid range 0.0001 - 99.9999
[latency-max <NUMBER: 1-999>]	admin	maximum latency in ms for latency test to pass
[pdv-max <NUMBER: 1-999>]	admin	maximum delay variation in ms for PDV test to pass
[single-outage-max <NUMBER: 1-10000>]	admin	maximum duration of a single outage detected in milliseconds
[sum-outages-max <NUMBER: 1-30000>]	admin	maximum duration sum of all outages detected during the test in milliseconds

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[max-num-outages <NUMBER: 0-128>]	admin	maximum number of outages detected during the test

Command	Access	Description
benchmark generator kpi-profile show	limited	show the existing kpi-profile(s)

Command	Access	Description
benchmark generator kpi-profile show	limited	show the existing kpi-profile(s)
name <name>		name of existing kpi-profile to show

Command	Access	Description
benchmark generator kpi-profile unset	admin	set one or more kpi(s) in the specified kpi-profile
name <name>		name of existing kpi-profile to be unset
{pcp <NUMBER>}	admin	list of PCP(s) which the kpi-profile will use
{untagged}	admin	KPIs for the untagged session
[throughput-min]	admin	largest negative deviation from throughput as a percentage of the profile bandwidth for throughput test to pass
[frameloss-max]	admin	maximum percentage of frame lost for frame loss test to pass
[latency-max]	admin	maximum latency in ms for latency test to pass
[pdv-max]	admin	maximum delay variation in ms for PDV test to pass
[single-outage-max]	admin	maximum duration of a single outage detected in milliseconds
[sum-outages-max]	admin	maximum duration sum of all outages detected during the test in milliseconds
[max-num-outages]	admin	maximum number of outages detected during the test
[all]	admin	unset all attributes

Command	Access	Description
benchmark generator bw-allocation-profile create	admin	create a new bandwidth allocation profile

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name <name>		user-defined name for new bandwidth allocation profile
[pcp <NUMBER>]	admin	list of PCP(s) which the bw allocation profile will use
{bandwidth <NUMBER: 0-1000000>}	admin	ratio or weight of bandwidth allocation for a particular pcp

Command	**Access**	**Description**
benchmark generator bw-allocation-profile delete	admin	delete an existing bandwidth allocation profile
name <name>		user-defined bandwidth allocation profile to delete

Command	**Access**	**Description**
benchmark generator bw-allocation-profile set	admin	set the bandwidth allocation of a profile
name <name>		user-defined bandwidth allocation profile to set
{pcp <NUMBER>}	admin	list of PCP(s) in the bw allocation profile to be set
{bandwidth <NUMBER: 0-1000000>}	admin	ratio or weight of bandwidth allocation for a particular pcp

Command	**Access**	**Description**
benchmark generator bw-allocation-profile show	limited	show the existing bandwidth allocation profiles

Command	**Access**	**Description**
benchmark generator bw-allocation-profile show	limited	show the specified bw allocation profile
name <name>		user-defined bandwidth allocation profile to set

Command	**Access**	**Description**
benchmark generator bw-allocation-profile unset	admin	unset the bandwidth allocation of a profile

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name <name>		user-defined bandwidth allocation profile to unset
{pcp <NUMBER>}	admin	list of PCP(s) in the bw allocation profile to be unset

Command	**Access**	**Description**
benchmark generator delete	admin	delete benchmark test instance(s)
name <name>		name of generator instance
{all-test-instances}		delete all test instances for the selected generator

Command	**Access**	**Description**
benchmark generator stop	admin	stop benchmark test instance(s)
name <name>		name of generator instance
{all-test-instances}		stop all test instances for the selected generator

Command	**Access**	**Description**
benchmark generator set	admin	set some default values for all generators
[kpi-profile <Benchmark KPI Profile>]	admin	default kpi profile
[emix-sequence <Benchmark EMIX Sequence>]	admin	default emix sequence
[bw-allocation-profile <Benchmark Bandwidth Allocation Profile>]	admin	default bandwidth allocation profile

Command	**Access**	**Description**
benchmark generator unset	admin	unset some default values for all generators
[kpi-profile]	admin	default kpi profile to unset
[emix-sequence]	admin	default emix sequence to unset
[bw-allocation-profile]	admin	default bandwidth allocation profile to unset

Command	**Access**	**Description**
benchmark generator enable	admin	enable benchmark generator globally
name <name>		name of generator instance

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Command	Access	Description
benchmark generator disable	admin	disable benchmark generator globally
name <name>		name of generator instance
{all-test-instances}		disable all test instances for the selected generator

Command	Access	Description
benchmark generator clear	admin	clear the global counters and the statistics of the benchmark FPGA port for a given generator
name <name>		name of generator instance
{statistics}	admin	global counters and the statistics of the benchmark FPGA port

Command	Access	Description
benchmark generator show	limited	display global generator info and list of generator instances

Command	Access	Description
benchmark generator show	limited	display details on a generator instance
name <name>		name of generator instance
{status}		shows test progress for up to 16 test instances
{statistics}		shows global counters and statistics of the benchmark FPGA port
{emix-sequence <Benchmark EMIX Sequence>}		shows state of emix-sequence under generator entity

Command	Access	Description
benchmark generator set	admin	set benchmark generator instance attributes
name <name>		name of generator instance to set
{mode <in-service | out-of-service | vid-out-of-service>}		set service mode, default: in-service

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{emix-h-frame-size <NUMBER>}		default emix's h frame size for a generator entity

Command	**Access**	**Description**
benchmark generator unset	admin	unset benchmark generator instance attributes
name <name>		name of generator instance to unset
{mode}		unset the service mode to default of in-service
{emix-h-frame-size}		default emix's h frame size for a generator entity

Command	**Access**	**Description**
benchmark profile configuration set	admin	set benchmark profile attributes
name <name>		profile to configure
[bandwidth <NUMBER: 1-100000>]	admin	maximum bandwidth of test traffic in Mbps
[color-validation <on | off>]	admin	turn on or off color (C-DEI bit) validation for test packets returning to the generator
[duration <15Min | 1Hr | 6Hr | 24Hr | Indefinite | Once | Custom>]	admin	duration time, default: Once
[custom-duration <MINUTES>]	admin	Custom duration time in mins, default: 15
[emix-sequence <Benchmark EMIX Sequence>]	admin	emix-sequence to be used with this profile
[excess-bandwidth <NUMBER: 1-100000>]	admin	bandwidth used for the yellow traffic in Mbps
[frameloss-start-bw <profile-bandwidth | max-throughput>]	admin	bandwidth the frameloss test is to use as a starting point
[frame-size-list <NUMBER>]	admin	list of packet sizes to be used for tests, default: 64, 128, 256, 512, 1024, 1280, 1518, 9216
[interval <15Min | 1Hr | 2Hr | 6Hr | Completion>]	admin	interval time, default: Completion
[kpi-profile <Benchmark KPI Profile>]	admin	kpi-profile to be used to analyze the result of the tests
[max-bw-search <NUMBER: 1-16>]	admin	maximum number of searches to do in an attempt to find a successful throughput bandwidth for a given packet size, default: 7
[max-samples <NUMBER: 2-20>]	admin	maximum number of samples to take for the latency and PDV tests, default: 20
[bw-allocation-profile <Benchmark Bandwidth Allocation Profile>]	admin	bandwidth allocation profile to use when testing with this profile
[pcp-validation <on | off>]	admin	turn on or off PCP validation for test packets returning to the generator

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[sampling-interval <DECISECONDS>]	admin	number of tenths of a second in between samples for the latency and PDV tests, default: 1
[vid-validation <on | off>]	admin	turn on or off C-VID validation for test packets returning to the generator

Command	**Access**	**Description**
benchmark profile configuration add	admin	add a frame size to the existing list of frame sizes
name <name>		profile to configure
[frame-size <NUMBER: 64-9216>]	admin	packet size to add to the list of packet sizes used for tests

Command	**Access**	**Description**
benchmark profile configuration remove	admin	remove a frame size from the list of frame sizes
name <name>		profile to configure
[frame-size <NUMBER: 64-9216>]	admin	packet size to remove from the list of packet sizes used for tests

Command	**Access**	**Description**
benchmark profile configuration unset	admin	unset benchmark profile attributes
name <name>		profile to configure
[bandwidth]	admin	maximum bandwidth of test traffic in Mbps, default: 1000
[duration]	admin	duration time, default: Once
[custom-duration]	admin	Custom duration time in mins, default :15
[emix-sequence]	admin	emix-sequence to be used with this profile
[excess-bandwidth]	admin	excess bandwidth
[frameloss-start-bw]	admin	bandwidth the frameloss test is to use as a starting point
[frame-size-list]	admin	list of packet sizes to be used for tests, default 64, 128, 256, 512, 1024, 1280, 1518, 9216
[interval]	admin	interval time, default: Completion
[kpi-profile]	admin	kpi-profile to be used to justify the result of this profile

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[max-bw-search]	admin	maximum number of searches to do in an attempt to find a successful throughput bandwidth for a given packet size, default: 7
[max-samples]	admin	maximum number of samples to take for the latency and PDV tests, default: 20
[bw-allocation-profile]	admin	bandwidth allocation profile to use when testing with this profile
[sampling-interval]	admin	number of tenths of a second in between samples for the latency and PDV tests, default: 1

Command	**Access**	**Description**
benchmark profile traffic set	admin	request benchmark profile traffic tests
name <name>		profile to configure
[throughput]	admin	throughput test
[latency]	admin	latency test
[PDV]	admin	packet delay variation (PDV) test
[frameLoss]	admin	frame loss measurement test
[rfc2544]	admin	suite of tests that includes throughput, latency, and frame loss
[y1564]	admin	concurrent measurement of throughput, frame loss, latency and pdv
[outage]	admin	network outage test

Command	**Access**	**Description**
benchmark profile traffic unset	admin	unset benchmark profile traffic attributes
name <name>		profile to configure
[throughput]	admin	throughput test
[latency]	admin	latency test
[PDV]	admin	packet delay variation (PDV) test
[frameLoss]	admin	frame loss measurement test
[rfc2544]	admin	Suite of tests that includes throughput, latency and frame loss
[y1564]	admin	concurrent measurement of throughput, frame loss, latency and pdv
[outage]	admin	network outage test

Command	**Access**	**Description**

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benchmark profile payload set	admin	set benchmark profile payload attributes
name <name>		profile to configure
[dst-mac <MAC address: XX:XX:XX:XX:XX:XX>]		destination MAC address
[vlan-encap-type <untagged | dot1q>]		VLAN encapsulation type - default untagged
[c-vid <NUMBER: 1-4094>]		customer VLAN ID value
[c-pcp <NUMBER>]		customer priority code point (PCP) value
[c-color <green | yellow | green-yellow | green-yellow-red>]		color of test traffic, default green
[tpid <0x8100 | 0x9100 | 0x88A8>]		customer tag protocol identifier (TPID) value, default 0x8100
[pdu-type <ethernet | ip | udp-echo>]		test PDU type, default ethernet
[custom-payload <String>]		custom payload to use with selected PDU type
[ip-src-addr <IP address>]		IP source address
[ip-dest-addr <IP address>]		IP destination address
[ip-dscp <NUMBER: 0-63>]		IP DSCP value

Command	**Access**	**Description**
benchmark profile payload unset	admin	unset benchmark profile payload attributes
name <name>		profile to configure
[dst-mac]		destination MAC address
[vlan-encap-type]		VLAN encapsulation type - default untagged
[c-vid]		customer VLAN ID value
[c-pcp]		customer priority code point (PCP) value
[c-color]		color of test traffic, default green
[tpid]		customer tag protocol identifier (TPID) value
[pdu-type]		test PDU type, default ethernet
[custom-payload]		custom payload to use with selected PDU type
[ip-src-addr]		IP source address
[ip-dest-addr]		IP destination address
[ip-dscp]		IP DSCP value

Command	**Access**	**Description**
benchmark profile create	admin	create benchmark profile
name <name>		Name of profile instance to create

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Command	Access	Description
benchmark profile clone	admin	clone benchmark profile
name <name>		name of existing profile to clone
{to <Name (no ,) String>}		user-defined name for new profile

Command	Access	Description
benchmark profile delete	admin	delete benchmark profile
name <name>		profile to delete

Command	Access	Description
benchmark profile show	limited	display generator profile information

Command	Access	Description
benchmark profile show	limited	display generator profile information
name <name>		Show profile information

Command	Access	Description
benchmark test create	admin	create benchmark test instance
name <name>		Name of test instance to create
{profile <Benchmark Profile Instance>}		profile to based the test on
{vtag-stack <vid[/mask]>.<pcp[/mask]>.<dei>}		VLAN stack to test with
{vlan-untagged-data}		generate or reflect untagged packets\n
{dst-mac <MAC address: XX:XX:XX:XX:XX:XX>}		Reflector MAX address to test with; override the profile configuration

Command	Access	Description
benchmark test delete	admin	delete benchmark test instance(s)
name <name>		test instance(s) to delete

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Command	Access	Description
benchmark test enable	admin	enable benchmark test instance(s)
name <name>		test instance to enable

Command	Access	Description
benchmark test disable	admin	disable benchmark test instance(s)
name <name>		test instance to disable

Command	Access	Description
benchmark test show	limited	show summary of all benchmark test instance(s)
{kpi-fail}		Only show test instances with test results that failed at least one configured KPI
{kpi-pass}		Only show test instances with test results that passed all configured KPI(s)

Command	Access	Description
benchmark test show	limited	show details of benchmark test instance(s)
name <name>		test instance(s) to show
{outage}		only show outage test results
{frameloss}		only show frameloss test results
{latency}		only show latency test results
{pdv}		only show pdv test results
{statistics}		show test instance statistics and test results
{throughput}		only show throughput test results
{status}		shows test progress for the targetted test instances

Command	Access	Description
benchmark test start	admin	start benchmark test instance(s)
name <name>		test instance to start

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Command	Access	Description
benchmark test stop	admin	stop benchmark test instance(s)
name <name>		test instance to stop

Command	Access	Description
benchmark test clear	admin	clear test instance(s) results
name <name>		clear results for given test instance(s)
{statistics}		clear test results

Command	Access	Description
benchmark test trigger	admin	trigger a connectivity test for the selected benchmark test instance(s)
name <name>		test instance to test connectivy for
{connectivity-test}		trigger a connectivity test on the selected profile

Command	Access	Description
benchmark create	admin	create a benchmark entity
{reflector}		Create a benchmark reflector entity
{generator}		Create a benchmark generator entity
{name <Name (no ,) String>}		name of the entity
{port <Port>}		benchmark port under test
{mode <in-service | out-of-service | vid-out-of-service>}		set service mode, default: in-service
{vendor-type <ciena | other>}		vendor type of the generator node
[emix-h-frame-size <NUMBER>]		default emix's h frame size for a generator entity
{mac-validation <on | off>}		turns on or off validation of MAC address(es) for test frames, default: on

Command	Access	Description
benchmark delete	admin	delete a benchmark entity
name <name>		Benchmark entity to delete

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Command	Access	Description
benchmark enable	admin	enable benchmark globally

Command	Access	Description
benchmark disable	admin	disable benchmark globally

Command	Access	Description
benchmark show	limited	show summary of all created benchmark instances

Command	Access	Description
benchmark show	limited	show details on benchmark entity
name <name>		Benchmark entity to show

bfd

bidirectional forwarding detection (BFD)

Command	Access	Description
bfd profile create	admin	create a BFD profile
profile <profile>		BFD profile name
[receive-interval <3.3msec | 10msec | 20msec | 50msec | 100msec | 300msec | 1sec | 10sec>]		receive interval for BFD packets, default: 100
[detect-multiplier <NUMBER: 2-255>]		Detect Multiplier, default: 3
[role <active | passive>]		role, default: active
[lsp-gachtype <22 | 7>]		LSP G-ACh type, default: 22
[transmit-interval <3.3msec | 10msec | 20msec | 50msec | 100msec | 300msec | 1sec | 10sec>]		transmit interval for BFD packets, default: 100
[hw-acceleration <disable | enable>]		Enable or disable HW acceleration for BFD

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Command	Access	Description
bfd profile delete	admin	delete a BFD profile
profile <profile>		BFD profile name

Command	Access	Description
bfd profile set	admin	set BFD profile parameters
profile <profile>		BFD profile name
[receive-interval <3.3msec | 10msec | 20msec | 50msec | 100msec | 300msec | 1sec | 10sec>]		receive interval for BFD packets, default: 100
[detect-multiplier <NUMBER: 2-255>]		Detect Multiplier, default: 3
[role <active | passive>]		role, default: active
[lsp-gachtype <22 | 7>]		Lsp gachtype, default: 22
[transmit-interval <3.3msec | 10msec | 20msec | 50msec | 100msec | 300msec | 1sec | 10sec>]		transmit interval for BFD packets, default: Disable,.
[hw-acceleration <disable | enable>]		Enable or disable HW acceleration for BFD

Command	Access	Description
bfd profile show	limited	show BFD profile configuration

Command	Access	Description
bfd profile show	limited	show a BFD profile
profile <profile>		BFD profile name

Command	Access	Description
bfd profile unset	admin	unset BFD profile parameters
profile <profile>		BFD profile name
[receive-interval]		receive interval for BFD packets, default: 100
[detect-multiplier]		Detect Multiplier, default: 3
[role]		role, default: active
[lsp-gachtype]		Lsp gachtype, default: 22
[transmit-interval]		transmit interval for BFD packets, default: 100

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[hw-acceleration]		Enable or disable HW acceleration for BFD, default: Disable

Command	**Access**	**Description**
bfd session clear	admin	clear BFD session statistics
session <session>		BFD session name
{statistics}		total statistics

Command	**Access**	**Description**
bfd session create	admin	create a BFD session
session <session>		BFD session name
{multihop}		enable bfd multihop session
{neighbor <IP address>}		next hop IP address
{profile <MPLS BFD Profile>}		BFD profile to be used for this session
[source <IP address>]		source IP address

Command	**Access**	**Description**
bfd session delete	admin	delete a BFD session
session <session>		BFD session name

Command	**Access**	**Description**
bfd session disable	admin	disable a BFD session (trigger)
session <session>		BFD session name

Command	**Access**	**Description**
bfd session enable	admin	enable a BFD session (trigger)
session <session>		BFD session name

Command	**Access**	**Description**
bfd session set	admin	set BFD Session parameters

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session <session>		BFD session name
{profile <MPLS BFD Profile>}		profile

Command	Access	Description
bfd session show	limited	show a BFD session

Command	Access	Description
bfd session show	limited	show a BFD session
{all-ip}		list all IP BFD sessions
{all-lsp}		list all LSP BFD sessions
{all-vccv}		list all VCCV BFD sessions
{neighbor <IP address>}		next hop IP address
{oper-down}		list all oper down sessions
{oper-up}		list all oper up sessions
{admin-enabled}		list all admin-enabled sessions
{tunnel}		tunnel
{te-assoc <MPLS assoc te-tunnel>}		associated te tunnels
{tp-assoc <MPLS assoc tp-tunnel>}		associated tp tunnels
{tp-egress-corout <MPLS egress tp-corout-tunnel>}		tp egress tunnel list
{tp-ingress-corout <MPLS ingress tp-corout-tunnel>}		tp ingress tunnel list
{vc <Virtual Circuit MPLS Name>}		vc

Command	Access	Description
bfd session show	limited	show a BFD session
session <session>		BFD session name
{statistics}		total statistics

Command	Access	Description
bfd session unset	admin	unset BFD session parameters to default
session <session>		BFD session name
{profile}		profile

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Command	Access	Description
bfd dampening profile create	admin	create a BFD dampening profile
profile <profile>		BFD dampening profile name
[suppress-threshold <NUMBER: 1-120000>]		Bfd dampening suppress threshold
[reuse-threshold <NUMBER: 1-120000>]		Bfd dampening reuse threshold
[max-suppress-time <MILLISECONDS: 501-3600000>]		bfd dampening max suppress time
[decay-half-life <MILLISECONDS: 500-1800000>]		bfd penalty decay after half-life
[mode <test | full>]		bfd dampening mode

Command	Access	Description
bfd dampening profile delete	admin	delete a BFD dampening profile
profile <profile>		BFD dampening profile name

Command	Access	Description
bfd dampening profile set	admin	set BFD dampening profile parameters
profile <profile>		BFD dampening profile name
[suppress-threshold <NUMBER: 1-120000>]		Bfd dampening suppress threshold
[reuse-threshold <NUMBER: 1-120000>]		Bfd dampening reuse threshold
[max-suppress-time <MILLISECONDS: 501-3600000>]		bfd dampening max suppress time
[decay-half-life <MILLISECONDS: 500-1800000>]		bfd penalty decay after half-life
[mode <test | full>]		bfd dampening mode

Command	Access	Description
bfd dampening profile unset	admin	unset BFD dampening profile parameters
profile <profile>		BFD dampening profile name
[suppress-threshold]		Bfd dampening suppress threshold
[reuse-threshold]		Bfd dampening reuse threshold
[max-suppress-time]		bfd dampening max suppress time
[decay-half-life]		bfd penalty decay after half-life
[mode]		reset bfd dampening mode Default: test

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Command	Access	Description
bfd dampening profile show	limited	show BFD dampening profile configuration

Command	Access	Description
bfd dampening profile show	limited	show a BFD dampening profile
profile <profile>		BFD dampening profile name

Command	Access	Description
bfd dampening session show	limited	show BFD dampening session show
{suppressed}		list all suppressed BFD sessions

Command	Access	Description
bfd dampening session show	limited	show a BFD session
session <session>		BFD session name
{statistics}		total statistics

Command	Access	Description
bfd dampening disable	admin	disable BFD dampening globally

Command	Access	Description
bfd dampening enable	admin	enable BFD dampening globally

Command	Access	Description
bfd disable	admin	disable BFD globally

Command	Access	Description

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bfd enable	admin	enable BFD globally

Command	Access	Description
bfd set	admin	Set BFD global attributes
[hw-acceleration <off | on>]		control HW acceleration capability of LSP BFD sessions for the device, default: no
[vccv-hw-acceleration <off | on>]		control HW acceleration capability of VCCV BFD sessions for the device, default: yes

Command	Access	Description
bfd show	limited	show BFD global configuration

Command	Access	Description
bfd unset	admin	Unset BFD global attributes to default values
[hw-acceleration]		control HW acceleration capability of LSP BFD sessions for the device
[vccv-hw-acceleration]		control HW acceleration capability of VCCV BFD sessions for the device

blade

blade management

Command	Access	Description
blade show	limited	show blade information
[attributes]	limited	show board attributes
[capabilities]	limited	show blade capabilities
[information]	limited	show blade information
[state]	limited	show blade state

broadcast-containment

broadcast containment storm control

Command	Access	Description
broadcast-containment disable	admin	disable broadcast containment globally

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Command	Access	Description
broadcast-containment enable	admin	enable broadcast containment globally

Command	Access	Description
broadcast-containment add	admin	add members to a defined filter
filter <filter>		filter name
{port <Port list>}		ports to add to the filter
[vs <Virtual Switch Name>]		virtual-switch to add to the filter

Command	Access	Description
broadcast-containment clear	limited	clear Global statistics
{statistics}		clear global statistics

Command	Access	Description
broadcast-containment clear	limited	clear broadcast-containment filter statistics
filter <filter>		broadcast-containment filter
{statistics}		clear filter statistics

Command	Access	Description
broadcast-containment create	admin	create a broadcast containment filter
filter <filter>		filter name
{kbps <NUMBER: 0-10000000>}		kilobits per-second to allow
{port <Port list>}		ports to add to the filter
{vs <Virtual Switch Name>}		virtual-switch to add to the filter
{containment-classification <String List>}		traffic classes covered by the filter

Command	Access	Description
broadcast-containment delete	admin	delete a broadcast containment filter
filter <filter>		filter name

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Command	Access	Description
broadcast-containment remove	admin	remove members from a defined filter
filter <filter>		filter name
{port <Port list>}		ports to be removed from the filter
[vs <Virtual Switch Name>]		virtual-switch to be removed from the filter

Command	Access	Description
broadcast-containment set	admin	set broadcast containment filter attributes
filter <filter>		filter name
[kbps <NUMBER: 0-10000000>]		kilobits per-second to allow
[name <String>]		rename filter
{containment-classification <String List>}		traffic classes covered by the filter

Command	Access	Description
broadcast-containment set	admin	set broadcast containment configuration
{ignore-multicast-cfm-msgs <on | off>}		Ignore multicast cfm messages {MAC RANGE: 01-80-C2-00-00-30 to 01-80-C2-00-00-3F} when filtering PDUs
{ignore-raps-msgs <on | off>}		Ignore R-APS messages when filtering PDUs
{resource-mode <on | off>}		resource usage mode

Command	Access	Description
broadcast-containment show	limited	show detailed broadcast-containment filter information
filter <filter>		broadcast-containment filter to show
{statistics}		filter statistics

Command	Access	Description
broadcast-containment show	limited	show membership details
port <port>		port list
{vs <Virtual Switch Name>}		virtual-switch

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Command	Access	Description
broadcast-containment show	limited	show global broadcast-containment filter information
{resources}		broadcast containment resource usage

Command	Access	Description
broadcast-containment show	limited	show membership details
vs <vs>		virtual-switch
port <port>		port

cfm

cfm

Command	Access	Description
cfm delay clear	admin	clear delay-measurement statistics
{statistics}		Clears the total delay statistics globally, across services and meps.

Command	Access	Description
cfm delay clear	admin	clear delay-measurement statistics
service <service>		cfm service name
[port <Port>]		port
[vlan <VLAN including VID 0>]		VLAN
[local-mepid <NUMBER: 1-8191>]		local MEPID
{statistics}		Clears the total delay statistics associated with the local mep.
{history}		Clears the delay history associated with the local mep except the most recent result.

Command	Access	Description
cfm delay cancel	admin	cancel DMM to a Remote MEP
service <service>		service name

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{port <Port>}		port
[vlan <VLAN including VID 0>]		VLAN
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep.
{mepid <NUMBER: 1-8191>}		Mepid of the remote-mep
{mac <MAC address: XX:XX:XX:XX:XX:XX>}		MAC address of the remote-mep.
{test-id <NUMBER: 0-4294967295>}		Test ID

Command	**Access**	**Description**
cfm delay delete	admin	delete all delay measurement sessions

Command	**Access**	**Description**
cfm delay delete	admin	delete delay measurement session
service <service>		cfm service
{port <Port>}		port
[vlan <VLAN including VID 0>]		VLAN
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep.
{mepid <NUMBER: 1-8191>}		Mepid of the remote-mep.
{test-id <NUMBER: 0-4294967295>}		Test ID

Command	**Access**	**Description**
cfm delay send	admin	Initiate a DMM session from the local-mep to the remote-mep.
service <service>		cfm service name
{port <Port>}		port
[vlan <VLAN including VID 0>]		VLAN
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep.
{mepid <NUMBER: 1-8191>}		Mepid of the remote-mep.
{mac <MAC address: XX:XX:XX:XX:XX:XX>}		MAC address of the remote-mep.
{test-id <NUMBER: 0-4294967295>}		Test ID to identify the session between a local and remote mep pair.
{count <NUMBER: 2-65535>}		Number of DMMs to transmit in an iteration, default: 100
{duration <SECONDS: 1-65535>}		Duration is the amount of time in seconds the test iteration should run
{dmm-interval <1 | 2 | 3 | 4 | 5 | 6 | 7 | 3.33ms | 10ms | 100ms | 1sec | 10sec | 1min | 10min>}		DMM transmission interval index or time, default: 100ms

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{priority <NUMBER: 0-7>}		DMM message priority, default: 7
{repeat-delay <MINUTES>}		Time in minutes between each run of a repeating DMM test
{iterate <NUMBER: 0-60>}		Number of times the DMM test has to iterate, default: 1, Continuous test: 0
{timeout <MILLISECONDS: 2000-10000>}		DMM timeout(ms), default: 5000ms
{frame-size <NUMBER: 140-1400>}		Base CFM Frame size
{delay-threshold <MICROSECONDS: 0-2147483647>}		Delay threshold in microseconds
{jitter-threshold <MICROSECONDS: 0-2147483647>}		Jitter threshold in microseconds
{max-delay-threshold <MICROSECONDS: 0-2147483647>}		Maximum Delay threshold in microseconds
{max-jitter-threshold <MICROSECONDS: 0-2147483647>}		Maximum Jitter threshold in microseconds
{sd-delay-clear-threshold <MICROSECONDS: 0-2147483646>}		Signal Degrade two-way delay clear threshold in microseconds
{sd-delay-set-threshold <MICROSECONDS: 1-2147483647>}		Signal Degrade two-way delay set threshold in microseconds
{sd-jitter-clear-threshold <MICROSECONDS: 0-2147483646>}		Signal Degrade backward jitter clear threshold in microseconds
{sd-jitter-set-threshold <MICROSECONDS: 1-2147483647>}		Signal Degrade backward jitter set threshold in microseconds
[accelerate]		Hardware assisted DMM session
[non-accelerate]		Software timestamped DMM session
[delay-bins <CFM Delay Profile Name>]		Delay profile name
[jitter-bins <CFM Jitter Profile Name>]		Jitter profile name
[cos-mode]		Substitute DMR p-bits for test-id when TestId TLV is missing
[forward-jitter-bins <CFM Jitter Profile Name>]		Jitter profile name for forward direction
[backward-jitter-bins <CFM Jitter Profile Name>]		Jitter profile name for backward direction

Command	**Access**	**Description**
cfm delay show	limited	show DMM statistics
[bins]	limited	bins counters
[order-by-mepid]	limited	Order results by MEPID
[exclude-evpl]	limited	Exclude EVPL interfaces
{local-mepid <NUMBER: 1-8191>}		local MEPID
{mepid <NUMBER: 1-8191>}		remote MEPID
{test-id <NUMBER: 0-4294967295>}		Test ID

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{priority <NUMBER: 0-7>}		session priority
{accelerate}		Hardware assisted DMM session

Command	**Access**	**Description**
cfm delay show	limited	show service DMM statistics
service <service>		service name
{bins}		session bins counters
[order-by-mepid]	limited	Order results by MEPID
[exclude-evpl]	limited	Exclude EVPL interfaces
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep
{mepid <NUMBER: 1-8191>}		Mepid of the remote-mep
{priority <NUMBER: 0-7>}		DMM message priority
{test-id <NUMBER: 0-4294967295>}		Test ID
{history}		history
{accelerate}		Hardware assisted DMM session

Command	**Access**	**Description**
cfm delay-responder create	admin	create DMM responder
service <service>		service name
{port <Port>}		port
[vlan <VLAN including VID 0>]		VLAN
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep
{mepid <NUMBER: 1-8191>}		Mepid of the remote-mep
{accelerate}		Hardware assisted dmm-responder session
{non-accelerate}		Software timestamped dmm-responder session
[test-id <NUMBER: 0-4294967295>]		Test ID

Command	**Access**	**Description**
cfm delay-responder clear	admin	clear DMM responder
service <service>		service name
{port <Port>}		port
{vlan <VLAN including VID 0>}		VLAN
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep
{mepid <NUMBER: 1-8191>}		Mepid of the remote-mep
[test-id <NUMBER: 0-4294967295>]		Test ID

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Command	Access	Description
cfm delay-responder delete	admin	delete DMM responder
service <service>		service name
{port <Port>}		port
{vlan <VLAN including VID 0>}		VLAN
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep
{mepid <NUMBER: 1-8191>}		Mepid of the remote-mep
[test-id <NUMBER: 0-4294967295>]		Test ID

Command	Access	Description
cfm delay-responder show	admin	show all delay responder sessions

Command	Access	Description
cfm delay-responder show	admin	show DMM responder
service <service>		service name
{local-mepid <NUMBER: 1-8191>}		local MEPID

Command	Access	Description
cfm frame-loss clear	admin	clear loss-measurement statistics
{statistics}		Clears the total frame-loss statistics globally, across services and meps.

Command	Access	Description
cfm frame-loss clear	admin	clear loss-measurement statistics
service <service>		cfm service name
{port <Port>}		port
{vlan <VLAN including VID 0>}		VLAN
{local-mepid <NUMBER: 1-8191>}		local MEPID
{statistics}		Clears the total frame-loss statistics associated with the local mep.
{history}		Clears the frame-loss history associated with the local mep except the most recent result.

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Command	Access	Description
cfm frame-loss cancel	admin	cancel LMM to a Remote MEP
service <service>		service name
{port <Port>}		port
{vlan <VLAN including VID 0>}		VLAN
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep.
{mepid <NUMBER: 1-8191>}		Mepid of the remote-mep
{mac <MAC address: XX:XX:XX:XX:XX:XX>}		MAC address of the remote-mep.
{test-id <NUMBER: 0-4294967295>}		Test ID

Command	Access	Description
cfm frame-loss delete	admin	delete all frame loss sessions

Command	Access	Description
cfm frame-loss delete	admin	delete frame loss session
service <service>		cfm service
{port <Port>}		port
{vlan <VLAN including VID 0>}		VLAN
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep.
[mepid <NUMBER: 1-8191>]		Mepid of the remote-mep.
{test-id <NUMBER: 0-4294967295>}		Test ID

Command	Access	Description
cfm frame-loss send	admin	Initiate a LMM session from the local-mep to the remote-mep.
service <service>		cfm service name
{port <Port>}		port
{vlan <VLAN including VID 0>}		VLAN
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep.
[mepid <NUMBER: 1-8191>]		Mepid of the remote-mep.
[mac <MAC address: XX:XX:XX:XX:XX:XX>]		MAC address of the remote-mep.
{test-id <NUMBER: 0-4294967295>}		Test ID to identify the session between a local and remote mep pair.

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{count <NUMBER: 2-65535>}		Number of LMMs to transmit, default: 100
{duration <SECONDS: 1-65535>}		Duration is the amount of time in seconds the test iteration should run
{lmm-interval <1 | 2 | 3 | 4 | 5 | 6 | 7 | 3.33ms | 10ms | 100ms | 1sec | 10sec | 1min | 10min>}		LMM transmission interval index or time, default: 100ms
{priority <NUMBER: 0-7>}		LMM message priority, default: 7
{repeat-delay <MINUTES>}		Time in minutes between each run of a repeating LMM test
{iterate <NUMBER: 0-60>}		Number of times the LMM test has to iterate, default: 1, Continuous test: 0
{timeout <MILLISECONDS: 2000-10000>}		LMM timeout(ms), default: 5000ms
{fln-threshold <NUMBER: 0-2147483647>}		Frame Loss Near threshold
{flf-threshold <NUMBER: 0-2147483647>}		Frame Loss Far threshold
{seq-threshold <NUMBER: 0-65535>}		Bad Sequence Number error threshold
{data-priority <0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | all>}		data-traffic priority (0-7, or all), default: 7
[accelerate]		Hardware assisted lmm session

Command	**Access**	**Description**
cfm frame-loss show	limited	show LMM statistics
[order-by-mepid]	limited	Order results by MEPID
[exclude-evpl]	limited	Exclude EVPL interfaces
{local-mepid <NUMBER: 1-8191>}		local MEPID
{mepid <NUMBER: 1-8191>}		remote MEPID
{test-id <NUMBER: 0-4294967295>}		Test ID
{priority <NUMBER: 0-7>}		session priority
{accelerate}		Hardware assisted lmm session

Command	**Access**	**Description**
cfm frame-loss show	limited	show service LMM statistics
service <service>		service name
[order-by-mepid]	limited	Order results by MEPID
[exclude-evpl]	limited	Exclude EVPL interfaces
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep
{mepid <NUMBER: 1-8191>}		Mepid of the remote-mep
{test-id <NUMBER: 0-4294967295>}		Test ID
{priority <NUMBER: 0-7>}		session priority
{history}		history
{history-with-counters}		history with counters

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Command	Access	Description
cfm frame-loss-responder create	admin	create LMM responder
service <service>		service name
{port <Port>}		port
{vlan <VLAN including VID 0>}		VLAN
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep
{mepid <NUMBER: 1-8191>}		Mepid of the remote-mep
[test-id <NUMBER: 0-4294967295>]		Test ID
{accelerate}		Hardware assisted lmm-responder session
{data-priority <0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | all>}		Data-traffic priority (0-7, or all), default:7

Command	Access	Description
cfm frame-loss-responder clear	admin	clear LMM responder
service <service>		service name
{port <Port>}		port
{vlan <VLAN including VID 0>}		VLAN
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep
{mepid <NUMBER: 1-8191>}		Mepid of the remote-mep
[test-id <NUMBER: 0-4294967295>]		Test ID

Command	Access	Description
cfm frame-loss-responder delete	admin	delete LMM responder
service <service>		service name
{port <Port>}		port
{vlan <VLAN including VID 0>}		VLAN
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep
{mepid <NUMBER: 1-8191>}		Mepid of the remote-mep
[test-id <NUMBER: 0-4294967295>]		Test ID

Command	Access	Description
cfm frame-loss-responder show	admin	show all frame loss responder sessions
{accelerate}		Hardware assisted session
{local-mepid <NUMBER: 1-8191>}		local MEPID

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{mepid <NUMBER: 1-8191>}		remote MEPID
{test-id <NUMBER: 1-4294967295>}		Test ID

Command	**Access**	**Description**
cfm frame-loss-responder show	admin	show LMM responder
service <service>		service name
{accelerate}		Hardware assisted session
{local-mepid <NUMBER: 1-8191>}		local MEPID
{mepid <NUMBER: 1-8191>}		remote MEPID
{test-id <NUMBER: 1-4294967295>}		Test ID

Command	**Access**	**Description**
cfm synthetic-loss clear	admin	clear synthetic loss-measurement statistics
{statistics}		Clears the total synthetic-loss statistics globally, across services and meps.

Command	**Access**	**Description**
cfm synthetic-loss clear	admin	clear synthetic loss-measurement statistics
service <service>		cfm service
{port <Port>}		port
{vlan <VLAN including VID 0>}		VLAN
{local-mepid <NUMBER: 1-8191>}		local MEPID
{statistics}		Clears the total synthetic-loss statistics associated with the local mep.
{history}		Clears the synthetic-loss history associated with the local mep except the most recent result.

Command	**Access**	**Description**
cfm synthetic-loss cancel	admin	cancel SLM to a Remote MEP
service <service>		service name
{port <Port>}		port
{vlan <VLAN including VID 0>}		VLAN
{local-mepid <NUMBER: 1-8191>}		local MEPID

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{mepid <NUMBER: 1-8191>}		remote MEPID
{test-id <NUMBER: 1-4294967295>}		Test ID

Command	Access	Description
cfm synthetic-loss delete	admin	delete all synthetic loss-measurement sessions

Command	Access	Description
cfm synthetic-loss delete	admin	delete synthetic loss-measurement session
service <service>		cfm service
{port <Port>}		port
{vlan <VLAN including VID 0>}		VLAN
{local-mepid <NUMBER: 1-8191>}		local MEPID
{mepid <NUMBER: 1-8191>}		remote MEPID
{test-id <NUMBER: 1-4294967295>}		Test ID

Command	Access	Description
cfm synthetic-loss send	admin	send SLM to a Remote MEP
service <service>		service name
{port <Port>}		port
{vlan <VLAN including VID 0>}		VLAN
{local-mepid <NUMBER: 1-8191>}		local MEPID
{mepid <NUMBER: 1-8191>}		remote MEPID
{test-id <NUMBER: 1-4294967295>}		Test ID, default: 1
{count <NUMBER: 2-65535>}		Number of SLMs to transmit, default: 100
{duration <SECONDS: 1-65535>}		Duration is the amount of time in seconds the test iteration should run
{slm-interval <1 | 2 | 3 | 4 | 5 | 6 | 7 | 3.33ms | 10ms | 100ms | 1sec | 10sec | 1min | 10min>}		SLM transmission interval index or time, default: 100ms
{priority <NUMBER: 0-7>}		SLM message priority, default: 7
{drop-eligibility <NUMBER: 0-1>}		SLM message Drop Eligibility Indicator, default: 0
{repeat-delay <MINUTES>}		Time in minutes between each run of a repeating LMM test
{iterate <NUMBER: 0-60>}		Number of times the SLM test has to iterate, default: 1, Continuous test: 0

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{timeout <MILLISECONDS: 2000-10000>}		SLM timeout(ms), default: 5000ms
{frame-size <NUMBER: 64-1400>}		Base CFM Frame size
{fln-threshold <NUMBER: 0-65535>}		Frame Loss Near threshold
{flf-threshold <NUMBER: 0-65535>}		Frame Loss Far threshold
{sd-clear-threshold <NUMBER: 0-65534>}		Signal Degrade clear threshold
{sd-set-threshold <NUMBER: 1-65535>}		Signal Degrade set threshold
{accelerate}		Hardware assisted SLM session

Command	**Access**	**Description**
cfm synthetic-loss show	limited	show SLM sessions
[order-by-mepid]	limited	Order results by MEPID
[exclude-evpl]	limited	Exclude EVPL interfaces
{local-mepid <NUMBER: 1-8191>}		local MEPID
{mepid <NUMBER: 1-8191>}		remote MEPID
{test-id <NUMBER: 1-4294967295>}		Test ID
{priority <NUMBER: 0-7>}		session priority
{accelerate}		Hardware assisted SLM session

Command	**Access**	**Description**
cfm synthetic-loss show	limited	show service SLM session
service <service>		service name
[order-by-mepid]	limited	Order results by MEPID
[exclude-evpl]	limited	Exclude EVPL interfaces
{local-mepid <NUMBER: 1-8191>}		local MEPID
{mepid <NUMBER: 1-8191>}		remote MEPID
{test-id <NUMBER: 1-4294967295>}		Test ID
{priority <NUMBER: 0-7>}		session priority
{history}		history
{history-with-counters}		history with counters
{accelerate}		Hardware assisted SLM session

Command	**Access**	**Description**
cfm synthetic-loss-responder create	admin	create SLM responder
service <service>		service name
{port <Port>}		port
{vlan <VLAN including VID 0>}		VLAN

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{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep
{mepid <NUMBER: 1-8191>}		Mepid of the remote-mep
[test-id <NUMBER: 1-4294967295>]		Test ID
[accelerate]		Hardware assisted synthetic-loss responder session

Command	**Access**	**Description**
cfm synthetic-loss-responder clear	admin	clear SLM responder
service <service>		service name
{port <Port>}		port
{vlan <VLAN including VID 0>}		VLAN
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep
{mepid <NUMBER: 1-8191>}		Mepid of the remote-mep
[test-id <NUMBER: 1-4294967295>]		Test ID

Command	**Access**	**Description**
cfm synthetic-loss-responder delete	admin	delete SLM responder
service <service>		service name
{port <Port>}		port
{vlan <VLAN including VID 0>}		VLAN
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep
{mepid <NUMBER: 1-8191>}		Mepid of the remote-mep
[test-id <NUMBER: 1-4294967295>]		Test ID

Command	**Access**	**Description**
cfm synthetic-loss-responder show	admin	show synthetic loss responder sessions
{accelerate}		Hardware assisted session
{local-mepid <NUMBER: 1-8191>}		local MEPID
{mepid <NUMBER: 1-8191>}		remote MEPID
{test-id <NUMBER: 1-4294967295>}		Test ID

Command	**Access**	**Description**
cfm synthetic-loss-responder show	admin	show synthetic loss responder sessions
service <service>		service name

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{accelerate}		Hardware assisted session
{local-mepid <NUMBER: 1-8191>}		local MEPID
{mepid <NUMBER: 1-8191>}		remote MEPID
{test-id <NUMBER: 1-4294967295>}		Test ID

Command	**Access**	**Description**
cfm linktrace clear	admin	clear linktrace information
{statistics}		statistics table

Command	**Access**	**Description**
cfm linktrace clear	admin	clear linktrace information
service <service>		cfm service
{port <Port>}		port
{mepid <NUMBER: 1-8191>}		MEPID
{statistics}		statistics
{vlan <VLAN including VID 0>}		VLAN

Command	**Access**	**Description**
cfm linktrace send	admin	send LTM to a Remote MEP
service <service>		service name
{port <Port>}		port
{local-mepid <NUMBER: 1-8191>}		local MEPID
{mepid <NUMBER: 1-8191>}		remote MEPID
{ttl <NUMBER: 1-255>}		Initial LTM TTL value, default: 64
{priority <NUMBER: 0-7>}		LTM message priority, default: 7
{fdb-only}		Set LTM useFDBonly flag
[vlan <VLAN including VID 0>]		vlan

Command	**Access**	**Description**
cfm linktrace send-mac	admin	send LTM to a MAC address
service <service>		service name
{port <Port>}		port
{local-mepid <NUMBER: 1-8191>}		local MEPID
{mac <MAC address: XX:XX:XX:XX:XX:XX>}		MAC address

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{ttl <NUMBER: 1-255>}		Initial LTM TTL value, default: 1
{priority <NUMBER: 0-7>}		LTM message priority, default: 7
{fdb-only}		Set LTM useFDBonly flag
[vlan <VLAN including VID 0>]		VLAN

Command	**Access**	**Description**
cfm linktrace show	limited	show LTRs
[order-by-mepid]	limited	Order results by MEPID
[exclude-evpl]	limited	Exclude EVPL interfaces

Command	**Access**	**Description**
cfm linktrace show	limited	show LTRs for last LTM
service <service>		service name
{port <Port>}		port
{mepid <NUMBER: 1-8191>}		MEPID
{vlan <VLAN including VID 0>}		VLAN

Command	**Access**	**Description**
cfm loopback clear	admin	clear loopback statistics
{statistics}		statistics

Command	**Access**	**Description**
cfm loopback clear	admin	clear loopback statistics
service <service>		cfm service
{port <Port>}		port
{mepid <NUMBER: 1-8191>}		local MEPID
{statistics}		statistics
{vlan <VLAN including VID 0>}		VLAN

Command	**Access**	**Description**
cfm loopback send	admin	send LBM to a Remote MEP
service <service>		service name

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{port <Port>}		port
[vlan <VLAN including VID 0>]		VLAN
{local-mepid <NUMBER: 1-8191>}		local MEPID
{mepid <NUMBER: 1-8191>}		remote MEPID
{count <NUMBER: 1-3000>}		Number of LBMs to transmit, default:1
{priority <NUMBER: 0-7>}		LBM message priority, default: 7
{data <String[128]>}		LBM extra data
{interval <MILLISECONDS: 10-60000>}		LBM interval(ms), default: 100
{timeout <MILLISECONDS: 2000-10000>}		LBM timeout(ms), default: 5000

Command	**Access**	**Description**
cfm loopback send-mac	admin	send LBM to a MAC
service <service>		service name
{port <Port>}		port
[vlan <VLAN including VID 0>]		VLAN
{local-mepid <NUMBER: 1-8191>}		local MEPID
{mac <MAC address: XX:XX:XX:XX:XX:XX>}		MAC address
{count <NUMBER: 1-3000>}		Number of LBMs to transmit, default:1
{priority <NUMBER: 0-7>}		LBM message priority, default: 7
{data <String>}		LBM extra data
{interval <MILLISECONDS: 10-60000>}		LBM interval(ms), default: 100
{timeout <MILLISECONDS: 2000-10000>}		LBM timeout(ms), default: 5000

Command	**Access**	**Description**
cfm loopback show	limited	show LBM statistics
[order-by-mepid]	limited	Order results by MEPID
[exclude-evpl]	limited	Exclude EVPL interfaces

Command	**Access**	**Description**
cfm loopback show	limited	show service LBM statistics
service <service>		service name
[order-by-mepid]	limited	Order results by MEPID
[exclude-evpl]	limited	Exclude EVPL interfaces

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Command	Access	Description
cfm md create	admin	create a Maintenance Domain
md <md>		Maintenance Domain administrative name
{level <NUMBER: 0-7>}		Maintenance Domain level
{md-name-format <none | dns | mac-int | string>}		Maintenance Domain Name Format
{md-name-mac-addr <MAC address: XX:XX:XX:XX:XX:XX>}		MAC address xx:xx:xx:xx:xx:xx for the MD name
{md-name-integer <NUMBER: 0-65535>}		2-octet integer for the MD name
{md-name-string <String[43]>}		Maintenance Domain name string

Command	Access	Description
cfm md delete	admin	delete Maintenance Domain attributes
md <md>		Maintenance Domain

Command	Access	Description
cfm md set	admin	set Maintenance Domain attributes
level <level>		Maintenance Domain level
{name <String[43]>}		Maintenance Domain administrative name
{md-name-format <none | dns | mac-int | string>}		Maintenance Domain Name Format
{md-name-mac-addr <MAC address: XX:XX:XX:XX:XX:XX>}		MAC address xx:xx:xx:xx:xx:xx for the MD name
{md-name-integer <NUMBER: 0-65535>}		2-octet integer for MD name
{md-name-string <String[43]>}		Maintenance Domain name string

Command	Access	Description
cfm md set	admin	set Maintenance Domain attributes
md <md>		Maintenance Domain
{level <NUMBER: 0-7>}		Maintenance Domain level
{name <String[43]>}		Maintenance Domain administrative name
{md-name-format <none | dns | mac-int | string>}		Maintenance Domain Name Format
{md-name-mac-addr <MAC address: XX:XX:XX:XX:XX:XX>}		MAC address xx:xx:xx:xx:xx:xx for the MD name

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{md-name-integer <NUMBER: 0-65535>}		2-octet integer for MD name
{md-name-string <String[43]>}		Maintenance Domain name string

Command	**Access**	**Description**
cfm md unset	admin	set Maintenance Domain attributes
level <level>		Maintenance Domain level
{name}		Maintenance Domain administrative name
{md-name-format}		Maintenance Domain Name Format
{md-name-mac-addr}		MAC address xx:xx:xx:xx:xx:xx for the MD name
{md-name-integer}		2-octet integer for MD name
{md-name-string}		Maintenance Domain name string

Command	**Access**	**Description**
cfm md unset	admin	set Maintenance Domain attributes
md <md>		Maintenance Domain
{level}		Maintenance Domain level
{name}		Maintenance Domain administrative name
{md-name-format}		Maintenance Domain Name Format
{md-name-mac-addr}		MAC address xx:xx:xx:xx:xx:xx for the MD name
{md-name-integer}		2-octet integer for MD name
{md-name-string}		Maintenance Domain name string

Command	**Access**	**Description**
cfm md show	limited	show Maintenance Domain information
level <level>		Maintenance Domain level
{services}		show service information

Command	**Access**	**Description**
cfm md show	limited	show Maintenance Domain information
md <md>		Maintenance Domain
{services}		show service information

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Command	Access	Description
cfm md show	limited	show all Maintenance Domains

Command	Access	Description
cfm mep clear	admin	clear stats
{statistics}		statistics

Command	Access	Description
cfm mep clear	admin	clear stats
service <service>		service name
{port <Port>}		port
{vlan <VLAN including VID 0>}		VLAN
{mepid <NUMBER: 1-8191>}		MEPID
{statistics}		statistics

Command	Access	Description
cfm mep create	admin	create a MEP
service <service>		service name
port <port>		service port
{vlan <VLAN including VID 0>}		VLAN
{type <up | down>}		MEP type
{mepid <NUMBER: 1-8191>}		MEPID
{member-port <Physical port list>}		port

Command	Access	Description
cfm mep delete	admin	delete a MEP
service <service>		service name
{port <Port>}		port
{vlan <VLAN including VID 0>}		VLAN
{mepid <NUMBER: 1-8191>}		MEPID

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Command	Access	Description
cfm mep disable	admin	disable a MEP
service <service>		service name
{port <Port>}		port
{vlan <VLAN including VID 0>}		VLAN
{mepid <NUMBER: 1-8191>}		MEPID

Command	Access	Description
cfm mep enable	admin	enable a MEP
service <service>		service name
{port <Port>}		port
{vlan <VLAN including VID 0>}		VLAN
{mepid <NUMBER: 1-8191>}		MEPID

Command	Access	Description
cfm mep set	admin	set MEP attributes
service <service>		service name
{port <Port>}		port
{vlan <VLAN including VID 0>}		VLAN
{local-mepid <NUMBER: 1-8191>}		local MEPID
{block-opposite-fault-threshold <NUMBER>}		Frame threshold for generating fault, default: 0
{block-opposite-fault-time <MINUTES>}		Frame sampling time in minutes, default: 5
{ccm-comment <String[32]>}		CCM Comment
{ccm-priority <NUMBER: 0-7>}		CCM message priority, default: 7
{ccm-state <on | off>}		CCM Tx state, default: on
{csf-priority <NUMBER: 0-7>}		CSF message priority, default: 7
{csf-state <on | off>}		CSF State, default: on
{mepid <NUMBER: 1-8191>}		MEPID
{sd-monitoring <on | off>}		Set Signal Degrade monitoring
{sd-trigger-mode <near-end | near-far-end>}		Signal Degrade trigger mode
{tag-mode <on | off>}		Additional VLAN tag mode
{tag-vid <NUMBER: 0-4095>}		Additional VLAN tag vid
{tag-priority <NUMBER: 0-7>}		Additional VLAN tag priority
{transparency-state <on | off>}		MEP is transparent to frame MD levels less than or equal to transparency-md-level, default: off

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{transparency-md-level <NUMBER: 0-7>}		MEP transparency applies to frames at this MD level and below, default: 0
{type <up | down>}		MEP type, default: down

Command	**Access**	**Description**
cfm mep unset	admin	unset MEP attributes
service <service>		service name
{port <Port>}		port
{vlan <VLAN including VID 0>}		VLAN
{local-mepid <NUMBER>}		MEPID
{ccm-comment}		CCM Comment

Command	**Access**	**Description**
cfm mep show	limited	show MEPs
[order-by-mepid]	limited	Order results by MEPID
[exclude-evpl]	limited	Exclude EVPL interfaces
[sd-monitoring-on]	limited	filter by signal degrade monitoring ON state

Command	**Access**	**Description**
cfm mep show	limited	show MEP information
service <service>		service name
{port <Port>}		port
{vlan <VLAN including VID 0>}		vlan
{mepid <NUMBER: 1-8191>}		MEPID
{agent}		retrieve from agent

Command	**Access**	**Description**
cfm mip clear	admin	clear MIP
service <service>		service name
port <port>		service port
{statistics}		statistics

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Command	Access	Description
cfm mip create	admin	create MIP
vlan <vlan>		VLAN or list of VLANs including VID 0
port <port>		port
{level <NUMBER: 0-7>}		MD level

Command	Access	Description
cfm mip create	admin	create CFM service
vs <vs>		virtual switch
{level <NUMBER: 0-7>}		MD level
{port <Port>}		port
{vlan <VLAN list including VID 0>}		VLAN or list of VLANs including VID 0

Command	Access	Description
cfm mip delete	admin	delete a MIP
vlan <vlan>		VLAN or list of VLANs including VID 0
port <port>		port
{level <NUMBER: 0-7>}		MD level

Command	Access	Description
cfm mip delete	admin	delete a MIP
vs <vs>		virtual switch
{level <NUMBER: 0-7>}		MD level
{port <Port>}		port
{vlan <VLAN list including VID 0>}		VLAN or list of VLANs including VID 0

Command	Access	Description
cfm mip show	limited	show MIPs
{order-by-interface}	limited	Order results by interface

Command	Access	Description

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cfm mip show	limited	show MIP information
vlan <vlan>		VLAN or list of VLANs including VID 0
port <port>		port
{level <NUMBER: 0-7>}		MD level

Command	**Access**	**Description**
cfm mip show	limited	show MIP information
vs <vs>		virtual switch
{level <NUMBER: 0-7>}		MD level
{port <Port>}		port
{vlan <VLAN list including VID 0>}		VLAN or list of VLANs including VID 0

Command	**Access**	**Description**
cfm mip-ccm-db disable	admin	disable MIP CCM database learning

Command	**Access**	**Description**
cfm mip-ccm-db enable	admin	enable MIP CCM database learning

Command	**Access**	**Description**
cfm mip-ccm-db show	limited	show all MIP CCM database records

Command	**Access**	**Description**
cfm mip-ccm-db show	limited	show MIP CCM database records for a service network
vlan <vlan>		VLAN

Command	**Access**	**Description**
cfm profile bins create	admin	Create bins profile
delay <delay>		delay profile

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Command	Access	Description
cfm profile bins create	admin	Create bins profile
jitter <jitter>		jitter profile

Command	Access	Description
cfm profile bins create	admin	Create bins profile
delay-range <delay-range>		delay range profile

Command	Access	Description
cfm profile bins delete	admin	Delete bins profile
delay <delay>		delay profile

Command	Access	Description
cfm profile bins delete	admin	Delete bins profile
jitter <jitter>		jitter profile

Command	Access	Description
cfm profile bins delete	admin	Delete bins profile
delay-range <delay-range>		delay range profile

Command	Access	Description
cfm profile bins set	admin	set bins profile
delay <delay>		delay profile
{bin-index <NUMBER: 1-10>}		bin index
{threshold <NUMBER: 1-2147483647>}		Threshold value must be greater than the value of the preceding bin

Command	Access	Description
cfm profile bins set	admin	set bins profile

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jitter <jitter>		jitter profile
{bin-index <NUMBER: 1-10>}		bin index
{threshold <NUMBER: 1-2147483647>}		Threshold value must be greater than the value of the preceding bin

Command	**Access**	**Description**
cfm profile bins set	admin	set bins profile
delay-range <delay-range>		delay range profile
{bin-index <NUMBER: 1-10>}		bin index
{threshold <NUMBER: 1-2147483647>}		Threshold value must be greater than the value of the preceding bin

Command	**Access**	**Description**
cfm profile bins show	admin	show bins profile

Command	**Access**	**Description**
cfm profile bins show	admin	show bins profile
delay <delay>		delay profile

Command	**Access**	**Description**
cfm profile bins show	admin	show bins profile
jitter <jitter>		jitter profile

Command	**Access**	**Description**
cfm profile bins show	admin	show delay-range profile
delay-range <delay-range>		delay range profile

Command	**Access**	**Description**
cfm profile bins unset	admin	unset bins profile
delay <delay>		delay profile
{bin-index <NUMBER>}		bin index 1..10

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Command	Access	Description
cfm profile bins unset	admin	unset bins profile
jitter <jitter>		jitter profile
{bin-index <NUMBER>}		bin index 1..10

Command	Access	Description
cfm profile bins unset	admin	unset bins profile
delay-range <delay-range>		delay range profile
{bin-index <NUMBER>}		bin index 1..10

Command	Access	Description
cfm profile threshold create	admin	Create threshold profile
loss <loss>		loss threshold profile

Command	Access	Description
cfm profile threshold create	admin	Create threshold profile
delay <delay>		delay threshold profile

Command	Access	Description
cfm profile threshold delete	admin	Delete threshold profile
loss <loss>		loss threshold profile

Command	Access	Description
cfm profile threshold delete	admin	Delete threshold profile
delay <delay>		delay threshold profile

Command	Access	Description
cfm profile threshold set	admin	set threshold profile

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loss <loss>		loss threshold profile
{forward-maximum-flr <MILLIPERCENT>}		forward maximum flr, default:100000
{forward-average-flr <MILLIPERCENT>}		forward average flr, default:100000
{backward-maximum-flr <MILLIPERCENT>}		backward maximum flr, default:100000
{backward-average-flr <MILLIPERCENT>}		backward average flr, default:100000
{avail-forward-high-loss <NUMBER: 0-4294967295>}		availability forward high loss, default:4294967295
{avail-forward-consecutive-high-loss <NUMBER: 0-4294967295>}		availability forward consecutive high loss, default:4294967295
{avail-backward-high-loss <NUMBER: 0-4294967295>}		availability backward high loss, default:4294967295
{avail-backward-consecutive-high-loss <NUMBER: 0-4294967295>}		availability backward consecutive high loss, default:4294967295
{avail-forward-unavailable-count <NUMBER: 0-4294967295>}		availability forward unavailable count, default:4294967295
{avail-backward-unavailable-count <NUMBER: 0-4294967295>}		availability backward unavailable count, default:4294967295
{avail-forward-available-ratio <MILLIPERCENT>}		availability forward available ratio, default:0
{avail-backward-available-ratio <MILLIPERCENT>}		availability backward available ratio, default:0

Command	**Access**	**Description**
cfm profile threshold set	admin	set threshold profile
delay <delay>		delay threshold profile
{forward-maximum-ifdv <NUMBER: 0-4294967295>}		forward maximum ifdv in microseconds, default:4294967295
{forward-average-ifdv <NUMBER: 0-4294967295>}		forward average ifdv in microseconds, default:4294967295
{backward-maximum-ifdv <NUMBER: 0-4294967295>}		backward maximum ifdv in microseconds, default:4294967295
{backward-average-ifdv <NUMBER: 0-4294967295>}		backward average ifdv in microseconds, default:4294967295
{two-way-maximum-fd <NUMBER: 0-4294967295>}		two way maximum fd in microseconds, default:4294967295
{two-way-average-fd <NUMBER: 0-4294967295>}		two way average fd in microseconds, default:4294967295
{two-way-maximum-ifdv <NUMBER: 0-4294967295>}		two way maximum ifdv in microseconds, default:4294967295
{two-way-average-ifdv <NUMBER: 0-4294967295>}		two way average ifdv in microseconds, default:4294967295

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{two-way-maximum-fdr <NUMBER: 0-4294967295>}		two way maximum fdr in microseconds, default:4294967295
{two-way-average-fdr <NUMBER: 0-4294967295>}		two way average fdr in microseconds, default:4294967295

Command	Access	Description
cfm profile threshold show	admin	show threshold profile

Command	Access	Description
cfm profile threshold show	admin	show threshold profile
loss <loss>		loss threshold profile

Command	Access	Description
cfm profile threshold show	admin	show threshold profile
delay <delay>		delay threshold profile

Command	Access	Description
cfm profile threshold unset	admin	unset threshold profile
loss <loss>		loss threshold profile
{forward-maximum-flr}		forward maximum flr
{forward-average-flr}		forward average flr
{backward-maximum-flr}		backward maximum flr
{backward-average-flr}		backward average flr
{avail-forward-high-loss}		availability-forward-high-loss
{avail-forward-consecutive-high-loss}		availability-forward-consecutive-high-loss
{avail-backward-high-loss}		availability-backward-high-loss
{avail-backward-consecutive-high-loss}		availability-backward-consecutive-high-loss
{avail-forward-unavailable-count}		availability-forward-unavailable-count
{avail-backward-unavailable-count}		availability-backward-unavailable-count
{avail-forward-available-ratio}		availability-forward-available-ratio
{avail-backward-available-ratio}		availability-backward-available-ratio

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Command	Access	Description
cfm profile threshold unset	admin	unset threshold profile
delay <delay>		delay threshold profile
{forward-maximum-ifdv}		forward maximum ifdv
{forward-average-ifdv}		forward average ifdv
{backward-maximum-ifdv}		backward maximum ifdv
{backward-average-ifdv}		backward average ifdv
{two-way-maximum-fd}		two way maximum fd
{two-way-average-fd}		two way average fd
{two-way-maximum-ifdv}		two way maximum ifdv
{two-way-average-ifdv}		two way average ifdv
{two-way-maximum-fdr}		two way maximum fdr
{two-way-average-fdr}		two way average fdr

Command	Access	Description
cfm remote-mep clear	admin	clear Remote MEP statistics
{statistics}		statistics

Command	Access	Description
cfm remote-mep clear	admin	clear Remote MEP statistics
service <service>		service name
mepid <mepid>		Remote MEP MEPID
{statistics}		statistics

Command	Access	Description
cfm remote-mep create	admin	create Remote MEP
service <service>		service name
mepid <mepid>		Remote MEP MEPID

Command	Access	Description
cfm remote-mep delete	admin	delete Remote MEP

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Command	Access	Description
cfm remote-mep delete	admin	delete Remote MEP
service <service>		service name
mepid <mepid>		Remote MEP MEPID

Command	Access	Description
cfm remote-mep disable	admin	disable Remote MEP
service <service>		service name
mepid <mepid>		Remote MEP MEPID

Command	Access	Description
cfm remote-mep enable	admin	enable Remote MEP
service <service>		service name
mepid <mepid>		Remote MEP MEPID

Command	Access	Description
cfm remote-mep set	admin	set Remote MEP attributes
service <service>		service name
mepid <mepid>		Remote MEP MEPID
{hold-state <enable | disable | lock>}		hold after enabled until stable
{mac <MAC address: XX:XX:XX:XX:XX:XX>}		MAC address
{cvid <VLAN ID>}		customer vid

Command	Access	Description
cfm remote-mep show	limited	show Remote MEPs
{y1731}		Y.1731 Information

Command	Access	Description
cfm remote-mep show	limited	show Remote MEP information
service <service>		service name
mepid <mepid>		Remote MEP MEPID

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Command	Access	Description
cfm remote-mep unset	admin	Unset
service <service>		service name
mepid <mepid>		Remote MEP MEPID
{mac}		MAC address
{cvid}		customer vid

Command	Access	Description
cfm service clear	admin	clear Remote MEP statistics
{statistics}		statistics

Command	Access	Description
cfm service clear	admin	Clear statistics of all CFM services
service <service>		service name
{statistics}		statistics

Command	Access	Description
cfm service create	admin	create CFM service
vlan <vlan>		VLAN(s) service
[accelerate]		Hardware assisted service
{default-mep-type <up | down>}		Default type for MEPs
[level <NUMBER: 0-7>]		MD level
{ma-name-format <icc-based | integer | string | vid | vpnid>}		Short MA Name Format
{ma-name-integer <NUMBER: 0-65535>}		2-octet integer for Short MA Name
{ma-name-string <String[45]>}		Short MA Name Character String
{ma-name-vid <VLAN ID including VID 0>}		Short MA Name Primary VID
{ma-name-vpn-oui <Organization Unique Identifier>}		Short MA Name VPN OUI
{ma-name-vpn-index <NUMBER>}		Short MA Name VPN Index
{md <CFM MD Name>}		Maintenance Domain
{name <String[45]>}		CFM service name
[next-mepid <NUMBER: 1-8191>]		initialize next-mepid

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Command	Access	Description
cfm service create	admin	create CFM service
vs <vs>		virtual switch service
[accelerate]		Hardware assisted service
{default-mep-type <up | down>}		Default type for MEPs
[level <NUMBER: 0-7>]		MD level
{ma-name-format <icc-based | integer | string | vid | vpnid>}		Short MA Name Format
{ma-name-integer <NUMBER: 0-65535>}		2-octet integer for Short MA Name
{ma-name-string <String[45]>}		Short MA Name Character String
{ma-name-vid <VLAN ID including VID 0>}		Short MA Name Primary VID
{ma-name-vpn-oui <Organization Unique Identifier>}		Short MA Name VPN OUI
{ma-name-vpn-index <NUMBER>}		Short MA Name VPN Index
{md <CFM MD Name>}		Maintenance Domain
{name <String[45]>}		CFM service name
[next-mepid <NUMBER: 1-8191>]		initialize next-mepid

Command	Access	Description
cfm service delete	admin	delete a CFM service
service <service>		service name

Command	Access	Description
cfm service disable	admin	disable a CFM service
service <service>		service name

Command	Access	Description
cfm service enable	admin	enable a CFM service
service <service>		service name

Command	Access	Description
cfm service set	admin	set a CFM Service attributes

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service <service>		service name
{accelerate}		Hardware assisted CFM
{alarm-priority <NUMBER: 1-5>}		service fault alarm priority, default: 3
{alarm-time <MILLISECONDS: 0-36000>}		service fault alarm time in milliseconds, default: 3000
{ccm-interval <0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | off | 3.33ms | 10ms | 100ms | 1sec | 10sec | 1min | 10min>}		CCM transmission interval index or time, default: 1sec
{csf-interval <1 | 2 | 3 | 4 | 5 | 6 | 7 | 3.33ms | 10ms | 100ms | 1sec | 10sec | 1min | 10min>}		CSF transmission interval index or time, default: 1sec
{csf-loss-num <NUMBER: 1-255>}		CSF loss number, default: 3
{csf-dci-num <NUMBER: 1-255>}		CSF Dci number, default: 3
{ccm-loss-bucket-size <MINUTES>}		CCM loss bucket size in minutes, default: 15
{ccm-loss-num <NUMBER: 1-255>}		CCM loss number, default: 3
{ccm-loss-stats <enable | disable>}		CCM Loss Statistics per Remote MEP, default: disable
{level <NUMBER: 0-7>}		MD level, default: 3
{ma-name-format <icc-based | integer | string | vid | vpnid>}		Short MA Name Format
{ma-name-integer <NUMBER: 0-65535>}		2-octet integer for Short MA Name
{ma-name-string <String[45]>}		Short MA Name Character String
{ma-name-vid <VLAN ID including VID 0>}		Short MA Name Primary VID, default: 0
{ma-name-vpn-oui <Organization Unique Identifier>}		Short MA Name VPN OUI, default: first 3 octets of the chassis MAC
{ma-name-vpn-index <NUMBER>}		Short MA Name VPN Index, default: 0
{md <CFM MD Name>}		Maintenance Domain
{name <String[45]>}		CFM service name
{next-mepid <NUMBER: 1-8191>}		MEPID of next MEP created
{reset-time <MILLISECONDS: 10-36000>}		service fault reset time
{remote-mep-aging-time <MILLISECONDS: 0-3600000>}		remote mep aging time, default: 0 (disabled)
{remote-mep-discovery <enable | disable>}		automatically discover remote MEPs
{sender-id-type <none | chassis | manage | chassis-manage>}		Sender ID TLV type
{y-protection-monitoring <on | off>}		Y Cable Protection Monitoring

Command	**Access**	**Description**
cfm service unset	admin	unset CFM service
service <service>		service name
{accelerate}		HW assisted CFM

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Command	Access	Description
cfm service show	limited	show CFM services

Command	Access	Description
cfm service show	limited	show CFM service information
service <service>		service name
{mep}		show service MEPs
{remote-mep}		show service Remote MEPs
{statistics}		Global CFM Statistics

Command	Access	Description
cfm signal-degrade synthetic-loss show	limited	show Signal Degrade SLM session
service <service>		service name used for signal degrade monitoring
{local-mepid <NUMBER: 1-8191>}		local MEPID where SD monitoring is on
{mepid <NUMBER: 1-8191>}		remote MEPID
{test-id <NUMBER: 1-4294967295>}		Test ID
{history}		history

Command	Access	Description
cfm signal-degrade delay show	limited	show Signal Degrade DM session
service <service>		service name used for signal degrade monitoring
{local-mepid <NUMBER: 1-8191>}		local MEPID where SD monitoring is on
{mepid <NUMBER: 1-8191>}		remote MEPID
{test-id <NUMBER: 1-4294967295>}		Test ID
{history}		history

Command	Access	Description
cfm stack show	limited	show stacks on all ports in all service networks
{order-by-interface}	limited	Order results by interface

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Command	Access	Description
cfm stack show	limited	show stacks on all ports in a service network
vlan <vlan>		VLAN
{order-by-interface}	limited	Order results by interface

Command	Access	Description
cfm mef delay create	admin	Initiate a DMM session from the local-mep to the remote-mep.
service <service>		cfm service name
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep.
{remote-mepid <NUMBER: 1-8191>}		Mepid of the remote-mep.
{mac <MAC address: XX:XX:XX:XX:XX:XX>}		MAC address of the remote-mep.
{test-id <NUMBER: 0-4294967295>}		Test ID to identify the session between a local and remote mep pair. If not specified, it will be equal to session ID.
{session-type <on-demand | proactive>}		Delay session type, default: proactive
{message-interval <3.33ms | 10ms | 100ms | 1sec | 10sec | 1min | 10min>}		DMM transmission interval time, default: 100ms
{measurement-interval <MINUTES>}		Amount of time in minutes the test iteration should run, default: 15min(Proactive), 5min(on-demand).
{priority <NUMBER: 0-7>}		DMM message priority, default: 7
{repetition-time <MINUTES>}		Time in minutes between start of first Measurement Interval and start of the next measurement interval.
{start-now}		Starts session immediately.
{start-at-time <time: hh:mm:ss or hh:mm>}		Fixed mode: Starts session at input time.
{start-at-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>}		Fixed mode: Starts session at input date.
{start-after <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		Relative mode: Starts session in input time from now.
{stop-none}		Session runs forever.
{stop-at-time <time: hh:mm:ss or hh:mm>}		Fixed mode: Stops session at input time.
{stop-at-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>}		Fixed mode: Stops session at input date.
{stop-after <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		Relative mode: Stops session in input time from start-time.
{align-measurement-interval}		Aligns session with a zero offset to real time.

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{align-measurement-offset <MINUTES>}		Offset in minutes from the time of day value.
{stored-interval-count <NUMBER: 2-96>}		Number of completed Measurement Intervals to be stored in the history statistic table, default:32
{frame-size <NUMBER: 140-2000>}		Base CFM Frame size
[accelerate]		Hardware assisted DMM session
{delay-bins <CFM Delay Profile Name>}		Delay profile name
{delay-range-bins <CFM Delay Range Profile Name>}		Delay Range profile name
{ifdv-bins <CFM Jitter Profile Name>}		Jitter profile name
{forward-ifdv-bins <CFM Jitter Profile Name>}		Jitter profile name for forward direction
{backward-ifdv-bins <CFM Jitter Profile Name>}		Jitter profile name for backward direction
{threshold-profile <CFM Delay Threshold Profile Name>}		Delay Threshold Profile name
{cos-mode}		Substitute DMR p-bits for test-id when TestId TLV is missing

Command	**Access**	**Description**
cfm mef delay delete	admin	delete delay measurement session
service <service>		service name
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep.
{session-id <NUMBER: 1-4294967295>}		Session ID

Command	**Access**	**Description**
cfm mef delay disable	admin	cancel DM session
service <service>		service name
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep.
{session-id <NUMBER: 1-4294967295>}		Session ID

Command	**Access**	**Description**
cfm mef delay show	limited	show DMM statistics
[bins]	limited	bins counters

Command	**Access**	**Description**

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cfm mef delay show	limited	show service DMM statistics
service <service>		service name
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep
{session-id <NUMBER: 1-4294967295>}		Session ID
{history}		Complete history for a unique test session.
{history-id <NUMBER: 1-4294967295>}		History for a unique measurement interval.
{bins}		session bins counters

Command	**Access**	**Description**
cfm mef synthetic-loss availability show	limited	show service availability statistics
service <service>		service name
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep
{session-id <NUMBER: 1-4294967295>}		Session ID
{history}		Complete availability history for a unique test session.
{history-id <NUMBER: 1-4294967295>}		Availability history for a unique measurement interval.

Command	**Access**	**Description**
cfm mef synthetic-loss create	admin	Initiate a SLM session from the local-mep to the remote-mep.
service <service>		cfm service name
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep.
{remote-mepid <NUMBER: 1-8191>}		Mepid of the remote-mep.
{mac <MAC address: XX:XX:XX:XX:XX:XX>}		MAC address of the remote-mep.
{test-id <NUMBER: 1-4294967295>}		Test ID to identify the session between a local and remote mep pair. If not specified, it will be equal to session ID.
{session-type <on-demand | proactive>}		Delay session type, default: proactive
{message-interval <3.33ms | 10ms | 100ms | 1sec | 10sec | 1min | 10min>}		SLM transmission interval time, default: 1sec
{measurement-interval <MINUTES>}		Amount of time in minutes the test iteration should run, default: 15min(Proactive), 5min(on-demand).
{priority <NUMBER: 0-7>}		SLM message priority, default: 7
{repetition-time <MINUTES>}		Time in minutes between start of first measurement interval and start of the next measurement interval.
{start-now}		Starts session immediately.

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{start-at-time <time: hh:mm:ss or hh:mm>}		Fixed mode: Starts session at input time.
{start-at-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>}		Fixed mode: Starts session at input date.
{start-after <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		Relative mode: Starts session in input time from now.
{stop-none}		Session runs forever.
{stop-at-time <time: hh:mm:ss or hh:mm>}		Fixed mode: Stops session at input time.
{stop-at-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>}		Fixed mode: Stops session at input date.
{stop-after <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		Relative mode: Stops session in input time from start-time.
{align-measurement-interval}		Aligns session with a zero offset to real time.
{align-measurement-offset <MINUTES>}		Offset in minutes from the time of day value.
{stored-interval-count <NUMBER: 2-96>}		Number of completed Measurement Intervals to be stored in the history statistic table, default:32
{frame-size <NUMBER: 64-2000>}		Base CFM Frame size
[accelerate]		Hardware assisted SLM session
{avail-measurement-interval <MINUTES>}		Specifies the availability Measurement Interval, default:15
{avail-consecutive-pdu-count <NUMBER: 10-1000000>}		Number of SLM PDUs transmitted during each 'delta_t' period, default:10
{avail-flr-threshold <MILLIPERCENT>}		Threshold used in evaluating the availability/ unavailability status of each delta_t. Units:milli-percent default:50000
{avail-consecutive-intervals <NUMBER: 1-1000>}		Number of consecutive availability indicators used to determine a change in availability status, default:10
{avail-consecutive-high-flr <NUMBER: 1-1000>}		Number of consecutive availability indicators used for assessing CHLI, default:5
{threshold-profile <CFM Loss Threshold Profile Name>}		Loss Threshold Profile name

Command	**Access**	**Description**
cfm mef synthetic-loss delete	admin	delete synthetic-loss measurement session
service <service>		service name
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep.
{session-id <NUMBER: 1-4294967295>}		Session ID

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Command	Access	Description
cfm mef synthetic-loss disable	admin	cancel SLM session
service <service>		service name
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep.
{session-id <NUMBER: 1-4294967295>}		Session ID

Command	Access	Description
cfm mef synthetic-loss show	limited	show SLM statistics

Command	Access	Description
cfm mef synthetic-loss show	limited	show service SLM statistics
service <service>		service name
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep
{session-id <NUMBER: 1-4294967295>}		Session ID
{history}		Complete history for a unique test session.
{history-id <NUMBER: 1-4294967295>}		History for a unique measurement interval.

Command	Access	Description
cfm mef session show	limited	lists all existing legacy and mef sessions
service <service>		service name
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep
{test-type <delay | synthetic-loss>}		test session type

Command	Access	Description
cfm clear	admin	clear CFM statistics
{statistics}		statistics

Command	Access	Description
cfm disable	admin	disable CFM globally

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Command	Access	Description
cfm enable	admin	enable CFM globally

Command	Access	Description
cfm set	admin	set CFM attributes
{dot1ad-strict <on | off>}		Strict 802.1ad compliance, default: on
{ethertype <NUMBER: 2048-65535>}		ethernet type, default: 35074 (0x8902)
{l2-loop-detect <on | off>}		L2 Loop Detection, default: off
{dmm-default-count <NUMBER: 2-65535>}		default DMM count, default: 100
{dmm-default-interval <1 | 2 | 3 | 4 | 5 | 6 | 7 | 3.33ms | 10ms | 100ms | 1sec | 10sec | 1min | 10min>}		default DMM interval(ms), default: 100ms
{dmm-default-timeout <MILLISECONDS: 2000-10000>}		default DMM timeout(ms), default: 5000ms
{lmm-default-count <NUMBER: 2-65535>}		default LMM count, default: 100
{lmm-default-interval <1 | 2 | 3 | 4 | 5 | 6 | 7 | 3.33ms | 10ms | 100ms | 1sec | 10sec | 1min | 10min>}		default LMM interval(ms), default: 100ms
{lmm-default-timeout <MILLISECONDS: 2000-10000>}		default LMM timeout(ms), default: 5000ms
{lbm-default-count <NUMBER: 1-3000>}		default LBM count, default: 1
{lbm-default-interval <MILLISECONDS: 10-60000>}		default LBM interval(ms), default: 100ms
{lbm-default-timeout <MILLISECONDS: 2000-10000>}		default LBM timeout(ms), default: 5000ms
{slm-default-count <NUMBER: 2-65535>}		default SLM count, default: 100
{slm-default-interval <2 | 3 | 4 | 5 | 6 | 7 | 10ms | 100ms | 1sec | 10sec | 1min | 10min>}		default SLM interval(ms), default: 100ms
{slm-default-timeout <MILLISECONDS: 2000-10000>}		default SLM timeout(ms), default: 5000ms
{mip-level-enforcement <on | off>}		MIP MD Level enforcement, default: on
{rmep-hold-time <MILLISECONDS: 10-300000>}		remote MEP hold time, default: 10000
{vs-automatic-meps <on | off>}		Automatic UNI Up MEP creation, default: on
{y1731ethertype <NUMBER: 2048-65535>}		y.1731 ethernet type, default: 35074 (0x8902)
{slm-responder-aging <on | off>}		Enable Implicit SLM Responder Aging, default: off

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Command	Access	Description
cfm unset	admin	unset CFM attributes
{dot1ad-strict}		Strict 802.1ad compliance, default: on
{ethertype}		ethernet type, default: 35074 (0x8902)
{l2-loop-detect}		L2 Loop Detection
{dmm-default-count}		default DMM count, default: 100
{dmm-default-interval}		default DMM interval(ms), default: 100ms
{dmm-default-timeout}		default DMM timeout(ms), default: 5000ms
{lmm-default-count}		default LMM count, default: 100
{lmm-default-interval}		default LMM interval(ms), default: 100ms
{lmm-default-timeout}		default LMM timeout(ms), default: 5000ms
{lbm-default-count}		default LBM count, default: 1
{lbm-default-interval}		default LBM interval(ms), default: 100ms
{lbm-default-timeout}		default LBM timeout(ms), default: 5000ms
{slm-default-count}		default SLM count, default: 100
{slm-default-interval}		default SLM interval(ms), default: 100ms
{slm-default-timeout}		default SLM timeout(ms), default: 5000ms
{mip-level-enforcement}		MIP MD Level enforcement, default: on
{rmep-hold-time}		remote MEP hold time, default: 10000
{vs-automatic-meps}		Automatic UNI Up MEP creation, default: on
{y1731ethertype}		y.1731 ethernet type, default: 35074 (0x8902)

Command	Access	Description
cfm show	limited	show CFM information
{port}		CFM port capabilities
{hardware-resources}		CFM hardware resources
{statistics}		Global CFM Statistics

chassis

chassis management

Command	Access	Description
chassis dying-gasp disable	admin	disable dying-gasp

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Command	Access	Description
chassis dying-gasp enable	admin	enable dying-gasp

Command	Access	Description
chassis dying-gasp set	admin	set dying-gasp settings
[informs <on | off>] [src-port <source-port-number>]		when on send informs if the target server is configured for informs set source port for dying-gasp in the range 32768.60999

Command	Access	Description
chassis dying-gasp unset src-port	admin	unset dying-gasp source port

Command	Access	Description
chassis dying-gasp show	limited	show dying-gasp settings

Command	Access	Description
chassis post clear	admin	clear POST errors

Command	Access	Description
chassis post disable	admin	disable POST

Command	Access	Description
chassis post enable	admin	enable POST

Command	Access	Description
chassis post show	limited	show POST status

Command	Access	Description

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chassis port-led-mirror create	admin	create led-map
map		led-map
{led <1 | 2 | 3 | 4>}		led
{port <9 | 10>}		port

Command	**Access**	**Description**
chassis port-led-mirror delete	admin	delete led-map
map		led-map

Command	**Access**	**Description**
chassis port-led-mirror show	limited	show led-map configuration

Command	**Access**	**Description**
chassis system-rsvd-port add	admin	reserve a port for system use for the specified feature
{port <Physical port>}		port to reserve
{feature <enhanced-cfm | oam-services | vc-transform | vpls-irb>}		feature to be associated with this port

Command	**Access**	**Description**
chassis system-rsvd-port remove	admin	unreserve a port for a system feature
{port <Physical port>}		port to unreserve

Command	**Access**	**Description**
chassis system-rsvd-port show	limited	show port(s) reserved for system features
[feature <enhanced-cfm | oam-services | vc-transform | vpls-irb>]		feature to query

Command	**Access**	**Description**
chassis force-reset	admin	force reset the device

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Command	Access	Description
chassis reboot	limited	reboot this device
show		show scheduled reboot

Command	Access	Description
chassis reboot	admin	reboot this device
[cancel]	admin	cancel scheduled reboot
[cold-start]	admin	Start the system fresh, including POST as well as resetting all the HW components
[now]	admin	reboot immediately

Command	Access	Description
chassis reboot	admin	reboot this device
delay <delay>		delay to reboot (N[yMwdhms]...)
[nopost]	admin	suppress POST on reboot

Command	Access	Description
chassis reboot	admin	reboot this device
nopost		disable POST at reboot
[now]	admin	reboot immediately

Command	Access	Description
chassis reboot	admin	reboot this device
time <time>		time/date to reboot yyyy-mm-dd.hh:mm:ss or yy-mm-dd or mm-dd '.' hh:mm:ss or hh:mm
[nopost]	admin	suppress POST on reboot

Command	Access	Description
chassis set	admin	set chassis attributes
[temperature-high-threshold <degrees Celsius>]	limited	set chassis high temperature threshold

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[temperature-low-threshold <degrees Celsius>]	limited	set chassis low temperature threshold
[oam-services-port-role <customer-traffic | oam-services>]	limited	set role of oam-services-port (port 20)
[power-feed <single | dual>]	limited	set power feed

Command	Access	Description
chassis show	limited	show chassis information
[capabilities]	limited	show chassis capabilities
[device-id]	limited	show chassis device ID
[door]	limited	show chassis door information
[oam-services-port-role]	limited	show oam-services port role
[fans]	limited	show chassis fan information
[mac]	limited	show chassis MAC information
[power]	limited	show chassis power supply information
[temperature]	limited	show chassis temperature information
[power-feed]	limited	show power feed setting

Command	Access	Description
chassis unset	limited	unset chassis attributes
[power-feed]	limited	unset power feed

clear

clear the terminal screen

cli

CLI shell special functions

Command	Access	Description
cli search	limited	search CLI string
keyword <keyword>		search CLI keyword
{full}		search full commands with parameters
{object <String>}		specify a main level menu object
{persistent-only}		find only persistent commands

Command	Access	Description

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cli show	limited	show all CLI commands
{full}		show full commands with parameters
{object <String>}		specify a main level menu object
{persistent-only}		show only persistent commands

command-log

command log menu

Command	Access	Description
command-log transfer disable	super	disable command log automatic transfer

Command	Access	Description
command-log transfer enable	super	enable command log automatic transfer

Command	Access	Description
command-log transfer now	super	command log manual transfer

Command	Access	Description
command-log transfer set	super	set an FTP server and its attributes
ftp-server <ftp-server>		FTP server IP/Hostname/Credentials
[login-id <String[32]>]		ftp username
[echoless-password]		collect password interactively
[server-port <NUMBER: 0-65535>]		port to connect to

Command	Access	Description
command-log transfer set	admin	set a TFTP server
tftp-server <tftp-server>		TFTP server IP/Hostname
[server-port <NUMBER: 0-65535>]		port to connect to

Command	Access	Description
command-log transfer set	admin	set an SFTP server and its attributes

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sftp-server <sftp-server>		SFTP server IP/Hostname/Credentials
{login-id <String[32]>}		sftp username
[echoless-password]		collect password interactively
[echoless-sftp-passphrase]		collect passphrase for SFTP transfer interactively
[server-port <NUMBER: 0-65535>]		port to connect to

Command	**Access**	**Description**
command-log transfer set	super	set the global default xFTP server mode and its attributes
[connection-timeout <SECONDS: 1-100>]		duration (in seconds) before retry times out
[dest-path <String[127]>]		path on destination
[discards-exported <on | off>]		Automatic export of discarded log information
[interval <duration: {N[yMwdhms]}* e.g. 1h10m3s>]		periodic transfer time (N[yMwdhms]...)
[add-prefix-ip]		include host IP in remote filename
[start-plus-or-minus <duration: {N[yMwdhms]}* e.g. 1h10m3s>]		shift first transfer time by up to (N[yMwdhms]...)
[retries <NUMBER: 1-10>]		maximum number of retries allowed
[retry-interval <SECONDS: 1-300>]		delay interval (in seconds) between retries

Command	**Access**	**Description**
command-log transfer unset	admin	unset an xFTP server
{connection-timeout}		restore default connection timeout
{dest-path}		path on destination
{discards-exported}		restore default log-loss export behavior
{add-prefix-ip}		don't include host IP in remote filename
{interval}		restore default automatic export of log
{login-id}		restore default login ID
{password}		restore default login password
{start-plus-or-minus}		remove interval stagger
{retries}		restore default retry count
{retry-interval}		restore default retry interval
{server}		unset xFTP server (and mode)
{sftp-passphrase}		restore default passphrase used for SFTP transfer
{server-port}		restore default xFTP port

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Command	Access	Description
command-log transfer show	super	show command log transfer settings

Command	Access	Description
command-log transfer unset	super	command log automatic transfer options

Command	Access	Description
command-log rpc clear	super	clear rpc log

Command	Access	Description
command-log rpc enable	super	enable rpc logging

Command	Access	Description
command-log rpc disable	super	disable rpc logging

Command	Access	Description
command-log rpc show	limited	show rpc log
{brief}		brief report
{containing <String[128]>}		entries containing string
{destination}		log storage destination
{failed}		entries with failing exit status
{from-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>}		entries from date (inclusive)
{from-time <time: hh:mm:ss or hh:mm>}		entries from time (inclusive)
{last <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		recent entries (N[yMwdhms]...)
{recent}		entries within the last hour
{sequence-id <NUMBER>}		specified ID(s) only
{since-activated}		from system start or failover
{status}		command log configuration state

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{successful}		entries with successful exit status
{tail <NUMBER: 1-4294967295>}		latest entries to show
{today}		today's entries
{to-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>}		entries to date (inclusive)
{to-time <time: hh:mm:ss or hh:mm>}		entries to time (inclusive)
{user <String[32]>}		containing string
{verbose}		full report
{yesterday}		yesterday's entries

Command	**Access**	**Description**
command-log clear	super	clear command log

Command	**Access**	**Description**
command-log disable	super	disable command logging

Command	**Access**	**Description**
command-log enable	super	enable command logging

Command	**Access**	**Description**
command-log repeat	limited	repeat command
[command <String>]		command
[every <duration: {N[yMwdhms]}* e.g. 1h10m3s>]		time between repetitions (N[yMwdhms]...)
[my-last-command]		my last-executed command
[sequence-id <NUMBER>]		identifier(s)
[times <NUMBER: 1-4294967295>]		number of repetitions
{times <NUMBER: 1-4294967295>}		number of repetitions

Command	**Access**	**Description**
command-log show	limited	show command log
{brief}		brief report

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{containing <String[128]>}		entries containing string
{destination}		log storage destination
{exclude <String List>}		class-based entry exclusion
{exit-status <NUMBER: 0-4294967295>}		entries with given exit status
{failed}		entries with failing exit status
{from-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>}		entries from date (inclusive)
{from-time <time: hh:mm:ss or hh:mm>}		entries from time (inclusive)
{last <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		recent entries (N[yMwdhms]...)
{mine}		my entries
{on-terminal <String[32]>}		on connection
{privilege <limited | admin | super | diag>}	super	user access level
{recent}		entries within the last hour
{sequence-id <NUMBER>}		specified ID(s) only
{since-activated}		from system start or failover
{status}		command log configuration state
{successful}		entries with successful exit status
{tail <NUMBER: 1-4294967295>}		latest entries to show
{today}		today's entries
{to-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>}		entries to date (inclusive)
{to-time <time: hh:mm:ss or hh:mm>}		entries to time (inclusive)
{user <String[32]>}		containing string
{verbose}		full report
{yesterday}		yesterday's entries

configuration

configuration

Command	**Access**	**Description**
configuration augment	admin	augment current configuration with a file
{filename <Configuration File>}		configuration file name
[server <IP address or host name>]		FTP server
[verbose]		print commands before execution
[hide-progress]		hide progress of execution
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server

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[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[auth-interactive]		allow interactive password entry when requested by the remote server
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively

Command	**Access**	**Description**
configuration install	admin	download and install new configuration file
{filename <String>}		configuration file name
[server <IP address or host name>]		FTP server
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[auth-interactive]		allow interactive password entry when requested by the remote server
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively

Command	**Access**	**Description**
configuration check	admin	check a configuration file for errors
{filename <Configuration File>}		configuration file name
[server <IP address or host name>]		FTP server
[verbose]		print commands before execution
[hide-progress]		hide progress of execution
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server

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[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[auth-interactive]		allow interactive password entry when requested by the remote server
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively

Command	**Access**	**Description**
configuration clear	admin	clear configuration login notifications
[config-errors-warning]		cancel 'configuration errors during restore' warning
[no-config-warning]		cancel 'no configuration file restored' warning

Command	**Access**	**Description**
configuration copy	admin	copy (duplicate) a configuration file
filename <filename>		configuration file name
{to-filename <String>}		new file name

Command	**Access**	**Description**
configuration delete	admin	delete line(s) in a configuration file
filename <filename>		configuration file name
[all-disabled-lines]		all previously disabled lines
[start-line <NUMBER: 1-4294967295>]		line number
[end-line <NUMBER: 1-4294967295>]		line number

Command	**Access**	**Description**
configuration disable	admin	disable line(s) in a configuration file
filename <filename>		configuration file name
{start-line <NUMBER: 1-4294967295>}		line number

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[end-line <NUMBER: 1-4294967295>]		line number

Command	Access	Description
configuration enable	admin	enable line(s) in a configuration file
filename <filename>		configuration file name
[all-disabled-lines]		all previously disabled lines
[start-line <NUMBER: 1-4294967295>]		line number
[end-line <NUMBER: 1-4294967295>]		line number

Command	Access	Description
configuration list	limited	list all configuration files

Command	Access	Description
configuration rename	admin	rename a configuration file
filename <filename>		configuration file name
{to-filename <String>}		new file name

Command	Access	Description
configuration reset-to-factory-defaults	admin	reset to factory defaults

Command	Access	Description
configuration reset-to-user-config	admin	reset configuration to user defaults
filename <filename>		configuration file name

Command	Access	Description
configuration save	admin	save configuration
[strip-logical-ids]		remove logical-ids from saved file

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Command	Access	Description
configuration save	admin	save configuration
filename <filename>		configuration file name
[strip-logical-ids]		remove logical-ids from saved file

Command	Access	Description
configuration search	limited	search configuration file
[file <Configuration File>]	limited	filename (no path)
[include-logical-ids]	limited	results include logical-id fields
[lines <NUMBER: 0-40>]	limited	search window size
[running-config]	limited	search running config
{string <String>}	limited	search string

Command	Access	Description
configuration set	admin	set attribute
[default-save-filename <Configuration File>]	admin	save filename (Default: startup-config)
[default-load-filename <Configuration File>]	admin	load filename (Default: startup-config)

Command	Access	Description
configuration show	limited	show configuration
filename <filename>		configuration file name
[line-numbered]	limited	with line numbers
[logical-ids]	limited	with logical ID's

Command	Access	Description
configuration show	limited	show configuration
[brief]	limited	without commented lines
[differences-from-saved]	limited	changes since last saved
[logical-ids]	limited	with logical ID's
[line-numbered]	limited	with line numbers

Command	Access	Description

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configuration show	limited	show configuration
status		status

Command	**Access**	**Description**
configuration stop	admin	stop current configuration file

Command	**Access**	**Description**
configuration unset	admin	unset config filename attributes
[default-save-filename]	admin	save filename (Default: startup-config)
[default-load-filename]	admin	load filename (Default: startup-config)

device-archive

device archive

Command	**Access**	**Description**
device-archive save	limited	save device archive

Command	**Access**	**Description**
device-archive show	limited	show device archive

dhcp

DHCP commands

Command	**Access**	**Description**
dhcp client lease renew	admin	renew DHCP lease

Command	**Access**	**Description**
dhcp client options set	admin	set dhcp options
{boot-file <on | off>}		set boot file DHCP option (67)
{dns <on | off>}		set DNS DHCP option (6)
{host-name <on | off>}		set host name DHCP option (12)

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{domain-name <on | off>}		set domain name DHCP option (15)
{lease-time <on | off>}		set lease time option (51)
{log-server <on | off>}		set log server DHCP option (7)
{ntp <on | off>}		set NTP DHCP option (42)
{router <on | off>}		set router DHCP option (3)
{subnet <on | off>}		set subnet DHCP option (1)
{tftp-server <on | off>}		set TFTP server DHCP option (66)
{time-offset <on | off>}		set time offset DHCP option (2)
{vivsi <on | off>}		set Vendor-Identifying Vendor-Specific Information DHCP option (125)

Command	**Access**	**Description**
dhcp client options show	limited	show DHCP client option state

Command	**Access**	**Description**
dhcp client disable	admin	disable DHCP

Command	**Access**	**Description**
dhcp client enable	admin	enable DHCP

Command	**Access**	**Description**
dhcp client set	admin	set DHCP client attributes
{interface <local | remote>}		interface on which to run DHCP
{release-on-link-transition <on | off>}		activate dhcp client re-init on NNI link transition
{discovery-interval <SECONDS: 1-60>}		DHCP discovery interval in seconds

Command	**Access**	**Description**
dhcp client show	limited	show DHCP client configuration
{config}		show configuration from enabled DHCP options
{options}		show DHCP client options state
{state}		show DHCP client state

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Command	Access	Description
dhcp l2-relay-agent clear	admin	clear statistics for L2 relay agent
{statistics}		clear L2 relay agent global statistics

Command	Access	Description
dhcp l2-relay-agent clear	admin	clear statistics for L2 relay agent
vlan <vlan>		L2 relay agent VLAN list
{statistics}		statistics table

Command	Access	Description
dhcp l2-relay-agent clear	admin	clear statistics for L2 relay agent
vs <vs>		L2 relay agent VS list
{statistics}		statistics table

Command	Access	Description
dhcp l2-relay-agent create	admin	create L2 relay agent
vlan <vlan>		VLAN list for new L2 relay agents

Command	Access	Description
dhcp l2-relay-agent create	admin	create L2 relay agent
vs <vs>		VS for new L2 relay agent

Command	Access	Description
dhcp l2-relay-agent delete	admin	delete L2 relay agent
vlan <vlan>		L2 relay agent VLAN list

Command	Access	Description
dhcp l2-relay-agent delete	admin	delete L2 relay agent

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vs <vs>		L2 relay agent VS list

Command	Access	Description
dhcp l2-relay-agent disable	admin	disable L2 relay agent

Command	Access	Description
dhcp l2-relay-agent disable	admin	disable L2 relay agent
vlan <vlan>		L2 relay agent VLAN list

Command	Access	Description
dhcp l2-relay-agent disable	admin	disable L2 relay agent
vs <vs>		L2 relay agent VS list

Command	Access	Description
dhcp l2-relay-agent enable	admin	enable L2 relay agent

Command	Access	Description
dhcp l2-relay-agent enable	admin	enable L2 relay agent
vlan <vlan>		L2 relay agent VLAN list

Command	Access	Description
dhcp l2-relay-agent enable	admin	enable L2 relay agent
vs <vs>		L2 relay agent VS list

Command	Access	Description
dhcp l2-relay-agent set	admin	set attributes
{circuit-id-type <cid-string | slot-port | slot-port-vlan>}		the Circuit ID type

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{remote-id-type <device-hostname | device-mac | rid-string>}		the Remote ID type
{replace-option82 <on | off>}		replace existing option-82

Command	**Access**	**Description**
dhcp l2-relay-agent unset	admin	unset attributes
{circuit-id-type}		the Circuit ID type
{remote-id-type}		the Remote ID type
{replace-option82}		replace existing option-82

Command	**Access**	**Description**
dhcp l2-relay-agent set	admin	set VLAN/port attributes
vlan <vlan>		L2 relay agent VLAN list to set attributes on
port <port>		ports to set attributes on
{trust-mode <client-trusted | dualrole-trusted | server-trusted | untrusted>}		trust level
{cid-string <String[64]>}		circuit ID string
{rid-string <String[64]>}		remote ID string

Command	**Access**	**Description**
dhcp l2-relay-agent set	admin	set VS/LI attributes
vs-port <vs-port>		interface to set attributes on
vs <vs>		L2 relay agent VS to set attributes on
{trust-mode <client-trusted | dualrole-trusted | server-trusted | untrusted>}		trust level
{cid-string <String[64]>}		circuit ID string
{rid-string <String[64]>}		remote ID string
{vlan <VLAN ID>}		subscriber VLAN id

Command	**Access**	**Description**
dhcp l2-relay-agent set	admin	set VS/LI attributes
mpls-vc <mpls-vc>		mpls-vc to set attributes on
vs <vs>		L2 relay agent VS to set attributes on
{trust-mode <server-trusted | untrusted>}		trust level

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Command	Access	Description
dhcp l2-relay-agent unset	admin	unset VLAN/port attributes
vlan <vlan>		L2 relay agent VLAN list to unset attributes on
port <port>		ports to unset attributes on
{cid-string}		Circuit ID string
{rid-string}		Remote ID string
{trust-mode}		trust level

Command	Access	Description
dhcp l2-relay-agent unset	admin	unset VS/LI attributes
vs-port <vs-port>		interface to unset attributes on
vs <vs>		L2 relay agent VS list to unset attributes on
{cid-string}		Circuit ID string
{rid-string}		Remote ID string
{trust-mode}		trust level
{vlan <VLAN ID>}		subscriber VLAN id

Command	Access	Description
dhcp l2-relay-agent unset	admin	unset VS/LI attributes
mpls-vc <mpls-vc>		mpls-vc to unset attributes on
vs <vs>		L2 relay agent VS list to unset attributes on
{trust-mode}		trust level

Command	Access	Description
dhcp l2-relay-agent show	limited	show settings for L2 relay agent
{statistics}		global statistics for L2 relay

Command	Access	Description
dhcp l2-relay-agent show	limited	show settings for L2 relay agent
vlan <vlan>		L2 relay agent VLAN list
{statistics}		statistics for L2 relay agent

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Command	Access	Description
dhcp l2-relay-agent show	limited	show settings for L2 relay agent
vs <vs>		L2 relay agent VS list
{statistics}		statistics for L2 relay agent

Command	Access	Description
dhcp security set	admin	set DHCP security attributes
{username <Username String>}		SFTP server account user name
{echoless-password}		collect SFTP server account password interactively

Command	Access	Description
dhcp security show	limited	show DHCP security attributes

Command	Access	Description
dhcp security unset	admin	unset DHCP security attributes
{username}		unset SFTP server account username
{password}		unset SFTP server account password

Command	Access	Description
dhcp tpid-rotation set	admin	set TPID rotation attributes
{rotation-state <off>}		TPID rotation state

Command	Access	Description
dhcp tpid-rotation show	limited	show TPID rotation state

Command	Access	Description
dhcp l3-relay-agent instance create	admin	create DHCP L3 relay instance

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dhcp-instance <dhcp-instance>		DHCP L3 relay instance name

Command	Access	Description
dhcp l3-relay-agent instance delete	admin	delete DHCP L3 relay instance
dhcp-instance <dhcp-instance>		DHCP L3 relay instance name

Command	Access	Description
dhcp l3-relay-agent instance enable	admin	enable DHCP instance
dhcp-instance <dhcp-instance>		DHCP L3 relay instance name

Command	Access	Description
dhcp l3-relay-agent instance disable	admin	disable DHCP instance
dhcp-instance <dhcp-instance>		DHCP L3 relay instance name

Command	Access	Description
dhcp l3-relay-agent instance add	admin	add server-address to DHCP instance
dhcp-instance <dhcp-instance>		DHCP L3 relay instance name
{server-addr <Server Address added to DHCP instance>}		server address added to DHCP instance

Command	Access	Description
dhcp l3-relay-agent instance remove	admin	remove server-address from DHCP instance
dhcp-instance <dhcp-instance>		DHCP L3 relay instance name
{server-addr <Server Address added to DHCP instance>}		server address remove from DHCP instance

Command	Access	Description
dhcp l3-relay-agent instance set	admin	set DHCP instance attributes
dhcp-instance <dhcp-instance>		DHCP L3 relay instance name
{trust-mode <untrusted | trusted>}		configure trust-mode on DHCP attach ip interfaces

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{option82 <off | on | replace>}		set option 82 for DHCP Relay request
{remote-id-type <device-hostname | device-mac | rid-string>}		set the type of remote ID for L3 relay instance
{circuit-id-type <cid-string | interface-name>}		set the type of circuit ID for L3 relay instance

Command	**Access**	**Description**
dhcp l3-relay-agent instance unset	admin	unset DHCP instance attributes
dhcp-instance <dhcp-instance>		DHCP L3 relay instance name
{trust-mode}		Reset trust-mode on DHCP attach ip interfaces
{option82}		Reset option 82 for DHCP Relay request
{remote-id-type}		Reset the type of remote ID for L3 relay instance
{circuit-id-type}		Reset the type of circuit ID for L3 relay instance

Command	**Access**	**Description**
dhcp l3-relay-agent instance show	limited	show DHCP L3 Relay instance info
dhcp-instance <dhcp-instance>		instance name
[statistics]		DHCP L3 Relay global statistics

Command	**Access**	**Description**
dhcp l3-relay-agent instance clear	admin	clear DHCP L3 Relay instance stats
dhcp-instance <dhcp-instance>		instance name
{statistics}		DHCP L3 Relay global statistics

Command	**Access**	**Description**
dhcp l3-relay-agent interface attach	admin	attach an ip interface to DHCP instance
ip-interface <ip-interface>		ip interface name
{dhcp-instance <DHCP L3 Relay Instance>}		DHCP instance name

Command	**Access**	**Description**
dhcp l3-relay-agent interface detach	admin	detach an ip interface from the DHCP instance

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ip-interface <ip-interface>		ip interface name
{dhcp-instance <DHCP L3 Relay Instance>}		DHCP instance name

Command	**Access**	**Description**
dhcp l3-relay-agent interface enable	admin	enable DHCP L3 Relay on the ip interface
ip-interface <ip-interface>		ip interface name

Command	**Access**	**Description**
dhcp l3-relay-agent interface disable	admin	disable DHCP L3 Relay on the ip interface
ip-interface <ip-interface>		ip interface name

Command	**Access**	**Description**
dhcp l3-relay-agent interface set	admin	set interface attributes
ip-interface <ip-interface>		ip interface name
[cid-string <String[64]>]		the Circuit ID string
[rid-string <String[64]>]		the Remote ID string
[trust-mode <untrusted | trusted>]		trust level on this interface
{trust-mode <untrusted | trusted>}		trust level on this interface
[port <Port list>]		port num

Command	**Access**	**Description**
dhcp l3-relay-agent interface unset	admin	unset interface attributes
ip-interface <ip-interface>		ip interface name
[cid-string]		Reset the Circuit-ID value
[rid-string]		Reset the Remote-ID value
[trust-mode]		Reset trust-mode setting on this interface
{trust-mode}		Reset trust-mode setting on this interface
[port <Port list>]		port num

Command	**Access**	**Description**
dhcp l3-relay-agent interface show	limited	show stats of interface attach to L3 Relay

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Command	Access	Description
dhcp l3-relay-agent interface show	limited	show stats of interface attach to L3 Relay
ip-interface <ip-interface>		ip interface name
{statistics}		DHCP L3 Relay ip-interface show stats

Command	Access	Description
dhcp l3-relay-agent interface clear	admin	clear stats of interface attach to L3 Relay
ip-interface <ip-interface>		ip interface name
{statistics}		DHCP L3 Relay ip-interface clear stats

Command	Access	Description
dhcp show	limited	show DHCP config

dhcpv6

DHCPv6 commands

Command	Access	Description
dhcpv6 client lease renew	admin	renew DHCPv6 lease

Command	Access	Description
dhcpv6 client options set	admin	set DHCPv6 option state
{bootfile-url <on | off>}		set boot file URL DHCPv6 option (60)
{dns-servers <on | off>}		set DNS servers DHCPv6 option (23)
{domain-list <on | off>}		set domain list DHCPv6 option (24)
{ntp-servers <on | off>}		set NTP servers DHCPv6 option (56)
{posix-timezone <on | off>}		set POSIX timezone DHCPv6 option (41)
{tzdb-timezone <on | off>}		set TZDB timezone DHCPv6 option (42)

Command	Access	Description
dhcpv6 client options show	limited	show DHCPv6 option state

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Command	Access	Description
dhcpv6 client options unset	admin	set DHCPv6 option state to default
{bootfile-url}		set boot file URL DHCPv6 option (60) back to default (on)
{dns-servers}		set DNS servers DHCPv6 option (23) back to default (on)
{domain-list}		set domain list DHCPv6 option (24) back to default (on)
{ntp-servers}		set NTP servers DHCPv6 option (56) back to default (on)
{posix-timezone}		set POSIX timezone DHCPv6 option (41) back to default (on)
{tzdb-timezone}		set TZDB timezone DHCPv6 option (42) back to default (on)

Command	Access	Description
dhcpv6 client rapid-commit disable	admin	disable DHCPv6 rapid commit

Command	Access	Description
dhcpv6 client rapid-commit enable	admin	enable DHCPv6 rapid commit

Command	Access	Description
dhcpv6 client rapid-commit show	limited	show DHCPv6 rapid commit state

Command	Access	Description
dhcpv6 client clear	admin	clear DHCPv6 statistics
{statistics}		clear DHCPv6 statistics

Command	Access	Description
dhcpv6 client disable	admin	disable DHCPv6

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Command	Access	Description
dhcpv6 client enable	admin	enable DHCPv6

Command	Access	Description
dhcpv6 client set	admin	set DHCPv6 attributes
{interface <local | remote>}		interface on which to run DHCPv6
{preferred-lifetime <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		DHCPv6 requested preferred lifetime (N[yMwdhms]...)
{valid-lifetime <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		DHCPv6 request valid lifetime (N[yMwdhms]...)

Command	Access	Description
dhcpv6 client show	limited	show DHCPv6
{options}		DHCPv6 client option information
{state}		DHCPv6 client state
{statistics}		DHCPv6 client statistics

Command	Access	Description
dhcpv6 client unset	admin	set DHCPv6 attributes
{interface}		interface on which to run DHCPv6
{preferred-lifetime}		set DHCPv6 requested preferred lifetime to default
{valid-lifetime}		set DHCPv6 request valid lifetime to default

Command	Access	Description
dhcpv6 ldra clear	admin	clear statistics for LDRA
{statistics}		Clear LDRA global statistics

Command	Access	Description
dhcpv6 ldra clear	admin	clear statistics for LDRA

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vlan <vlan>		LDRA VLAN list
{statistics}		statistics table

Command	**Access**	**Description**
dhcpv6 ldra clear	admin	clear statistics for LDRA
vs <vs>		LDRA VS list
{statistics}		statistics table

Command	**Access**	**Description**
dhcpv6 ldra create	admin	create LDRA
vlan <vlan>		VLAN list for new LDRAs

Command	**Access**	**Description**
dhcpv6 ldra create	admin	create LDRA
vs <vs>		VS for new LDRA

Command	**Access**	**Description**
dhcpv6 ldra delete	admin	delete LDRA
vlan <vlan>		LDRA VLAN list

Command	**Access**	**Description**
dhcpv6 ldra delete	admin	delete LDRA
vs <vs>		LDRA VS

Command	**Access**	**Description**
dhcpv6 ldra disable	admin	disable LDRA

Command	**Access**	**Description**
dhcpv6 ldra disable	admin	disable LDRA

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vlan <vlan>		LDRA VLAN list

Command	Access	Description
dhcpv6 ldra disable	admin	disable LDRA
vs <vs>		LDRA VS

Command	Access	Description
dhcpv6 ldra enable	admin	enable LDRA

Command	Access	Description
dhcpv6 ldra enable	admin	enable LDRA
vlan <vlan>		LDRA VLAN list

Command	Access	Description
dhcpv6 ldra enable	admin	enable LDRA
vs <vs>		LDRA VS

Command	Access	Description
dhcpv6 ldra set	admin	set attributes
{interface-id-type <intid-string | slot-port | slot-port-vlan>}		the Interface ID type
{remote-id-type <device-hostname | device-mac | rid-string>}		the Remote ID type
{remote-id-option <on | off>}		include remote-id-option (37)
{remote-id-enterprise-number <NUMBER: 1-4294967295>}		IANA number for option 37. Broadband Forum: 3561, Ciena: 1271

Command	Access	Description
dhcpv6 ldra unset	admin	unset attributes
{interface-id-type}		the Interface ID type
{remote-id-type}		the Remote ID type

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{remote-id-option}		include remote-id-option (37)
{remote-id-enterprise-number}		IANA number for option 37. Broadband Forum: 3561, Ciena: 1271

Command	**Access**	**Description**
dhcpv6 ldra set	admin	set VLAN/port attributes
vlan <vlan>		LDRA VLAN list to set attributes on
port <port>		ports to set attributes on
{trust-mode <client | client-trusted | dualrole-trusted | server-trusted | untrusted>}		trust level
{intid-string <String[64]>}		interface ID string
{rid-string <String[64]>}		remote ID string

Command	**Access**	**Description**
dhcpv6 ldra set	admin	set VS/LI attributes
vs-port <vs-port>		interfaces to set attributes on
vs <vs>		LDRA VS to set attributes on
{trust-mode <client | client-trusted | dualrole-trusted | server-trusted | untrusted>}		trust level
{intid-string <String[64]>}		interface ID string
{rid-string <String[64]>}		remote ID string
{vlan <VLAN ID>}		subscriber VLAN id

Command	**Access**	**Description**
dhcpv6 ldra set	admin	set VS/LI attributes
mpls-vc <mpls-vc>		mpls-vc to set attributes on
vs <vs>		LDRA VS to set attributes on
{trust-mode <server-trusted | untrusted>}		trust level

Command	**Access**	**Description**
dhcpv6 ldra unset	admin	unset VLAN/port attributes
vlan <vlan>		LDRA VLAN list to unset attributes on
port <port>		ports to unset attributes on
{intid-string}		interface ID string

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{rid-string}		remote ID string
{trust-mode}		trust level

Command	**Access**	**Description**
dhcpv6 ldra unset	admin	unset VS/LI attributes
vs-port <vs-port>		ports to unset attributes on
vs <vs>		LDRA VS to unset attributes on
{intid-string}		interface ID string
{rid-string}		remote ID string
{trust-mode}		trust level
{vlan <VLAN ID>}		subscriber VLAN id

Command	**Access**	**Description**
dhcpv6 ldra unset	admin	unset VS/LI attributes
mpls-vc <mpls-vc>		mpls-vc to set attributes on
vs <vs>		LDRA VS to unset attributes on
{trust-mode}		trust level

Command	**Access**	**Description**
dhcpv6 ldra show	limited	show settings for LDRA
{statistics}		global statistics for LDRA

Command	**Access**	**Description**
dhcpv6 ldra show	limited	show settings for LDRA
vlan <vlan>		LDRA VLAN list to show
{statistics}		statistics for LDRA

Command	**Access**	**Description**
dhcpv6 ldra show	limited	show settings for LDRA
vs <vs>		LDRA VS list to show
{statistics}		statistics for LDRA

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Command	Access	Description
dhcpv6 show	limited	show DHCPv6 config

dns-client

Domain Name Server (DNS) client

Command	Access	Description
dns-client add	admin	add DNS server
server <server>		DNS server IP address

Command	Access	Description
dns-client disable	admin	disable DNS client

Command	Access	Description
dns-client disable	admin	disable DNS server
server <server>		IP address of DNS server to disable

Command	Access	Description
dns-client enable	admin	enable DNS server
server <server>		IP address of DNS server to enable

Command	Access	Description
dns-client enable	admin	enable DNS client

Command	Access	Description
dns-client remove	admin	remove DNS server
server <server>		DNS server IP address

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Command	Access	Description
dns-client resolve	limited	resolve host name or IP address
ip <ip>		host name or IP address

Command	Access	Description
dns-client set	admin	set DNS client attributes
domain-name <domain-name>		DNS domain name

Command	Access	Description
dns-client set	admin	set preferred-source-ip
preferred-source-ip <preferred-source-ip>		Interface Name

Command	Access	Description
dns-client set	admin	set relative priority DNS server
server <server>		DNS server IP address
{priority <NUMBER: 1-3>}		relative priority of DNS server

Command	Access	Description
dns-client show	limited	show DNS client information
{domain-name}	limited	show DNS client domain name configuration information
{servers}	limited	show DNS client server configuration information
{monitor}	limited	show DNS client monitor information

Command	Access	Description
dns-client unset	admin	unset DNS client attributes
{domain-name}		DNS domain name
{preferred-source-ip}		set Preferred Source Ip to default

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dot1x

dot1x

Command	Access	Description
dot1x auth clear	admin	clear port authenticator statistics
port <port>		port(s) to clear
{statistics}		statistics table

Command	Access	Description
dot1x auth clear	admin	clear all port authenticator statistics
{statistics}		statistics table

Command	Access	Description
dot1x auth disable	admin	dot1x authentication disable
port <port>		ports to disable

Command	Access	Description
dot1x auth enable	admin	dot1x authentication enable
port <port>		ports to enable

Command	Access	Description
dot1x auth pae-port-reauth	admin	re-authenticate the port
port <port>		port(s) to reauthenticate

Command	Access	Description
dot1x auth set	admin	set dot1x authentication port attributes
port <port>		list of ports
{eapol-version <NUMBER: 1-2>}		set the EAPOL version, default: 2
{max-reauth-req <NUMBER: 1-10>}		set the max authentication request, default: 2
{mode <auto | force-auth | force-unauth>}		set the port control to either auto/forceauth/ forceunauth, default: auto
{reauthentication <on | off>}		enable reauthentication, default: on

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{quiet-period <SECONDS: 1-65535>}		set the quiet period, default: 60
{reauth-period <SECONDS: 1-65535>}		set the reauthentication period, default: 3600
{server-timeout <SECONDS: 1-180>}		set the server timeout, default: 30

Command	Access	Description
dot1x auth show	limited	Show Authenticator Port Configuration
{statistics}		show authenticator statistics

Command	Access	Description
dot1x auth show	admin	show authenticator information per port
port <port>		port to show

Command	Access	Description
dot1x auth unset	admin	unset dot1x authentication port attributes
port <port>		list of ports
{eapol-version}		unset the EAPOL version, default: 2
{max-reauth-req}		unset the max authentication request, default: 2
{mode}		unset the port control, default: auto
{reauthentication}		unset reauthentication, default: on
{quiet-period}		unset the quiet period, default: 60
{reauth-period}		unset the reauthentication period, default: 3600
{server-timeout}		unset the server timeout, default: 30

Command	Access	Description
dot1x supp algorithm cipher-suite disable	super	disable cipher suite
cipher-suite <cipher-suite>		cipher suite

Command	Access	Description
dot1x supp algorithm cipher-suite enable	super	enable cipher suite
cipher-suite <cipher-suite>		cipher suite

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Command	Access	Description
dot1x supp algorithm cipher-suite set	super	set cipher suite attributes
cipher-suite <cipher-suite>		cipher suite
{priority <NUMBER: 1-51>}		cipher suite priority

Command	Access	Description
dot1x supp algorithm cipher-suite show	limited	show cipher suite info

Command	Access	Description
dot1x supp algorithm cipher-suite unset	super	unset cipher suite attributes
cipher-suite <cipher-suite>		TLS cipher suite
{priority}		cipher suite priority

Command	Access	Description
dot1x supp algorithm elliptic-curve disable	super	disable elliptic curve
elliptic-curve <elliptic-curve>		TLS elliptic curves

Command	Access	Description
dot1x supp algorithm elliptic-curve enable	super	enable elliptic curve
elliptic-curve <elliptic-curve>		TLS elliptic curves

Command	Access	Description
dot1x supp algorithm elliptic-curve set	super	set elliptic curve attributes
elliptic-curve <elliptic-curve>		TLS elliptic curves
{priority <NUMBER: 1-13>}		cipher suite priority

Command	Access	Description
dot1x supp algorithm elliptic-curve show	limited	show elliptic curve info

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Command	Access	Description
dot1x supp algorithm elliptic-curve unset	super	unset elliptic curve attributes
elliptic-curve <elliptic-curve>		TLS elliptic curves
{priority}		elliptic curve priority

Command	Access	Description
dot1x supp algorithm show	limited	show algorithm info

Command	Access	Description
dot1x supp clear	admin	clear port supplicant statistics
port <port>		port(s) to clear
{statistics}		statistics table

Command	Access	Description
dot1x supp clear	admin	clear all port supplicant statistics
{statistics}		statistics table

Command	Access	Description
dot1x supp disable	admin	dot1x supplicant disable
port <port>		ports to disable

Command	Access	Description
dot1x supp enable	admin	dot1x supplicant enable
port <port>		ports to enable

Command	Access	Description
dot1x supp set	admin	set dot1x supplicant port attributes
port <port>		list of ports

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{authentication-period <SECONDS: 1-65535>}		set the authentication period, default: 30
[cert-name <Certificate name>]		certificate to use
{check-cert-time <on | off>}		determines if certificate dates are checked or ignored when and if the supplicant authenticates the server, default: on
{eapol-version <NUMBER: 1-2>}		set the EAPOL version, default: 2
{eap-method <String List>}		sets list of allowed EAP methods, default: eap-md5
[echoless-password]		collect password interactively
{held-period <SECONDS: 1-65535>}		set the held period, default: 60
{max-start <NUMBER: 1-65535>}		set the maximum number of EAPOL start messages to send, default: 3
{minimum-tls-version <TLSv1.0 | TLSv1.1 | TLSv1.2>}		set minimum TLS version, default: TLSv1.0
{mutual-authentication <on | off>}		determines if supplicant authenticates the server, default: off
[ocsp <on | off>]		determines if supplicant uses OCSP when authenticating the server
[peer-cert-reauth <on | off>]		determines if supplicant does peer certificate reauthentication, default: off
{start-period <SECONDS: 1-65535>}		set the start period, default: 30
[username <String[32]>]		username

Command	**Access**	**Description**
dot1x supp show	limited	show supplicant port configuration
{statistics}		show supplicant statistics

Command	**Access**	**Description**
dot1x supp show	limited	show supplicant information per port
port <port>		show supplicant information per port
{certificate}		show supplicant certificate

Command	**Access**	**Description**
dot1x supp unset	admin	unset supplicant port attributes
port <port>		port(s) to unset
{authentication-period}		unset port authentication-period, default: 30
{cert-name}		set to use no certificate

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{check-cert-time}		unset port check-cert-time, default: on
{eapol-version}		unset port eapol-version, default: 2
{eap-method}		unset port eap-method, default: eap-md5
{held-period}		unset port held-period, default: 60
{max-start}		unset port max-start, default: 3
{minimum-tls-version}		unset minimum TLS version, default: TLSv1.0
{mutual-authentication}		unset port mutual-authentication, default: off
{ocsp}		unset OCSP, default: off
{password}		unset port password
{peer-cert-reauth}		unset peer certificate reauthentication, default: off
{start-period}		unset port start-period, default: 30
{username}		unset port username

Command	Access	Description
dot1x disable	admin	disable dot1x globally

Command	Access	Description
dot1x enable	admin	enable dot1x globally

Command	Access	Description
dot1x pae-port-initialize	admin	initialize the port
port <port>		port(s) to initialize

Command	Access	Description
dot1x show	limited	show dot1x global information

egress-port-restriction

Egress Port Restriction (EPR)

Command	Access	Description
egress-port-restriction assign	admin	assign the vlan/port to an EPR group

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vlan <vlan>		VLAN object
port <port>		port object
{group <A | B>}		EPR group for VLAN/port

Command	Access	Description
egress-port-restriction disable	admin	disable EPR
vlan <vlan>		VLAN list

Command	Access	Description
egress-port-restriction enable	admin	disable EPR
vlan <vlan>		VLAN list

Command	Access	Description
egress-port-restriction set	admin	set the group access rules
vlan <vlan>		VLAN object
{a-access <A | B | AB>}		access rules for group A
{b-access <A | B | AB>}		access rules for group B

Command	Access	Description
egress-port-restriction show	limited	show EPR information

Command	Access	Description
egress-port-restriction show	limited	show EPR VLAN information
vlan <vlan>		VLAN list

eoam

OAM

Command	Access	Description
eoam loopback ignore	admin	ignore remote loopback command

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port <port>		ports to enable

Command	Access	Description
eoam loopback process	admin	process remote loopback
port <port>		ports to enable

Command	Access	Description
eoam loopback show	limited	show loopback statistics

Command	Access	Description
eoam loopback show	limited	show loopback statistics
port <port>		port to show

Command	Access	Description
eoam loopback start	admin	start loopback
port <port>		ports to start loopback

Command	Access	Description
eoam loopback stop	admin	stop loopback
port <port>		ports to stop loopback

Command	Access	Description
eoam clear	admin	clear all OAM statistics
{statistics}		statistics table

Command	Access	Description
eoam disable	admin	disable OAM globally

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Command	Access	Description
eoam disable	admin	disable OAM per port
port <port>		list of ports

Command	Access	Description
eoam enable	admin	enable OAM globally

Command	Access	Description
eoam enable	admin	enable OAM per port
port <port>		list of ports

Command	Access	Description
eoam set	admin	set OAM port attributes
port <port>		list of ports
{critical-event <on | off>}		set critical event
{dying-gasp <on | off>}		set dying gasp
{errd-frame-ev-notify <on | off>}		set errored frame event notification
{errd-frame-window <DECISECONDS>}		set errored frame window, default: 10
{errd-frame-threshold <NUMBER: 0-4294967293>}		set errored frame threshold, default: 1
{errd-frame-period-ev-notify <on | off>}		set errored frame period event notification
{errd-frame-period-window <NUMBER: 1488-892857120>}		set errored frame period window
{errd-frame-period-threshold <NUMBER: 0-4294967293>}		set errored frame period threshold, default: 1
{errd-frame-secs-summary <on | off>}		set errored frame seconds summary event notification
{errd-frame-secs-threshold <NUMBER: 0-65535>}		set errored frame seconds summary threshold
{errd-frame-secs-window <DECISECONDS>}		set errored frame seconds summary window, default: 60
{link-lost-timer <MILLISECONDS: 500-5000>}		link lost timer in milliseconds
{mode <active | passive>}		set OAM mode to active/passive
{pdu-timer <MILLISECONDS: 100-1000>}		PDU timer in milliseconds

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Command	Access	Description
eoam show	limited	show OAM statistics

Command	Access	Description
eoam show	limited	show OAM link events
{link-events}		show OAM link event configuration
{errd-events-statistics}		show link events statistics

Command	Access	Description
eoam show	limited	show OAM link events
port <port>		port to show
{link-events}		show OAM link event configuration
{errd-events-statistics}		show link events statistics
{event-log}		show OAM event log for the specified port

file

file submenu

Command	Access	Description
cat [filename]	limited	list file to terminal

Command	Access	Description
cd [dirname]	limited	change directory

Command	Access	Description
chmod [filename]	limited	change access mode of file

Command	Access	Description
cp [src] [dst]	admin	copy file within local file system

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Command	Access	Description
ls [-acil] [[dirname]]	limited	list files

Command	Access	Description
mkdir [dirname]	admin	create directory

Command	Access	Description
mv [source] [destination]	admin	move file

Command	Access	Description
ping [options] [host or IPv4 address]	admin	ping using IPv4

Command	Access	Description
ping6 [options] [host or IPv6 address]	admin	ping using IPv6

Command	Access	Description
ps [-wb] [[process]]	limited	Display all processes

Command	Access	Description
pwd NULL	limited	Display current directory

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Command	Access	Description
rm [-f] [filename]	admin	remove files

Command	Access	Description
rmdir [-f] [dirname]	admin	remove directory

Command	Access	Description
rmtree [path]	admin	remove directory tree

Command	Access	Description
scp [source] [destination]	admin	secure copy

Command	Access	Description
ssh [options] host or IP address	limited	IP address or host name

Command	Access	Description
telnet [options] host or IP address	limited	Telnet to IP address or host name

Command	Access	Description
tget <host> <remote-file> <local-file>	admin	tget SERVER REMOTE-FILE LOCAL-FILE

Command	Access	Description
tput <host> <remote-file> <local-file>	limited	tput SERVER REMOTE-FILE LOCAL-FILE

Command	Access	Description

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traceroute [options] [host or IPv4 address]	admin	traceroute hostname or IPv4 Address

Command	Access	Description
traceroute6 [options] [host or IPv6 address]	admin	traceroute hostname or IPv6 Address

Command	Access	Description
vols [volume]	limited	volume information

Command	Access	Description
xget [REMOTE-FILE] [LOCAL-FILE]	admin	xget

Command	Access	Description
xput [REMOTE-FILE] [LOCAL-FILE]	limited	xput

flow

flow management

Command	Access	Description
flow access-control clear	admin	clear all access control statistics
{statistics}		clear learned MAC high-water mark statistics

Command	Access	Description
flow access-control clear	admin	clear port access control statistics
port <port>		port(s) to clear statistics
{statistics}		clear learned MAC high-water mark statistics

Command	Access	Description
flow access-control set	admin	set access-control attributes
port <port>		port(s) to set access control attributes

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{forward-unlearned <off | on>}		forward unlearned frames
{max-dynamic-macs <NUMBER>}		maximum dynamic MACs allowed

Command	Access	Description
flow access-control show	limited	show all access control information

Command	Access	Description
flow access-control show	limited	show access control information
{active}		show access control information of only active instances
{all}		show all access control information
{all-ports}		show all port access control information

Command	Access	Description
flow access-control show	limited	show port access control information
port <port>		port(s) to show access control information

Command	Access	Description
flow aging disable	admin	disable aging

Command	Access	Description
flow aging enable	admin	enable aging

Command	Access	Description
flow aging set	admin	set aging options
[mac-refresh <da-sa | sa>]		age mac based on SA or DA/SA refresh
[time <SECONDS: 10-1000000>]		MAC table aging time

Command	Access	Description

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flow aging show	limited	show aging time/status

Command	**Access**	**Description**
flow aging unset	admin	unset aging options
[mac-refresh]		age mac based on SA or DA/SA refresh: defaut DA/SA
[time]		MAC table aging time

Command	**Access**	**Description**
flow bw-calculation-mode set	admin	set bandwidth calculation mode
{mode <payload | transport>}		bandwidth calculation mode

Command	**Access**	**Description**
flow bw-calculation-mode show	limited	show bandwidth calculation mode

Command	**Access**	**Description**
flow learning disable	admin	disable MAC learning
vlan <vlan>		VLAN(s) to disable learning

Command	**Access**	**Description**
flow learning disable	admin	disable MAC learning
vs <vs>		virtual switch to disable learning

Command	**Access**	**Description**
flow learning enable	admin	enable MAC learning
vlan <vlan>		VLAN(s) to enable learning

Command	**Access**	**Description**
flow learning enable	admin	enable MAC learning

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vs <vs>		virtual switch to enable learning

Command	Access	Description
flow learning show	limited	show MAC learning

Command	Access	Description
flow learning show	limited	show MAC learning
{all}		show learning status of all VLANs and virtual switches
{all-disabled-vlans}		show all VLANs with learning disabled
{all-disabled-vs}		show all virtual switches with learning disabled
{all-vlans}		show learning status of all VLANS
{all-vs}		show learning status of all virtual switches

Command	Access	Description
flow learning show	limited	show learning status
vlan <vlan>		VLAN(s) to show learning status

Command	Access	Description
flow learning show	limited	show learning status
vs <vs>		virtual switch to show learning status

Command	Access	Description
flow cpu-rate-limit clear	admin	clear statistics for physical port(s)
port <port>		physical port list
{statistics}		statistics table

Command	Access	Description
flow cpu-rate-limit disable	admin	Disable Rate-Limit PPS controls

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Command	Access	Description
flow cpu-rate-limit disable	admin	Disable Rate-Limit PPS controls
port <port>		physical port list

Command	Access	Description
flow cpu-rate-limit enable	admin	Enable Rate-Limit PPS controls

Command	Access	Description
flow cpu-rate-limit enable	admin	Enable Rate-Limit PPS controls on port(s)
port <port>		physical port list

Command	Access	Description
flow cpu-rate-limit set	admin	set burst PPS attributes
port <port>		physical port list
{arp <NUMBER: 0-2500>}		ARP PPS limit, default: 50
{bootp <NUMBER: 0-2500>}		BOOTP/DHCP PPS limit, default: 5
{cfm <NUMBER: 0-2500>}		CFM PPS limit, default: 50
{cft <NUMBER: 0-2500>}		Tunneled Control Frame PPS limit, default: 250
{dhcpv6 <NUMBER: 0-2500>}		DHCPv6 PPS limit, default: 5
{dot1x <NUMBER: 0-2500>}		Dot1X PPS limit, default: 5
{eoam <NUMBER: 0-2500>}		EOAM PPS limit, default: 5
{esmc <NUMBER: 0-2500>}		ESMC PPS limit, default: 40
{igmp <NUMBER: 0-2500>}		IGMP PPS limit, default: 25
{ip-control <NUMBER: 0-5000>}		IP control protocols PPS limit, default: 700
{ip-icmp <NUMBER: 0-5000>}		IP ICMP PPS limit, default: 100
{ip-mgmt <NUMBER: 0-5000>}		IP management protocols PPS limit, default: 700
{ipv6-mgmt <NUMBER: 0-5000>}		IPv6 management protocols PPS limit, default: 700
{ipv6-icmp <NUMBER: 0-5000>}		IPV6 ICMP PPS limit, default: 100
{lacp <NUMBER: 0-2500>}		LACP PPS limit, default: 5
{lldp <NUMBER: 0-2500>}		LLDP PPS limit, default: 5
{lpbk <NUMBER: 0-2500>}		Loopback PPS limit, default: 5
{mpls <NUMBER: 0-2500>}		MPLS PPS limit

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{pvst <NUMBER: 0-2500>}		PVST PPS limit, default: 5
{raps <NUMBER: 0-2500>}		RAPS PPS limit, default: 200
{rmtlpbk <NUMBER: 0-2500>}		Remote Loopback PPS limit, default: 5
{twamp <NUMBER: 0-2500>}		TWAMP Test PPS limit, default: 100
{twampRsp <NUMBER: 0-2500>}		TWAMP Response PPS limit, default: 250
{xstp <NUMBER: 0-2500>}		XSTP PPS limit, default: 5
{cicp <NUMBER: 0-2500>}		CICP PPS limit, default: 200
{dflt <NUMBER: 0-10000>}		Default PPS limit, default: 10

Command	**Access**	**Description**
flow cpu-rate-limit set	admin	set CPU rate (PPS) limit for a feature
feature		feature
{frame-sample <NUMBER>}		frame sample rate (PPS) limit, default: 100

Command	**Access**	**Description**
flow cpu-rate-limit show	limited	show CPU Rate-Limit PPS status

Command	**Access**	**Description**
flow cpu-rate-limit show	limited	show CPU Rate-Limit PPS configuration
port <port>		physical port list
{statistics}		display PPS statistics

Command	**Access**	**Description**
flow cpu-rate-limit show	limited	show CPU Rate (PPS) limit for all features
feature		feature

Command	**Access**	**Description**
flow cpu-rate-limit unset	admin	reset CPU PPS rate limit threshholds to default
port <port>		physical port list
{arp}		ARP PPS limit, default: 50
{bootp}		BOOTP/DHCP PPS limit, default: 5
{cfm}		CFM PPS limit, default: 50

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{cft}		Tunneled Control Frame PPS limit, default: 250
{dhcpv6}		DHCPv6 PPS limit, default: 5
{dot1x}		Dot1X PPS limit, default: 5
{eoam}		EOAM PPS limit, default: 5
{esmc}		ESMC PPS limit, default: 40
{igmp}		IGMP PPS limit, default: 25
{ip-control}		IP control protocols PPS limit, default: 700
{ip-icmp}		IP ICMP PPS limit, default: 100
{ip-mgmt}		IP management protocols PPS limit, default: 700
{ipv6-mgmt}		IPv6 management protocols PPS limit, default: 700
{ipv6-icmp}		IPV6 ICMP PPS limit, default: 100
{lacp}		LACP PPS limit, default: 5
{lldp}		LLDP PPS limit, default: 5
{lpbk}		Loopback PPS limit, default: 5
{mpls}		MPLS PPS limit
{pvst}		PVST PPS limit, default: 5
{raps}		RAPS PPS limit, default: 200
{rmtlpbk}		Remote Loopback PPS limit, default: 5
{twamp}		TWAMP Test PPS limit, default: 100
{twampRsp}		TWAMP Response PPS limit, default: 250
{xstp}		XSTP PPS limit, default: 5
{cicp}		CICP PPS limit, default: 200
{dflt}		Default PPS limit, default: 10

Command	**Access**	**Description**
flow cpu-rate-limit unset	admin	unset CPU rate (PPS) limit for a feature
feature		feature
{frame-sample}		reset frame sample rate (PPS) limit to default.

Command	**Access**	**Description**
flow loop-detection clear	admin	Clear statistics for ports
port <port>		physical port list/aggregation port
{statistics}		Statistics table

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Command	Access	Description
flow loop-detection disable	admin	Disable loop-detection on system level

Command	Access	Description
flow loop-detection enable	admin	Enable loop-detection on system level

Command	Access	Description
flow loop-detection disable	admin	Disable loop-detection on Port
port <port>		Physical port list/aggregation port

Command	Access	Description
flow loop-detection enable	admin	Enable loop-detection on Port
port <port>		Physical port list/aggregation port

Command	Access	Description
flow loop-detection set	admin	Set loop-detection attributes
[mac-motion-count <NUMBER: 2-10>]		Mac-Motion Count
[reversion-holdoff-time <MINUTES>]		Reversion-Holdoff-Time in minutes

Command	Access	Description
flow loop-detection set	admin	Set loop-detection attributes
port <port>		Port(s) to set access control attributes
{action <block-mac-motion | notify-only | port-shut>}		Flow Loop Prevention Action
{revertive <off | on>}		Auto Reversion of Flow Loop Prevention Action

Command	Access	Description
flow loop-detection show	limited	Show all loop-detection information

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Command	Access	Description
flow loop-detection show	limited	Show specified port loop-detection information
port <port>		Port(s) to show access control information

Command	Access	Description
flow loop-detection unset	admin	Set loop-detection default attributes
[mac-motion-count]		Set Mac-Motion Count to default value
[reversion-holdoff-time]		Set Reversion-Holdoff-Time to default value

Command	Access	Description
flow mac-addr find	limited	find MAC address
{mac <MAC address: XX:XX:XX:XX:XX:XX>}		MAC address
[vlan <VLAN>]		VLAN
[all-occurrences]		find all VLAN-independent occurrences

Command	Access	Description
flow mac-addr flush	admin	flush MAC addresses for one or more ports
port <port>		ports to flush

Command	Access	Description
flow mac-addr flush	admin	flush MAC addresses for virtual circuit
mpls-vc <mpls-vc>		virtual circuit to flush

Command	Access	Description
flow mac-addr flush	admin	flush MAC addresses for one or more vlans
vlan <vlan>		VLANs to flush

Command	Access	Description

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flow mac-addr flush	admin	flush MAC addresses virtual switch
vs <vs>		virtual switch to flush

Command	**Access**	**Description**
flow mac-addr flush	admin	flush MAC addresses for one or more sub-ports
sub-port <sub-port>		sub-ports to flush

Command	**Access**	**Description**
flow mac-addr show	limited	show dynamic and static MAC addresses

Command	**Access**	**Description**
flow mac-addr show	limited	show dynamic and static MAC addresses
vlan <vlan>		VLAN list
[mac <MAC address: XX:XX:XX:XX:XX:XX>]		MAC address
[table-count]		show table count only

Command	**Access**	**Description**
flow mac-addr show	limited	show dynamic and static MAC addresses
mac <mac>		MAC address

Command	**Access**	**Description**
flow mac-addr show	limited	show dynamic and static MAC addresses
port <port>		PORT number

Command	**Access**	**Description**
flow mac-addr show	admin	show dynamic and static MAC addresses
sub-port <sub-port>		sub-port

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Command	Access	Description
flow mac-addr set	admin	set MAC table config
[save-to-file-interval <SECONDS: 100-499999>]		Time interval in seconds at which full MAC table is saved to a file on device
[max-num-files <NUMBER: 2-4>]		Maximum number of MAC table files can be present at device level, default: 2

Command	Access	Description
flow mac-addr unset	admin	unset MAC table config
[save-to-file-interval]		Time interval in seconds at which full MAC table is saved to a file on device: default 0 i.e. disabled
[max-num-files]		Maximum number of MAC table files can be present at device level, default: 2

Command	Access	Description
flow mac-addr show	admin	show MAC table configured parameters
{config}		config report

Command	Access	Description
flow show aging	limited	show all aging entries

Command	Access	Description
flow show access-control	limited	show all access control entries

Command	Access	Description
flow show learning	limited	show all learning entries

Command	Access	Description
flow show mac-addr	limited	show all MAC entries (dynamic and static)

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Command	Access	Description
flow static-mac add	admin	add a static MAC entry
{mac <MAC address: XX:XX:XX:XX:XX:XX>}		static MAC address
{port <Port>}		port
{vlan <VLAN>}		VLAN

Command	Access	Description
flow static-mac remove	admin	delete a static MAC entry
{mac <MAC address: XX:XX:XX:XX:XX:XX>}		static MAC address
{vlan <VLAN>}		VLAN

Command	Access	Description
flow static-mac show	admin	show static MAC information
[mac <MAC address: XX:XX:XX:XX:XX:XX>]		static MAC address
[vlan <VLAN>]		VLAN

gmpls

GMPLS Tunneling

Command	Access	Description
gmpls tp-tunnel create	admin	create gmpls ingress co-routed TP-Tunnel
rsvp-ingress-corout <rsvp-ingress-corout>		gmpls ingress tp-tunnel name
{dest-ip <IP address>}		tp-tunnel destination IP address
[setup-priority <NUMBER: 0-7>]		tp-tunnel setup priority,default=0
[hold-priority <NUMBER: 0-7>]		tp-tunnel hold priority,default=0
[class-type <NUMBER: 0-7>]		DSTE class type (ct0-ct7),default=0
[resource-include-all <MPLS TE Admin Color Group>]		Admin Group which contains include-all colors to constrain path selection
[resource-include-any <MPLS TE Admin Color Group>]		Admin Group which contains include-any colors to constrain path selection
[resource-exclude-any <MPLS TE Admin Color Group>]		Admin Group which contains exclude-all colors to constrain path selection
[backup-resource-include-all <MPLS TE Admin Color Group>]		Admin Group which contains include-all colors to constrain backup path selection

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[backup-resource-include-any <MPLS TE Admin Color Group>]		Admin Group which contains include-any colors to constrain backup path selection
[backup-resource-exclude-any <MPLS TE Admin Color Group>]		Admin Group which contains exclude-any colors to constrain backup path selection
[record-route <on | off>]	admin	record route,default=on
[sticky-lsp <on | off>]	admin	sticky lsp,default=off
[explicit-tunnel-path <MPLS Rsvp Path Except Auto>]		Tunnel explicit path name
[path-diverse <node | srlg | srlg-and-node | link | link-and-node | srlg-and-link | srlg-and-link-and-node>]		Backup path disjointness,default=srlg strict
[strict]		strict diverse backup path,default
[maximal]		maximal diverse backup path
[auto-backup <on | off>]		Create auto-backup dynamic co-routed tunnel,default=off
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name,default=DefaultTunlCoSProfile
{ttl-policy <fixed>}		TTL policy,default=fixed
[fixed-ttl <NUMBER: 1-255>]		tp-tunnel fixed ttl,default=255
[reversion-hold-time <SECONDS: 0-3600>]		reversion hold time in seconds,default=30
[tunnel-reversion <on | off>]		tunnel reversion behavior,default=on
[bfd-monitor <enable | disable>]		BFD based fault monitoring,default=disable
[bfd-profile <MPLS BFD Profile>]		BFD profile to be used for this session,default=Active-LSP
[min-bandwidth <Kbps>]		Minimum bandwidth (Kbps),default=0
[max-bandwidth <Kbps>]		Maximum bandwidth (Kbps),default=1000000000
[increment-bandwidth <Kbps>]		Increment bandwidth (Kbps),default=0
[auto-size-interval <MINUTES>]		Down size interval in minutes 5...60 (zero to turn it off),default=0
[auto-size <enable | disable>]		Auto sizing for this tunnel,default=disable
[auto-size-failure <alarm | mbb>]		Auto sizing failure handling for this tunnel,default=alarm
[auto-size-mode <cac | utilization>]		Auto sizing mode of this tunnel,default=cac
[lsp-reopt <enable | disable>]		LSP Reoptimization,default=disable
[lsp-reopt-interval <MINUTES>]		LSP Reoptimization interval in minutes,default=0
{share-srlg <RSVP SRLG values and ranges>}		Shared SRLGs
[backup-path-diversity <enable | disable>]		Backup Path Diversity,default=enable

Command	**Access**	**Description**

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gmpls tp-tunnel set	admin	set gmpls ingress co-routed TP-Tunnel
rsvp-ingress-corout <rsvp-ingress-corout>		gmpls ingress tp-tunnel name
[setup-priority <NUMBER: 0-7>]		tp-tunnel setup priority,default=0
[hold-priority <NUMBER: 0-7>]		tp-tunnel hold priority,default=0
[class-type <NUMBER: 0-7>]		DSTE class type (ct0-ct7),default=0
[resource-include-all <MPLS TE Admin Color Group>]		Admin Group which contains include-all colors to constrain path selection
[resource-include-any <MPLS TE Admin Color Group>]		Admin Group which contains include-any colors to constrain path selection
[resource-exclude-any <MPLS TE Admin Color Group>]		Admin Group which contains exclude-all colors to constrain path selection
[backup-resource-include-all <MPLS TE Admin Color Group>]		Admin Group which contains include-all colors to constrain backup path selection
[backup-resource-include-any <MPLS TE Admin Color Group>]		Admin Group which contains include-any colors to constrain backup path selection
[backup-resource-exclude-any <MPLS TE Admin Color Group>]		Admin Group which contains exclude-any colors to constrain backup path selection
[record-route <on | off>]	admin	record route,default=on
[sticky-lsp <on | off>]	admin	sticky lsp,default=off
[explicit-tunnel-path <MPLS Rsvp Path Except Auto>]		Tunnel explicit path name
[auto-backup <on | off>]		Create or delete auto-backup dynamic co-routed tunnel,default=off
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name,default=DefaultTunlCoSProfile
{ttl-policy <fixed>}		TTL policy,default=fixed
[fixed-ttl <NUMBER: 1-255>]		tp-tunnel fixed ttl,default=255
[reversion-hold-time <SECONDS: 0-3600>]		reversion hold time in seconds,default=30
[tunnel-reversion <on | off>]		tunnel reversion behavior,default=on
[bfd-monitor <enable | disable>]		BFD based fault monitoring,default=disable
[bfd-profile <MPLS BFD Profile>]		BFD profile to be used for this session,default=Active-LSP
[min-bandwidth <Kbps>]		Minimum bandwidth (Kbps),default=0
[max-bandwidth <Kbps>]		Maximum bandwidth (Kbps),default=1000000000
[increment-bandwidth <Kbps>]		Increment bandwidth (Kbps),default=0
[auto-size-interval <MINUTES>]		Down size interval in minutes 5...60 (zero to turn it off),default=0
[auto-size <enable | disable>]		Auto sizing for this tunnel,default=disable
[auto-size-failure <alarm | mbb>]		Auto sizing failure handling for this tunnel,default=alarm
[auto-size-trigger]		Auto size trigger

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[lsp-reopt <enable | disable>]		LSP Reoptimization for this tunnel,default=disable
[lsp-reopt-trigger]		LSP Reoptimization trigger
[lsp-reopt-interval <MINUTES>]		LSP Reoptimization interval in minutes,default=0
[path-diverse <node | srlg | srlg-and-node | link | link-and-node | srlg-and-link | srlg-and-link-and-node>]		Backup path disjointness,default=srlg strict
[strict]		strict diverse backup path,default
[maximal]		maximal diverse backup path
{share-srlg <RSVP SRLG values and ranges>}		Shared SRLGs
[backup-path-diversity <enable | disable>]		Backup Path Diversity,default=enable

Command	**Access**	**Description**
gmpls tp-tunnel unset	admin	unset gmpls ingress co-routed TP-Tunnel
rsvp-ingress-corout <rsvp-ingress-corout>		gmpls ingress tp-tunnel name
[setup-priority]		tunnel setup priority,default=0
[hold-priority]		tunnel hold priority,default=0
[class-type]		DSTE class type,default=0
[resource-include-all]		Unset Include-All Admin Group
[resource-include-any]		Unset Include-Any Admin Group
[resource-exclude-any]		Unset Exclude-Any Admin Group
[backup-resource-include-all]		Unset Include-All Admin Group for backup
[backup-resource-include-any]		Unset Include-Any Admin Group for backup
[backup-resource-exclude-any]		Unset Exclude-Any Admin Group for backup
[record-route]	admin	record route,default=on
[sticky-lsp]	admin	sticky lsp,default=off
[explicit-tunnel-path]		Tunnel explicit path name
[cos-profile]		Default Tunnel COS profile,default=DefaultTunlCoSProfile
{ttl-policy}		TTL policy,default=fixed
[fixed-ttl]		tunnel fixed ttl,default=255
[reversion-hold-time]		reversion hold time in seconds,default=30
[tunnel-reversion]		tunnel reversion behavior,default=on
[bfd-monitor]		BFD based fault monitoring,default=disable
[bfd-profile]		BFD profile to be used for monitoring,default=Active-LSP
[auto-backup]		delete auto-backup dynamic co-routed tunnel if enabled,default=off
[min-bandwidth]		Minimum bandwidth (Kbps),default=0

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[max-bandwidth]		Maximum bandwidth (Kbps),default=1000000000
[increment-bandwidth]		Increment bandwidth (Kbps),default=0
[auto-size-interval]		Down size interval in minutes 5...60 (zero to turn it off),default=0
[auto-size]		Auto sizing for this tunnel,default=disable
[auto-size-failure]		Auto sizing failure handling for this tunnel,default=alarm
[lsp-reopt-interval]		LSP Reoptimization interval,default=0
{share-srlg}		Shared SRLGS
[backup-path-diversity]		Unset Backup Path Diversity

Command	**Access**	**Description**
gmpls tp-tunnel switchover	admin	Switchover gmpls ingress co-routed TP-Tunnel
rsvp-ingress-corout <rsvp-ingress-corout>		gmpls ingress tp-tunnel name

Command	**Access**	**Description**
gmpls tp-tunnel delete	admin	delete ingress co-routed TP-Tunnel
rsvp-ingress-corout <rsvp-ingress-corout>		gmpls ingress tp-tunnel name
[gracefully]		graceful deletion

Command	**Access**	**Description**
gmpls tp-tunnel disable	admin	disable any ingress co-routed TP-Tunnel
rsvp-ingress-corout <rsvp-ingress-corout>		gmpls ingress tp-tunnel name

Command	**Access**	**Description**
gmpls tp-tunnel enable	admin	enable any ingress co-routed TP-Tunnel
rsvp-ingress-corout <rsvp-ingress-corout>		gmpls ingress tp-tunnel name

Command	**Access**	**Description**
gmpls tp-tunnel delete	admin	delete dynamic transit co-routed TP-Tunnel
rsvp-transit-corout <rsvp-transit-corout>		transit tp-tunnel name

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[gracefully]		graceful deletion

Command	Access	Description
gmpls tp-tunnel disable	admin	disable dynamic transit co-routed TP-Tunnel
rsvp-transit-corout <rsvp-transit-corout>		transit tp-tunnel name

Command	Access	Description
gmpls tp-tunnel enable	admin	enable dynamic transit co-routed TP-Tunnel
rsvp-transit-corout <rsvp-transit-corout>		transit tp-tunnel name

Command	Access	Description
gmpls tp-tunnel delete	admin	delete dynamic egress co-routed TP-Tunnel
rsvp-egress-corout <rsvp-egress-corout>		egress tp-tunnel name
[gracefully]		graceful deletion

Command	Access	Description
gmpls tp-tunnel disable	admin	disable dynamic egress co-routed TP-Tunnel
rsvp-egress-corout <rsvp-egress-corout>		egress tp-tunnel name

Command	Access	Description
gmpls tp-tunnel enable	admin	enable dynamic egress co-routed TP-Tunnel
rsvp-egress-corout <rsvp-egress-corout>		egress tp-tunnel name

Command	Access	Description
gmpls tp-tunnel create	admin	create gmpls TP-Tunnel
rsvp-ingress-unidir <rsvp-ingress-unidir>		gmpls ingress tp-tunnel name
{dest-ip <IP address>}		tp-tunnel destination IP address
[setup-priority <NUMBER: 0-7>]		tp-tunnel setup priority
[hold-priority <NUMBER: 0-7>]		tp-tunnel hold priority
[record-route <on | off>]	admin	record route

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[explicit-tunnel-path <MPLS Rsvp Path Except Auto>]		Tunnel explicit path name
[backup-tunnel <MPLS primary tp-corout-tunnel>]		Select uni-directional primary tp-tunnel
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <fixed>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tp-tunnel fixed ttl
[reversion-hold-time <SECONDS: 0-3600>]		reversion hold time in seconds
[tunnel-reversion <on | off>]		tunnel reversion behavior

Command	**Access**	**Description**
gmpls tp-tunnel set	admin	set gmpls TP-Tunnel
rsvp-ingress-unidir <rsvp-ingress-unidir>		gmpls ingress tp-tunnel name
[setup-priority <NUMBER: 0-7>]		tp-tunnel setup priority
[hold-priority <NUMBER: 0-7>]		tp-tunnel hold priority
[record-route <on | off>]	admin	record route
[explicit-tunnel-path <MPLS Rsvp Path Except Auto>]		Tunnel explicit path name
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <fixed>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tp-tunnel fixed ttl
[reversion-hold-time <SECONDS: 0-3600>]		reversion hold time in seconds
[tunnel-reversion <on | off>]		tunnel reversion behavior

Command	**Access**	**Description**
gmpls tp-tunnel unset	admin	unset gmpls TP-Tunnel
rsvp-ingress-unidir <rsvp-ingress-unidir>		gmpls ingress tp-tunnel name
[setup-priority]		tunnel setup priority
[hold-priority]		tunnel hold priority
[record-route]	admin	record route
[explicit-tunnel-path]		Tunnel explicit path name
[cos-profile]		Default Tunnel COS profile
{ttl-policy}		TTL policy
[fixed-ttl]		tunnel fixed ttl
[reversion-hold-time]		reversion hold time in seconds
[tunnel-reversion]		tunnel reversion behavior

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Command	Access	Description
gmpls tp-tunnel switchover	admin	switchover gmpls TP-Tunnel
rsvp-ingress-unidir <rsvp-ingress-unidir>		gmpls ingress tp-tunnel name

Command	Access	Description
gmpls tp-tunnel delete	admin	delete gmpls TP-Tunnel
rsvp-ingress-unidir <rsvp-ingress-unidir>		gmpls ingress tp-tunnel name

Command	Access	Description
gmpls tp-tunnel disable	admin	disable gmpls TP-Tunnel
rsvp-ingress-unidir <rsvp-ingress-unidir>		gmpls ingress tp-tunnel name

Command	Access	Description
gmpls tp-tunnel enable	admin	enable gmpls TP-Tunnel
rsvp-ingress-unidir <rsvp-ingress-unidir>		gmpls ingress tp-tunnel name

Command	Access	Description
gmpls tp-tunnel delete	admin	delete dynamic transit uni-directional TP-Tunnel
rsvp-transit-unidir <rsvp-transit-unidir>		transit tp-tunnel name
[gracefully]		graceful deletion

Command	Access	Description
gmpls tp-tunnel disable	admin	disable dynamic transit uni-directional TP-Tunnel
rsvp-transit-unidir <rsvp-transit-unidir>		transit tp-tunnel name

Command	Access	Description

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gmpls tp-tunnel enable	admin	enable dynamic transit uni-directional TP-Tunnel
rsvp-transit-unidir <rsvp-transit-unidir>		transit tp-tunnel name

Command	**Access**	**Description**
gmpls tp-tunnel delete	admin	delete dynamic egress uni-directional TP-Tunnel
rsvp-egress-unidir <rsvp-egress-unidir>		egress tp-tunnel name
[gracefully]		graceful deletion

Command	**Access**	**Description**
gmpls tp-tunnel disable	admin	disable dynamic egress uni-directional TP-Tunnel
rsvp-egress-unidir <rsvp-egress-unidir>		egress tp-tunnel name

Command	**Access**	**Description**
gmpls tp-tunnel enable	admin	enable dynamic egress uni-directional TP-Tunnel
rsvp-egress-unidir <rsvp-egress-unidir>		egress tp-tunnel name

Command	**Access**	**Description**
gmpls tp-tunnel create	admin	create static ingress co-routed TP-Tunnel
static-ingress-corout <static-ingress-corout>		static ingress co-routed tp-tunnel name
[dest-tunnel-id <NUMBER: 1-65535>]		Ingress tp-tunnel destination Tunnel-ID
{lsp-id <NUMBER: 1-65535>}		Ingress tp-tunnel LSP-ID
{src-tunnel-id <NUMBER: 1-65535>}		Ingress tp-tunnel source Tunnel-ID
[lsp-id <NUMBER: 1-65535>]		Ingress tp-tunnel LSP-ID
{dest-tunnel-id <NUMBER: 1-65535>}		Ingress tp-tunnel destination Tunnel-ID
{src-tunnel-id <NUMBER: 1-65535>}		Ingress tp-tunnel source Tunnel-ID
[src-tunnel-id <NUMBER: 1-65535>]		Ingress tp-tunnel source Tunnel-ID
{dest-tunnel-id <NUMBER: 1-65535>}		Ingress tp-tunnel destination Tunnel-ID
{lsp-id <NUMBER: 1-65535>}		Ingress tp-tunnel LSP-ID
{dest-ip <IP address>}		tp-tunnel destination IP address
{next-hop-ip <IP address>}		tp-tunnel next hop IP address

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[next-hop-ifnum <NUMBER: 1-4294967295>]		Ingress IF_NUM of DDMAP/DSMAP TLV
{next-hop-local-interface <Interface Supports Data>}		Local Interface for tp-tunnel next hop IP address
{forward-out-label <NUMBER: 16-1044479>}		forward encap tp-tunnel outgoing label
{reverse-in-label <NUMBER: 16-1044479>}		reverse decap tp-tunnel incoming label
{ttl-policy <fixed>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tp-tunnel fixed TTL
[recovery-nhop-disjoint <link | none>]		Recovery path next-hop disjointness requirement (default = Link)
[backup-tunnel <MPLS primary tp-corout-tunnel>]		list of primary tp-tunnels
[reversion-hold-time <SECONDS: 0-3600>]		reversion hold time in seconds
[tunnel-reversion <on | off>]		tunnel reversion behavior
[bfd-monitor <enable | disable>]		BFD based fault monitoring
[bfd-profile <MPLS BFD Profile>]		BFD profile to be used for this session
[ais-monitor <enable | disable>]		AIS based fault monitoring
[ais-profile <AIS Profile List>]		AIS profile to be used for this session
[bfd-dampening <on | off>]		BFD dampening based fault monitoring
[bfd-dampening-profile <BFD Dampening Session>]		BFD dampening profile to be used for this session

Command	**Access**	**Description**
gmpls tp-tunnel set	admin	set static ingress co-routed TP-Tunnel
static-ingress-corout <static-ingress-corout>		static ingress tp-tunnel name
[next-hop-local-interface <Interface Supports Data>]		Local Interface for tp-tunnel next hop IP address
[next-hop-ip <IP address>]		tp-tunnel next hop IP address
[next-hop-ifnum <NUMBER: 1-4294967295>]		Ingress IF_NUM of DDMAP/DSMAP TLV
[forward-out-label <NUMBER: 16-1044479>]		forward encap tp-tunnel outgoing label
[reverse-in-label <NUMBER: 16-1044479>]		reverse decap tp-tunnel incoming label
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <fixed>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tunnel fixed ttl
[recovery-nhop-disjoint <link | none>]		Recovery path next-hop disjointness requirement (default = Link)
[reversion-hold-time <SECONDS: 0-3600>]		reversion hold time in seconds
[tunnel-reversion <on | off>]		tunnel reversion behavior
[bfd-monitor <enable | disable>]		BFD based fault monitoring
[bfd-profile <MPLS BFD Profile>]		BFD profile to be used for this session
[ais-monitor <enable | disable>]		AIS based fault monitoring

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[ais-profile <AIS Profile List>]		AIS profile to be used for this session
[name <Name (no ,) String>]		renaming the tunnel
[bfd-dampening <on | off>]		BFD dampening based fault monitoring
[bfd-dampening-profile <BFD Dampening Session>]		BFD dampening profile to be used for this session

Command	**Access**	**Description**
gmpls tp-tunnel unset	admin	unset static ingress co-routed TP-Tunnel
static-ingress-corout <static-ingress-corout>		static ingress tp-tunnel name
[next-hop-ifnum]		Ingress IF_NUM of DDMAP/DSMAP TLV
[cos-profile]		Default Tunnel COS profile
{ttl-policy}		TTL policy
[fixed-ttl]		tunnel fixed ttl
[reversion-hold-time]		reversion hold time in seconds
[tunnel-reversion]		tunnel reversion behavior
[recovery-nhop-disjoint]		Recovery path next-hop disjointness requirement
[bfd-monitor]		BFD based fault monitoring
[bfd-profile]		BFD profile to be used for monitoring
[ais-monitor]		AIS based fault monitoring
[ais-profile]		AIS profile to be used for monitoring
[bfd-dampening]		BFD dampening based fault monitoring
[bfd-dampening-profile]		BFD dampening profile to be used for this session

Command	**Access**	**Description**
gmpls tp-tunnel switchover	admin	switchover static ingress co-routed TP-Tunnel
static-ingress-corout <static-ingress-corout>		static ingress tp-tunnel name

Command	**Access**	**Description**
gmpls tp-tunnel delete	admin	delete static ingress co-routed TP-Tunnel
static-ingress-corout <static-ingress-corout>		static ingress tp-tunnel name

Command	**Access**	**Description**

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gmpls tp-tunnel disable	admin	disable static ingress co-routed TP-Tunnel
static-ingress-corout <static-ingress-corout>		static ingress tp-tunnel name

Command	**Access**	**Description**
gmpls tp-tunnel enable	admin	enable static ingress co-routed TP-Tunnel
static-ingress-corout <static-ingress-corout>		static ingress tp-tunnel name

Command	**Access**	**Description**
gmpls tp-tunnel create	admin	create static egress co-routed TP-Tunnel
static-egress-corout <static-egress-corout>		static egress co-routed tp-tunnel name
[dest-tunnel-id <NUMBER: 1-65535>]		Egress tp-tunnel destination Tunnel-ID
{lsp-id <NUMBER: 1-65535>}		Egress tp-tunnel LSP-ID
{src-tunnel-id <NUMBER: 1-65535>}		Egress tp-tunnel source Tunnel-ID
[lsp-id <NUMBER: 1-65535>]		Egress tp-tunnel LSP-ID
{dest-tunnel-id <NUMBER: 1-65535>}		Egress tp-tunnel destination Tunnel-ID
{src-tunnel-id <NUMBER: 1-65535>}		Egress tp-tunnel source Tunnel-ID
[src-tunnel-id <NUMBER: 1-65535>]		Egress tp-tunnel source Tunnel-ID
{dest-tunnel-id <NUMBER: 1-65535>}		Egress tp-tunnel destination Tunnel-ID
{lsp-id <NUMBER: 1-65535>}		Egress tp-tunnel LSP-ID
{src-ip <IP address>}		tp-tunnel source IP address
{prev-hop-ip <IP address>}		tp-tunnel previous hop IP address
[prev-hop-ifnum <NUMBER: 1-4294967295>]		Ingress IF_NUM of DDMAP/DSMAP TLV
{prev-hop-local-interface <Interface Supports Data>}		Local Interface for tp-tunnel previous hop IP address
{forward-in-label <NUMBER: 16-1044479>}		forward decap tp-tunnel incoming label
{reverse-out-label <NUMBER: 16-1044479>}		reverse encap tp-tunnel outgoing label
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <fixed>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tp-tunnel fixed TTL
[reversion-hold-time <SECONDS: 0-3600>]		reversion hold time in seconds
[tunnel-reversion <on | off>]		tunnel reversion behavior
[recovery-phop-disjoint <link | none>]		Recovery path prev-hop disjointness requirement (default = Link)
[backup-tunnel <MPLS primary tp-corout-tunnel>]		list of primary tp-tunnels
[bfd-monitor <enable | disable>]		BFD based fault monitoring
[bfd-profile <MPLS BFD Profile>]		BFD profile to be used for this session
[ais-monitor <enable | disable>]		AIS based fault monitoring

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[ais-profile <AIS Profile List>]		AIS profile to be used for this session
[bfd-dampening <on | off>]		BFD dampening based fault monitoring
[bfd-dampening-profile <BFD Dampening Session>]		BFD dampening profile to be used for this session

Command	**Access**	**Description**
gmpls tp-tunnel set	admin	set static egress co-routed TP-Tunnel
static-egress-corout <static-egress-corout>		static egress tp-tunnel name
[prev-hop-ifnum <NUMBER: 1-4294967295>]		Ingress IF_NUM of DDMAP/DSMAP TLV
[prev-hop-ip <IP address>]		tp-tunnel previous hop IP address
[prev-hop-local-interface <Interface Supports Data>]		Local Interface for tp-tunnel previous hop IP address
[forward-in-label <NUMBER: 16-1044479>]		forward decap tp-tunnel incoming label
[reverse-out-label <NUMBER: 16-1044479>]		reverse encap tp-tunnel outgoing label
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <fixed>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tp-tunnel fixed TTL
[reversion-hold-time <SECONDS: 0-3600>]		reversion hold time in seconds
[tunnel-reversion <on | off>]		tunnel reversion behavior
[recovery-phop-disjoint <link | none>]		Recovery path prev-hop disjointness requirement (default = Link)
[bfd-monitor <enable | disable>]		BFD based fault monitoring
[bfd-profile <MPLS BFD Profile>]		BFD profile to be used for this session
[ais-monitor <enable | disable>]		AIS based fault monitoring
[ais-profile <AIS Profile List>]		AIS profile to be used for this session
[name <Name (no ,) String>]		renaming the tunnel
[bfd-dampening <on | off>]		BFD dampening based fault monitoring
[bfd-dampening-profile <BFD Dampening Session>]		BFD dampening profile to be used for this session

Command	**Access**	**Description**
gmpls tp-tunnel unset	admin	unset static egress co-routed TP-Tunnel
static-egress-corout <static-egress-corout>		static egress tp-tunnel name
[cos-profile]		Default Tunnel COS profile
[prev-hop-ifnum]		Ingress IF_NUM of DDMAP/DSMAP TLV
{ttl-policy}		TTL policy
[fixed-ttl]		tunnel fixed ttl
[reversion-hold-time]		reversion hold time in seconds

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[tunnel-reversion]		tunnel reversion behavior
[recovery-phop-disjoint]		Recovery path prev-hop disjointness requirement
[bfd-monitor]		BFD based fault monitoring
[bfd-profile]		BFD profile to be used for monitoring
[ais-monitor]		AIS based fault monitoring
[ais-profile]		AIS profile to be used for monitoring
[bfd-dampening]		BFD dampening based fault monitoring
[bfd-dampening-profile]		BFD dampening profile to be used for this session

Command	**Access**	**Description**
gmpls tp-tunnel switchover	admin	switchover static egress co-routed TP-Tunnel
static-egress-corout <static-egress-corout>		static egress tp-tunnel name

Command	**Access**	**Description**
gmpls tp-tunnel delete	admin	delete static egress co-routed TP-Tunnel
static-egress-corout <static-egress-corout>		static egress tp-tunnel name

Command	**Access**	**Description**
gmpls tp-tunnel disable	admin	disable static egress co-routed TP-Tunnel
static-egress-corout <static-egress-corout>		static egress tp-tunnel name

Command	**Access**	**Description**
gmpls tp-tunnel enable	admin	enable static egress co-routed TP-Tunnel
static-egress-corout <static-egress-corout>		static egress tp-tunnel name

Command	**Access**	**Description**
gmpls tp-tunnel create	admin	create static transit co-routed TP-Tunnel
static-transit-corout <static-transit-corout>		static transit co-routed tp-tunnel name
[dest-tunnel-id <NUMBER: 1-65535>]		Transit tp-tunnel destination Tunnel-ID
{lsp-id <NUMBER: 1-65535>}		Transit tp-tunnel LSP-ID

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{src-tunnel-id <NUMBER: 1-65535>}		Transit tp-tunnel source Tunnel-ID
[lsp-id <NUMBER: 1-65535>]		Transit tp-tunnel LSP-ID
{dest-tunnel-id <NUMBER: 1-65535>}		Transit tp-tunnel destination Tunnel-ID
{src-tunnel-id <NUMBER: 1-65535>}		Transit tp-tunnel source Tunnel-ID
[src-tunnel-id <NUMBER: 1-65535>]		Transit tp-tunnel source Tunnel-ID
{dest-tunnel-id <NUMBER: 1-65535>}		Transit tp-tunnel destination Tunnel-ID
{lsp-id <NUMBER: 1-65535>}		Transit tp-tunnel LSP-ID
{dest-ip <IP address>}		tp-tunnel destination IP address
{src-ip <IP address>}		tp-tunnel source IP address
{next-hop-ip <IP address>}		tp-tunnel next hop IP address
{prev-hop-ip <IP address>}		tp-tunnel previous hop IP address
[next-hop-ifnum <NUMBER: 1-4294967295>]		Forward Ingress IF_NUM of DDMAP/DSMAP TLV
[prev-hop-ifnum <NUMBER: 1-4294967295>]		Reverse Ingress IF_NUM of DDMAP/DSMAP TLV
{next-hop-local-interface <Interface Supports Data>}		Local Interface for tp-tunnel next hop IP address
{prev-hop-local-interface <Interface Supports Data>}		Local Interface for tp-tunnel previous hop IP address
{forward-out-label <NUMBER: 16-1044479>}		forward tp-tunnel outgoing label
{forward-in-label <NUMBER: 16-1044479>}		forward tp-tunnel incoming label
{reverse-out-label <NUMBER: 16-1044479>}		reverse tp-tunnel outgoing label
{reverse-in-label <NUMBER: 16-1044479>}		reverse tp-tunnel incoming label
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <fixed | decrement>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tp-tunnel fixed TTL
[ais-monitor <enable | disable>]		AIS based fault monitoring
[ais-profile <AIS Profile List>]		AIS profile to be used for this session

Command	**Access**	**Description**
gmpls tp-tunnel set	admin	set static transit co-routed TP-Tunnel
static-transit-corout <static-transit-corout>		static transit tp-tunnel name
[next-hop-ifnum <NUMBER: 1-4294967295>]		Forward Ingress IF_NUM of DDMAP/DSMAP TLV
[prev-hop-ifnum <NUMBER: 1-4294967295>]		Reverse Ingress IF_NUM of DDMAP/DSMAP TLV
[forward-out-label <NUMBER: 16-1044479>]		forward tp-tunnel outgoing label
[forward-in-label <NUMBER: 16-1044479>]		forward tp-tunnel incoming label
[reverse-out-label <NUMBER: 16-1044479>]		reverse tp-tunnel outgoing label
[reverse-in-label <NUMBER: 16-1044479>]		reverse tp-tunnel incoming label

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[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <fixed | decrement>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tp-tunnel fixed TTL
[ais-monitor <enable | disable>]		AIS based fault monitoring
[ais-profile <AIS Profile List>]		AIS profile to be used for this session
[name <Name (no ,) String>]		renaming the tunnel

Command	**Access**	**Description**
gmpls tp-tunnel unset	admin	unset static transit co-routed TP-Tunnel
static-transit-corout <static-transit-corout>		static transit tp-tunnel name
[next-hop-ifnum]		Forward path Ingress IF_NUM of DDMAP/ DSMAP TLV
[prev-hop-ifnum]		Reverse path Ingress IF_NUM of DDMAP/ DSMAP TLV
[cos-profile]		Default Tunnel COS profile
[ttl-policy]		TTL policy
[fixed-ttl]		tp-tunnel fixed TTL
[ais-monitor]		AIS based fault monitoring
[ais-profile]		AIS profile to be used for monitoring

Command	**Access**	**Description**
gmpls tp-tunnel delete	admin	delete static transit co-routed TP-Tunnel
static-transit-corout <static-transit-corout>		static transit tp-tunnel name

Command	**Access**	**Description**
gmpls tp-tunnel disable	admin	disable static transit co-routed TP-Tunnel
static-transit-corout <static-transit-corout>		static transit tp-tunnel name

Command	**Access**	**Description**
gmpls tp-tunnel enable	admin	enable static transit co-routed TP-Tunnel
static-transit-corout <static-transit-corout>		static transit tp-tunnel name

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Command	Access	Description
gmpls tp-tunnel create	admin	create static ingress uni-directional TP-Tunnel
static-ingress-unidir <static-ingress-unidir>		static ingress unidirectional tp-tunnel name
[dest-tunnel-id <NUMBER: 1-65535>]		Ingress tp-tunnel destination Tunnel-ID
{lsp-id <NUMBER: 1-65535>}		Ingress tp-tunnel LSP-ID
{src-tunnel-id <NUMBER: 1-65535>}		Ingress tp-tunnel source Tunnel-ID
[lsp-id <NUMBER: 1-65535>]		Ingress tp-tunnel LSP-ID
{dest-tunnel-id <NUMBER: 1-65535>}		Ingress tp-tunnel destination Tunnel-ID
{src-tunnel-id <NUMBER: 1-65535>}		Ingress tp-tunnel source Tunnel-ID
[src-tunnel-id <NUMBER: 1-65535>]		Ingress tp-tunnel source Tunnel-ID
{dest-tunnel-id <NUMBER: 1-65535>}		Ingress tp-tunnel destination Tunnel-ID
{lsp-id <NUMBER: 1-65535>}		Ingress tp-tunnel LSP-ID
{dest-ip <IP address>}		tp-tunnel destination IP address
{next-hop-ip <IP address>}		tp-tunnel next hop IP address
{forward-out-label <NUMBER: 16-1044479>}		forward encap tp-tunnel outgoing label
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <fixed>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tp-tunnel fixed TTL
[reversion-hold-time <SECONDS: 0-3600>]		reversion hold time in seconds
[tunnel-reversion <on | off>]		tunnel reversion behavior
[recovery-nhop-disjoint <link | none>]		Recovery path next-hop disjointness requirement (default = Link)
[backup-tunnel <MPLS primary tp-corout-tunnel>]		list of primary tp-unidir-tunnels

Command	Access	Description
gmpls tp-tunnel set	admin	set static ingress uni-directional TP-Tunnel
static-ingress-unidir <static-ingress-unidir>		static ingress tp-tunnel name
[next-hop-ip <IP address>]		tp-tunnel next hop IP address
[forward-out-label <NUMBER: 16-1044479>]		forward encap tp-tunnel out-label
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <fixed>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tunnel fixed ttl
[reversion-hold-time <SECONDS: 0-3600>]		reversion hold time in seconds
[tunnel-reversion <on | off>]		tunnel reversion behavior
[recovery-nhop-disjoint <link | none>]		Recovery path next-hop disjointness requirement (default = Link)
[name <Name (no ,) String>]		renaming the tunnel

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Command	Access	Description
gmpls tp-tunnel unset	admin	unset static ingress uni-directional TP-Tunnel
static-ingress-unidir <static-ingress-unidir>		static ingress tp-tunnel name
[cos-profile]		Default Tunnel COS profile
{ttl-policy}		TTL policy
[fixed-ttl]		tunnel fixed ttl
[reversion-hold-time]		reversion hold time in seconds
[tunnel-reversion]		tunnel reversion behavior
[recovery-nhop-disjoint]		Recovery path next-hop disjointness requirement

Command	Access	Description
gmpls tp-tunnel switchover	admin	switchover static ingress uni-directional TP-Tunnel
static-ingress-unidir <static-ingress-unidir>		static ingress tp-tunnel name

Command	Access	Description
gmpls tp-tunnel delete	admin	delete static ingress uni-directional TP-Tunnel
static-ingress-unidir <static-ingress-unidir>		static ingress tp-tunnel name

Command	Access	Description
gmpls tp-tunnel disable	admin	disable static ingress uni-directional TP-Tunnel
static-ingress-unidir <static-ingress-unidir>		static ingress tp-tunnel name

Command	Access	Description
gmpls tp-tunnel enable	admin	enable static ingress uni-directional TP-Tunnel
static-ingress-unidir <static-ingress-unidir>		static ingress tp-tunnel name

Command	Access	Description
gmpls tp-tunnel create	admin	create static egress uni-directional TP-Tunnel

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static-egress-unidir <static-egress-unidir>		static egress unidirectional tp-tunnel name
[dest-tunnel-id <NUMBER: 1-65535>]		Egress tp-tunnel destination Tunnel-ID
{lsp-id <NUMBER: 1-65535>}		Egress tp-tunnel LSP-ID
{src-tunnel-id <NUMBER: 1-65535>}		Egress tp-tunnel source Tunnel-ID
[lsp-id <NUMBER: 1-65535>]		Egress tp-tunnel LSP-ID
{dest-tunnel-id <NUMBER: 1-65535>}		Egress tp-tunnel destination Tunnel-ID
{src-tunnel-id <NUMBER: 1-65535>}		Egress tp-tunnel source Tunnel-ID
[src-tunnel-id <NUMBER: 1-65535>]		Egress tp-tunnel source Tunnel-ID
{dest-tunnel-id <NUMBER: 1-65535>}		Egress tp-tunnel destination Tunnel-ID
{lsp-id <NUMBER: 1-65535>}		Egress tp-tunnel LSP-ID
{src-ip <IP address>}		tp-tunnel source IP address
{forward-in-label <NUMBER: 16-1044479>}		forward decap tp-tunnel incoming label
[prev-hop-ip <IP address>]		Tunnel previous hop IP address used for AIS monitoring

Command	**Access**	**Description**
gmpls tp-tunnel set	admin	set static egress uni-directional TP-Tunnel
static-egress-unidir <static-egress-unidir>		static egress tp-tunnel name
[forward-in-label <NUMBER: 16-1044479>]		forward decap tp-tunnel incoming label
[prev-hop-ip <IP address>]		Tunnel previous hop IP address used for AIS monitoring
[name <Name (no ,) String>]		renaming the tunnel

Command	**Access**	**Description**
gmpls tp-tunnel unset	admin	unset static egress uni-directional TP-Tunnel
static-egress-unidir <static-egress-unidir>		static egress tp-tunnel name

Command	**Access**	**Description**
gmpls tp-tunnel delete	admin	delete static egress uni-directional TP-Tunnel
static-egress-unidir <static-egress-unidir>		static egress tp-tunnel name

Command	**Access**	**Description**
gmpls tp-tunnel disable	admin	disable static egress uni-directional TP-Tunnel
static-egress-unidir <static-egress-unidir>		static egress tp-tunnel name

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Command	Access	Description
gmpls tp-tunnel enable	admin	enable static egress uni-directional TP-Tunnel
static-egress-unidir <static-egress-unidir>		static egress tp-tunnel name

Command	Access	Description
gmpls tp-tunnel create	admin	create static transit uni-directional TP-Tunnel
static-transit-unidir <static-transit-unidir>		static transit unidirectional tp-tunnel name
[dest-tunnel-id <NUMBER: 1-65535>]		Transit tp-tunnel destination Tunnel-ID
{lsp-id <NUMBER: 1-65535>}		Transit tp-tunnel LSP-ID
{src-tunnel-id <NUMBER: 1-65535>}		Transit tp-tunnel source Tunnel-ID
[lsp-id <NUMBER: 1-65535>]		Transit tp-tunnel LSP-ID
{dest-tunnel-id <NUMBER: 1-65535>}		Transit tp-tunnel destination Tunnel-ID
{src-tunnel-id <NUMBER: 1-65535>}		Transit tp-tunnel source Tunnel-ID
[src-tunnel-id <NUMBER: 1-65535>]		Transit tp-tunnel source Tunnel-ID
{dest-tunnel-id <NUMBER: 1-65535>}		Transit tp-tunnel destination Tunnel-ID
{lsp-id <NUMBER: 1-65535>}		Transit tp-tunnel LSP-ID
{dest-ip <IP address>}		tp-tunnel destination IP address
{src-ip <IP address>}		tp-tunnel source IP address
{next-hop-ip <IP address>}		tp-tunnel next hop IP address
{forward-out-label <NUMBER: 16-1044479>}		forward tp-tunnel outgoing label
{forward-in-label <NUMBER: 16-1044479>}		forward tp-tunnel incoming label
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <fixed | decrement>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tp-tunnel fixed TTL
[prev-hop-ip <IP address>]		tunnel prev hop IP address
[ais-monitor <enable | disable>]		AIS based fault monitoring
[ais-profile <AIS Profile List>]		AIS profile to be used for this session

Command	Access	Description
gmpls tp-tunnel set	admin	set static transit uni-directional TP-Tunnel
static-transit-unidir <static-transit-unidir>		static transit tp-tunnel name
[forward-out-label <NUMBER: 16-1044479>]		forward tp-tunnel outgoing label
[forward-in-label <NUMBER: 16-1044479>]		forward tp-tunnel incoming label
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <fixed | decrement>}		TTL policy

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[fixed-ttl <NUMBER: 1-255>]		tp-tunnel fixed TTL
[prev-hop-ip <IP address>]		tunnel prev hop IP address
[ais-monitor <enable | disable>]		AIS based fault monitoring
[ais-profile <AIS Profile List>]		AIS profile to be used for this session
[name <Name (no ,) String>]		renaming the tunnel

Command	**Access**	**Description**
gmpls tp-tunnel unset	admin	unset static transit uni-directional TP-Tunnel
static-transit-unidir <static-transit-unidir>		static transit tp-tunnel name
[cos-profile]		Default Tunnel COS profile
[ttl-policy]		TTL policy
[fixed-ttl]		tp-tunnel fixed TTL
[ais-monitor]		AIS based fault monitoring
[ais-profile]		AIS profile to be used for monitoring

Command	**Access**	**Description**
gmpls tp-tunnel delete	admin	delete static transit uni-directional TP-Tunnel
static-transit-unidir <static-transit-unidir>		static transit tp-tunnel name

Command	**Access**	**Description**
gmpls tp-tunnel disable	admin	disable static transit uni-directional TP-Tunnel
static-transit-unidir <static-transit-unidir>		static transit tp-tunnel name

Command	**Access**	**Description**
gmpls tp-tunnel enable	admin	enable static transit uni-directional TP-Tunnel
static-transit-unidir <static-transit-unidir>		static transit tp-tunnel name

Command	**Access**	**Description**
gmpls tp-tunnel show	limited	show gmpls Tp-Tunnels

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Command	Access	Description
gmpls tp-tunnel show	limited	show gmpls Tp-Tunnel
matching-lsp		any Tp-Tunnel Lsp
{persist <static | dynamic>}		Local node's role
{type <ingress | egress | transit>}		Local node's role
[path-type <corouted | unidirectional>]		tunnel's path layout
[state <up | down>]		tp-tunnel state
[source <IP address>]		tunnel source IP Address
[destination <IP address>]		tunnel destination IP Address
[next-hop <IP address>]		tunnel next hop IP Address
[prev-hop <IP address>]		tunnel prev hop IP Address
[next-hop-ifnum <NUMBER: 1-4294967295>]		tunnel next hop IF_NUM
[prev-hop-ifnum <NUMBER: 1-4294967295>]		tunnel prev hop IF_NUM
[rev-out-ip-intf <Interface Supports Data>]		tunnel exiting via IP Interface in reverse direction
[fwd-out-ip-intf <Interface Supports Data>]		tunnel exiting via IP Interface in forward directions
[fwd-in-label <NUMBER: 16-1044479>]		forward tunnel in-label
[fwd-out-label <NUMBER: 16-1044479>]		forward tunnel out-label
[rev-in-label <NUMBER: 16-1044479>]		reverse tunnel in-label
[rev-out-label <NUMBER: 16-1044479>]		reverse tunnel out-label
[recovery <protected | unprotected>]		tunnel's recovery type
[role <primary | backup | locally-repaired | active-backup>]		tunnel's current role
[cos-profile <MPLS Tunnel COS Profile>]		Select Tunnel CoS profile name
[class-type <NUMBER: 0-7>]		DSTE class type (ct0-ct7)
[auto-size <enable>]		Auto sizing for this tunnel
[auto-size-interval <MINUTES>]		Down size interval in minutes 5...60
[auto-size-failure <alarm | mbb>]		Auto sizing failure handling for this tunnel
[min-bandwidth <Kbps>]		Minimum bandwidth (Kbps)
[max-bandwidth <Kbps>]		Maximum bandwidth (Kbps)
[increment-bandwidth <Kbps>]		Increment bandwidth (Kbps)
[lsp-reopt <enable>]		LSP Reoptimization
[oper-bandwidth <Kbps>]		If zero then filter tunnels for exact match, else filter tunnels with operational bandwidth >= given bandwidth
[backup-path-diversity <enable | disable>]		Backup Path Diversity

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Command	Access	Description
gmpls tp-tunnel show	limited	show static ingress TP-Corout-Tunnels
static-ingress-corout <static-ingress-corout>		static ingress tp-corout-tunnel name
[statistics]		traffic statistics for static ingress corout tunnels

Command	Access	Description
gmpls tp-tunnel show	limited	show static ingress TP-Unidir-Tunnels
static-ingress-unidir <static-ingress-unidir>		static ingress tp-unidir-tunnel name

Command	Access	Description
gmpls tp-tunnel show	limited	show dynamic ingress TP-Corout-Tunnels
rsvp-ingress-corout <rsvp-ingress-corout>		dynamic ingress tp-corout-tunnel name

Command	Access	Description
gmpls tp-tunnel show	limited	show dynamic ingress TP-Unidir-Tunnels
rsvp-ingress-unidir <rsvp-ingress-unidir>		dynamic ingress tp-unidir-tunnel name

Command	Access	Description
gmpls tp-tunnel show	limited	show dynamic egress TP-Unidir-Tunnels
rsvp-egress-unidir <rsvp-egress-unidir>		dynamic egress tp-unidir-tunnel name

Command	Access	Description
gmpls tp-tunnel show	limited	show static egress TP-Corout-Tunnels
static-egress-corout <static-egress-corout>		static egress tp-corout-tunnel name
[statistics]		traffic statistics for static egress corout tunnels

Command	Access	Description
gmpls tp-tunnel show	limited	show static egress TP-Unidir-Tunnels
static-egress-unidir <static-egress-unidir>		static egress tp-unidir-tunnel name

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Command	Access	Description
gmpls tp-tunnel show	admin	show static transit TP-Corout-Tunnels
static-transit-corout <static-transit-corout>		static transit tp-corout-tunnel name
[statistics]		traffic statistics for static transit corout tunnels

Command	Access	Description
gmpls tp-tunnel show	admin	show static transit TP-Unidir-Tunnels
static-transit-unidir <static-transit-unidir>		static transit tp-unidir-tunnel name
[statistics]		traffic statistics for static transit unidir tunnels

Command	Access	Description
gmpls tp-tunnel show	limited	show dynamic transit TP-Unidir-Tunnels
rsvp-transit-unidir <rsvp-transit-unidir>		dynamic transit tp-unidir-tunnel name
[statistics]		traffic statistics for dynamic transit unidir tunnels

Command	Access	Description
gmpls tp-tunnel show	limited	show dynamic transit TP-corout-Tunnels
rsvp-transit-corout <rsvp-transit-corout>		dynamic transit tp-corout-tunnel name
[statistics]		traffic statistics for dynamic transit corout tunnels

Command	Access	Description
gmpls tp-tunnel show	limited	show dynamic egress TP-Corout-Tunnels
rsvp-egress-corout <rsvp-egress-corout>		dynamic egress tp-corout-tunnel name

Command	Access	Description
gmpls tp-tunnel show	limited	show gmpls Tp-Tunnel summary counts
resource		Tp-Tunnel summary counts

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{summary}		Tunnel maximum, configured and operational count summary
{counter}		Tunnel platform provisioning statistics

Command	Access	Description
gmpls tp-tunnel clear	admin	clears the traffic statistics for static transit TP-Corout-Tunnels
static-transit-corout <static-transit-corout>		static transit tp-corout-tunnel name
{statistics}		clear the traffic statistics for static transit corout tunnels

Command	Access	Description
gmpls tp-tunnel clear	admin	clears the traffic statistics for static transit TP-Unidir-Tunnels
static-transit-unidir <static-transit-unidir>		static transit tp-unidir-tunnel name
{statistics}		clear the traffic statistics for static transit unidir tunnels

Command	Access	Description
gmpls tp-tunnel clear	admin	clears the traffic statistics for dynamic transit TP-Unidir-Tunnels
rsvp-transit-unidir <rsvp-transit-unidir>		dynamic transit tp-unidir-tunnel name
{statistics}		clear the traffic statistics for dynamic transit unidir tunnels

Command	Access	Description
gmpls tp-tunnel clear	admin	clears the traffic statistics for dynamic transit TP-corout-Tunnels
rsvp-transit-corout <rsvp-transit-corout>		dynamic transit tp-corout-tunnel name
{statistics}		clear the traffic statistics for dynamic transit corout tunnels

Command	Access	Description

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gmpls tp-tunnel clear	admin	clears the traffic statistics for static Ingress TP-corout-Tunnels
static-ingress-corout <static-ingress-corout>		static ingress tp-corout-tunnel name
{statistics}		clear the traffic statistics for static ingress corout tunnels

Command	**Access**	**Description**
gmpls tp-tunnel clear	admin	clears the traffic statistics for static Egress TP-corout-Tunnels
static-egress-corout <static-egress-corout>		static egress tp-corout-tunnel name
{statistics}		clear the traffic statistics for static egress corout tunnels

Command	**Access**	**Description**
gmpls tp-tunnel create	admin	create static ingress associated TP-Tunnel
static-ingress-assoc <static-ingress-assoc>		static ingress associated tp-tunnel name
{forward-tunnel <MPLS ingress tp-unidir-tunnel>}		forward tunnel
{reverse-static-tunnel <MPLS static Egress unidir tp-tunnel>}		static reverse tunnel
{reverse-dyntun-name <String>}		dynamic reverse tunnel name
[bfd-monitor <enable | disable>]		BFD based fault monitoring
[bfd-profile <MPLS BFD Profile>]		BFD profile to be used for this session
[ais-monitor <enable | disable>]		AIS based fault monitoring
[ais-profile <AIS Profile List>]		AIS profile to be used for this session

Command	**Access**	**Description**
gmpls tp-tunnel set	admin	set static ingress associated TP-Tunnel
static-ingress-assoc <static-ingress-assoc>		static ingress tp-tunnel name
[reverse-dyntun-name <String>]		dynamic reverse tunnel name
[bfd-monitor <enable | disable>]		BFD based fault monitoring
[bfd-profile <MPLS BFD Profile>]		BFD profile to be used for this session
[ais-monitor <enable | disable>]		AIS based fault monitoring
[ais-profile <AIS Profile List>]		AIS profile to be used for this session

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Command	Access	Description
gmpls tp-tunnel unset	admin	unset static ingress associated TP-Tunnel
static-ingress-assoc <static-ingress-assoc>		static ingress tp-tunnel name
[bfd-monitor]		BFD based fault monitoring
[bfd-profile]		BFD profile to be used for monitoring
[ais-monitor]		AIS based fault monitoring
[ais-profile]		AIS profile to be used for this session

Command	Access	Description
gmpls tp-tunnel delete	admin	delete static ingress associated TP-Tunnel
static-ingress-assoc <static-ingress-assoc>		static ingress tp-tunnel name

Command	Access	Description
gmpls tp-tunnel disable	admin	disable static ingress associated TP-Tunnel
static-ingress-assoc <static-ingress-assoc>		static ingress tp-tunnel name

Command	Access	Description
gmpls tp-tunnel enable	admin	enable static ingress associated TP-Tunnel
static-ingress-assoc <static-ingress-assoc>		static ingress tp-tunnel name

Command	Access	Description
gmpls tp-tunnel switchover	admin	switchover static ingress associated TP-Tunnel
static-ingress-assoc <static-ingress-assoc>		static ingress tp-tunnel name

Command	Access	Description
gmpls tp-tunnel create	admin	create static transit associated TP-Tunnel
static-transit-assoc <static-transit-assoc>		static transit tp-tunnel name
{forward-tunnel <MPLS static transit tunnel>}		forward transit tunnel
{reverse-tunnel <MPLS static transit tunnel>}		reverse transit tunnel

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[forward-backup-tunnel <MPLS static transit tunnel>]		forward backup-tunnel
[reverse-backup-tunnel <MPLS static transit tunnel>]		reverse backup-tunnel
[protection-switching <unidirectional | bidirectional>]		protection switching behavior
[bfd-monitor <enable | disable>]		BFD based fault monitoring
[bfd-profile <MPLS BFD Profile>]		BFD profile to be used for this session

Command	**Access**	**Description**
gmpls tp-tunnel set	admin	set static transit associated TP-Tunnel
static-transit-assoc <static-transit-assoc>		static transit tp-tunnel name
[forward-tunnel <MPLS static transit tunnel>]		forward transit tunnel
[reverse-tunnel <MPLS static transit tunnel>]		reverse transit tunnel
[forward-backup-tunnel <MPLS static transit tunnel>]		forward backup-tunnel
[reverse-backup-tunnel <MPLS static transit tunnel>]		reverse backup-tunnel
[protection-switching <unidirectional | bidirectional>]		protection switching behavior
[bfd-monitor <enable | disable>]		BFD based fault monitoring
[bfd-profile <MPLS BFD Profile>]		BFD profile to be used for this session

Command	**Access**	**Description**
gmpls tp-tunnel unset	admin	unset static transit associated TP-Tunnel
static-transit-assoc <static-transit-assoc>		static transit tp-tunnel name
[forward-backup-tunnel]		forward backup-tunnel
[reverse-backup-tunnel]		reverse backup-tunnel
[protection-switching]		protection switching behavior
[bfd-monitor]		BFD based fault monitoring
[bfd-profile]		BFD profile to be used for monitoring

Command	**Access**	**Description**
gmpls tp-tunnel delete	admin	delete static transit associated TP-Tunnel
static-transit-assoc <static-transit-assoc>		static transit tp-tunnel name

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Command	Access	Description
gmpls tp-tunnel disable	admin	disable static transit associated TP-Tunnel
static-transit-assoc <static-transit-assoc>		static transit tp-tunnel name

Command	Access	Description
gmpls tp-tunnel enable	admin	enable static transit associated TP-Tunnel
static-transit-assoc <static-transit-assoc>		static transit tp-tunnel name

Command	Access	Description
gmpls tp-tunnel show	limited	show bi-directional ingress associated TP-Tunnels
matching-assoc		Bi-directional associated TP-Tunnels
[state <up | down>]		associated TP-Tunnel state
[destination <IP address>]		Associated TP-Tunnel's destination IP Address
[next-hop <IP address>]		Forward tunnel next hop IP Address
[out-ip-intf <Interface Supports Signals>]		Forward tunnel initiating via IP Interface
[out-label <NUMBER: 16-1044479>]		Forward tunnel out-label
[in-label <NUMBER: 16-1044479>]		Reverse tunnel in-label
[recovery <protected | unprotected>]		Associated TP-tunnel's recovery type
[role <primary | backup | locally-repaired | active-backup>]		Associated TP-Tunnel's current role

Command	Access	Description
gmpls tp-tunnel show	limited	show bi-directional ingress associated TP-Tunnel
static-ingress-assoc <static-ingress-assoc>		ingress associated tp-tunnel name

icl

Inter-chassis link

Command	Access	Description
icl clear	admin	clear all Inter-chassis link statistics

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{statistics}		Inter-chassis link statistics

Command	Access	Description
icl clear	admin	clear Inter-chassis link statistics
link <link>		Inter-chassis link
{statistics}		Inter-chassis link statistics

Command	Access	Description
icl create	admin	create Inter-chassis link
link <link>		Inter-chassis link
[cfm-service-primary <CFM Service Name>]		primary CFM service name
[cfm-service-secondary <CFM Service Name>]		secondary CFM service name
[heartbeat-interval <SECONDS: 1-30>]		Inter-chassis link heartbeat interval in secs, default: 5s
{remote-mac-address <MAC address: XX:XX:XX:XX:XX:XX>}		remote Inter-chassis link MAC address
{vlan <VLAN>}		Inter-chassis link VLAN
{vs <Virtual Switch Name>}		Inter-chassis link VS

Command	Access	Description
icl delete	admin	delete Inter-chassis link
link <link>		Inter-chassis link

Command	Access	Description
icl disable	admin	disable Inter-chassis link
link <link>		Inter-chassis link

Command	Access	Description
icl enable	admin	enable Inter-chassis link
link <link>		Inter-chassis link

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Command	Access	Description
icl set	admin	modify Inter-chassis link attributes
link <link>		Inter-chassis link
[cfm-service-primary <CFM Service Name>]		primary CFM service name
[cfm-service-secondary <CFM Service Name>]		secondary CFM service name
[heartbeat-interval <SECONDS: 1-30>]		Inter-chassis link heartbeat interval in secs, default: 5s
[remote-mac-address <MAC address: XX:XX:XX:XX:XX:XX>]		remote Inter-chassis link MAC address

Command	Access	Description
icl show	admin	show all Inter-chassis links

Command	Access	Description
icl show	admin	show Inter-chassis link information
link <link>		Inter-chassis link

Command	Access	Description
icl unset	admin	unset Inter-chassis link attributes
link <link>		Inter-chassis link
[cfm-service-primary]		unset primary CFM service name
[cfm-service-secondary]		unset secondary CFM service name
[heartbeat-interval]		unset Inter-chassis link heartbeat interval

interface

interface management

Command	Access	Description
interface local disable	admin	disable interface

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Command	Access	Description
interface local enable	admin	enable interface

Command	Access	Description
interface local set	admin	set IPv4 attributes of an interface
{ip <IP address in CIDR notation>}		set IPv4 address of interface
{gateway <IPv4 address>}		default IPv4 gateway
[ingress-acl <ACL Profile>]		The ACL profile to be applied on the ingress direction of this interface

Command	Access	Description
interface local unset	admin	unset IPv4 attributes of an interface
[ip]		unset IPv4 address of interface
[ingress-acl]		Unset the ACL profile applied on the ingress direction of this interface

Command	Access	Description
interface local add	admin	add IPv6 address(es) to interface
ip <ip>		add IPv6 address(es) of interface

Command	Access	Description
interface local remove	admin	remove IPv6 address attributes of an interface
ip <ip>		remove IPv6 address of interface

Command	Access	Description
interface local show	limited	show interface information

Command	Access	Description
interface ip-acl add	admin	add entry to access control list

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[src-ip <IP address in CIDR notation>]		source network
[dest-ip <IP address in CIDR notation>]		destination network
[port <Physical port list>]		source port list
[dscp <NUMBER and range list>]		DSCP value list, default: 0-63 (all)
[protocol <String List>]		specify what protocol(s) to allow or allow all protocols; values: all, icmp, tcp, udp; default: all

Command	**Access**	**Description**
interface ip-acl clear	admin	clear IP-ACL statistics
{statistics}		statistics table

Command	**Access**	**Description**
interface ip-acl disable	admin	disable IP access control list

Command	**Access**	**Description**
interface ip-acl enable	admin	enable IP access control list

Command	**Access**	**Description**
interface ip-acl import	admin	import existing interfaces to access control list

Command	**Access**	**Description**
interface ip-acl remove	admin	remove entry from access control list
[src-ip <IP address in CIDR notation>]		source network
[dest-ip <IP address in CIDR notation>]		destination network

Command	**Access**	**Description**
interface ip-acl set	admin	set attributes of an access control list entry
[src-ip <IP address in CIDR notation>]		source network
[dest-ip <IP address in CIDR notation>]		destination network
[port <Physical port list>]		source port list

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[dscp <NUMBER and range list>]		DSCP value list, default: 0-63 (all)
[protocol <String List>]		specify what protocol(s) to allow or allow all protocols; values: all, icmp, tcp, udp; default: all

Command	Access	Description
interface ip-acl show	limited	show IP access control list

Command	Access	Description
interface ip-interface show	limited	show IP interface table

Command	Access	Description
interface ip-interface add	admin	add IPv6 address to interface
ip-interface <ip-interface>		Interface name
{ip <IP address in CIDR notation>}		interface address

Command	Access	Description
interface ip-interface remove	admin	remove IPv6 address from interface
ip-interface <ip-interface>		Interface name
{ip <IP address in CIDR notation>}		interface address

Command	Access	Description
interface ipv4-stack set	admin	set ip-stack attributes
[icmp-accept-redirects <on | off>]		ICMP Accept Redirects
[icmp-echo-ignore-broadcasts <on | off>]		ICMP Echo Ignore Broadcasts
[icmp-port-unreachable <on | off>]		ICMP Port Unreachable

Command	Access	Description
interface ipv4-stack show	limited	show IP interface table

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Command	Access	Description
interface ipv4-stack unset	admin	unset ip-stack attributes
[icmp-accept-redirects]		unset ICMP Accept Redirects
[icmp-echo-ignore-broadcasts]		unset ICMP Echo Ignore Broadcasts
[icmp-port-unreachable]		unset ICMP Port Unreachable

Command	Access	Description
interface ipv6-stack disable	admin	disable IPv6 stack

Command	Access	Description
interface ipv6-stack enable	admin	enable IPv6 stack

Command	Access	Description
interface ipv6-stack set	admin	set ip-stack attributes
[icmp-accept-redirects <on | off>]		ICMP Accept Redirects
[icmp-echo-ignore-broadcasts <on | off>]		ICMP Echo Ignore Broadcasts
[icmp-port-unreachable <on | off>]		ICMP Port Unreachable
[accept-router-advertisement <on | off>]		Set IPv6 Accept Router Advertisement
[stack-preference <IPv4 | IPv6>]		set IP stack preference, default: ipv6

Command	Access	Description
interface ipv6-stack show	limited	show IP interface table

Command	Access	Description
interface ipv6-stack unset	admin	unset ip-stack attributes
[icmp-accept-redirects]		unset ICMP Accept Redirects
[icmp-echo-ignore-broadcasts]		unset ICMP Echo Ignore Broadcasts
[icmp-port-unreachable]		unset ICMP Port Unreachable
[accept-router-advertisement]		unset IPv6 Accept Router Advertisement
[stack-preference]		unset IP stack preference, default: ipv6

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Command	Access	Description
interface remote add	admin	add IPv6 address to interface
ip <ip>		add IPv6 address of interface

Command	Access	Description
interface remote disable	admin	disable interface

Command	Access	Description
interface remote enable	admin	enable interface

Command	Access	Description
interface remote remove	admin	remove IPv6 address from interface
ip <ip>		remove IPv6 address of interface

Command	Access	Description
interface remote set	admin	set attributes of an interface
{ip <IP address in CIDR notation>}		set IPv4 address of interface
{priority <NUMBER: 0-7>}		802.1D priority tag
{gateway <IP address>}		default IPv4 gateway
{vlan <VLAN>}		management VLAN
{vs <Virtual Switch Name>}		management virtual switch
[ingress-acl <ACL Profile>]		The ACL profile to be applied on the ingress direction of this interface

Command	Access	Description
interface remote unset	admin	unset IPv4 attributes of an interface
[ip]		unset IPv4 address of interface
[ingress-acl]		Unset the ACL profile applied on the ingress direction of this interface

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Command	Access	Description
interface remote show	limited	show interface information

Command	Access	Description
interface route add	admin	add route to routing table
{destination <IP address in CIDR notation>}		destination IP address
{gateway <IP address>}		gateway address
{metric <NUMBER: 1-255>}		interface metric
{interface <remote | local>}		Route IP gateway interface
{ip-interface <Interface Name>}		IP interface name

Command	Access	Description
interface route remove	admin	remove route from routing table
{destination <IP address in CIDR notation>}		destination IP address
{gateway <IP address>}		gateway address
{metric <NUMBER>}		interface metric
{interface <remote | local>}		Route IP gateway interface
{ip-interface <Interface Name>}		IP interface name

Command	Access	Description
interface route show	limited	show interface routes

Command	Access	Description
interface serial-console disable	admin	disable serial-console port login access

Command	Access	Description
interface serial-console enable	admin	enable serial-console port login access

Command	Access	Description

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interface serial-console show	limited	show serial-console port information

Command	**Access**	**Description**
interface tcp-stack set	admin	set tcp-stack attributes
[tcp-timestamps <on | off>]		TCP Timestamps option

Command	**Access**	**Description**
interface tcp-stack show	limited	show TCP stack info

Command	**Access**	**Description**
interface tcp-stack unset	admin	unset tcp-stack attributes
[tcp-timestamps]		unset TCP Timestamps option, default: on

Command	**Access**	**Description**
interface add	admin	add IPv6 gateway attributes of an interface
gateway <gateway>		add IPv6 gateway
{interface <remote | local>}		add IPv6 gateway to a management interface

Command	**Access**	**Description**
interface create	admin	create interface
ip-interface <ip-interface>		interface name
{ip <IP address or 'unnumbered'>}		interface IP address or 'unnumbered'
{auto-ipv6}		use auto-generated IPv6 address
[vlan <VLAN>]		interface VLAN
[vs <Virtual Switch Ethernet Name>]		virtual switch name
[role <evc-ping | device-mgmt | auxiliary>]		IP interface roles, default: evc-ping
[priority <NUMBER: 0-7>]		The egress priority (pcp) value on packets egressing this interface - Default: 7
[mtu <BYTES>]		interface MTU in bytes, default: 1500
[mac <MAC address: XX:XX:XX:XX:XX:XX>]		MAC address
[ip-forwarding <on | off>]		interface IP forwarding, default: off
[lockout <on | off>]		lockout interface, default: off

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[ingress-acl <ACL Profile>]		The ACL profile to be applied on the ingress direction of this interface
[donor-interface <Interface Name>]		name of donor interface
[peer-ip-address <IP address>]		IP address of Peer Neighbor
[service-mac <benchmark | local-mgmt | remote-mgmt>]		service name associated with the MAC address. Alternate way of specifying the MAC address
[if-num <NUMBER: 1-4294967295>]		interface identifier for a non-ip mpls link (RFC 6426)
[bfd-profile <MPLS BFD Profile>]		BFD profile for IGP/BGP BFD session

Command	**Access**	**Description**
interface create	admin	create interface
loopback <loopback>		loopback interface name
{ip <IP address>}		Interface IP address

Command	**Access**	**Description**
interface delete	admin	delete interface
ip-interface <ip-interface>		Interface name

Command	**Access**	**Description**
interface disable	admin	disable interface
ip-interface <ip-interface>		interface name

Command	**Access**	**Description**
interface enable	admin	enable interface
ip-interface <ip-interface>		Interface name

Command	**Access**	**Description**
interface remove	admin	remove IPv6 gateway
gateway <gateway>		remove IPv6 gateway
{interface <remote | local>}		remove IPv6 gateway to a management interface

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Command	Access	Description
interface set	admin	set global IP interface attributes
{gateway <IPv4 address>}		IPv4 gateway
{ip-forwarding <on | off>}		IP forwarding
{default-dscp <NUMBER: 0-63>}		Default DSCP value for IP traffic (0..63)
{mgmt-port-interface <local | remote>}		management interface associated with local management port, default: local

Command	Access	Description
interface set	admin	set IP interface
ip-interface <ip-interface>		Interface Name
{ip <IP address in CIDR notation>}		interface IP address
[ip-forwarding <on | off>]		interface IP forwarding
[lockout <on | off>]		lockout interface
[mtu <NUMBER: 1500-9216>]		interface MTU, default: 1500
[ingress-acl <ACL Profile>]		The ACL profile to be applied on the ingress direction of this interface
[if-num <NUMBER: 1-4294967295>]		interface identifier for a non-ip mpls link (RFC 6426)
[bfd-profile <MPLS BFD Profile>]		Set BFD profile for IGP/BGP BFD session
[priority <NUMBER: 0-7>]		The egress priority (pcp) value on packets egressing this interface - Default: 7
[peer-ip-address <IP address>]		Set ip address of Peer Neighbor

Command	Access	Description
interface unset	admin	unset IPv4 attributes of an interface
ip-interface <ip-interface>		Interface Name
[ip]		unset IPv4 address of interface
[peer-ip-address]		Unset peer-address configuration
[ingress-acl]		Unset the ACL profile applied on the ingress direction of this interface
[network-type]		Unset network-type configuration
[bfd-profile]		Unset BFD profile for IGP/BGP

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Command	Access	Description
interface unset	admin	unset interface attr
{mgmt-port-interface}		management interface associated with local management port, default: local

Command	Access	Description
interface show	limited	show interface information
{gateway}		show configured gateway settings
{local}		Local Interface configuration
{remote}		Remote interface configuration

Command	Access	Description
interface show	admin	show interface
ip-interface <ip-interface>		Interface Name

ip

FIB and AIB CLI commands access

Command	Access	Description
ip fib l3-switching disable	admin	Set static routes disable (default: enabled)

Command	Access	Description
ip fib l3-switching enable	admin	Set static routes enable (default: enabled)

Command	Access	Description
ip fib l3-switching show	limited	Show l3-switching information

Command	Access	Description
ip fib log show	limited	display logged FIB events

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Command	Access	Description
ip fib interfaces show	limited	display interfaces

Command	Access	Description
ip fib interfaceIpAddresses show	admin	display local IP addresses
[details]		show details for each entry
[summary]		summary option selected (default)

Command	Access	Description
ip fib staticResolutions clear	admin	zero counters
{downCount}		Number of Up to Down opState transitions for an adjacency

Command	Access	Description
ip fib staticResolutions show	admin	display objects

Command	Access	Description
ip fib show	limited	display FIB content
[default]		default route, if any configured
[destination <IP address in CIDR notation>]		destination route IP address/mask
[active]		show active routes for packet forwarding
[all]		Show all forwarding entries

Command	Access	Description
ip fib debug	super	FIB event log control
[events <off | on>]		Destination Route IP address (default: off)

Command	Access	Description

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ip fib trace	super	trace component execution
{module <all | rtnl | metaSwitchFT | adjacency | interfaces | routes | linkIpAddresses | arp | nexthop | ippd | staticResolver>}		select which module to set
{level <all | level1 | level2 | level3 | none>}		select tracing level

Command	**Access**	**Description**
ip aib log show	limited	display logged AIB events

Command	**Access**	**Description**
ip aib show	limited	Display AIB Content
[ip-interface <Interface Name>]		Adjacency entries learned on the given IP Interface

Command	**Access**	**Description**
ip aib debug	super	AIB Event log control
{events <off | on>}		Turn on/off control

Command	**Access**	**Description**
ip aib flush	admin	flush all AIB entries

Command	**Access**	**Description**
ip aib set	admin	set AIB options
{timeout <SECONDS: 60-600>}		Registered AIB entry timeout (Range:60-600 sec. Default 60 sec.)

Command	**Access**	**Description**
ip aib register	super	test for registration of adjacency
{nexthop <IP address>}		nexthop IP address
{is-static}		is nexthop IP static (default: dynamic)

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Command	Access	Description
ip aib unregister	super	test for deregistration of adjacency
{nexthop <IP address>}		nexthop IP address

Command	Access	Description
ip route add	admin	add route to routing table
{destination <IP address in CIDR notation>}		IP address
{gateway <IP address>}		gateway address
{metric <NUMBER: 0-16777215>}		metric, default: 1
[egress-interface <Interface Name>]		outgoing IP Interface

Command	Access	Description
ip route remove	admin	remove route from routing table
{destination <IP address in CIDR notation>}		IP address
{gateway <IP address>}		gateway address
[egress-interface <Interface Name>]		outgoing IP Interface

Command	Access	Description
ip route show	limited	show static and IGP routes from the routing table
[all]		show static, IGP and BGP routes from the routing table

Command	Access	Description
ip fast-reroute interface enable	admin	enable LFA policy on this IP interface
ip-interface <ip-interface>		IP interface name

Command	Access	Description
ip fast-reroute interface disable	admin	disable LFA policy on this IP interface
ip-interface <ip-interface>		IP interface name

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Command	Access	Description
ip fast-reroute interface show	limited	show LFA interface specifc policy applied

Command	Access	Description
ip fast-reroute enable	admin	enable LFA Default in ISIS

Command	Access	Description
ip fast-reroute disable	admin	disable LFA

Command	Access	Description
ip fast-reroute set	admin	set LFA Protocols option
{src-proto <isis>}		Set protocol on which LFA will work
{level <L1 | L2>}		Set level in ISIS for specific LFA route selection
[route-map <String[20]>]		apply route-map to LFA route selection
{lfa-calc-max-delay <MILLISECONDS: 0-2147483647>}		LFA SPT calculations delay (msecs), default: 10000
{lfa-reserved-ip <IP address in CIDR notation>}		ipv4 address/mask

Command	Access	Description
ip fast-reroute unset	admin	unset LFA Protocols option
{src-proto <isis>}		Unset protocol in LFA
{level}		Unset level in ISIS for specific LFA route selction
{route-map}		Unset route-map to LFA route selection
{lfa-calc-max-delay}		Set default LFA SPT calculations delay
{lfa-reserved-ip}		ipv4 address/mask

Command	Access	Description
ip fast-reroute show	limited	show LFA entity details

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{lfa-summary}		LFA route summary
{lfa-path-table}		LFA path summary
[prefix <IP address in CIDR notation>]		destination route IP address/mask

isis

Intermediate System To Intermediate System (ISIS) protocol

Command	Access	Description
isis instance create	admin	create ISIS instance
isis-instance <isis-instance>		ISIS instance name
{area <ISIS Area>}		Area ID - variable length in Hex (AFI.xxxx.xxxx.....)
{level <L1 | L2 | L1-L2>}		routing level

Command	Access	Description
isis instance delete	admin	delete ISIS instance
isis-instance <isis-instance>		ISIS instance name

Command	Access	Description
isis instance clear	admin	Clear ISIS instance statistics
isis-instance <isis-instance>		ISIS instance name
{statistics}		Clear statistics

Command	Access	Description
isis instance enable	admin	enable ISIS instance
isis-instance <isis-instance>		ISIS instance name

Command	Access	Description
isis instance disable	admin	disable ISIS instance
isis-instance <isis-instance>		ISIS instance name

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Command	Access	Description
isis instance add	admin	add an area
isis-instance <isis-instance>		ISIS instance name
[area <ISIS Area>]		Area ID - variable length in HEX (xx.xxxx.xxxx.....)
[summary-route <L1-to-L2>]		summarize routes to L2
[route-leak <L2-to-L1>]		leaking routes from L2 to L1
{ip <IP address in CIDR notation>}		ipv4 address/mask
[wide-metric <NUMBER: 0-16777215>]		route metric value

Command	Access	Description
isis instance remove	admin	remove an area only if more than one is configured
isis-instance <isis-instance>		ISIS instance name
[area <ISIS Area>]		Area Id - variable length in HEX (xx.xxxx.xxxx.....)
[summary-route <L1-to-L2>]		summarize routes to L2
[route-leak <L2-to-L1>]		leak routes from L2 to L1
{ip <IP address in CIDR notation>}		ipv4 address/mask

Command	Access	Description
isis instance set	admin	set ISIS attribute
isis-instance <isis-instance>		ISIS instance name
[redistribute <static>]		isis routes redistribute
[metric <NUMBER: 0-16777215>]		route metric value
[metric-type <L1-int | L1-ext | L2-int>]		route metric type
[route-leak <enable | disable>]		leak L2 routes to L1
[ignore-attach-bit <enable | disable>]		Ignore incoming Attach Bit
[send-attach-bit <attached | cleared | no-overlap-only | no-overlap-or-redistribute>]		Set send Attach Bit property
[uloop-prevention-timer <MILLISECONDS: 0-4294967295>]		Set uloop prevention timer-value (msec)
[level <L1 | L2 | L1-L2>]		Set Instance Level
[authentication-algo <hmac-md5>]		Type of authentication algorithm

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Command	Access	Description
isis instance unset	admin	unset ISIS configuration
isis-instance <isis-instance>		ISIS instance name
[redistribute <static>]		unset isis route redistribute
[route-leak]		enable route leak from L2 to L1
[ignore-attach-bit]		disable ignore attach bit
[send-attach-bit]		Unset send Attach Bit Property to Default
[uloop-prevention-timer]		Unset uloop prevention timer-value (msec)
[level]		Unset Instance Level to L1
[authentication-algo]		Authentication algorithm(unconfigure)

Command	Access	Description
isis instance show	limited	Show ISIS instance protocol details
isis-instance <isis-instance>		ISIS instance details
[attached-interfaces]		interfaces attached to this ISIS instance
[database]		protocol database details
[hostname]		known hostnames of IS neighbors
[is-neighbors <summary | details>]		IS neighbors
[neighbors <summary | details>]		IP address of neighbors
[statistics]		protocol statistics
{level <L1 | L2>}		routing level
[summary-routes]		summary routes configured
[route-leak]		summary routes configured

Command	Access	Description
isis area-authentication set	admin	configure authentication information
isis-instance <isis-instance>		ISIS instance name
{authentication-type <md5 | text>}		Type of authentication
{echoless-password}		collect password interactively and length of password should be less than 64.
send-only <yes | no>		send without validation
snp-authenticate <yes | no>		CSNP and PSNP PDU validation

Command	Access	Description

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isis area-authentication unset	admin	revert to defaults/unconfigure authentication
isis-instance <isis-instance>		isis instance name
{authentication-type}		No authentication (unconfigure)
{snp-authenticate}		CSNP,PSNP PDU validation
{send-only}		send without Validation

Command	**Access**	**Description**
isis area-authentication show	limited	show authentication details of a system instance
isis-instance <isis-instance>		isis instance name

Command	**Access**	**Description**
isis domain-authentication set	admin	configuring authentication information
isis-instance <isis-instance>		ISIS instance name
{authentication-type <md5 | text>}		type of authentication
{echoless-password}		collect password interactively and length of password should be less than 64.
[send-only <yes | no>]		no validation
[snp-authenticate <yes | no>]		CSNP,PSNP PDU validation

Command	**Access**	**Description**
isis domain-authentication unset	admin	reverting to defaults/unconfiguring authentication
isis-instance <isis-instance>		ISIS instance name
{authentication-type}		no authentication(unconfigure)
{snp-authenticate}		CSNP,PSNP PDU validation
{send-only}		no validation

Command	**Access**	**Description**
isis domain-authentication show	limited	show authentication details of a system instance
isis-instance <isis-instance>		ISIS instance name

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Command	Access	Description
isis interface-authentication set	admin	configuring authentication information
ip-interface <ip-interface>		IP interface name
{authentication-type <md5 | text>}		Type of authentication
{echoless-password}		collect password interactively and length of password should be less than 64.
[send-only <yes | no>]		no validation
{level <L1 | L2>}		routing level

Command	Access	Description
isis interface-authentication unset	admin	reverting to defaults/unconfiguring authentication
ip-interface <ip-interface>		IP interface name
{level <L1 | L2>}		routing level
{authentication-type}		no authentication(unconfigure)
{send-only}		no validation

Command	Access	Description
isis interface-authentication show	limited	show summary of circuit authentications

Command	Access	Description
isis interface-authentication show	limited	show details of a circuit authentication
ip-interface <ip-interface>		IP interface name

Command	Access	Description
isis lsp set	admin	Configure LSP parameters
isis-instance <isis-instance>		ISIS instance name
{max-lifetime <SECONDS: 350-65235>}		Maximum Lifetime of an LSP (default: 1200 secs)
{refresh-interval <SECONDS: 1-65235>}		LSP Refresh Interval (default: 900 secs)

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Command	Access	Description
isis lsp unset	admin	Revert to default values of LSP parameters
isis-instance <isis-instance>		ISIS instance name
[max-lifetime]		Maximum Lifetime of an LSP (default: 1200 secs)
[refresh-interval]		LSP Refresh Interval (default: 900 secs)

Command	Access	Description
isis spf-calculations set	admin	Configure SPF Calculation parameters
isis-instance <isis-instance>		ISIS instance name
[max-delay <MILLISECONDS: 0-65535>]		Maximum delay (msecs) to start a computation, default: 1200
[threshold-restart-limit <NUMBER: 1-100>]		Maximum number of restarts before an in-progress computation run is completed, default: 10
[threshold-update-restart <NUMBER: 1-100>]		Minimum number of changes should exceed to restart of an in-progress computation, default: 20
[threshold-update-start <NUMBER: 1-100>]		Minimum number of changes should exceed to start computation, default: 20

Command	Access	Description
isis spf-calculations unset	admin	Revert to default values of SPF Calculation parameters
isis-instance <isis-instance>		ISIS instance name
[max-delay]		Maximum delay (msecs) to start a computation, default: 5000
[threshold-restart-limit]		Maximum number of restarts before an in-progress computation run is completed, default: -1
[threshold-update-restart]		Minimum number of changes should exceed to restart of an in-progress computation, default: -1
[threshold-update-start]		Minimum number of changes should exceed to start of computation, default: 10

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Command	Access	Description
isis interface attach	admin	attach an IP interface to ISIS instance
ip-interface <ip-interface>		ip interface name
{isis-instance <ISIS Instance>}		ISIS instance name
{level <L1 | L2 | L1-L2>}		routing level

Command	Access	Description
isis interface detach	admin	detach an IP interface from the ISIS instance
ip-interface <ip-interface>		ip interface name

Command	Access	Description
isis interface enable	admin	enable ISIS on the ip interface
ip-interface <ip-interface>		IP interface name

Command	Access	Description
isis interface disable	admin	disable ISIS on the ip interface
ip-interface <ip-interface>		IP interface name

Command	Access	Description
isis interface set	admin	configure ISIS on the IP interface
ip-interface <ip-interface>		ip interface name
[bfd-monitor <enable | disable>]		Is BFD desired on interface
[padded-hello <yes | no>]		Padded Hello configuration, default: Yes
[level <L1 | L2 | L1-L2>]		interface level
[network-type <broadcast | point-to-point>]		interface network type
{passive}		set isis passive interface

Command	Access	Description
isis interface unset	admin	Revert ISIS configuration to the default values on the IP interface
ip-interface <ip-interface>		ip interface name

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[bfd-monitor]		Is BFD desired on interface
[padded-hello]		Revert padded hello to the default, default: Yes
[level]		interface level
[network-type]		unset network type
{passive}		unset isis passive interface

Command	**Access**	**Description**
isis interface-level set	admin	per Level configuration on the IP interface
ip-interface <ip-interface>		ip interface name
{level <L1 | L2>}		ISIS Level selection
{csnp-interval <SECONDS: 1-600>}		CSNP generation interval(sec), default: 10
[csnp-interval <SECONDS: 1-600>]		CSNP generation interval(sec), default: 10
{hello-multiplier <NUMBER: 2-100>}		Multiplier to set hold time in the Hello PDU, default: 3
[hello-multiplier <NUMBER: 2-100>]		Multiplier to set hold time in the Hello PDU, default: 3
{hello-timer <SECONDS: 1-600>}		Hello Timer (secs), default: 10
[hello-timer <SECONDS: 1-600>]		Hello Timer (secs), default: 10
{lsp-interval <MILLISECONDS: 50-65535>}		LSP generation (/throttle) interval (msecs), default: 50
[lsp-interval <MILLISECONDS: 50-65535>]		LSP generation (/throttle) interval (msecs), default: 50
{priority <NUMBER: 0-127>}		Priority of the node on the interface, default: 64
[priority <NUMBER: 0-127>]		Priority of the node on the interface, default: 64
{wide-metric <NUMBER: 1-16777215>}		Cost of the link, default: 128
[wide-metric <NUMBER: 1-16777215>]		Cost of the link, default: 128

Command	**Access**	**Description**
isis interface-level unset	admin	Revert per Level configuration on the IP interface
ip-interface <ip-interface>		ip interface name
{level <L1 | L2>}		ISIS Level selection
{csnp-interval}		Default CSNP generation interval 10(sec), default: 10
[csnp-interval]		Default CSNP generation interval 10(sec), default: 10
{hello-multiplier}		Default Multiplier (3) to set hold time in the Hello PDU, default: 3

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[hello-multiplier]		Default Multiplier (3) to set hold time in the Hello PDU, default: 3
{hello-timer}		Default Hello Timer 10(secs), default: 10
[hello-timer]		Default Hello Timer 10(secs), default: 10
{lsp-interval}		Default LSP generation interval (msecs), default: 50
[lsp-interval]		Default LSP generation interval (msecs), default: 50
{priority}		Default Priority (64) of the node on the interface, default: 64
[priority]		Default Priority (64) of the node on the interface, default: 64
{wide-metric}		Default Cost of the link, default: 128
[wide-metric]		Default Cost of the link, default: 128

Command	**Access**	**Description**
isis te-tables show	limited	walk through the te tables
{te}		show entries in ISIS_TE_TLV table

Command	**Access**	**Description**
isis administrative-distance set	admin	Set ISIS distance
{distance <NUMBER: 1-255>}		Distance value of protocol in RTM

Command	**Access**	**Description**
isis administrative-distance unset	admin	Unset ISIS distance
{distance}		Distance value of protocol in RTM

ldp

Label Distribution Protocol

Command	**Access**	**Description**
ldp authentication set	admin	Configure Peer Node authentication
{peer <IP address>}		Peer Node Ip Address
{authentication-type <md5>}		authentication type
{echoless-password}		collect password interactively

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Command	Access	Description
ldp authentication unset	admin	Unconfigure Peer Node authentication
{peer <IP address>}		Peer Node Ip Address

Command	Access	Description
ldp authentication show	limited	Display LDP Authentication configuration

Command	Access	Description
ldp lsp interface show	limited	show LDP interfaces

Command	Access	Description
ldp lsp unset	admin	Reset LDP global parameters
[hello-hold-time]		LDP link hello hold time
[keep-alive-hold-time]		LDP link keep alive timer

Command	Access	Description
ldp lsp unset	admin	Configure LDP attributes
ip-interface <ip-interface>		Interface Name

Command	Access	Description
ldp lsp set	admin	Set LDP global parameters
[hello-hold-time <SECONDS: 15-65535>]		LDP link hello hold time (default 15 sec)
[keep-alive-hold-time <SECONDS: 40-65535>]		LDP link keep alive timer (default 40 sec)

Command	Access	Description
ldp lsp set	admin	Configure LDP attributes
ip-interface <ip-interface>		Interface Name

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Command	Access	Description
ldp lsp enable	admin	enable LDP LSP on the interface
ip-interface <ip-interface>		Interface Name

Command	Access	Description
ldp lsp disable	admin	disable LDP LSP on the interface
ip-interface <ip-interface>		Interface Name

Command	Access	Description
ldp lsp show	limited	show LSP
[timers]		show link LDP global timers
[ipv4]		show LDP IPv4 FEC
[in-label]		show LDP label sent to upstream
[out-label]		show LDP label received from downstream

Command	Access	Description
ldp graceful-restart enable	admin	enable LDP Graceful Restart

Command	Access	Description
ldp graceful-restart disable	admin	disable LDP Graceful Restart

Command	Access	Description
ldp graceful-restart set	admin	Configure LDP Graceful Restart Timers
[reconnect-time <SECONDS: 90-1200>]		LDP GR Reconnect Time (default 90 sec)
[recovery-time <SECONDS: 90-1200>]		LDP GR Recovery Time (default 180 sec)
[max-peer-reconnect <SECONDS: 90-1200>]		LDP GR Max Peer Reconnect Time (default 180 sec)
[max-peer-recovery <SECONDS: 90-1200>]		LDP GR Max Peer Recovery Time (default 240 sec)

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Command	Access	Description
ldp graceful-restart unset	admin	Unconfigure Peer Node authentication
[reconnect-time]		LDP GR Reconnect Time
[recovery-time]		LDP GR Recovery Time
[max-peer-reconnect]		LDP GR Max Peer Reconnect Time
[max-peer-recovery]		LDP GR Max Peer Recovery Time

Command	Access	Description
ldp session-history statistics show	limited	show ldp statistics
{peer <IP address>}		LDP Peer IP

Command	Access	Description
ldp session-history statistics clear	admin	Clear LDP session statistics
{peer <IP address>}		LDP Peer IP

Command	Access	Description
ldp session-history disable	admin	Disable LDP session history and statistics

Command	Access	Description
ldp session-history enable	admin	Enable LDP session history and statistics

Command	Access	Description
ldp session-history show	limited	show ldp
[active]		Show active LDP sessions
[expired]		Show expired LDP session
[init]		Show LDP sessions being established

Command	Access	Description
ldp enable	admin	enable LDP protocol instance globally

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Command	Access	Description
ldp disable	admin	disable LDP protocol instance globally

Command	Access	Description
ldp set	admin	set LDP attributes
{hello-hold-time <SECONDS: 1-65535>}		LDP hello hold time (default 180 sec)
{keep-alive-hold-time <SECONDS: 1-65535>}		LDP keep alive timer (default 180 sec)
[label-type <implicit-null | non-reserved>]		the type of label to advertise

Command	Access	Description
ldp unset	admin	unset LDP attributes
{hello-hold-time}		LDP hello hold time
{keep-alive-hold-time}		LDP keep alive timer
[label-type]		reset to implicit-null label

Command	Access	Description
ldp show	limited	show LDP
[adjacency]		show LDP adjacency
[session]		show LDP session
[timers]		show LDP session timers
[status]		show LDP protocol status

Command	Access	Description
ldp clear	admin	Clear LDP counters

linear-protection

Linear Automatic Protection Switching (LAPS)

Command	Access	Description
linear-protection create	admin	Create a linear protection group

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protection-group <protection-group>		Protection group name
[holdoff-time <MILLISECONDS: 0-10000>]		Protection switch holdoff time milliseconds, default: 0
[revertive <on | off>]		Protection revertive mode, default: off
[wait-to-restore <MINUTES>]		Protection wait-to-restore minutes, default: 5

Command	**Access**	**Description**
linear-protection delete	admin	Delete a linear protection group
protection-group <protection-group>		Protection group name

Command	**Access**	**Description**
linear-protection set	admin	Set one or more linear protection group parameters
protection-group <protection-group>		Protection group name
[holdoff-time <MILLISECONDS: 0-10000>]		Protection switch holdoff time milliseconds, default: 0
[revertive <on | off>]		Protection revertive mode
[wait-to-restore <MINUTES>]		Protection wait-to-restore minutes, default: 5

Command	**Access**	**Description**
linear-protection unset	admin	Restore one or more linear protection group parameters to their default values
protection-group <protection-group>		Protection group name
[holdoff-time]		Protection switch holdoff time milliseconds, default: 0
[revertive]		Protection revertive mode, default: off
[wait-to-restore]		Protection wait-to-restore minutes, default: 5

Command	**Access**	**Description**
linear-protection enable	admin	Administratively enable a linear protection group
protection-group <protection-group>		Protection group name

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Command	Access	Description
linear-protection disable	admin	Administratively disable a linear protection group
protection-group <protection-group>		Protection group name

Command	Access	Description
linear-protection add	admin	Add a port to a linear protection group
protection-group <protection-group>		protection group name
[working-port <TDM Port Name>]		TDM port
[protect-port <TDM Port Name>]		TDM port

Command	Access	Description
linear-protection remove	admin	Remove a port from a linear protection group
protection-group <protection-group>		protection group name
[working-port <TDM Port Name>]		TDM port
[protect-port <TDM Port Name>]		TDM port

Command	Access	Description
linear-protection switchover	admin	Perform a linear protection switchover
protection-group <protection-group>		Protection group name
[forced <working-to-protect | protect-to-working>]		Forced protection switchover
[clear]		Clear a local user-initiated protection switchover

Command	Access	Description
linear-protection show	limited	Show a summary of linear protection groups

Command	Access	Description
linear-protection show	limited	Show details of a linear protection group instance

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protection-group <protection-group>		Protection group name
{statistics}		Show linear protection group statistics

Command	Access	Description
linear-protection clear	admin	Reset linear protection group statistics counters
protection-group <protection-group>		Protection group name
{statistics}		Reset linear protection group statistics counters

l2-cft

Layer 2 Control Frame Forwarding (l2-cft)

Command	Access	Description
l2-cft l2pt-mac set	admin	Set l2pt MAC
mac-name <mac-name>		MAC name
{mac-addr <MAC address: XX:XX:XX:XX:XX:XX>}		MAC address

Command	Access	Description
l2-cft l2pt-mac show	limited	show l2pt MAC

Command	Access	Description
l2-cft l2pt-mac unset	admin	Set l2pt MAC to default GBPT MAC address
mac-name <mac-name>		MAC name

Command	Access	Description
l2-cft priority set	admin	Set l2-cft priority mapping
{high <NUMBER: 0-7>}		fixed resolved CoS for forwarded untagged L2 control frames
{low <NUMBER: 0-7>}		fixed resolved CoS for forwarded untagged L2 control frames

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{medium <NUMBER: 0-7>}		fixed resolved CoS for forwarded untagged L2 control frames

Command	**Access**	**Description**
l2-cft priority unset	admin	Reset l2-cft priority mapping to default
{high}		fixed resolved CoS for forwarded untagged L2 control frames
{low}		fixed resolved CoS for forwarded untagged L2 control frames
{medium}		fixed resolved CoS for forwarded untagged L2 control frames

Command	**Access**	**Description**
l2-cft protocol add	admin	add protocol to l2-cft profile
profile <profile>		l2-cft profile name
{ctrl-protocol <802.1x | all-bridges-block | bridge-block | bridge-rsvd-0B0F | bridge-rsvd-0C0D | cisco-cdp | cisco-dtp | cisco-pagp | cisco-pvst | cisco-stp-uplink-fast | cisco-udld | cisco-vtp | elmi | esmc | garp-block | gmrp | gvrp | lacp | lacp-marker | lldp | mef-ce2-bridge-block | oam | ptp-peer-delay | rstp | vlan-bridge | xstp>}		layer 2 control protocol
{tagged-disposition <discard>}		Tagged l2cp protocol processing disposition
[tagged-disposition <discard>]		Tagged l2cp protocol processing disposition
{untagged-disposition <discard | forward>}		Untagged l2cp protocol processing disposition
[untagged-disposition <discard | forward>]		Untagged l2cp protocol processing disposition

Command	**Access**	**Description**
l2-cft protocol remove	admin	remove protocol from l2-cft profile
profile <profile>		l2-cft profile name

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{ctrl-protocol <802.1x | all-bridges-block | bridge-block | bridge-rsvd-0B0F | bridge-rsvd-0C0D | cisco-cdp | cisco-dtp | cisco-pagp | cisco-pvst | cisco-stp-uplink-fast | cisco-udld | cisco-vtp | elmi | esmc | garp-block | gmrp | gvrp | lacp | lacp-marker | lldp | mef-ce2-bridge-block | oam | ptp-peer-delay | rstp | vlan-bridge | xstp | all-protocols>}		layer 2 control protocol

Command	**Access**	**Description**
l2-cft protocol set	admin	set protocol in l2-cft profile
profile <profile>		l2-cft profile name
{ctrl-protocol <802.1x | all-bridges-block | bridge-block | bridge-rsvd-0B0F | bridge-rsvd-0C0D | cisco-cdp | cisco-dtp | cisco-pagp | cisco-pvst | cisco-stp-uplink-fast | cisco-udld | cisco-vtp | elmi | esmc | garp-block | gmrp | gvrp | lacp | lacp-marker | lldp | mef-ce2-bridge-block | oam | ptp-peer-delay | rstp | vlan-bridge | xstp>}		layer 2 control protocol
{tagged-disposition <discard>}		Tagged l2cp protocol processing disposition
[tagged-disposition <discard>]		Tagged l2cp protocol processing disposition
{untagged-disposition <discard | forward>}		Untagged l2cp protocol processing disposition
[untagged-disposition <discard | forward>]		Untagged l2cp protocol processing disposition

Command	**Access**	**Description**
l2-cft protocol unset	admin	unset protocol in l2-cft profile
profile <profile>		l2-cft profile name
{ctrl-protocol <802.1x | all-bridges-block | bridge-block | bridge-rsvd-0B0F | bridge-rsvd-0C0D | cisco-cdp | cisco-dtp | cisco-pagp | cisco-pvst | cisco-stp-uplink-fast | cisco-udld | cisco-vtp | elmi | esmc | garp-block | gmrp | gvrp | lacp | lacp-marker | lldp | mef-ce2-bridge-block | oam | ptp-peer-delay | rstp | vlan-bridge | xstp>}		layer 2 control protocol
{tagged-disposition}		Tagged l2cp protocol processing disposition
[tagged-disposition]		Tagged l2cp protocol processing disposition
{untagged-disposition}		Untagged l2cp protocol processing disposition

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[untagged-disposition]		Untagged l2cp protocol processing disposition

Command	Access	Description
l2-cft tagged-pvst-l2pt disable	admin	Disable l2pt of tagged PVST frames on VS
vs <vs>		virtual switch name

Command	Access	Description
l2-cft tagged-pvst-l2pt enable	admin	Enable l2pt of tagged PVST frames on VS
vs <vs>		virtual switch name

Command	Access	Description
l2-cft tagged-pvst-l2pt show	limited	Show Admin State on all VS

Command	Access	Description
l2-cft tagged-pvst-l2pt show	limited	Show Admin and Oper State on a particular VS
vs <vs>		virtual switch name

Command	Access	Description
l2-cft clear	admin	clear all control protocol tunneling statistics
{statistics}		statistics

Command	Access	Description
l2-cft create	admin	create a layer 2 control frame forwarding profile
profile <profile>		l2-cft profile
[priority <high | low | medium>]		fixed resolved CoS for forwarded untagged l2cp frames
[tunnel-method <l2pt | transparent>]		tunnel method for forwarded untagged l2cp frames

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[untagged-cos-policy <fixed | ignore>]		encapsulation cos policy for forwarding untagged l2cp frames

Command	Access	Description
l2-cft delete	admin	delete a l2-cft profile
profile <profile>		l2-cft profile

Command	Access	Description
l2-cft disable	admin	disable l2-cft
port <port>		port to disable profile

Command	Access	Description
l2-cft enable	admin	enable l2-cft
port <port>		port to enable profile

Command	Access	Description
l2-cft set	admin	set l2-cft global attributes
{mode <mef-ce1 | mef-ce2>}		l2-cft device mode list

Command	Access	Description
l2-cft set	admin	set l2-cft profile
port <port>		port to set profile
{profile <L2-CFT Profile Name>}		l2-cft profile

Command	Access	Description
l2-cft set	admin	set l2-cft profile attributes
profile <profile>		l2-cft profile
{name <String[31]>}		l2-cft profile name
{priority <high | low | medium>}		fixed resolved CoS for forwarded untagged l2cp frames

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{tunnel-method <l2pt | transparent>}		tunnel method for forwarded untagged l2cp frames
[untagged-cos-policy <fixed | ignore>]		encapsulation cos policy for forwarding untagged l2cp frames

Command	Access	Description
l2-cft show	limited	show l2-cft settings
port <port>		port to show l2-cft Attributes
{statistics}		control protocol tunneling statistics per port

Command	Access	Description
l2-cft show	limited	show Attributes of a l2-cft profile
profile <profile>		l2-cft profile

Command	Access	Description
l2-cft show	limited	show l2-cft configuration settings
[resources]		l2-cft resources usage
[statistics]		global control protocol tunneling statistics

Command	Access	Description
l2-cft unset	admin	unset l2-cft profile
port <port>		port to unset profile
{profile}		l2-cft profile

lldp

Link Layer Discovery Protocol (LLDP)

Command	Access	Description
lldp tlvtx set	admin	set per port TLV Tx parameters
port <port>		port list
{mgmt-addr-local <on | off>}		transmit Local Management Address, default: on

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{mgmt-addr-local-ipv6 <on | off>}		transmit Local Management Address, default: on
{mgmt-addr-remote <on | off>}		transmit Remote Management Address, default: on
{mgmt-addr-remote-ipv6 <on | off>}		transmit Remote Management Address, default: on
{port-descr <on | off>}		transmit port description, default: on
{system-cap <on | off>}		transmit system capabilities, default: on
{system-descr <on | off>}		transmit system description, default: on
{system-name <on | off>}		transmit system name, default: on

Command	Access	Description
lldp tlvtx show	limited	show LLDP TLV Tx configuration

Command	Access	Description
lldp tlvtx show	limited	show LLDP TLV Tx per port configuration
port <port>		physical port to show

Command	Access	Description
lldp tlvtx-dot1 set	admin	set port 802.1 TLV Tx parameters
port <port>		port list
{port-vlan-id <on | off>}		xdot1 port VLAN ID, default: on
{protocol-id-dot1x <on | off>}		xdot1 protocol ID xdot1x, default: on
{protocol-id-lacp <on | off>}		xdot1 protocol ID LACP, default: on
{protocol-id-oam <on | off>}		xdot1 protocol ID OAM, default: on
{protocol-id-stp <on | off>}		xdot1 protocol ID STP, default: on

Command	Access	Description
lldp tlvtx-dot1 show	limited	show 802.1 TLV Tx configuration

Command	Access	Description
lldp tlvtx-dot1 show	limited	show per port 802.1 TLV Tx configuration

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port <port>		physical port to show

Command	Access	Description
lldp tlvtx-dot3 set	admin	set per port 802.3 TLV Tx parameters
port <port>		port list
{link-agg <on | off>}		link aggregation status, default: on
{mac-phy-config <on | off>}		MAC/PHY configuration, default: on
{max-frame-size <on | off>}		maximum frame size, default: on
{power-via-mdi <on | off>}		power via MDI status, default: on

Command	Access	Description
lldp tlvtx-dot3 show	limited	show 802.3 TLV Tx configuration

Command	Access	Description
lldp tlvtx-dot3 show	limited	show per port 802.3 TLV Tx configuration
port <port>		physical port to show

Command	Access	Description
lldp clear	admin	clear statistics
{statistics}		clear LLDP statistics

Command	Access	Description
lldp clear	admin	clear statistics
port <port>		physical port
{statistics}		clear LLDP port statistics

Command	Access	Description
lldp disable	admin	disable LLDP

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Command	Access	Description
lldp enable	admin	enable LLDP

Command	Access	Description
lldp set	admin	set LLDP attributes
{msg-interval <SECONDS: 5-32768>}		message regular tx interval, default 30 sec
{msg-tx-hold <NUMBER: 2-10>}		# of message intervals to keep value current, default: 4
{notif-interval <SECONDS: 5-3600>}		notification interval 5-3600 sec
{reinit-delay <SECONDS: 1-10>}		the interval before re-initialization after admin disable, default: 2
{tx-delay <SECONDS: 1-8192>}		the min interval after which next msg can tx, default: 2

Command	Access	Description
lldp set	admin	set LLDP port attributes
port <port>		physical port to set attributes for
{mode <rx-only | tx-only | tx-rx | disable>}		tx/rx mode of the port, default: tx-rx
{notification <on | off>}		configure standard lldpRemTablesChange SNMP notification, default: off

Command	Access	Description
lldp show	limited	show LLDP

Command	Access	Description
lldp show	limited	show LLDP
{configuration}		show LLDP configuration
{neighbors}		show LLDP neighbors
{statistics}		show LLDP statistics

Command	Access	Description

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lldp show	limited	show LLDP
port <port>		physical port to show
{configuration}		show LLDP port configuration
{statistics}		show LLDP port statistics

log

log

Command	Access	Description
log flash add	admin	add parameters to flash log-filter
filter <filter>		log-filter object
[all-mgrs]		ALL logging categories
[acl-mgr <String List>]		list of ACL logging categories
[ais-mgr <String List>]		list of AIS logging categories
[alarm-mgr <String List>]		list of Alarm logging categories
[arp-mgr <String List>]		list of ARP logging categories
[bcast-containment-mgr <String List>]		list of broadcast containment logging categories
[bfd-mgr <String List>]		list of BFD logging categories
[blade-mgr <String List>]		list of blade logging categories
[cfm-mgr <String List>]		list of CFM logging categories
[chassis-mgr <String List>]		list of chassis logging categories
[config-mgr <String List>]		list of configuration logging categories
[dhcp-mgr <String List>]		list of DHCP client logging categories
[dhcpv6-mgr <String List>]		list of DHCPv6 client logging categories
[dnld-mgr <String List>]		list of download logging categories
[dnsc-mgr <String List>]		list of DNS client logging categories
[dot1x-mgr <String List>]		list of dot1x logging categories
[event-mgr <String List>]		list of event logging categories
[flow-mgr <String List>]		list of flow logging categories
[igmp-mgr <String List>]		list of IGMP logging categories
[interface-mgr <String List>]		list of interface logging categories
[irb-mgr <String List>]		list of VPLS IRB logging categories
[isis-mgr <String List>]		list of ISIS logging categories
[l2-protocol-mgr <String List>]		list of L2 protocol logging categories
[lacp-mgr <String List>]		list of LACP logging categories
[laps-mgr <String List>]		list of Linear APS logging categories
[ldp-mgr <String List>]		list of ldp logging categories
[lldp-mgr <String List>]		list of LLDP logging categories

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[logging-mgr <String List>]		list of ISIS logging categories
[mpls-ldp-mgr <String List>]		list of MPLS LDP logging categories
[mpls-mgr <String List>]		list of MPLS logging categories
[mstp-mgr <String List>]		list of MSTP logging categories
[ndp-mgr <String List>]		list of NDP logging categories
[netconf-helper-mgr <String List>]		list of NETCONF helper logging categories
[ntpc-mgr <String List>]		list of NTP client logging categories
[ntwrk-mgr <String List>]		list of network logging categories
[oam-mgr <String List>]		list of OAM logging categories
[ospf-mgr <String List>]		list of ospf logging categories
[perfmon-mgr <String List>]		list of performance monitor logging categories
[pfg-mgr <String List>]		list of PFG logging categories
[port <Port list>]		port list
[port-mgr <String List>]		list of port logging categories
[prtc-mgr <String List>]		list of protection logging categories
[radius-mgr <String List>]		list of RADIUS logging categories
[raps-mgr <String List>]		list of ring protection logging categories
[rmon-mgr <String List>]		list of RMON logging categories
[routing-domain-mgr <String List>]		list of routing domain logging categories
[rstp-mgr <String List>]		list of RSTP logging categories
[rsvp-mgr <String List>]		list of rsvp logging categories
[rtm-mgr <String List>]		list of RTM logging categories
[security-mgr <String List>]		list of security logging categories
{severity <String List>}		message severity
[ssh-mgr <String List>]		list of SSH logging categories
[snmp-mgr <String List>]		list of SNMP logging categories
[software-mgr <String List>]		list of software logging categories
[spidd-mgr <String List>]		list of SPIDD logging categories
[sub-port-mgr <String List>]		list of sub-port logging categories
[sync-mgr <String List>]		list of SYNC logging categories
[tacacs-mgr <String List>]		list of TACACS logging categories
[tdm-mgr <String List>]		list of TDM PWE logging categories
[traffic-profiling-mgr <String List>]		list of traffic profiling logging categories
[twamp-mgr <String List>]		list of TWAMP logging categories
[virtual-circuit-mgr <String List>]		list of virtual circuit logging categories
[vlli-mgr <String List>]		list of VLLI logging categories
[xcvr-mgr <String List>]		list of XCVR logging categories
[xftp-mgr <String List>]		list of xFTP logging categories

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Command	Access	Description
log flash add	admin	add flash packet-filter
pkt-filter <pkt-filter>		packet-filter object
{icl-pkt <all | egress | ingress>}		ICL packet type
[igmp-pkt <all | egress | ingress>]		IGMP packet types
[ip-pkt <all | egress | ingress>]		IP packet types
[ip-mgmt <all | egress | ingress>]		IP mgmt packet types
[ip-control <all | egress | ingress>]		IP control packet types
[ipv6-mgmt <all | egress | ingress>]		IPv6 mgmt packet types
[ip-icmp <all | egress | ingress>]		IP icmp packet types
[ipv6-icmp <all | egress | ingress>]		IPv6 icmp packet types
[lacp-pkt <all | egress | ingress>]		LACP packet types
[lldp-pkt <all | egress | ingress>]		LLDP packet types
[mstp-pkt <all | egress | ingress>]		MSTP packet types
[pkt-decode <on | off>]		packet decode feature
[port <Port list>]		port list to add to flash packet filter
[rstp-pkt <all | egress | ingress>]		RSTP packet types

Command	Access	Description
log flash clear	super	clear the flash log

Command	Access	Description
log flash create	admin	create flash log-filter
filter <filter>		log-filter object
[all-mgrs]		ALL logging categories
[acl-mgr <String List>]		list of ACL logging categories
[ais-mgr <String List>]		list of AIS logging categories
[alarm-mgr <String List>]		list of Alarm logging categories
[arp-mgr <String List>]		list of ARP logging categories
[bcast-containment-mgr <String List>]		list of broadcast containment logging categories
[bfd-mgr <String List>]		list of BFD logging categories
[blade-mgr <String List>]		list of blade logging categories
[cfm-mgr <String List>]		list of CFM logging categories
[chassis-mgr <String List>]		list of chassis logging categories
[config-mgr <String List>]		list of configuration logging categories

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[dhcp-mgr <String List>]		list of DHCP client logging categories
[dhcpv6-mgr <String List>]		list of DHCPv6 client logging categories
[dnld-mgr <String List>]		list of download logging categories
[dnsc-mgr <String List>]		list of DNS client logging categories
[dot1x-mgr <String List>]		list of dot1x logging categories
[event-mgr <String List>]		list of event logging categories
[flow-mgr <String List>]		list of flow logging categories
[igmp-mgr <String List>]		list of IGMP logging categories
[interface-mgr <String List>]		list of interface logging categories
[irb-mgr <String List>]		list of VPLS IRB logging categories
[isis-mgr <String List>]		list of ISIS logging categories
[l2-protocol-mgr <String List>]		list of L2 protocol logging categories
[lacp-mgr <String List>]		list of LACP logging categories
[laps-mgr <String List>]		list of Linear APS logging categories
[ldp-mgr <String List>]		list of ldp logging categories
[lldp-mgr <String List>]		list of LLDP logging categories
[logging-mgr <String List>]		list of ISIS logging categories
[mpls-ldp-mgr <String List>]		list of MPLS LDP logging categories
[mpls-mgr <String List>]		list of MPLS logging categories
[mstp-mgr <String List>]		list of MSTP logging categories
[ndp-mgr <String List>]		list of NDP logging categories
[netconf-helper-mgr <String List>]		list of NETCONF helper logging categories
[ntpc-mgr <String List>]		list of NTP client logging categories
[ntwrk-mgr <String List>]		list of network logging categories
[oam-mgr <String List>]		list of OAM logging categories
[ospf-mgr <String List>]		list of ospf logging categories
[perfmon-mgr <String List>]		list of performance monitor logging categories
[pfg-mgr <String List>]		list of PFG logging categories
[port <Port list>]		port list
[port-mgr <String List>]		list of port logging categories
[prtc-mgr <String List>]		list of protection logging categories
[radius-mgr <String List>]		list of RADIUS logging categories
[raps-mgr <String List>]		list of ring protection logging categories
[rmon-mgr <String List>]		list of RMON logging categories
[routing-domain-mgr <String List>]		list of routing domain logging categories
[rstp-mgr <String List>]		list of RSTP logging categories
[rsvp-mgr <String List>]		list of rsvp logging categories
[rtm-mgr <String List>]		list of RTM logging categories
[security-mgr <String List>]		list of security logging categories
{severity <String List>}		message severity

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[ssh-mgr <String List>]		list of SSH logging categories
[snmp-mgr <String List>]		list of SNMP logging categories
[software-mgr <String List>]		list of software logging categories
[spidd-mgr <String List>]		list of SPIDD logging categories
[sub-port-mgr <String List>]		list of sub-port logging categories
[sync-mgr <String List>]		list of SYNC logging categories
[tacacs-mgr <String List>]		list of TACACS logging categories
[tdm-mgr <String List>]		list of TDM PWE logging categories
[traffic-profiling-mgr <String List>]		list of traffic profiling logging categories
[twamp-mgr <String List>]		list of TWAMP logging categories
[virtual-circuit-mgr <String List>]		list of virtual circuit logging categories
[vlli-mgr <String List>]		list of VLLI logging categories
[xcvr-mgr <String List>]		list of XCVR logging categories
[xftp-mgr <String List>]		list of xFTP logging categories

Command	**Access**	**Description**
log flash create	admin	create flash packet-filter
pkt-filter <pkt-filter>		packet-filter object
{icl-pkt <all | egress | ingress>}		ICL packet type
[igmp-pkt <all | egress | ingress>]		IGMP packet types
[ip-pkt <all | egress | ingress>]		IP packet types
[ip-mgmt <all | egress | ingress>]		IP mgmt packet types
[ip-control <all | egress | ingress>]		IP control packet types
[ipv6-mgmt <all | egress | ingress>]		IPv6 mgmt packet types
[ip-icmp <all | egress | ingress>]		IP icmp packet types
[ipv6-icmp <all | egress | ingress>]		IPv6 icmp packet types
[lacp-pkt <all | egress | ingress>]		LACP packet types
[lldp-pkt <all | egress | ingress>]		LLDP packet types
[mstp-pkt <all | egress | ingress>]		MSTP packet types
[pkt-decode <on | off>]		packet decode feature
[port <Port list>]		port list to add to flash packet filter
[rstp-pkt <all | egress | ingress>]		RSTP packet types

Command	**Access**	**Description**
log flash delete	admin	delete flash log-filter
filter <filter>		log filter object

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Command	Access	Description
log flash delete	admin	delete flash packet-filter
pkt-filter <pkt-filter>		packet filter object

Command	Access	Description
log flash disable	admin	global disabling of logging to flash

Command	Access	Description
log flash disable	admin	disable flash log-filter
filter <filter>		log filter object

Command	Access	Description
log flash disable	admin	disable flash packet-filter
pkt-filter <pkt-filter>		packet filter object

Command	Access	Description
log flash enable	admin	global enable of logging to flash

Command	Access	Description
log flash enable	admin	enable flash log-filter
filter <filter>		log filter object

Command	Access	Description
log flash enable	admin	enable flash packet-filter
pkt-filter <pkt-filter>		packet filter object

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Command	Access	Description
log flash remove	admin	remove parameters from flash log-filter
filter <filter>		log filter object
[all-mgrs]		ALL logging categories
[acl-mgr <String List>]		list of ACL logging categories
[ais-mgr <String List>]		list of AIS logging categories
[alarm-mgr <String List>]		list of Alarm logging categories
[arp-mgr <String List>]		list of ARP logging categories
[bcast-containment-mgr <String List>]		list of broadcast containment logging categories
[bfd-mgr <String List>]		list of BFD logging categories
[blade-mgr <String List>]		list of blade logging categories
[cfm-mgr <String List>]		list of CFM logging categories
[chassis-mgr <String List>]		list of chassis logging categories
[config-mgr <String List>]		list of configuration logging categories
[dhcp-mgr <String List>]		list of DHCP client logging categories
[dhcpv6-mgr <String List>]		list of DHCPv6 client logging categories
[dnld-mgr <String List>]		list of download logging categories
[dnsc-mgr <String List>]		list of DNS client logging categories
[dot1x-mgr <String List>]		list of dot1x logging categories
[event-mgr <String List>]		list of event logging categories
[flow-mgr <String List>]		list of flow logging categories
[igmp-mgr <String List>]		list of IGMP logging categories
[interface-mgr <String List>]		list of interface logging categories
[irb-mgr <String List>]		list of VPLS IRB logging categories
[isis-mgr <String List>]		list of ISIS logging categories
[l2-protocol-mgr <String List>]		list of L2 protocol logging categories
[lacp-mgr <String List>]		list of LACP logging categories
[laps-mgr <String List>]		list of Linear APS logging categories
[ldp-mgr <String List>]		list of ldp logging categories
[lldp-mgr <String List>]		list of LLDP logging categories
[logging-mgr <String List>]		list of ISIS logging categories
[mpls-ldp-mgr <String List>]		list of MPLS LDP logging categories
[mpls-mgr <String List>]		list of MPLS logging categories
[mstp-mgr <String List>]		list of MSTP logging categories
[ndp-mgr <String List>]		list of NDP logging categories
[netconf-helper-mgr <String List>]		list of NETCONF helper logging categories
[ntpc-mgr <String List>]		list of NTP client logging categories
[ntwrk-mgr <String List>]		list of network logging categories

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[oam-mgr <String List>]		list of OAM logging categories
[ospf-mgr <String List>]		list of ospf logging categories
[perfmon-mgr <String List>]		list of performance monitor logging categories
[pfg-mgr <String List>]		list of PFG logging categories
[port <Port list>]		port list
[port-mgr <String List>]		list of port logging categories
[prtc-mgr <String List>]		list of protection logging categories
[radius-mgr <String List>]		list of RADIUS logging categories
[raps-mgr <String List>]		list of ring protection logging categories
[rmon-mgr <String List>]		list of RMON logging categories
[routing-domain-mgr <String List>]		list of routing domain logging categories
[rstp-mgr <String List>]		list of RSTP logging categories
[rsvp-mgr <String List>]		list of rsvp logging categories
[rtm-mgr <String List>]		list of RTM logging categories
[security-mgr <String List>]		list of security logging categories
{severity <String List>}		message severity
[ssh-mgr <String List>]		list of SSH logging categories
[snmp-mgr <String List>]		list of SNMP logging categories
[software-mgr <String List>]		list of software logging categories
[spidd-mgr <String List>]		list of SPIDD logging categories
[sub-port-mgr <String List>]		list of sub-port logging categories
[sync-mgr <String List>]		list of SYNC logging categories
[tacacs-mgr <String List>]		list of TACACS logging categories
[tdm-mgr <String List>]		list of TDM PWE logging categories
[traffic-profiling-mgr <String List>]		list of traffic profiling logging categories
[twamp-mgr <String List>]		list of TWAMP logging categories
[virtual-circuit-mgr <String List>]		list of virtual circuit logging categories
[vlli-mgr <String List>]		list of VLLI logging categories
[xcvr-mgr <String List>]		list of XCVR logging categories
[xftp-mgr <String List>]		list of xFTP logging categories

Command	**Access**	**Description**
log flash remove	admin	remove parameters from flash packet-filter
pkt-filter <pkt-filter>		packet filter object
{icl-pkt <all | egress | ingress>}		ICL packet type
[igmp-pkt <all | egress | ingress>]		IGMP packet types
[ip-pkt <all | egress | ingress>]		IP packet types
[ip-mgmt <all | egress | ingress>]		IP mgmt packet types
[ip-control <all | egress | ingress>]		IP control packet types

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[ipv6-mgmt <all | egress | ingress>]		IPv6 mgmt packet types
[ip-icmp <all | egress | ingress>]		IP icmp packet types
[ipv6-icmp <all | egress | ingress>]		IPv6 icmp packet types
[lacp-pkt <all | egress | ingress>]		LACP packet types
[lldp-pkt <all | egress | ingress>]		LLDP packet types
[mstp-pkt <all | egress | ingress>]		MSTP packet types
[pkt-decode <on | off>]		packet decode feature
[port <Port list>]		port list to add to flash packet filter
[rstp-pkt <all | egress | ingress>]		RSTP packet types

Command	**Access**	**Description**
log flash set	admin	set parameters of flash log-filter
filter <filter>		log filter object
{severity <String List>}		message severity

Command	**Access**	**Description**
log flash set	admin	set parameters of flash packet-filter
pkt-filter <pkt-filter>		packet filter object
[pkt-decode <on | off>]		packet decode feature

Command	**Access**	**Description**
log flash show	limited	show flash log-filter configuration
filter <filter>		log filter object

Command	**Access**	**Description**
log flash show	limited	show flash packet-filter configuration
pkt-filter <pkt-filter>		packet filter object

Command	**Access**	**Description**
log flash show	limited	show flash filter summaries
{log-summary}		show summary of log filters
{pkt-summary}		show summary of packet filters

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{severity-mapping}		show event/syslog severity map
{system-events}		show system events
{manager <acl-mgr | ais-mgr | alarm-mgr | alarm-config-mgr | arp-mgr | bcast-containment-mgr | benchmark-mgr | bfd-mgr | blade-mgr | cfm-mgr | chassis-mgr | config-mgr | dhcp-mgr | dhcpv6-mgr | dnld-mgr | dnsc-mgr | dot1x-mgr | event-mgr | flow-mgr | igmp-mgr | interface-mgr | irb-mgr | isis-mgr | l2-protocol-mgr | lacp-mgr | laps-mgr | ldp-mgr | lldp-mgr | logging-mgr | mpls-ldp-mgr | mpls-mgr | mstp-mgr | ndp-mgr | netconf-helper-mgr | ntpc-mgr | ntwrk-mgr | oam-mgr | ospf-mgr | perfmon-mgr | pfg-mgr | port-mgr | prtc-mgr | radius-mgr | raps-mgr | rmon-mgr | routing-domain-mgr | rstp-mgr | rsvp-mgr | rtm-mgr | security-mgr | snmp-mgr | software-mgr | spidd-mgr | ssh-mgr | sub-port-mgr | sync-mgr | tacacs-mgr | tdm-mgr | traffic-profiling-mgr | twamp-mgr | virtual-circuit-mgr | vlli-mgr | xcvr-mgr | xftp-mgr>}		limit to a manager
{severity <critical | major | minor | warning | config | info | debug>}		limit to an event severity

Command	**Access**	**Description**
log flash view	limited	display the flash log
{tail <NUMBER: 1-100>}		display last x lines
{keyword <String[16]>}		display last lines that contain keyword

Command	**Access**	**Description**
log ram add	admin	add parameters to ram log-filter
filter <filter>		log filter object
[all-mgrs]		ALL logging categories
[acl-mgr <String List>]		list of ACL logging categories
[ais-mgr <String List>]		list of AIS logging categories
[alarm-mgr <String List>]		list of Alarm logging categories
[arp-mgr <String List>]		list of ARP logging categories
[bcast-containment-mgr <String List>]		list of broadcast containment logging categories

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[bfd-mgr <String List>]		list of BFD logging categories
[blade-mgr <String List>]		list of blade logging categories
[cfm-mgr <String List>]		list of CFM logging categories
[chassis-mgr <String List>]		list of chassis logging categories
[config-mgr <String List>]		list of configuration logging categories
[dhcp-mgr <String List>]		list of DHCP client logging categories
[dhcpv6-mgr <String List>]		list of DHCPv6 client logging categories
[dnld-mgr <String List>]		list of download logging categories
[dnsc-mgr <String List>]		list of DNS client logging categories
[dot1x-mgr <String List>]		list of dot1x logging categories
[event-mgr <String List>]		list of event logging categories
[flow-mgr <String List>]		list of flow logging categories
[igmp-mgr <String List>]		list of IGMP logging categories
[interface-mgr <String List>]		list of interface logging categories
[irb-mgr <String List>]		list of VPLS IRB logging categories
[isis-mgr <String List>]		list of ISIS logging categories
[l2-protocol-mgr <String List>]		list of L2 protocol logging categories
[lacp-mgr <String List>]		list of LACP logging categories
[laps-mgr <String List>]		list of Linear APS logging categories
[ldp-mgr <String List>]		list of ldp logging categories
[lldp-mgr <String List>]		list of LLDP logging categories
[logging-mgr <String List>]		list of ISIS logging categories
[mpls-ldp-mgr <String List>]		list of MPLS LDP logging categories
[mpls-mgr <String List>]		list of MPLS logging categories
[mstp-mgr <String List>]		list of MSTP logging categories
[ndp-mgr <String List>]		list of NDP logging categories
[netconf-helper-mgr <String List>]		list of NETCONF helper logging categories
[ntpc-mgr <String List>]		list of NTP client logging categories
[ntwrk-mgr <String List>]		list of network logging categories
[oam-mgr <String List>]		list of OAM logging categories
[ospf-mgr <String List>]		list of ospf logging categories
[perfmon-mgr <String List>]		list of performance monitor logging categories
[pfg-mgr <String List>]		list of PFG logging categories
[port <Port list>]		port list
[port-mgr <String List>]		list of port logging categories
[prtc-mgr <String List>]		list of protection logging categories
[radius-mgr <String List>]		list of RADIUS logging categories
[raps-mgr <String List>]		list of ring protection logging categories
[rmon-mgr <String List>]		list of RMON logging categories
[routing-domain-mgr <String List>]		list of routing domain logging categories

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[rstp-mgr <String List>]		list of RSTP logging categories
[rsvp-mgr <String List>]		list of rsvp logging categories
[rtm-mgr <String List>]		list of RTM logging categories
[security-mgr <String List>]		list of security logging categories
{severity <String List>}		message severity
[ssh-mgr <String List>]		list of SSH logging categories
[snmp-mgr <String List>]		list of SNMP logging categories
[software-mgr <String List>]		list of software logging categories
[spidd-mgr <String List>]		list of SPIDD logging categories
[sub-port-mgr <String List>]		list of sub-port logging categories
[sync-mgr <String List>]		list of SYNC logging categories
[tacacs-mgr <String List>]		list of TACACS logging categories
[tdm-mgr <String List>]		list of TDM PWE logging categories
[traffic-profiling-mgr <String List>]		list of traffic profiling logging categories
[twamp-mgr <String List>]		list of TWAMP logging categories
[virtual-circuit-mgr <String List>]		list of virtual circuit logging categories
[vlli-mgr <String List>]		list of VLLI logging categories
[xcvr-mgr <String List>]		list of XCVR logging categories
[xftp-mgr <String List>]		list of xFTP logging categories

Command	**Access**	**Description**
log ram add	admin	add parameters to RAM packet-filter
pkt-filter <pkt-filter>		packet filter object
{icl-pkt <all | egress | ingress>}		ICL packet type
[igmp-pkt <all | egress | ingress>]		IGMP packet types
[ip-pkt <all | egress | ingress>]		IP packet types
[ip-mgmt <all | egress | ingress>]		IP mgmt packet types
[ip-control <all | egress | ingress>]		IP control packet types
[ipv6-mgmt <all | egress | ingress>]		IPv6 mgmt packet types
[ip-icmp <all | egress | ingress>]		IP icmp packet types
[ipv6-icmp <all | egress | ingress>]		IPv6 icmp packet types
[lacp-pkt <all | egress | ingress>]		LACP packet types
[lldp-pkt <all | egress | ingress>]		LLDP packet types
[mstp-pkt <all | egress | ingress>]		MSTP packet types
[pkt-decode <on | off>]		packet decode feature
[port <Port list>]		port list to add to flash packet filter
[rstp-pkt <all | egress | ingress>]		RSTP packet types

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Command	Access	Description
log ram clear	super	clear the RAM log

Command	Access	Description
log ram create	admin	create RAM log-filter
filter <filter>		log filter object
[all-mgrs]		ALL logging categories
[acl-mgr <String List>]		list of ACL logging categories
[ais-mgr <String List>]		list of AIS logging categories
[alarm-mgr <String List>]		list of Alarm logging categories
[arp-mgr <String List>]		list of ARP logging categories
[bcast-containment-mgr <String List>]		list of broadcast containment logging categories
[bfd-mgr <String List>]		list of BFD logging categories
[blade-mgr <String List>]		list of blade logging categories
[cfm-mgr <String List>]		list of CFM logging categories
[chassis-mgr <String List>]		list of chassis logging categories
[config-mgr <String List>]		list of configuration logging categories
[dhcp-mgr <String List>]		list of DHCP client logging categories
[dhcpv6-mgr <String List>]		list of DHCPv6 client logging categories
[dnld-mgr <String List>]		list of download logging categories
[dnsc-mgr <String List>]		list of DNS client logging categories
[dot1x-mgr <String List>]		list of dot1x logging categories
[event-mgr <String List>]		list of event logging categories
[flow-mgr <String List>]		list of flow logging categories
[igmp-mgr <String List>]		list of IGMP logging categories
[interface-mgr <String List>]		list of interface logging categories
[irb-mgr <String List>]		list of VPLS IRB logging categories
[isis-mgr <String List>]		list of ISIS logging categories
[l2-protocol-mgr <String List>]		list of L2 protocol logging categories
[lacp-mgr <String List>]		list of LACP logging categories
[laps-mgr <String List>]		list of Linear APS logging categories
[ldp-mgr <String List>]		list of ldp logging categories
[lldp-mgr <String List>]		list of LLDP logging categories
[logging-mgr <String List>]		list of ISIS logging categories
[mpls-ldp-mgr <String List>]		list of MPLS LDP logging categories
[mpls-mgr <String List>]		list of MPLS logging categories
[mstp-mgr <String List>]		list of MSTP logging categories

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[ndp-mgr <String List>]		list of NDP logging categories
[netconf-helper-mgr <String List>]		list of NETCONF helper logging categories
[ntpc-mgr <String List>]		list of NTP client logging categories
[ntwrk-mgr <String List>]		list of network logging categories
[oam-mgr <String List>]		list of OAM logging categories
[ospf-mgr <String List>]		list of ospf logging categories
[perfmon-mgr <String List>]		list of performance monitor logging categories
[pfg-mgr <String List>]		list of PFG logging categories
[port <Port list>]		port list
[port-mgr <String List>]		list of port logging categories
[prtc-mgr <String List>]		list of protection logging categories
[radius-mgr <String List>]		list of RADIUS logging categories
[raps-mgr <String List>]		list of ring protection logging categories
[rmon-mgr <String List>]		list of RMON logging categories
[routing-domain-mgr <String List>]		list of routing domain logging categories
[rstp-mgr <String List>]		list of RSTP logging categories
[rsvp-mgr <String List>]		list of rsvp logging categories
[rtm-mgr <String List>]		list of RTM logging categories
[security-mgr <String List>]		list of security logging categories
{severity <String List>}		message severity
[ssh-mgr <String List>]		list of SSH logging categories
[snmp-mgr <String List>]		list of SNMP logging categories
[software-mgr <String List>]		list of software logging categories
[spidd-mgr <String List>]		list of SPIDD logging categories
[sub-port-mgr <String List>]		list of sub-port logging categories
[sync-mgr <String List>]		list of SYNC logging categories
[tacacs-mgr <String List>]		list of TACACS logging categories
[tdm-mgr <String List>]		list of TDM PWE logging categories
[traffic-profiling-mgr <String List>]		list of traffic profiling logging categories
[twamp-mgr <String List>]		list of TWAMP logging categories
[virtual-circuit-mgr <String List>]		list of virtual circuit logging categories
[vlli-mgr <String List>]		list of VLLI logging categories
[xcvr-mgr <String List>]		list of XCVR logging categories
[xftp-mgr <String List>]		list of xFTP logging categories

Command	**Access**	**Description**
log ram create	admin	create ram packet-filter
pkt-filter <pkt-filter>		packet filter object
{icl-pkt <all | egress | ingress>}		ICL packet type

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[igmp-pkt <all | egress | ingress>]		IGMP packet types
[ip-pkt <all | egress | ingress>]		IP packet types
[ip-mgmt <all | egress | ingress>]		IP mgmt packet types
[ip-control <all | egress | ingress>]		IP control packet types
[ipv6-mgmt <all | egress | ingress>]		IPv6 mgmt packet types
[ip-icmp <all | egress | ingress>]		IP icmp packet types
[ipv6-icmp <all | egress | ingress>]		IPv6 icmp packet types
[lacp-pkt <all | egress | ingress>]		LACP packet types
[lldp-pkt <all | egress | ingress>]		LLDP packet types
[mstp-pkt <all | egress | ingress>]		MSTP packet types
[pkt-decode <on | off>]		packet decode feature
[port <Port list>]		port list to add to flash packet filter
[rstp-pkt <all | egress | ingress>]		RSTP packet types

Command	**Access**	**Description**
log ram delete	admin	delete RAM log-filter
filter <filter>		log filter object

Command	**Access**	**Description**
log ram delete	admin	delete RAM packet-filter
pkt-filter <pkt-filter>		packet filter object

Command	**Access**	**Description**
log ram disable	admin	global disabling of logging to RAM

Command	**Access**	**Description**
log ram disable	admin	disable RAM log-filter
filter <filter>		log filter object

Command	**Access**	**Description**
log ram disable	admin	disable RAM pkt-filter
pkt-filter <pkt-filter>		pkt filter object

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Command	Access	Description
log ram enable	admin	global enable of logging to RAM

Command	Access	Description
log ram enable	admin	enable RAM log-filter
filter <filter>		log filter object

Command	Access	Description
log ram enable	admin	enable RAM packet-filter
pkt-filter <pkt-filter>		packet filter object

Command	Access	Description
log ram remove	admin	remove parameters from RAM log-filter
filter <filter>		log filter object
[all-mgrs]		ALL logging categories
[acl-mgr <String List>]		list of ACL logging categories
[ais-mgr <String List>]		list of AIS logging categories
[alarm-mgr <String List>]		list of Alarm logging categories
[arp-mgr <String List>]		list of ARP logging categories
[bcast-containment-mgr <String List>]		list of broadcast containment logging categories
[bfd-mgr <String List>]		list of BFD logging categories
[blade-mgr <String List>]		list of blade logging categories
[cfm-mgr <String List>]		list of CFM logging categories
[chassis-mgr <String List>]		list of chassis logging categories
[config-mgr <String List>]		list of configuration logging categories
[dhcp-mgr <String List>]		list of DHCP client logging categories
[dhcpv6-mgr <String List>]		list of DHCPv6 client logging categories
[dnld-mgr <String List>]		list of download logging categories
[dnsc-mgr <String List>]		list of DNS client logging categories
[dot1x-mgr <String List>]		list of dot1x logging categories
[event-mgr <String List>]		list of event logging categories
[flow-mgr <String List>]		list of flow logging categories

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[igmp-mgr <String List>]		list of IGMP logging categories
[interface-mgr <String List>]		list of interface logging categories
[irb-mgr <String List>]		list of VPLS IRB logging categories
[isis-mgr <String List>]		list of ISIS logging categories
[l2-protocol-mgr <String List>]		list of L2 protocol logging categories
[lacp-mgr <String List>]		list of LACP logging categories
[laps-mgr <String List>]		list of Linear APS logging categories
[ldp-mgr <String List>]		list of ldp logging categories
[lldp-mgr <String List>]		list of LLDP logging categories
[logging-mgr <String List>]		list of ISIS logging categories
[mpls-ldp-mgr <String List>]		list of MPLS LDP logging categories
[mpls-mgr <String List>]		list of MPLS logging categories
[mstp-mgr <String List>]		list of MSTP logging categories
[ndp-mgr <String List>]		list of NDP logging categories
[netconf-helper-mgr <String List>]		list of NETCONF helper logging categories
[ntpc-mgr <String List>]		list of NTP client logging categories
[ntwrk-mgr <String List>]		list of network logging categories
[oam-mgr <String List>]		list of OAM logging categories
[ospf-mgr <String List>]		list of ospf logging categories
[perfmon-mgr <String List>]		list of performance monitor logging categories
[pfg-mgr <String List>]		list of PFG logging categories
[port <Port list>]		port list
[port-mgr <String List>]		list of port logging categories
[prtc-mgr <String List>]		list of protection logging categories
[radius-mgr <String List>]		list of RADIUS logging categories
[raps-mgr <String List>]		list of ring protection logging categories
[rmon-mgr <String List>]		list of RMON logging categories
[routing-domain-mgr <String List>]		list of routing domain logging categories
[rstp-mgr <String List>]		list of RSTP logging categories
[rsvp-mgr <String List>]		list of rsvp logging categories
[rtm-mgr <String List>]		list of RTM logging categories
[security-mgr <String List>]		list of security logging categories
{severity <String List>}		message severity
[ssh-mgr <String List>]		list of SSH logging categories
[snmp-mgr <String List>]		list of SNMP logging categories
[software-mgr <String List>]		list of software logging categories
[spidd-mgr <String List>]		list of SPIDD logging categories
[sub-port-mgr <String List>]		list of sub-port logging categories
[sync-mgr <String List>]		list of SYNC logging categories
[tacacs-mgr <String List>]		list of TACACS logging categories

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[tdm-mgr <String List>]		list of TDM PWE logging categories
[traffic-profiling-mgr <String List>]		list of traffic profiling logging categories
[twamp-mgr <String List>]		list of TWAMP logging categories
[virtual-circuit-mgr <String List>]		list of virtual circuit logging categories
[vlli-mgr <String List>]		list of VLLI logging categories
[xcvr-mgr <String List>]		list of XCVR logging categories
[xftp-mgr <String List>]		list of xFTP logging categories

Command	**Access**	**Description**
log ram remove	admin	remove parameters from RAM packet-filter
pkt-filter <pkt-filter>		packet filter object
{icl-pkt <all | egress | ingress>}		ICL packet type
[igmp-pkt <all | egress | ingress>]		IGMP packet types
[ip-pkt <all | egress | ingress>]		IP packet types
[ip-mgmt <all | egress | ingress>]		IP mgmt packet types
[ip-control <all | egress | ingress>]		IP control packet types
[ipv6-mgmt <all | egress | ingress>]		IPv6 mgmt packet types
[ip-icmp <all | egress | ingress>]		IP icmp packet types
[ipv6-icmp <all | egress | ingress>]		IPv6 icmp packet types
[lacp-pkt <all | egress | ingress>]		LACP packet types
[lldp-pkt <all | egress | ingress>]		LLDP packet types
[mstp-pkt <all | egress | ingress>]		MSTP packet types
{port <Port list>}		port list to remove from RAM packet-filter
[rstp-pkt <all | egress | ingress>]		RSTP packet types

Command	**Access**	**Description**
log ram set	admin	set parameters of RAM log-filter
filter <filter>		log-filter object
{severity <String List>}		message severity

Command	**Access**	**Description**
log ram set	admin	set parameters of RAM packet-filter
pkt-filter <pkt-filter>		packet filter object
[pkt-decode <on | off>]		packet decode feature

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Command	Access	Description
log ram show	limited	show RAM log-filter
filter <filter>		log filter object

Command	Access	Description
log ram show	limited	show RAM packet-filter
pkt-filter <pkt-filter>		packet filter object

Command	Access	Description
log ram show	limited	show ram filter summaries
{log-summary}		show summary of log filters
{pkt-summary}		show summary of pkt filters
{severity-mapping}		show event/syslog severity map
{system-events}		show system events
{manager <acl-mgr | ais-mgr | alarm-mgr | alarm-config-mgr | arp-mgr | bcast-containment-mgr | benchmark-mgr | bfd-mgr | blade-mgr | cfm-mgr | chassis-mgr | config-mgr | dhcp-mgr | dhcpv6-mgr | dnld-mgr | dnsc-mgr | dot1x-mgr | event-mgr | flow-mgr | irb-mgr | igmp-mgr | interface-mgr | isis-mgr | l2-protocol-mgr | lacp-mgr | laps-mgr | ldp-mgr | lldp-mgr | logging-mgr | mpls-ldp-mgr | mpls-mgr | mstp-mgr | ndp-mgr | netconf-helper-mgr | ntpc-mgr | ntwrk-mgr | oam-mgr | ospf-mgr | perfmon-mgr | pfg-mgr | port-mgr | prtc-mgr | radius-mgr | raps-mgr | rmon-mgr | routing-domain-mgr | rstp-mgr | rsvp-mgr | rtm-mgr | security-mgr | snmp-mgr | software-mgr | spidd-mgr | ssh-mgr | sub-port-mgr | sync-mgr | tacacs-mgr | tdm-mgr | traffic-profiling-mgr | twamp-mgr | virtual-circuit-mgr | vlli-mgr | xcvr-mgr | xftp-mgr>}		limit to a manager
{severity <critical | major | minor | warning | config | info | debug>}		limit to an event severity

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Command	Access	Description
log ram trace	limited	activate the RAM trace buffer display
{all}		show entire trace buffer

Command	Access	Description
log transfer disable	super	disable event log automatic transfer

Command	Access	Description
log transfer enable	super	enable event log automatic transfer

Command	Access	Description
log transfer now	super	event log manual transfer

Command	Access	Description
log transfer set	super	set an FTP server and its attributes
ftp-server <ftp-server>		FTP server IP/Hostname/Credentials
[login-id <String[32]>]		ftp username
[echoless-password]		collect password interactively
[server-port <NUMBER: 0-65535>]		port to connect to

Command	Access	Description
log transfer set	admin	set a TFTP server
tftp-server <tftp-server>		TFTP server IP/Hostname
[server-port <NUMBER: 0-65535>]		port to connect to

Command	Access	Description
log transfer set	admin	set an SFTP server and its attributes
sftp-server <sftp-server>		SFTP server IP/Hostname/Credentials
[login-id <String[32]>]		sftp username

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[echoless-password]		collect password interactively
[echoless-sftp-passphrase]		collect passphrase for SFTP transfer interactively
[server-port <NUMBER: 0-65535>]		port to connect to

Command	**Access**	**Description**
log transfer set	super	set the global default xFTP server mode and its attributes
[connection-timeout <SECONDS: 1-100>]		duration (in seconds) before retry times out
[dest-path <String[127]>]		path on destination
[discards-exported <on | off>]		Automatic export of discarded log information
[interval <duration: {N[yMwdhms]}* e.g. 1h10m3s>]		periodic transfer time (N[yMwdhms]...)
[start-plus-or-minus <duration: {N[yMwdhms]}* e.g. 1h10m3s>]		shift first transfer time by up to (N[yMwdhms]...)
[retries <NUMBER: 1-10>]		maximum number of retries allowed
[retry-interval <SECONDS: 1-300>]		delay interval (in seconds) between retries

Command	**Access**	**Description**
log transfer unset	admin	unset an xFTP server
{connection-timeout}		restore default connection timeout
{dest-path}		path on destination
{discards-exported}		restore default log-loss export behavior
{interval}		restore default automatic export of log
{login-id}		restore default login ID
{password}		restore default login password
{start-plus-or-minus}		remove interval stagger
{retries}		restore default retry count
{retry-interval}		restore default retry interval
{server}		unset xFTP server (and mode)
{sftp-passphrase}		restore default passphrase that's used for SFTP transfer
{server-port}		restore default xFTP port

Command	**Access**	**Description**
log transfer show	super	show event log transfer settings

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Command	Access	Description
log transfer unset	super	event log automatic transfer options

Command	Access	Description
log send	super	send debug log msg
[msg <String[127]>]		log debug message
[severity <critical | major | minor | warning | config | info | debug>]		severity of debug log message

Command	Access	Description
log reset-to-factory-defaults	admin	debug menu

module

pluggable module controls

Command	Access	Description
module power enable	admin	resume power to the pluggable module

Command	Access	Description
module power disable	admin	cease power to the pluggable module

Command	Access	Description
module idp clear	admin	clear the idprom cache

Command	Access	Description
module reboot	admin	reboot the pluggable module
{module <TDM | NFV | OC48-TDM>}	admin	show the Fru type
[now]	admin	reboot immediately

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Command	Access	Description
module diag-shell	admin	open a connection to the module
{module <TDM | NFV | OC48-TDM>}	admin	show the Fru type
[force]	admin	force diag-shell

Command	Access	Description
module show	limited	show the module information
{module <TDM | NFV | OC48-TDM>}	admin	show the Fru type

Command	Access	Description
module show	limited	show the module information

Command	Access	Description
module set	admin	set the module information
{fru-type <TDM | NFV | OC48-TDM>}	admin	set the Fru type

mpls

MPLS Tunneling

Command	Access	Description
mpls static-tunnel-label-range set	admin	set the static tunnel label range
{min-label <NUMBER: 16-1044479>}		minimum label
{max-label <NUMBER: 16-1044479>}		maximum label

Command	Access	Description
mpls static-tunnel-label-range unset	admin	unset the static tunnel label range
[min-label]		minimum label
[max-label]		maximum label

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Command	Access	Description
mpls static-tunnel-label-range show	limited	show the static tunnel label range

Command	Access	Description
mpls static-vc-label-range set	admin	set the static Pseudowire label range
{min-label <NUMBER: 16-1044479>}		minimum label
{max-label <NUMBER: 16-1044479>}		maximum label

Command	Access	Description
mpls static-vc-label-range unset	admin	unset the static Pseudowire label range
[min-label]		minimum label
[max-label]		maximum label

Command	Access	Description
mpls static-vc-label-range show	limited	show the static Pseudowire label range

Command	Access	Description
mpls dynamic-label-range set	admin	set the dynamic label range
{min-label <NUMBER: 18-1044479>}		minimum label
{max-label <NUMBER: 18-1044479>}		maximum label

Command	Access	Description
mpls dynamic-label-range unset	admin	unset the static Pseudowire label range
[min-label]		minimum label
[max-label]		maximum label

Command	Access	Description
mpls dynamic-label-range show	limited	show the dynamic label range

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Command	Access	Description
mpls tunnel-bandwidth-profile create	admin	create tunnel bandwidth profile
bandwidth-profile <bandwidth-profile>		tunnel bandwidth profile name
{bandwidth <Kbps>}		bandwidth (Kbps)
[burst <BYTES>]		burst size (Bytes)

Command	Access	Description
mpls tunnel-bandwidth-profile set	admin	Set tunnel bandwidth profile parameters
bandwidth-profile <bandwidth-profile>		tunnel bandwidth profile name
[committed-data-rate <NUMBER: 1000-1000000>]		Committed data rate in KBytes/Sec
[committed-burst-size <KBYTES>]		Committed burst size in KBytes
{peak-data-rate <NUMBER: 1000-1000000>}		Peak data rate in KBytes/Sec
[peak-burst-size <KBYTES>]		Peak burst size in KBytes
[min-packet-size <KBYTES>]		Minimum policed packet size in KBytes
[max-packet-size <KBYTES>]		Maximum packet size in KBytes
[diffserv-traffic-class <NUMBER: 1-8>]		DiffServ LSP's Traffic Class

Command	Access	Description
mpls tunnel-bandwidth-profile unset	admin	Unset tunnel bandwidth profile parameters
bandwidth-profile <bandwidth-profile>		tunnel bandwidth profile name
[committed-data-rate]		Committed data rate in KBytes/Sec
[committed-burst-size]		Committed burst size in KBytes
{peak-data-rate}		Peak data rate in KBytes/Sec
[peak-burst-size]		Peak burst size in KBytes
[min-packet-size]		Minimum policed packet size in KBytes
[max-packet-size]		Maximum packet size in KBytes
[diffserv-traffic-class]		DiffServ LSP's Traffic Class

Command	Access	Description
mpls tunnel-bandwidth-profile delete	admin	delete tunnel bandwidth profile
bandwidth-profile <bandwidth-profile>		tunnel bandwidth profile name

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Command	Access	Description
mpls tunnel-bandwidth-profile show	limited	show all tunnel bandwidth profiles

Command	Access	Description
mpls tunnel-bandwidth-profile show	limited	show specific tunnel bandwidth profile
bandwidth-profile <bandwidth-profile>		tunnel bandwidth profile name

Command	Access	Description
mpls tunnel-frr-profile create	admin	create tunnel FRR profile
frr-profile <frr-profile>		tunnel FRR profile name
[setup-priority <NUMBER: 0-7>]		frr tunnel setup priority, default=0
[hold-priority <NUMBER: 0-7>]		frr tunnel hold priority, default=0
[bandwidth <Kbps>]		bandwidth (Kbps), default=1000
[bw-protection <yes | no>]	admin	Bandwidth protection of Frr tunnel, default=no
[node-protection <yes | no>]	admin	Node protection of Frr tunnel, default=yes
[resource-include-any <MPLS TE Admin Color Group>]		tunnel resource-include-any
[resource-include-all <MPLS TE Admin Color Group>]		tunnel resource-include-all
[resource-exclude-any <MPLS TE Admin Color Group>]		tunnel resource-exclude-any

Command	Access	Description
mpls tunnel-frr-profile set	admin	Set tunnel FRR profile parameters
frr-profile <frr-profile>		tunnel FRR profile name
[setup-priority <NUMBER: 0-7>]		frr tunnel setup priority, default=0
[hold-priority <NUMBER: 0-7>]		frr tunnel hold priority, default=0
[bandwidth <Kbps>]		bandwidth (Kbps), default=1000
[bw-protection <yes | no>]	admin	Bandwidth protection of Frr tunnel, default=no
[node-protection <yes | no>]	admin	Node protection of Frr tunnel, default=yes
[resource-include-any <MPLS TE Admin Color Group>]		tunnel resource-include-any
[resource-include-all <MPLS TE Admin Color Group>]		tunnel resource-include-all
[resource-exclude-any <MPLS TE Admin Color Group>]		tunnel resource-exclude-any

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Command	Access	Description
mpls tunnel-frr-profile unset	admin	Unset tunnel FRR profile parameters
frr-profile <frr-profile>		tunnel FRR profile name
[setup-priority]		frr tunnel setup priority
[hold-priority]		frr tunnel hold priority
[bandwidth]		bandwidth (Kbps/s)
[bw-protection]	admin	Bandwidth protection of Frr tunnel
[node-protection]	admin	Node protection of Frr tunnel
[resource-include-any]		tunnel resource-include-any
[resource-include-all]		tunnel resource-include-all
[resource-exclude-any]		tunnel resource-exclude-any

Command	Access	Description
mpls tunnel-frr-profile delete	admin	delete tunnel FRR profile
frr-profile <frr-profile>		tunnel FRR profile name

Command	Access	Description
mpls tunnel-frr-profile show	limited	show all tunnel FRR profiles

Command	Access	Description
mpls tunnel-frr-profile show	limited	show specific tunnel FRR profile
frr-profile <frr-profile>		tunnel FRR profile name

Command	Access	Description
mpls tunnel-cos-profile create	admin	create MPLS Tunnel COS profile
cos-profile <cos-profile>		Tunnel COS profile name
[frame-cos-map <RCOS to FCOS Map>]		Select frame-cos-map
[frame-cos-policy <mapped | fixed>]		frame cos policy
[fixed-tc <NUMBER: 0-7>]		encapsulation fixed TC value
[resolved-cos-map <FCOS to RCOS Map>]		Select resolved-cos-map
[resolved-cos-policy <mapped | fixed>]		resolved cos policy
[resolved-cos-fixed <NUMBER: 0-7>]		fixed resolved CoS value

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Command	Access	Description
mpls tunnel-cos-profile set	admin	set MPLS Tunnel COS profile
cos-profile <cos-profile>		Tunnel COS profile name
[frame-cos-map <RCOS to FCOS Map>]		Select frame-cos-map
[frame-cos-policy <mapped | fixed>]		frame cos policy
[fixed-tc <NUMBER: 0-7>]		encapsulation fixed TC value
[resolved-cos-map <FCOS to RCOS Map>]		Select resolved-cos-map
[resolved-cos-policy <mapped | fixed>]		resolved cos policy
[resolved-cos-fixed <NUMBER: 0-7>]		fixed resolved CoS value

Command	Access	Description
mpls tunnel-cos-profile unset	admin	unset MPLS Tunnel COS profile
cos-profile <cos-profile>		Tunnel COS profile name
[frame-cos-map]		Select frame-cos-map
[frame-cos-policy]		frame cos policy
[fixed-tc]		encapsulation fixed TC value
[resolved-cos-map]		Select resolved-cos-map
[resolved-cos-policy]		resolved cos policy
[resolved-cos-fixed]		fixed resolved CoS value

Command	Access	Description
mpls tunnel-cos-profile delete	admin	Delete MPLS Tunnel COS profile
cos-profile <cos-profile>		Tunnel COS profile name

Command	Access	Description
mpls tunnel-cos-profile show	limited	show all Tunnel COS profiles

Command	Access	Description
mpls tunnel-cos-profile show	limited	show selected Tunnel COS profile
cos-profile <cos-profile>		Tunnel COS profile name

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Command	Access	Description
mpls traffic-eng class-type-profile create	admin	Create MPLS Class Type profile
class-profile <class-profile>		Class Type profile name

Command	Access	Description
mpls traffic-eng class-type-profile set	admin	Set MPLS Class Type profile
class-profile <class-profile>		Class Type profile name
[alarm-threshold-percentage <NUMBER: 0-100>]		Alarm Threshold percentage(%) value
[cac-policy <mam>]		CAC policy name
[class-type <NUMBER: 0-7>]		Class Type value
[lom <NUMBER: 1-4>]		Link Subscription Multiplier value
{queue-group <Egress Queue Group>}		Queue Group name

Command	Access	Description
mpls traffic-eng class-type-profile unset	admin	Unset MPLS Class Type profile
class-profile <class-profile>		Class Type profile name
[alarm-threshold-percentage]		Alarm Threshold percentage(%)
[cac-policy]		CAC policy name
[class-type <NUMBER>]		Class Type value
[lom]		Link Subscription Multiplier
[queue-group]		Queue Group name

Command	Access	Description
mpls traffic-eng class-type-profile delete	admin	Delete MPLS Class Type profile
class-profile <class-profile>		Class Type profile name

Command	Access	Description
mpls traffic-eng class-type-profile show	limited	Show all MPLS Class Type profiles

Command	Access	Description

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mpls traffic-eng class-type-profile show	limited	Show all MPLS Class Type profiles
class-profile <class-profile>		Show per Class Type profile details

Command	**Access**	**Description**
mpls traffic-eng class-type-profile show	limited	Show all MPLS Class Type profiles
matching-profile		Show all matching Class Type profiles
[alarm-threshold-percentage <NUMBER: 0-100>]		Filter profiles with this Alarm Threshold percentage(%) value
[cac-policy <mam>]		Filter profiles with this CAC policy
[class-type <NUMBER: 0-7>]		Filter profiles with this Class Type value
[lom <NUMBER: 1-4>]		Filter profiles with this Lom value
[queue-group <Egress Queue Group>]		Filter profiles with this Queue Group name
[use-count <NUMBER: 0-256>]		Filter profiles with use count value >= this value

Command	**Access**	**Description**
mpls traffic-eng resource-color create	admin	Create MPLS TE resource color
color <color>		MPLS TE resource color name
{index <NUMBER: 0-31>}		resource color bit number

Command	**Access**	**Description**
mpls traffic-eng resource-color delete	admin	Delete MPLS TE resource color
color <color>		MPLS TE resource color name

Command	**Access**	**Description**
mpls traffic-eng resource-color show	limited	Show all MPLS Resource Color

Command	**Access**	**Description**
mpls traffic-eng resource-color show	limited	Show MPLS Resource Color Details
color <color>		Show per MPLS Resource Color details

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Command	Access	Description
mpls traffic-eng resource-color-group create	admin	Create MPLS TE resource color group
color-group <color-group>		MPLS TE resource color group name
{colors <MPLS TE Resource Color List>}		resource color names

Command	Access	Description
mpls traffic-eng resource-color-group delete	admin	Delete MPLS TE resource color group
color-group <color-group>		MPLS TE resource color group name

Command	Access	Description
mpls traffic-eng resource-color-group show	limited	Show all MPLS Resource Color Group

Command	Access	Description
mpls traffic-eng resource-color-group show	limited	Show MPLS Resource Color Group Details
color-group <color-group>		Show per MPLS Resource Color Group details

Command	Access	Description
mpls traffic-eng set	admin	Set MPLS TE interface property
ip-interface <ip-interface>		Interface Name
[class-profile <MPLS Class Type Profile>]		MPLS Class Type profile name
[resource-color-group <MPLS TE Admin Color Group>]		MPLS TE resource color group name
[srlg <RSVP SRLG values and ranges>]		specifies the SRLGs of the interface
[link-cost <NUMBER: 1-16777215>]		specifies the TE link metric of the interface
[frr-auto-fb-profile <MPLS Tunnel auto FB Profile>]		MPLS Auto FB profile name

Command	Access	Description
mpls traffic-eng add	admin	Append to existing MPLS TE property
ip-interface <ip-interface>		Interface Name
[srlg <RSVP SRLG values and ranges>]		specifies the SRLGs of the interface

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Command	Access	Description
mpls traffic-eng remove	admin	Remove the specified MPLS TE Property
ip-interface <ip-interface>		Interface Name
[srlg <RSVP SRLG values and ranges>]		remove specific SRLGs of the interface

Command	Access	Description
mpls traffic-eng unset	admin	Unset MPLS TE interface property
ip-interface <ip-interface>		Interface Name
[class-profile]		MPLS class type profile
[resource-color-group]		MPLS TE resource color group
[srlg]		RSVP-TE SRLG of the interface
[link-cost]		the TE link metric of the interface
[frr-auto-fb-profile]		MPLS Auto FB profile name

Command	Access	Description
mpls traffic-eng show	limited	show all Traffic-Eng Interfaces
[ip-interfaces]		all Traffic-Eng interfaces

Command	Access	Description
mpls traffic-eng show	limited	show selected Traffic-Eng Interface
ip-interface <ip-interface>		Interface Name

Command	Access	Description
mpls traffic-eng show	limited	show all Traffic-Eng Interface
matching-interface		all matching Traffic-Eng Interfaces
[class-profile <MPLS Class Type Profile>]		Filters TE interfaces with this MPLS Class profile name
[class-type <NUMBER: 0-7>]		Filters TE interfaces with this Class Type value
[reserved-bw <NUMBER: 0-1000000000>]		Filters TE interfaces with Bandwidth >= given Reserved Bandwidth (Kbps)
{reserved-bw <NUMBER: 0-1000000000>}		Filters TE interfaces with Bandwidth >= given Reserved Bandwidth (Kbps)

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[unreserved-bw <NUMBER: 0-1000000000>]		Filters TE interfaces with Bandwidth >= given Un-Reserved Bandwidth (Kbps)
{unreserved-bw <NUMBER: 0-1000000000>}		Filters TE interfaces with Bandwidth >= given Un-Reserved Bandwidth (Kbps)
[link-cost <NUMBER: 1-16777215>]		Filters TE interfaces with this TE link metric
[resource-color-group <MPLS TE Admin Color Group>]		Filters TE interfaces with this MPLS TE resource color group name
[srlg <NUMBER: 0-4294967295>]		Filters TE interfaces with this RSVP-TE SRLG

Command	**Access**	**Description**
mpls debug tables show	admin	set
{dc-memory-usage}		type
{dcRsvpTbl}		type
{inSegTbl}		type
{outSegTbl}		type
{tunlGrpTbl}		type
{xcSegTbl}		type
{i3EmTbl}		type
{i3EtTbl}		type
{lfibTbl}		type
{nextHopTbl}		type
{rsvpDynPath}		type
{dcRsvpDynPath}		type

Command	**Access**	**Description**
mpls lsp-reopt disable	admin	disable LSP reoptimization globally

Command	**Access**	**Description**
mpls lsp-reopt enable	admin	enable LSP reoptimization globally

Command	**Access**	**Description**
mpls lsp-reopt show	limited	show LSP-reoptimization status

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Command	Access	Description
mpls soft-preemption set	admin	set soft preemption timer
[timer <SECONDS: 20-60>]		MPLS-TE soft preemption timer in Seconds, default=30

Command	Access	Description
mpls soft-preemption show	limited	show soft preemption timer

Command	Access	Description
mpls ldp-lsp show	limited	show MPLS LDP LSP

Command	Access	Description
mpls bgp-lsp show	limited	show MPLS BGP LSP

Command	Access	Description
mpls bgp-lsp show	limited	show MPLS BGP Ingress LSP
ingress <ingress>		BGP-LU ingress lsp name

Command	Access	Description
mpls bgp-lsp show	limited	show MPLS BGP Transit LSP
transit <transit>		BGP-LU transit lsp name

Command	Access	Description
mpls bgp-lsp show	limited	show MPLS BGP Egress LSP
egress <egress>		BGP-LU egress lsp name

Command	Access	Description
mpls bgp-lsp switchover	admin	Rebalance BGP sessions in RSVP tunnels

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rsvp-tunnel <rsvp-tunnel>		Source dynamic ingress tunnel name and destination tunnel is auto-selected
{percentage <NUMBER: 1-100>}		percentage of tunnels to be moved

Command	**Access**	**Description**
mpls bgp-lsp switchover	admin	Rebalance BGP sessions in RSVP tunnels
from-rsvp-tunnel <from-rsvp-tunnel>		Source dynamic ingress tunnel name
to-rsvp-tunnel <to-rsvp-tunnel>		Destination dynamic ingress tunnel name
{percentage <NUMBER: 1-100>}		percentage of tunnels to be moved

Command	**Access**	**Description**
mpls frr set	admin	Set FRR global parameters
[global-reversion <enable | disable>]	admin	Global reversion of FRR
[global-reversion-hold-time <SECONDS: 0-3600>]		Global reversion hold time(in seconds) of FRR, default=0
[global-reversion-retry-interval <SECONDS: 30-3600>]		Global reversion retry interval(in seconds) of FRR, default=60
[global-reversion-retry-count <NUMBER: 0-100>]		Global reversion retry count of FRR, 0 means infinite, default=1
[facility-bypass-autogeneration <enable | disable>]	admin	Facility bypass autogeneration of FRR
[plr-support <enable | disable>]	admin	PLR support of FRR
[auto-fb-cleanup-hold-time <SECONDS: 0-3600>]		Autogenerated FB deletion hold time(in seconds) of FRR, default=120

Command	**Access**	**Description**
mpls frr unset	admin	Unset FRR global parameters
[global-reversion]		Global reversion of FRR
[global-reversion-hold-time]		Global reversion hold time of FRR
[global-reversion-retry-interval]		Global reversion retry interval of FRR
[global-reversion-retry-count]		Global reversion retry count of FRR
[facility-bypass-autogeneration]		Facility bypass autogeneration of FRR
[plr-support]		PLR support of FRR
[auto-fb-cleanup-hold-time]		Autogenerated FB deletion hold time of FRR

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Command	Access	Description
mpls frr show	limited	show all FRR global parameters

Command	Access	Description
mpls tunnel-auto-fb-profile create	admin	Create tunnel auto FB profile
auto-fb-profile <auto-fb-profile>		tunnel auto FB profile name
[bandwidth-percentage-source <user | fast-reroute-object>]	admin	Source from where bandwidth(%) is selected. (user: To use user defined value. fast-reroute-object: To use value from fast reroute.) default=user
[bandwidth-percentage-value <NUMBER: 0-100>]		bandwidth percentage(%) value
[setup-hold-priority-source <user | fast-reroute-object>]	admin	Source from where setup and hold priority is selected. (user: To use user defined value. fast-reroute-object: To use value from fast reroute.) default=user
[setup-hold-priority-value <NUMBER: 0-7>]		auto fb tunnel setup and hold priority
[link-preference <yes | no>]	admin	Link Preference for Auto-FB tunnel, default=no
[affinity-disjoint <yes | no>]	admin	Affinity for Auto-FB tunnel to be 'exclude-any' of Protected Interface's Affinity, default=yes
[affinity-source <user | fast-reroute-object | protected-interface-disjoint>]	admin	Source from where resource affinity is selected. (user: To use user defined value. fast-reroute-object: To use value from fast reroute. protected-interface-disjoint: To exclude affinity of protected interface.) default=fast reroute
[resource-include-any <MPLS TE Admin Color Group>]		Auto FB tunnel resource-include-any
[resource-include-all <MPLS TE Admin Color Group>]		Auto FB tunnel resource-include-all
[resource-exclude-any <MPLS TE Admin Color Group>]		Auto FB tunnel resource-exclude-any
[srlg-mode <maximal | strict | none>]	admin	SRLG of protected LSP, default=none
[share-srlg-node <RSVP SRLG values and ranges>]		Shared SRLGs for Node Bypass
[share-srlg-link <RSVP SRLG values and ranges>]		Shared SRLGs for Link Bypass

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Command	Access	Description
mpls tunnel-auto-fb-profile set	admin	Set tunnel auto FB profile parameters
auto-fb-profile <auto-fb-profile>		tunnel auto FB profile name
[bandwidth-percentage-source <user | fast-reroute-object>]	admin	Source from where bandwidth(%) is selected. (user: To use user defined value. fast-reroute-object: To use value from fast reroute.) default=user
[bandwidth-percentage-value <NUMBER: 0-100>]		bandwidth percentage(%) value
[setup-hold-priority-source <user | fast-reroute-object>]	admin	Source from where setup and hold priority is selected. (user: To use user defined value. fast-reroute-object: To use value from fast reroute.) default=user
[setup-hold-priority-value <NUMBER: 0-7>]		auto fb tunnel setup and hold priority
[link-preference <yes | no>]	admin	Link Preference for Auto-FB tunnel, default=no
[affinity-disjoint <yes | no>]	admin	Affinity for Auto-FB tunnel to be 'exclude-any' of Protected Interface's Affinity, default=yes
[affinity-source <user | fast-reroute-object | protected-interface-disjoint>]	admin	Source from where resource affinity is selected. (user: To use user defined value. fast-reroute-object: To use value from fast reroute. protected-interface-disjoint: To exclude affinity of protected interface.) default=fast reroute
[resource-include-any <MPLS TE Admin Color Group>]		Auto FB tunnel resource-include-any
[resource-include-all <MPLS TE Admin Color Group>]		Auto FB tunnel resource-include-all
[resource-exclude-any <MPLS TE Admin Color Group>]		Auto FB tunnel resource-exclude-any
[srlg-mode <maximal | strict | none>]	admin	SRLG of protected LSP, default=none
[share-srlg-node <RSVP SRLG values and ranges>]		Shared SRLGs for Node Bypass
[share-srlg-link <RSVP SRLG values and ranges>]		Shared SRLGs for Link Bypass
[force-apply]		Force apply Auto FB profile

Command	Access	Description
mpls tunnel-auto-fb-profile unset	admin	Unset tunnel auto FB profile parameters
auto-fb-profile <auto-fb-profile>		tunnel auto FB profile name
[bandwidth-percentage-source]		bandwidth percentage(%) source

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[bandwidth-percentage-value]		bandwidth percentage(%) value
[setup-hold-priority-source]		auto fb tunnel setup and hold priority source
[setup-hold-priority-value]		auto fb tunnel setup and hold priority value
[link-preference]	admin	Link Preference for Auto-FB tunnel
[affinity-disjoint]	admin	Affinity for Auto-FB tunnel to be 'exclude-any' of Protected Interface's Affinity
[affinity-source]		Auto FB tunnel affinity source
[resource-include-any]		Auto FB tunnel resource-include-any
[resource-include-all]		Auto FB tunnel resource-include-all
[resource-exclude-any]		Auto FB tunnel resource-exclude-any
[srlg-mode]	admin	SRLG of protected LSP
[share-srlg-node]		Shared SRLGs for Node Bypass
[share-srlg-link]		Shared SRLGs for Link Bypass

Command	**Access**	**Description**
mpls tunnel-auto-fb-profile delete	admin	Delete tunnel auto FB profile
auto-fb-profile <auto-fb-profile>		tunnel auto FB profile name

Command	**Access**	**Description**
mpls tunnel-auto-fb-profile show	limited	Show all tunnel auto FB profiles

Command	**Access**	**Description**
mpls tunnel-auto-fb-profile show	limited	Show specific tunnel auto FB profile
auto-fb-profile <auto-fb-profile>		tunnel FRR profile name

Command	**Access**	**Description**
mpls backup-path-diversity disable	admin	disable Backup Path Diversity globally

Command	**Access**	**Description**
mpls backup-path-diversity enable	admin	enable Backup Path Diversity globally

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Command	Access	Description
mpls backup-path-diversity show	limited	show Backup Path Diversity global status

Command	Access	Description
mpls tunnel create	admin	create MPLS TE-Tunnel
rsvp-ingress <rsvp-ingress>		RSVP-TE tunnel name
{dest-ip <IP address>}		tunnel destination IP address
[setup-priority <NUMBER: 0-7>]		tunnel setup priority
[hold-priority <NUMBER: 0-7>]		tunnel hold priority
[class-type <NUMBER: 0-7>]		DSTE class type (ct0-ct7)
[resource-include-all <MPLS TE Admin Color Group>]		Admin Group which contains include-all colors to constrain path selection
[resource-include-any <MPLS TE Admin Color Group>]		Admin Group which contains include-any colors to constrain path selection
[resource-exclude-any <MPLS TE Admin Color Group>]		Admin Group which contains exclude-all colors to constrain path selection
[record-route <on | off>]	admin	record route
[sticky-lsp <on | off>]	admin	sticky lsp
[frr-profile <MPLS Tunnel FRR Profile>]		tunnel FRR profile name
[explicit-tunnel-path <MPLS Rsvp Path Except Auto>]		Tunnel explicit path name
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <fixed>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tunnel fixed ttl
[backup-tunnel <MPLS ingress primary tunnel>]		list of primary tunnels
[reversion-hold-time <SECONDS: 0-3600>]		reversion hold time in seconds
[tunnel-reversion <on | off>]		tunnel reversion behavior
[frr-type <facility-bypass | protected>]	admin	frr type
[min-bandwidth <Kbps>]		Minimum bandwidth (Kbps),default=0
[max-bandwidth <Kbps>]		Maximum bandwidth (Kbps),default=1000000000
[increment-bandwidth <Kbps>]		Increment bandwidth (Kbps),default=0
[auto-size-interval <MINUTES>]		Down size interval in minutes 5...60 (zero to turn it off),default=0
[auto-size <enable | disable>]		Auto sizing for this tunnel,default=disable
[auto-size-failure <alarm | mbb>]		Auto sizing failure handling for this tunnel,default=alarm
[protected-interface <MPLS Interface>]		Protected interface

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[auto-size-mode <cac | utilization>]		Auto sizing mode of this tunnel,default=cac
[lsp-reopt <enable | disable>]		LSP Reoptimization,default=disable
[lsp-reopt-interval <MINUTES>]		LSP Reoptimization interval in minutes
[exclude-ip <IP address>]		FRR Facility Bypass Exclude IP
[share-srlg <RSVP SRLG values and ranges>]		Shared SRLGs
[srlg-mode <maximal | strict | none>]	admin	SRLG of protected LSP
[soft-preemption <enable | disable>]		Soft Preemption, default=disable

Command	**Access**	**Description**
mpls tunnel set	admin	set MPLS TE-Tunnel
rsvp-ingress <rsvp-ingress>		dynamic ingress tunnel name
[setup-priority <NUMBER: 0-7>]		tunnel setup priority
[hold-priority <NUMBER: 0-7>]		tunnel hold priority
[class-type <NUMBER: 0-7>]		DSTE class type (ct0-ct7)
[resource-include-all <MPLS TE Admin Color Group>]		Admin Group which contains include-all colors to constrain path selection
[resource-include-any <MPLS TE Admin Color Group>]		Admin Group which contains include-any colors to constrain path selection
[resource-exclude-any <MPLS TE Admin Color Group>]		Admin Group which contains exclude-all colors to constrain path selection
[record-route <on | off>]	admin	record route
[sticky-lsp <on | off>]	admin	sticky lsp
[explicit-tunnel-path <MPLS Rsvp Path Except Auto>]		Tunnel explicit path name
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <fixed>}		TTL policy
[frr-profile <MPLS Tunnel FRR Profile>]		tunnel FRR profile name
[fixed-ttl <NUMBER: 1-255>]		tunnel fixed ttl
[reversion-hold-time <SECONDS: 0-3600>]		reversion hold time in seconds
[tunnel-reversion <on | off>]		tunnel reversion behavior
[frr-type <facility-bypass | protected>]	admin	frr type
[min-bandwidth <Kbps>]		Minimum bandwidth (Kbps),default=0
[max-bandwidth <Kbps>]		Maximum bandwidth (Kbps),default=1000000000
[increment-bandwidth <Kbps>]		Increment bandwidth (Kbps),default=0
[auto-size-interval <MINUTES>]		Down size interval in minutes 5...60 (zero to turn it off),default=0
[auto-size <enable | disable>]		Auto sizing for this tunnel,default=disable
[auto-size-failure <alarm | mbb>]		Auto sizing failure handling for this tunnel,default=alarm

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[protected-interface <MPLS Interface>]		Protected interface
[auto-size-trigger]		Auto size trigger
[lsp-reopt <enable | disable>]		LSP Reoptimization
[lsp-reopt-trigger]		LSP Reoptimization trigger
[lsp-reopt-interval <MINUTES>]		LSP Reoptimization interval in minutes
[exclude-ip <IP address>]		FRR Facility Bypass Exclude IP
[share-srlg <RSVP SRLG values and ranges>]		Shared SRLGs
[srlg-mode <maximal | strict | none>]	admin	SRLG of protected LSP
[soft-preemption <enable | disable>]		Soft Preemption, default=disable

Command	**Access**	**Description**
mpls tunnel unset	admin	unset MPLS TE-Tunnel
rsvp-ingress <rsvp-ingress>		dynamic ingress tunnel name
[setup-priority]		tunnel setup priority
[hold-priority]		tunnel hold priority
[class-type]		DSTE class type
[resource-include-all]		Unset Include-All Admin Group
[resource-include-any]		Unset Include-Any Admin Group
[resource-exclude-any]		Unset Exclude-Any Admin Group
[record-route]	admin	record route
[sticky-lsp]	admin	sticky lsp
[explicit-tunnel-path]		Tunnel explicit path name
[cos-profile]		Default Tunnel COS profile
[frr-profile]		Default Tunnel FRR profile
{ttl-policy}		TTL policy
[fixed-ttl]		tunnel fixed ttl
[reversion-hold-time]		reversion hold time in seconds
[tunnel-reversion]		tunnel reversion behavior
[frr-type]	admin	frr type
[protected-interface]		Protected interface
[min-bandwidth]		Minimum bandwidth (Kbps),default=0
[max-bandwidth]		Maximum bandwidth (Kbps),default=1000000000
[increment-bandwidth]		Increment bandwidth (Kbps),default=0
[auto-size-interval]		Down size interval in minutes 5...60 (zero to turn it off)
[auto-size]		Auto sizing for this tunnel
[auto-size-failure]		Auto sizing failure handling for this tunnel
[lsp-reopt-interval]		LSP Reoptimization interval

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[exclude-ip]		FRR Facility Bypass Exclude IP
[share-srlg]		Shared SRLGs
[srlg-mode]	admin	SRLG of protected LSP

Command	**Access**	**Description**
mpls tunnel disable	admin	disable MPLS TE-Tunnel
rsvp-ingress <rsvp-ingress>		dynamic ingress tunnel name

Command	**Access**	**Description**
mpls tunnel enable	admin	enable MPLS TE-Tunnel
rsvp-ingress <rsvp-ingress>		dynamic ingress tunnel name

Command	**Access**	**Description**
mpls tunnel delete	admin	delete MPLS TE-Tunnel
rsvp-ingress <rsvp-ingress>		dynamic ingress tunnel name

Command	**Access**	**Description**
mpls tunnel switchover	admin	Switchover MPLS TE-Tunnel
rsvp-ingress <rsvp-ingress>		dynamic ingress tunnel name

Command	**Access**	**Description**
mpls tunnel create	admin	create static ingress TE-Tunnel
static-ingress <static-ingress>		static ingress tunnel name
{dest-ip <IP address>}		tunnel destination IP address
{next-hop-ip <IP address>}		tunnel next hop IP address
{out-label <NUMBER: 16-1044479>}		tunnel encap label
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <fixed>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tunnel fixed TTL
[recovery-nhop-disjoint <link | none>]		Recovery path next-hop disjointness requirement (default = Link)

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[backup-tunnel <MPLS ingress primary tunnel>]		list of primary tunnels
[reversion-hold-time <SECONDS: 0-3600>]		reversion hold time in seconds
[tunnel-reversion <on | off>]		tunnel reversion behavior

Command	**Access**	**Description**
mpls tunnel set	admin	set static ingress TE-Tunnel
static-ingress <static-ingress>		static ingress tunnel name
[next-hop-ip <IP address>]		tunnel next hop IP address
[out-label <NUMBER: 16-1044479>]		tunnel encap label
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <fixed>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tunnel fixed ttl
[recovery-nhop-disjoint <link | none>]		Recovery path next-hop disjointness requirement (default = Link)
[reversion-hold-time <SECONDS: 0-3600>]		reversion hold time in seconds
[tunnel-reversion <on | off>]		tunnel reversion behavior
[name <Name (no ,) String>]		renaming the tunnel

Command	**Access**	**Description**
mpls tunnel unset	admin	unset static ingress TE-Tunnel
static-ingress <static-ingress>		static ingress tunnel name
[cos-profile]		Default Tunnel COS profile
{ttl-policy}		TTL policy
[fixed-ttl]		tunnel fixed ttl
[recovery-nhop-disjoint]		Recovery path next-hop disjointness requirement
[reversion-hold-time]		reversion hold time in seconds
[tunnel-reversion]		tunnel reversion behavior

Command	**Access**	**Description**
mpls tunnel disable	admin	disable static ingress TE-Tunnel
static-ingress <static-ingress>		static ingress tunnel name

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Command	Access	Description
mpls tunnel enable	admin	enable static ingress TE-Tunnel
static-ingress <static-ingress>		static ingress tunnel name

Command	Access	Description
mpls tunnel delete	admin	delete static ingress TE-Tunnel
static-ingress <static-ingress>		static ingress tunnel name

Command	Access	Description
mpls tunnel switchover	admin	Switchover static ingress TE-Tunnel
static-ingress <static-ingress>		static ingress tunnel name

Command	Access	Description
mpls tunnel create	admin	create static decap TE-Tunnel
static-egress <static-egress>		static egress tunnel name
{src-ip <IP address>}		tunnel source IP address
{in-label <NUMBER: 16-1044479>}		tunnel decap label
[prev-hop-ip <IP address>]		Tunnel previous hop IP address used for AIS monitoring

Command	Access	Description
mpls tunnel set	admin	set static egress TE-Tunnel
static-egress <static-egress>		static egress tunnel name
[in-label <NUMBER: 16-1044479>]		tunnel decap label
[prev-hop-ip <IP address>]		Tunnel previous hop IP address used for AIS monitoring
[name <Name (no ,) String>]		renaming the tunnel

Command	Access	Description
mpls tunnel unset	admin	unset static egress TE-Tunnel
static-egress <static-egress>		static egress tunnel name

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Command	Access	Description
mpls tunnel delete	admin	delete static egress TE-Tunnel
static-egress <static-egress>		static egress tunnel name

Command	Access	Description
mpls tunnel create	admin	create transit TE-Tunnel
static-transit <static-transit>		static transit tunnel name
{dest-ip <IP address>}		tunnel destination IP address
{src-ip <IP address>}		tunnel source IP address
{next-hop-ip <IP address>}		tunnel next hop IP address
{in-label <NUMBER: 16-1044479>}		tunnel in label
{out-label <NUMBER: 16-1044479>}		tunnel out label
{out-explicit-null-label}		egress explicit null label
{out-no-label}		egress no label
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <fixed | decrement>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		fixed TTL value
[prev-hop-ip <IP address>]		tunnel prev hop IP address

Command	Access	Description
mpls tunnel delete	admin	delete static transit TE-Tunnel
static-transit <static-transit>		static transit tunnel name

Command	Access	Description
mpls tunnel disable	admin	disable static transit TE-Tunnel
static-transit <static-transit>		static transit tunnel name

Command	Access	Description
mpls tunnel enable	admin	enable static transit TE-Tunnel
static-transit <static-transit>		static transit tunnel name

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Command	Access	Description
mpls tunnel set	admin	set static transit TE-Tunnel
static-transit <static-transit>		static transit tunnel name
[in-label <NUMBER: 16-1044479>]		tunnel in label
[out-label <NUMBER: 16-1044479>]		tunnel out label
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <fixed | decrement>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		fixed TTL value
[prev-hop-ip <IP address>]		tunnel prev hop IP address
[name <Name (no ,) String>]		renaming the tunnel

Command	Access	Description
mpls tunnel unset	admin	unset static transit TE-Tunnel
static-transit <static-transit>		static transit tunnel name
[cos-profile]		Default Tunnel COS profile
[ttl-policy]		TTL policy
[fixed-ttl]		tunnel fixed ttl

Command	Access	Description
mpls tunnel create	admin	create FRR bypass TE-LSP
frr-bypass-lsp <frr-bypass-lsp>		FRR bypass LSP name
{merge-point-ip <IP address>}		Merge Point IP address
[ip-interface <String>]		IP interface name
[setup-priority <NUMBER: 0-7>]		Setup priority
[hold-priority <NUMBER: 0-7>]		Hold priority
[path <String>]		Path name
[fixed-tc <NUMBER: 0-7>]		Fixed TC value

Command	Access	Description
mpls tunnel delete	admin	delete FRR bypass TE-LSP
frr-bypass-lsp <frr-bypass-lsp>		FRR bypass LSP name

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Command	Access	Description
mpls tunnel disable	admin	disable FRR bypass TE-LSP
frr-bypass-lsp <frr-bypass-lsp>		FRR bypass LSP name

Command	Access	Description
mpls tunnel enable	admin	enable FRR bypass TE-LSP
frr-bypass-lsp <frr-bypass-lsp>		FRR bypass LSP name

Command	Access	Description
mpls tunnel show	limited	show all TE-Tunnels

Command	Access	Description
mpls tunnel show	limited	show all TE-Tunnels
matching-lsp		all TE tunnels
{persist <static | dynamic>}		Tunnel's persistence
{type <ingress | egress | transit>}		Local node's role
[state <up | down>]		tunnel state
[source <IP address>]		tunnel source IP Address
[destination <IP address>]		tunnel destination IP Address
[next-hop <IP address>]		tunnel next hop IP Address
[out-ip-intf <Interface Supports Signals>]		tunnel passing via IP Interface
[in-label <NUMBER: 16-1044479>]		tunnel in-label
[out-label <NUMBER: 16-1044479>]		tunnel out-label
[recovery <protected | unprotected>]		tunnel's recovery type
[role <primary | backup | locally-repaired | active-backup>]		tunnel's current role
[cos-profile <MPLS Tunnel COS Profile>]		Select Tunnel CoS profile name
[class-type <NUMBER: 0-7>]		DSTE class type (ct0-ct7)
[auto-size <enable>]		Auto sizing for this tunnel
[auto-size-interval <MINUTES>]		Down size interval in minutes 5...60
[auto-size-failure <alarm | mbb>]		Auto sizing failure handling for this tunnel
[min-bandwidth <Kbps>]		Minimum bandwidth (Kbps)
[max-bandwidth <Kbps>]		Maximum bandwidth (Kbps)
[increment-bandwidth <Kbps>]		Increment bandwidth (Kbps)

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Command	Access	Description
mpls tunnel show	limited	show static ingress TE-Tunnel
static-ingress <static-ingress>		static ingress tunnel name

Command	Access	Description
mpls tunnel show	limited	show dynamic ingress TE-Tunnel
rsvp-ingress <rsvp-ingress>		dynamic ingress tunnel name

Command	Access	Description
mpls tunnel show	limited	show static egress TE-Tunnels
static-egress <static-egress>		static egress tunnel name

Command	Access	Description
mpls tunnel show	limited	show static transit TE-Tunnels
static-transit <static-transit>		static transit tunnel name
[statistics]		traffic statistics for static transit unidir te-tunnels

Command	Access	Description
mpls tunnel show	limited	show dynamic transit TE-Tunnel
rsvp-transit <rsvp-transit>		dynamic transit tunnel name
[statistics]		traffic statistics for dynamic transit te-tunnels

Command	Access	Description
mpls tunnel show	limited	show dynamic egress TE-Tunnel
rsvp-egress <rsvp-egress>		dynamic egress tunnel name

Command	Access	Description

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mpls tunnel show	admin	show FRR bypass TE-LSPs
frr-bypass-lsp <frr-bypass-lsp>		FRR bypass LSP

Command	**Access**	**Description**
mpls tunnel show	limited	show TE-Tunnel summary counts
resource		TE-Tunnel summary counts
{summary}		Tunnel maximum, configured and operational count summary

Command	**Access**	**Description**
mpls tunnel show	limited	show TE-Tunnel BGP LSP counts
bgp-lsp		BGP LSP instance
resource		TE-Tunnel summary counts
{summary}		BGP LSP count summary

Command	**Access**	**Description**
mpls tunnel clear	admin	clear traffic statistics for static transit TE-Tunnels
static-transit <static-transit>		static transit tunnel name
{statistics}		clear the traffic statistics for static transit unidir te-tunnels

Command	**Access**	**Description**
mpls tunnel clear	admin	clear traffic statistics for dynamic transit TE-Tunnel
rsvp-transit <rsvp-transit>		dynamic transit tunnel name
{statistics}		clear the traffic statistics for dynamic transit te-tunnels

Command	**Access**	**Description**
mpls tunnel create	admin	create bi-directional ingress associated TE-Tunnel

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bidir-ingress-assoc <bidir-ingress-assoc>		bi-directional ingress associated TE-Tunnel name
{forward-tunnel <MPLS ingress tunnel>}		forward tunnel
{reverse-static-tunnel <MPLS egress tunnel>}		static reverse tunnel
{reverse-dyntun-name <String>}		dynamic reverse tunnel name
[bfd-monitor <enable | disable>]		BFD based fault monitoring
[bfd-profile <MPLS BFD Profile>]		BFD profile to be used for this session

Command	**Access**	**Description**
mpls tunnel set	admin	set bi-directional ingress associated TE-Tunnel
bidir-ingress-assoc <bidir-ingress-assoc>		bi-directional ingress TE-Tunnel name
[reverse-dyntun-name <String>]		dynamic reverse tunnel name
[bfd-monitor <enable | disable>]		BFD based fault monitoring
[bfd-profile <MPLS BFD Profile>]		BFD profile to be used for this session

Command	**Access**	**Description**
mpls tunnel unset	admin	unset bi-directional ingress associated TE-Tunnel
bidir-ingress-assoc <bidir-ingress-assoc>		bi-directional ingress TE-Tunnel name
[bfd-monitor]		BFD based fault monitoring
[bfd-profile]		BFD profile to be used for monitoring

Command	**Access**	**Description**
mpls tunnel delete	admin	delete bi-directional ingress associated TE-Tunnel
bidir-ingress-assoc <bidir-ingress-assoc>		bi-directional ingress TE-Tunnel name

Command	**Access**	**Description**
mpls tunnel disable	admin	disable bi-directional ingress associated TE-Tunnel
bidir-ingress-assoc <bidir-ingress-assoc>		bi-directional ingress TE-Tunnel name

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Command	Access	Description
mpls tunnel enable	admin	enable bi-directional ingress associated TE-Tunnel
bidir-ingress-assoc <bidir-ingress-assoc>		bi-directional ingress TE-Tunnel name

Command	Access	Description
mpls tunnel switchover	admin	switchover bi-directional ingress associated TE-Tunnel
bidir-ingress-assoc <bidir-ingress-assoc>		bi-directional ingress TE-Tunnel name

Command	Access	Description
mpls tunnel show	limited	show bi-directional ingress associated TE-Tunnels
matching-assoc		Bi-directional associated TE-Tunnels
[state <up | down>]		associated tunnel state
[destination <IP address>]		tunnel destination IP Address
[next-hop <IP address>]		Forward tunnel next hop IP Address
[out-ip-intf <Interface Supports Signals>]		Forward tunnel initiating via IP Interface
[out-label <NUMBER: 16-1044479>]		Forward tunnel out-label
[in-label <NUMBER: 16-1044479>]		Reverse tunnel in-label
[recovery <protected | unprotected>]		Associated tunnel's recovery type
[role <primary | backup | locally-repaired | active-backup>]		Associated tunnel's current role

Command	Access	Description
mpls tunnel show	limited	show bi-directional ingress associated TE-Tunnel
bidir-ingress-assoc <bidir-ingress-assoc>		bi-directional associated TE-Tunnel name

Command	Access	Description
mpls l2-vpn pw-vccv-profile create	admin	create MPLS Pseudowire VCCV profile
vccv-profile <vccv-profile>		Pseudowire VCCV profile name

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[cc-in-band <on | off>]		Set in-band VCCV control channel (CC Type-1) operation
[cc-ttl-exp <on | off>]		Set TTL-expiry VCCV control channel (CC Type-3) operation
{cc-ciena-oob <on | off>}		Set CIENA proprietary out-of-band VCCV control channel (CC Type-4) operation
[cv-bfd-ach-detect-only <on | off>]		Set ACH based VCCV-CV detect only capability

Command	**Access**	**Description**
mpls l2-vpn pw-vccv-profile set	admin	set MPLS pseudowire VCCV profile
vccv-profile <vccv-profile>		Pseudowire VCCV profile name
[cc-in-band <on | off>]		Set in-band VCCV control channel (CC Type-1) operation
[cc-ttl-exp <on | off>]		Set TTL-expiry VCCV control channel (CC Type-3) operation
[cc-ciena-oob <on | off>]		Set CIENA proprietary out-of-band VCCV control channel (CC Type-4) operation
[cv-bfd-ach-detect-only <on | off>]		Set ACH based VCCV-CV detect only capability

Command	**Access**	**Description**
mpls l2-vpn pw-vccv-profile unset	admin	unset MPLS pseudowire VCCV profile
vccv-profile <vccv-profile>		Pseudowire VCCV profile name
[cc-in-band]		Reset in-band VCCV control channel (CC Type-1) operation
[cc-ttl-exp]		Reset TTL-expiry VCCV control channel (CC Type-3) operation
[cc-ciena-oob]		Reset CIENA proprietary out-of-band VCCV control channel (CC Type-4) operation
[cv-bfd-ach-detect-only]		Set ACH based VCCV-CV detect only capability

Command	**Access**	**Description**
mpls l2-vpn pw-vccv-profile delete	admin	Delete MPLS pseudowire VCCV profile
vccv-profile <vccv-profile>		Pseudowire VCCV profile name

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Command	Access	Description
mpls l2-vpn pw-vccv-profile show	limited	show all Pseudowire VCCV profiles

Command	Access	Description
mpls l2-vpn pw-vccv-profile show	admin	show selected Pseudowire VCCV profile
vccv-profile <vccv-profile>		Pseudowire VCCV profile name

Command	Access	Description
mpls l2-vpn pw-cos-profile create	admin	create MPLS Pseudowire COS profile
cos-profile <cos-profile>		Pseudowire COS profile name
[frame-cos-map <RCOS to FCOS Map>]		Select frame-cos-map
[frame-cos-policy <mapped | fixed>]		frame cos policy
[fixed-tc <NUMBER: 0-7>]		encapsulation fixed TC value
[resolved-cos-map <FCOS to RCOS Map>]		Select resolved-cos-map
[resolved-cos-policy <mapped | fixed>]		resolved cos policy
[resolved-cos-fixed <NUMBER: 0-7>]		fixed resolved CoS value

Command	Access	Description
mpls l2-vpn pw-cos-profile set	admin	set MPLS pseudowire COS profile
cos-profile <cos-profile>		Pseudowire COS profile name
[frame-cos-map <RCOS to FCOS Map>]		Select frame-cos-map
[frame-cos-policy <mapped | fixed>]		frame cos policy
[fixed-tc <NUMBER: 0-7>]		encapsulation fixed TC value
[resolved-cos-map <FCOS to RCOS Map>]		Select resolved-cos-map
[resolved-cos-policy <mapped | fixed>]		resolved cos policy
[resolved-cos-fixed <NUMBER: 0-7>]		fixed resolved CoS value

Command	Access	Description
mpls l2-vpn pw-cos-profile unset	admin	unset MPLS pseudowire COS profile
cos-profile <cos-profile>		Pseudowire COS profile name
[frame-cos-map]		Select frame-cos-map
[frame-cos-policy]		frame cos policy

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[fixed-tc]		encapsulation fixed TC value
[resolved-cos-map]		Select resolved-cos-map
[resolved-cos-policy]		resolved cos policy
[resolved-cos-fixed]		fixed resolved CoS value

Command	**Access**	**Description**
mpls l2-vpn pw-cos-profile delete	admin	Delete MPLS pseudowire COS profile
cos-profile <cos-profile>		Pseudowire COS profile name

Command	**Access**	**Description**
mpls l2-vpn pw-cos-profile show	limited	show all Pseudowire COS profiles

Command	**Access**	**Description**
mpls l2-vpn pw-cos-profile show	limited	show selected Pseudowire COS profile
cos-profile <cos-profile>		Pseudowire COS profile name

Command	**Access**	**Description**
mpls l2-vpn oam-statistics clear	admin	clear oam statistics for all virtual circuits

Command	**Access**	**Description**
mpls l2-vpn oam-statistics clear	admin	clear oam statistics for specific virtual circuit
vc <vc>		VC name

Command	**Access**	**Description**
mpls l2-vpn protection create	admin	create protection virtual circuit
dynamic-vc <dynamic-vc>		VC name
{secondary-pw-id <NUMBER: 1-2147483647>}		Secondary VPN ID
{fec-129}		Select FEC 129
{agi <String>}		Attachment Group Identifier

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{saii <String>}		Source Attachment Individual Identifier
{taii <String>}		Target Attachment Individual Identifier
{primary-vc-name <Virtual Circuit Dynamic MPLS Name>}		primary vc name
{peer <IP address>}		Destination IP address
{ldp-lsp}		Select LDP LSP
{bgp-tunnel}		Select BGP tunnel
{te-tunnel <MPLS ingress primary tunnel>}		Select ingress transport primary TE-Tunnel
{tp-tunnel-ingr-corout <MPLS ingress primary tp corout tunnel>}		Select ingress transport co-routed primary TP-Tunnel
{tp-tunnel-egrs-corout-static <MPLS static egress primary tp-tunnel>}		Select static egress transport co-routed primary TP-Tunnel
{tp-tunnel-egrs-corout-dynamic <Name (no ,) String>}		dynamic egress transport co-routed TP-Tunnel name
{te-tunnel-assoc <MPLS assoc te-tunnel>}		Select ingress transport associated primary TE-Tunnel
{tp-tunnel-assoc <MPLS assoc tp-tunnel>}		Select ingress transport associated primary TP-Tunnel
[pw-cword <off | on>]		Set pseudowire control word usage
[flow-label <off | rx | tx | both>]		Select flow-label usage

Command	**Access**	**Description**
mpls l2-vpn protection switchover	admin	switch to protection pseudowire
dynamic-vc <dynamic-vc>		VC name
{on}		switches from Primary to Secondary and Dis-engages the reversion process
{off}		switches from Secondary to Primary and Re-engages the reversion

Command	**Access**	**Description**
mpls l2-vpn protection show	limited	show all ethernet virtual circuits

Command	**Access**	**Description**
mpls l2-vpn protection create	admin	create static protection virtual circuit
static-vc <static-vc>		VC name
{secondary-pw-id <NUMBER: 1-2147483647>}		Secondary VPN ID

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{primary-vc-name <Virtual Circuit Static MPLS Name>}		primary vc name
{peer <IP address>}		Destination IP address
{in-label <NUMBER: 16-1044479>}		Set MPLS decap label
{out-label <NUMBER: 16-1044479>}		Set MPLS encap label
{ldp-lsp}		Select LDP LSP
{bgp-tunnel}		Select BGP tunnel
{te-tunnel <MPLS ingress primary tunnel>}		Select ingress transport primary TE-Tunnel
{tp-tunnel-ingr-corout <MPLS ingress primary tp corout tunnel>}		Select ingress transport co-routed primary TP-Tunnel
{tp-tunnel-egrs-corout-static <MPLS static egress primary tp-tunnel>}		Select static egress transport co-routed primary TP-Tunnel
{tp-tunnel-egrs-corout-dynamic <Name (no ,) String>}		dynmaic egress transport co-routed TP-Tunnel name
{te-tunnel-assoc <MPLS assoc te-tunnel>}		Select ingress transport associated primary TE-Tunnel
{tp-tunnel-assoc <MPLS assoc tp-tunnel>}		Select ingress transport associated primary TP-Tunnel
[refresh-status-interval <NUMBER: 0-65535>]		Set refresh timer interval
[pw-cword <off | on>]		Set pseudowire control word usage
[bfd-monitor <enable | disable>]		BFD based fault monitoring,default=disable
[bfd-profile <MPLS BFD Profile>]		BFD profile to be used for this session
[flow-label <off | rx | tx | both>]		Select flow-label usage

Command	**Access**	**Description**
mpls l2-vpn protection switchover	admin	switch to protection pseudowire
static-vc <static-vc>		VC name
{on}		switches from Primary to Secondary and Dis-engages the reversion process
{off}		switches from Secondary to Primary and Re-engages the reversion

Command	**Access**	**Description**
mpls l2-vpn create	admin	create static MPLS virtual circuit
static-vc <static-vc>		Set static virtual-circuit name
{pw-id <NUMBER: 1-2147483647>}		Set VPN ID
{peer <IP address>}		Set Destination IP address
{in-label <NUMBER: 16-1044479>}		Set MPLS decap label

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{out-label <NUMBER: 16-1044479>}		Set MPLS encap label
{ldp-lsp}		Select LDP LSP
{bgp-tunnel}		Select BGP tunnel
{te-tunnel <MPLS ingress primary tunnel>}		Select ingress transport primary TE-Tunnel
{tp-tunnel-ingr-corout <MPLS ingress primary tp corout tunnel>}		Select ingress transport co-routed primary TP-Tunnel
{tp-tunnel-egrs-corout-static <MPLS static egress primary tp-tunnel>}		Select static egress transport co-routed primary TP-Tunnel
{tp-tunnel-egrs-corout-dynamic <Name (no ,) String>}		dynamic egress transport co-routed TP-Tunnel name
{te-tunnel-assoc <MPLS assoc te-tunnel>}		Select ingress transport associated primary TE-Tunnel
{tp-tunnel-assoc <MPLS assoc tp-tunnel>}		Select ingress transport associated primary TP-Tunnel
[pw-type <eth-raw | eth-tagged | tdm>]		Select pseudowire type
[tdm-profile <TDM Profile Name>]		Select TDM profile
[pw-mode <mesh | spoke | switching>]		Select pseudowire mode
[mtu <BYTES>]		Set MTU (bytes)
[pw-cword <off | on>]		Set pseudowire control word usage
[status-tlv <off | on>]		Set status tlv
[status-query <off | on>]		Capable of querying remote status
[refresh-status-interval <SECONDS: 0-65535>]		Set refresh timer interval
[pw-reversion <on | off>]		Pseudowire reversion
[reversion-hold-time <SECONDS: 0-3600>]		Set PW reversion hold-down time (secs.)
[bandwidth <Kbps>]		Set PW bandwidth (Kbps)
[pw-vccv-profile <MPLS Pseudowire VCCV Profile>]		Pseudowire VCCV profile name
[pw-cos-profile <MPLS Pseudowire CoS Profile>]		Pseudowire CoS profile name
[bfd-monitor <enable | disable>]		BFD based fault monitoring,default=disable
[bfd-profile <MPLS BFD Profile>]		BFD profile to be used for this session
[pw-group-id <NUMBER: 1-65535>]		Set PW group
[is-infra-pw <yes | no>]		Set Infra PW
[flow-label <off | rx | tx | both>]		Select flow-label usage

Command	**Access**	**Description**
mpls l2-vpn set	admin	Static virtual circuit parameters
static-vc <static-vc>		update static virtual-circuit parameters
[pw-mode <mesh | spoke>]		Select pseudowire mode

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[ldp-lsp]		Select LDP LSP
[bgp-tunnel]		Select BGP tunnel
[te-tunnel <MPLS ingress primary tunnel>]		Select ingress transport primary TE-Tunnel
[tp-tunnel-ingr-corout <MPLS ingress primary tp corout tunnel>]		Select ingress transport co-routed primary TP-Tunnel
[tp-tunnel-egrs-corout-static <MPLS static egress primary tp-tunnel>]		Select static egress transport co-routed primary TP-Tunnel
[tp-tunnel-egrs-corout-dynamic <Name (no ,) String>]		dynamic egress transport co-routed TP-Tunnel name
[te-tunnel-assoc <MPLS assoc te-tunnel>]		Select ingress transport associated primary TE-Tunnel
[tp-tunnel-assoc <MPLS assoc tp-tunnel>]		Select ingress transport associated primary TP-Tunnel
[customer <String[15]>]		customer name
[refresh-status-interval <SECONDS: 0-65535>]		Set refresh timer interval
[tdm-profile <TDM Profile Name>]		Select TDM profile
[pw-cword <off | on>]		Set pseudowire control word usage
[status-query <off | on>]		Set the capability of querying remote status
[pw-reversion <on | off>]		Pseudowire reversion
[reversion-hold-time <SECONDS: 0-3600>]		Set PW reversion hold-down time (secs.)
[bandwidth <Kbps>]		Set PW bandwidth (Kbps)
[pw-vccv-profile <MPLS Pseudowire VCCV Profile>]		Pseudowire VCCV profile name
[pw-cos-profile <MPLS Pseudowire CoS Profile>]		Pseudowire COS profile name
[bfd-monitor <enable | disable>]		BFD based fault monitoring,default=disable
[bfd-profile <MPLS BFD Profile>]		BFD profile to be used for this session
[pw-group-id <NUMBER: 1-65535>]		Set PW group
[name <Name (no ,) String>]		renaming the VC
[flow-label <off | rx | tx | both>]		Select flow-label usage

Command	**Access**	**Description**
mpls l2-vpn unset	admin	Static Pseudowire parameters
static-vc <static-vc>		set dynamic-vc
[pw-mode]		PW mode
[customer]		customer name
[refresh-status-interval]		Unset refresh timer interval
[pw-cword]		Reset pseudowire control word usage
[status-query]		Restore status query default value

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[pw-reversion]		Reset pseudowire reversion
[reversion-hold-time]		Reset PW reversion hold-down time (secs.)
[bandwidth]		Reset PW bandwidth
[pw-vccv-profile]		Pseudowire VCCV profile name
[pw-cos-profile]		Pseudowire CoS profile name
[bfd-monitor]		Reset BFD fault monitoring, default=disable
[bfd-profile]		BFD profile name
[pw-group-id]		Set PW group
[flow-label]		Select of flow-label usage

Command	**Access**	**Description**
mpls l2-vpn create	admin	create LDP signaled virtual circuit
dynamic-vc <dynamic-vc>		Set dynamic virtual-circuit name
{pw-id <NUMBER: 1-2147483647>}		Set VPN ID
{fec-129}		Select FEC 129
{agi <String>}		Attachment Group Identifier
{saii <String>}		Source Attachment Individual Identifier
{taii <String>}		Target Attachment Individual Identifier
{peer <IP address>}		Set Destination IP address
{ldp-lsp}		Select LDP LSP
{bgp-tunnel}		Select BGP tunnel
{te-tunnel <MPLS ingress primary tunnel>}		Select ingress transport primary TE-Tunnel
{tp-tunnel-ingr-corout <MPLS ingress primary tp corout tunnel>}		Select ingress transport co-routed primary TP-Tunnel
{tp-tunnel-egrs-corout-static <MPLS static egress primary tp-tunnel>}		Select static egress transport co-routed primary TP-Tunnel
{tp-tunnel-egrs-corout-dynamic <Name (no ,) String>}		dynamic egress transport co-routed TP-Tunnel name
{te-tunnel-assoc <MPLS assoc te-tunnel>}		Select ingress transport associated primary TE-Tunnel
{tp-tunnel-assoc <MPLS assoc tp-tunnel>}		Select ingress transport associated primary TP-Tunnel
[pw-type <eth-raw | eth-tagged>]		Select pseudowire type
[mtu <BYTES>]		Set MTU (bytes)
[pw-cword <off | on>]		Set pseudowire control word usage
[status-tlv <off | on>]		Set status tlv
[pw-mode <mesh | spoke | switching>]		Select pseudowire mode
[pw-reversion <on | off>]		Pseudowire reversion
[reversion-hold-time <SECONDS: 0-3600>]		Set PW reversion hold-down time (secs.)
[bandwidth <Kbps>]		Set PW bandwidth (Kbps)

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[pw-vccv-profile <MPLS Pseudowire VCCV Profile>]		Pseudowire VCCV profile name
[pw-cos-profile <MPLS Pseudowire CoS Profile>]		Pseudowire CoS profile name
[flow-label <off | rx | tx | both>]		Select flow-label usage

Command	**Access**	**Description**
mpls l2-vpn set	admin	LDP signaled virtual circuit parameters
dynamic-vc <dynamic-vc>		Modify dynamic virtual-circuit attributes
[pw-mode <mesh | spoke>]		Select pseudowire mode
[ldp-lsp]		Select LDP LSP
[bgp-tunnel]		Select BGP tunnel
[te-tunnel <MPLS ingress primary tunnel>]		Select ingress transport primary TE-Tunnel
[tp-tunnel-ingr-corout <MPLS ingress primary tp corout tunnel>]		Select ingress transport co-routed primary TP-Tunnel
[tp-tunnel-egrs-corout-static <MPLS static egress primary tp-tunnel>]		Select static egress transport co-routed primary TP-Tunnel
[tp-tunnel-egrs-corout-dynamic <Name (no ,) String>]		dynamic egress transport co-routed TP-Tunnel name
[te-tunnel-assoc <MPLS assoc te-tunnel>]		Select ingress transport associated primary TE-Tunnel
[tp-tunnel-assoc <MPLS assoc tp-tunnel>]		Select ingress transport associated primary TP-Tunnel
[customer <String[15]>]		Set customer name
[pw-cword <off | on>]		Set pseudowire control word usage
[pw-reversion <on | off>]		Pseudowire reversion
[reversion-hold-time <SECONDS: 0-3600>]		Set PW reversion hold-down time (secs.)
[bandwidth <Kbps>]		Set PW bandwidth (Kbps)
[pw-vccv-profile <MPLS Pseudowire VCCV Profile>]		Pseudowire VCCV profile name
[pw-cos-profile <MPLS Pseudowire CoS Profile>]		Pseudowire CoS profile name
[flow-label <off | rx | tx | both>]		Select flow-label usage

Command	**Access**	**Description**
mpls l2-vpn unset	admin	LDP signaled Pseudowire parameters
dynamic-vc <dynamic-vc>		set dynamic-vc
{pw-mode}		PW mode
{customer}		customer name

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[pw-cword]		Reset pseudowire control word usage
[pw-reversion]		Reset pseudowire reversion
[reversion-hold-time]		Reset PW reversion hold-down time (secs.)
[bandwidth]		Reset PW bandwidth
[pw-vccv-profile]		Pseudowire VCCV profile name
[pw-cos-profile]		Pseudowire CoS profile name
[flow-label]		Reset flow-label usage

Command	**Access**	**Description**
mpls l2-vpn delete	admin	delete vc
vc <vc>		delete vc

Command	**Access**	**Description**
mpls l2-vpn enable	admin	enable pseudowire
vc <vc>		VC name

Command	**Access**	**Description**
mpls l2-vpn disable	admin	disable pseudowire
vc <vc>		VC name

Command	**Access**	**Description**
mpls l2-vpn show	limited	show all ethernet virtual circuits

Command	**Access**	**Description**
mpls l2-vpn show	limited	show all matched ethernet virtual circuits
matching-vc		all matching VCs
{persist <static | dynamic>}		VC's persistence
[state <up | down>]		VC state
{pw-id <NUMBER>}		VPN Id
[destination <IP address>]		VC destination IP Address
[fec-129]		VC's Fec 129
[agi <String>]		Attachment Group Identifier

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[saii <String>]		Source Attachment Individual Identifier
[taii <String>]		Target Attachment Individual Identifier
[in-label <NUMBER: 16-1044479>]		VC in-label
[out-label <NUMBER: 16-1044479>]		VC out-label
[recovery <protected | unprotected>]		VC's recovery type
[role <primary | backup | standalone>]		VC's current role
[te-tunnel <MPLS ingress primary tunnel>]		Select ingress transport primary TE-Tunnel
[tp-tunnel-ingr-corout <MPLS ingress primary tp corout tunnel>]		Select ingress transport co-routed primary TP-Tunnel
[tp-tunnel-egrs-corout-static <MPLS static egress primary tp-tunnel>]		Select static egress transport co-routed primary TP-Tunnel
[tp-tunnel-egrs-corout-dynamic <MPLS dynamic Egress corouted bi-dir tp-tunnel>]		dynamic egress transport co-routed primary TP-Tunnel name
[te-tunnel-assoc <MPLS assoc te-tunnel>]		Select ingress transport associated primary TE-Tunnel
[tp-tunnel-assoc <MPLS assoc tp-tunnel>]		Select ingress transport associated primary TP-Tunnel
[pw-type <eth-raw | eth-tagged | tdm>]		Select pseudowire type
[pw-mode <mesh | spoke | switching>]		Select pseudowire mode
[mtu <BYTES>]		Select MTU (bytes)
[status-tlv <off | on>]		Select Status TLV settings
[pw-vccv-profile <MPLS Pseudowire VCCV Profile>]		Select Pseudowire VCCV profile name
[pw-cos-profile <MPLS Pseudowire CoS Profile>]		Select Pseudowire CoS profile name
[tdm-profile <TDM Profile Name>]		Select TDM profile name

Command	**Access**	**Description**
mpls l2-vpn show	limited	show all matched ethernet virtual circuits
matching-vc-by-vs		all matching VCs by VS
[vs <Virtual Switch Ethernet Name>]		virtual switch name
{persist <static | dynamic>}		VC's persistence
[state <up | down>]		VC state
{pw-id <NUMBER>}		VPN Id
[destination <IP address>]		VC destination IP Address
[in-label <NUMBER: 16-1044479>]		VC in-label
[out-label <NUMBER: 16-1044479>]		VC out-label
[recovery <protected | unprotected>]		VC's recovery type
[role <primary | backup | standalone>]		VC's current role
[te-tunnel <MPLS ingress primary tunnel>]		Select ingress transport primary TE-Tunnel

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[tp-tunnel-ingr-corout <MPLS ingress primary tp corout tunnel>]		Select ingress transport co-routed primary TP-Tunnel
[tp-tunnel-egrs-corout-static <MPLS static egress primary tp-tunnel>]		Select static egress transport co-routed primary TP-Tunnel
[tp-tunnel-egrs-corout-dynamic <MPLS dynamic Egress corouted bi-dir tp-tunnel>]		dynamic egress transport co-routed primary TP-Tunnel name
[te-tunnel-assoc <MPLS assoc te-tunnel>]		Select ingress transport associated primary TE-Tunnel
[tp-tunnel-assoc <MPLS assoc tp-tunnel>]		Select ingress transport associated primary TP-Tunnel
[pw-type <eth-raw | eth-tagged | tdm>]		Select pseudowire type
[pw-mode <mesh | spoke | switching>]		Select pseudowire mode
[mtu <BYTES>]		Select MTU (bytes)
[status-tlv <off | on>]		Select Status TLV settings
[pw-vccv-profile <MPLS Pseudowire VCCV Profile>]		Select Pseudowire VCCV profile name
[pw-cos-profile <MPLS Pseudowire CoS Profile>]		Select Pseudowire CoS profile name
[tdm-profile <TDM Profile Name>]		Select TDM profile name

Command	**Access**	**Description**
mpls l2-vpn show	limited	show PW
vc <vc>		VC name
[statistics]		show traffic statistics for static and dynamic VCs

Command	**Access**	**Description**
mpls l2-vpn show	limited	show pseudowires by customer name
customer <customer>		Customer name

Command	**Access**	**Description**
mpls l2-vpn show	limited	show VC nexthops
vc-nexthops		VC nexthops

Command	**Access**	**Description**

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mpls l2-vpn show	limited	show VC VIFs
vc-vifs		VC VIFs

Command	**Access**	**Description**
mpls l2-vpn show	limited	show L2-VPN VC resource counts
resource		VC resource counts
{summary}		VC maximum, configured and operational count summary

Command	**Access**	**Description**
mpls l2-vpn clear	admin	clear PW Traffic Statistics
vc <vc>		VC name
{statistics}		clear traffic statistics for static and dynamic VCs

Command	**Access**	**Description**
mpls l2-vpn show	limited	show VC groups
vc-group		VC Groups
{group-id <MPLS Virtual Circuit Group>}		PWE Group Id

Command	**Access**	**Description**
mpls traceroute	admin	traceroute ingress MPLS-TE tunnel
tunnel <tunnel>		ingress TE-tunnel name
[timeout <MILLISECONDS: 500-10000>]		timeout in milliseconds
[ttl <NUMBER: 1-30>]		time-to-live
[fec-stack-validation <on | off>]		enable or disable fec validation
[reverse-fec-stack-validation <on | off>]		enable or disable fec validation in the reverse path
[dsmap-validation <on | off>]		enable or disable downstreamMap validation

Command	**Access**	**Description**
mpls traceroute	admin	traceroute ingress MPLS-TP Bi-directional tunnel

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tp-tunnel-ingress-corout <tp-tunnel-ingress-corout>		ingress Bi-directional TP-tunnel name
[timeout <MILLISECONDS: 500-10000>]		timeout in milliseconds
[ttl <NUMBER: 1-255>]		time-to-live
[reply-mode <ipv4 | lsp>]		Different types of reply mode. DEFAULT: LSP
[encap <ip/udp | non-ip/udp>]		Different types of encapsulation
[fec-stack-validation <on | off>]		enable or disable fec validation
[reverse-fec-stack-validation <on | off>]		enable or disable fec validation in the reverse path
[dsmap-validation <on | off>]		enable or disable downstreamMap validation

Command	**Access**	**Description**
mpls traceroute	admin	traceroute ingress MPLS-TP Uni-directional tunnel
tp-tunnel-ingress-unidir <tp-tunnel-ingress-unidir>		ingress Uni-directional TP-tunnel name
[timeout <MILLISECONDS: 500-10000>]		timeout in milliseconds
[ttl <NUMBER: 1-255>]		time-to-live
[fec-stack-validation <on | off>]		enable or disable fec validation
[reverse-fec-stack-validation <on | off>]		enable or disable fec validation in the reverse path
[dsmap-validation <on | off>]		enable or disable downstreamMap validation

Command	**Access**	**Description**
mpls traceroute	admin	traceroute egress MPLS-TP Bi-directional tunnel
tp-tunnel-egress-corout <tp-tunnel-egress-corout>		egress Bi-directional TP-tunnel name
[timeout <MILLISECONDS: 500-10000>]		timeout in milliseconds
[ttl <NUMBER: 1-255>]		time-to-live
[reply-mode <ipv4 | lsp>]		Different types of reply mode. DEFAULT: LSP
[encap <ip/udp | non-ip/udp>]		Different types of encapsulation
[fec-stack-validation <on | off>]		enable or disable fec validation
[reverse-fec-stack-validation <on | off>]		enable or disable fec validation in the reverse path
[dsmap-validation <on | off>]		enable or disable downstreamMap validation

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Command	Access	Description
mpls traceroute	admin	traceroute MPLS-TE Bi-directional associated tunnel
assoc-lsp <assoc-lsp>		ingress bi-directional associated TE-Tunnel name
[timeout <MILLISECONDS: 500-10000>]		timeout in milliseconds
[ttl <NUMBER: 1-255>]		time-to-live
[fec-stack-validation <on | off>]		enable or disable fec validation
[reverse-fec-stack-validation <on | off>]		enable or disable fec validation in the reverse path
[dsmap-validation <on | off>]		enable or disable downstreamMap validation

Command	Access	Description
mpls traceroute	admin	traceroute MPLS-TP Bi-directional associated tunnel
assoc-tp-lsp <assoc-tp-lsp>		ingress bi-directional associated TP-Tunnel name
[timeout <MILLISECONDS: 500-10000>]		timeout in milliseconds
[ttl <NUMBER: 1-255>]		time-to-live
[fec-stack-validation <on | off>]		enable or disable fec validation
[reverse-fec-stack-validation <on | off>]		enable or disable fec validation in the reverse path
[dsmap-validation <on | off>]		enable or disable downstreamMap validation

Command	Access	Description
mpls traceroute	admin	traceroute MPLS-TP virtual-circuit
vc <vc>		mpls pseudowire name
[timeout <MILLISECONDS: 500-10000>]		timeout in milliseconds
[ttl <NUMBER: 1-255>]		time-to-live
[segment <NUMBER: 1-255>]		last segment number
[encap <ip/udp | non-ip/udp>]		Different types of encapsulation
[fec-stack-validation <on | off>]		enable or disable fec validation
[reverse-fec-stack-validation <on | off>]		enable or disable fec validation in the reverse path
[dsmap-validation <on | off>]		enable or disable downstreamMap validation

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Command	Access	Description
mpls traceroute	admin	traceroute bgp-signalled LSP

Command	Access	Description
mpls traceroute	admin	traceroute bgp-signalled LSP
bgp		bgp lsp
{fec <IP address in CIDR notation>}		bgp lsp dest ip prefix
{lsp <MPLS Bgp Lsp Ingress>}		bgp lsp tunnel
[timeout <MILLISECONDS: 500-10000>]		timeout in milliseconds
[ttl <NUMBER: 1-255>]		time-to-live
[reply-mode <ipv4 | lsp>]		Different types of reply mode. DEFAULT: LSP
[fec-stack-validation <on | off>]		enable or disable fec validation
[reverse-fec-stack-validation <on | off>]		enable or disable fec validation in the reverse path
[dsmap-validation <on | off>]		enable or disable downstreamMap validation

Command	Access	Description
mpls traceroute	admin	traceroute ldp-lsp tunnel
ldp-lsp <ldp-lsp>		tunnel dest ip address
[timeout <MILLISECONDS: 500-10000>]		timeout in milliseconds
[ttl <NUMBER: 1-255>]		time-to-live
[reply-mode <ipv4 | lsp>]		Different types of reply mode. DEFAULT: LSP
[fec-stack-validation <on | off>]		enable or disable fec validation
[reverse-fec-stack-validation <on | off>]		enable or disable fec validation in the reverse path
[dsmap-validation <on | off>]		enable or disable downstreamMap validation

Command	Access	Description
mpls ping	admin	ping ingress MPLS-TE tunnel
tunnel <tunnel>		ingress TE-tunnel name
[count <NUMBER: 1-100>]		number of packets to send. DEFAULT: 5
[packet-size <NUMBER: 96-1464>]		packet size. DEFAULT: Static Tunnel = 118 bytes, Dynamic Tunnel = 96 bytes
[timeout <MILLISECONDS: 500-10000>]		timeout in milliseconds. DEFAULT: 1000 ms
[ttl <NUMBER: 1-255>]		time-to-live. DEFAULT: 255

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[fec-stack-validation <on | off>]		enable or disable fec validation
[reverse-fec-stack-validation <on | off>]		enable or disable fec validation in the reverse path

Command	**Access**	**Description**
mpls ping	admin	ping ingress MPLS-TP Bi-directional tunnel
tp-tunnel-ingress-corout <tp-tunnel-ingress-corout>		ingress Bi-directional TP-tunnel name
[count <NUMBER: 1-100>]		number of packets to send. DEFAULT: 5
[packet-size <BYTES>]		packet size. DEFAULT: Static Tunnel = 118 bytes, Dynamic Tunnel = 96 bytes
[timeout <MILLISECONDS: 500-10000>]		timeout in milliseconds. DEFAULT: 1000 ms
[ttl <NUMBER: 1-255>]		time-to-live. DEFAULT: 255
[reply-mode <ipv4 | lsp>]		Different types of reply mode. DEFAULT: LSP
[encap <ip/udp | non-ip/udp>]		Different types of encapsulation. DEFAULT: IP/UDP Encap
[fec-stack-validation <on | off>]		enable or disable fec validation
[reverse-fec-stack-validation <on | off>]		enable or disable fec validation in the reverse path

Command	**Access**	**Description**
mpls ping	admin	ping ingress MPLS-TP Uni-directional tunnel
tp-tunnel-ingress-unidir <tp-tunnel-ingress-unidir>		ingress Uni-directional TP-tunnel name
[count <NUMBER: 1-100>]		number of packets to send. DEFAULT: 5
[packet-size <BYTES>]		packet size. DEFAULT: Static Tunnel = 118 bytes, Dynamic Tunnel = 96 bytes
[timeout <MILLISECONDS: 500-10000>]		timeout in milliseconds. DEFAULT: 1000 ms
[ttl <NUMBER: 1-255>]		time-to-live. DEFAULT: 255
[fec-stack-validation <on | off>]		enable or disable fec validation
[reverse-fec-stack-validation <on | off>]		enable or disable fec validation in the reverse path

Command	**Access**	**Description**
mpls ping	admin	ping egress MPLS-TP Bi-directional tunnel
tp-tunnel-egress-corout <tp-tunnel-egress-corout>		egress Bi-directional TP-tunnel name

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[count <NUMBER: 1-100>]		number of packets to send. DEFAULT: 5
[packet-size <BYTES>]		packet size. DEFAULT: Static Tunnel = 118 bytes, Dynamic Tunnel = 96 bytes
[timeout <MILLISECONDS: 500-10000>]		timeout in milliseconds. DEFAULT: 1000 ms
[ttl <NUMBER: 1-255>]		time-to-live. DEFAULT: 255
[reply-mode <ipv4 | lsp>]		Different types of reply mode. DEFAULT: LSP
[encap <ip/udp | non-ip/udp>]		Different types of encapsulation. DEFAULT: IP/UDP Encap
[fec-stack-validation <on | off>]		enable or disable fec validation
[reverse-fec-stack-validation <on | off>]		enable or disable fec validation in the reverse path

Command	**Access**	**Description**
mpls ping	admin	ping MPLS-TE Bi-directional associated tunnel
assoc-lsp <assoc-lsp>		ingress bi-directional associated TE-Tunnel name
[count <NUMBER: 1-100>]		number of packets to send. DEFAULT: 5
[packet-size <BYTES>]		packet size. DEFAULT: Static Tunnel = 118 bytes, Dynamic Tunnel = 96 bytes
[timeout <MILLISECONDS: 500-10000>]		timeout in milliseconds. DEFAULT: 1000 ms
[ttl <NUMBER: 1-255>]		time-to-live. DEFAULT: 255
[reply-mode <ipv4 | lsp>]		Different types of reply mode. DEFAULT: LSP
[fec-stack-validation <on | off>]		enable or disable fec validation
[reverse-fec-stack-validation <on | off>]		enable or disable fec validation in the reverse path

Command	**Access**	**Description**
mpls ping	admin	ping MPLS-TP Bi-directional associated tunnel
assoc-tp-lsp <assoc-tp-lsp>		ingress bi-directional associated TP-Tunnel names
[count <NUMBER: 1-100>]		number of packets to send. DEFAULT: 5
[packet-size <BYTES>]		packet size. DEFAULT: Static Tunnel = 118 bytes, Dynamic Tunnel = 96 bytes
[timeout <MILLISECONDS: 500-10000>]		timeout in milliseconds. DEFAULT: 1000 ms
[ttl <NUMBER: 1-255>]		time-to-live. DEFAULT: 255
[reply-mode <ipv4 | lsp>]		Different types of reply mode. DEFAULT: LSP
[fec-stack-validation <on | off>]		enable or disable fec validation
[reverse-fec-stack-validation <on | off>]		enable or disable fec validation in the reverse path

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Command	Access	Description
mpls ping	admin	ping ldp-lsp tunnel
ldp-lsp <ldp-lsp>		tunnel dest ip address
[count <NUMBER: 1-100>]		number of packets to send. DEFAULT: 5
[packet-size <NUMBER: 96-1464>]		packet size. DEFAULT: Static Tunnel = 118 bytes, Dynamic Tunnel = 96 bytes
[timeout <MILLISECONDS: 500-10000>]		timeout in milliseconds. DEFAULT: 1000 ms
[ttl <NUMBER: 1-255>]		time-to-live. DEFAULT: 255
[reply-mode <ipv4 | lsp>]		Different types of reply mode. DEFAULT: LSP
[fec-stack-validation <on | off>]		enable or disable fec validation
[reverse-fec-stack-validation <on | off>]		enable or disable fec validation in the reverse path

Command	Access	Description
mpls ping	admin	ping bgp-signalled LSP

Command	Access	Description
mpls ping	admin	ping bgp-signalled LSP
bgp		bgp lsp
{fec <IP address in CIDR notation>}		bgp lsp dest ip prefix
{lsp <MPLS Bgp Lsp Ingress>}		bgp lsp tunnel
[count <NUMBER: 1-100>]		number of packets to send. DEFAULT: 5
[packet-size <NUMBER: 96-1464>]		packet size. DEFAULT: Static Tunnel = 118 bytes, Dynamic Tunnel = 96 bytes
[timeout <MILLISECONDS: 500-10000>]		timeout in milliseconds. DEFAULT: 1000 ms
[ttl <NUMBER: 1-255>]		time-to-live. DEFAULT: 255
[reply-mode <ipv4 | lsp>]		Different types of reply mode. DEFAULT: LSP
[fec-stack-validation <on | off>]		enable or disable fec validation
[reverse-fec-stack-validation <on | off>]		enable or disable fec validation in the reverse path

Command	Access	Description
mpls ping	admin	ping MPLS virtual-circuit
vc <vc>		mpls pseudowire name

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[count <NUMBER: 1-100>]		number of packets to send. DEFAULT: 5
[packet-size <BYTES>]		packet size. DEFAULT: 138 bytes
[timeout <MILLISECONDS: 500-10000>]		timeout in milliseconds. DEFAULT: 1000 ms
[fec-128-len <14 | 16>]		Uses 16 bytes for FEC 128 Length. DEFAULT: 14 bytes
[reply-mode <ipv4 | lsp>]		Different types of reply mode. DEFAULT: no-op if VC is created over TE tunnels. For TP tunnels, LSP
[encap <ip/udp | non-ip/udp>]		Different types of encapsulation
[segment <NUMBER: 1-255>]		last segment number. DEFAULT: 255
[seg-src-ip <IP address>]		last segment source ip address
[seg-dest-ip <IP address>]		last segment destination ip address
[seg-pw-id <NUMBER: 1-2147483647>]		last segment pw id. DEFAULT: LSP
[fec-stack-validation <on | off>]		enable or disable fec validation
[reverse-fec-stack-validation <on | off>]		enable or disable fec validation in the reverse path

mstp

Multiple Spanning Tree Protocol (MSTP)

Command	Access	Description
mstp clear	admin	clear MSTP port statistics
port <port>		port list
{statistics}		statistics

Command	Access	Description
mstp clear	admin	clear MSTP statistics on all ports
{statistics}		statistics

Command	Access	Description
mstp create	admin	create a Multiple Spanning Tree Instance (MSTI)
{msti <NUMBER: 1-64>}		MSTI
[bridge-priority <NUMBER: 0-15>]		MSTP bridge priority

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Command	Access	Description
mstp delete	admin	delete an MSTI
msti <msti>		MSTI identifier

Command	Access	Description
mstp disable	admin	disable MSTP globally

Command	Access	Description
mstp disable	admin	disable MSTP on specified ports
{port <Port list>}		port list

Command	Access	Description
mstp disable	admin	disable an MSTI
msti <msti>		MSTI identifier

Command	Access	Description
mstp enable	admin	enable MSTP globally

Command	Access	Description
mstp enable	admin	enable MSTP on specified ports
{port <Port list>}		port list

Command	Access	Description
mstp enable	admin	enable an MSTI
msti <msti>		MSTI identifier

Command	Access	Description

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mstp set	admin	set MSTP attributes
{forward-delay <SECONDS: 4-30>}		set bridge MSTP forward delay timer
{hello-time <SECONDS: 1-10>}		set bridge MSTP hello time
{loopback-blocking <on | off>}		set bridge MSTP loopback port blocking
{max-age <SECONDS: 6-40>}		set bridge MSTP maximum age time
{max-hops <NUMBER: 6-40>}		set bridge MSTP maximum hops
{mode <mstp | rstp>}		set bridge MSTP mode
{path-cost-def <stp8021d1998 | stp8021t2001>}		set bridge MSTP path-cost default
{tx-hold-count <SECONDS: 1-10>}		set bridge MSTP TX hold count
{mst-cfg-id-name <String[32]>}		MSTP config id name
{mst-cfg-id-rev-level <NUMBER: 0-65535>}		set MSTP configuration ID revision level
{pvst-notification <on | off>}		turn on or off PVST notifications

Command	**Access**	**Description**
mstp unset	admin	unset MSTP attributes
{forward-delay}		unset bridge MSTP forward delay timer to the default
{hello-time}		unset bridge MSTP hello time to default
{loopback-blocking}		unset bridge MSTP loopback port blocking
{max-age}		set bridge mstp maximum age to default
{max-hops}		set bridge mstp maximum hops to default
{path-cost-def}		unset bridge MSTP path-cost default
{tx-hold-count}		unset bridge MSTP Tx hold count

Command	**Access**	**Description**
mstp set	admin	set MSTP Common and Internal Spanning Tree (CIST) attributes
cist		CIST identifier
{bridge-priority <NUMBER: 0-15>}		set CIST bridge-priority (lowest priority designates the root bridge)

Command	**Access**	**Description**
mstp unset	admin	unset MSTP CIST attributes
cist		CIST identifier
{bridge-priority}		unset CIST bridge-priority

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Command	Access	Description
mstp set	admin	set MSTP MSTI attributes
msti <msti>		MSTI identifier
{bridge-priority <NUMBER: 0-15>}		set MSTI bridge-priority

Command	Access	Description
mstp unset	admin	unset MSTP MSTI attributes
msti <msti>		MSTI identifier
{bridge-priority}		unset MSTI bridge-priority

Command	Access	Description
mstp set	admin	set MSTP attributes
mst-cfg-id-vlan-mapping <mst-cfg-id-vlan-mapping>		MSTP configuration ID VLAN mapping
{cist}		map VLANs to the CIST
{msti <NUMBER: 1-64>}		map VLANs to the MSTI

Command	Access	Description
mstp set	admin	set MSTP port attributes
port <port>		port list
{dynamic-ext-path-cost <on | off>}		turn dynamic external port cost on/off
{edge-port <on | off>}		turn port edge port state on/off
{migration-check}		turn port migration check on/off
{ext-path-cost <NUMBER: 1-200000000>}		set port MSTP external path cost
{point-point-mac <auto | force-false | force-true>}		set point-to-point MAC mode
{auto-edge <on | off>}		turn auto edge on/off
{restricted-role <on | off>}		turn restricted role on/off
{restricted-tcn <on | off>}		turn restricted TCN on/off

Command	Access	Description
mstp unset	admin	unset MSTP port attributes

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port <port>		port list
{dynamic-ext-path-cost}		turn dynamic external port cost to default
{ext-path-cost}		set port MSTP external path cost
{point-point-mac}		unset point-to-point MAC mode

Command	Access	Description
mstp set	admin	set port CIST attributes
cist-port		CIST identifier
{port-priority <NUMBER: 0-15>}		CIST port priority
{int-path-cost <NUMBER: 1-200000000>}		CIST internal port path cost, default: 20000
{dynamic-int-path-cost <on | off>}		turn dynamic internal port cost on/off
{port <Port list>}		port list

Command	Access	Description
mstp unset	admin	unset port CIST attributes
cist-port		CIST identifier
{port-priority}		CIST port priority
{int-path-cost}		CIST internal port path cost, default: 20000
{dynamic-int-path-cost}		turn dynamic internal port cost on/off
{port <Port list>}		port list

Command	Access	Description
mstp set	admin	set port MSTI attributes
msti-port <msti-port>		MSTI identifier
{port-priority <NUMBER: 0-15>}		MSTI port priority
{int-path-cost <NUMBER: 1-200000000>}		MSTI internal port path cost, default: 20000
{dynamic-int-path-cost <on | off>}		turn dynamic internal port cost on/off
{port <Port list>}		port list

Command	Access	Description
mstp unset	admin	unset port msti attributes
msti-port <msti-port>		MSTI identifier
{port-priority}		MSTI port priority
{int-path-cost}		MSTI internal port path cost, default: 20000

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{dynamic-int-path-cost}		turn dynamic internal port cost on/off
{port <Port list>}		port list

Command	Access	Description
mstp show	limited	show MSTP
{bridge}		show bridge
{cist}		show CIST
{statistics}		show statistics

Command	Access	Description
mstp show	limited	show MSTP port
port <port>		port list
{statistics}		show port statistics
{state-machine}		show port state machine

Command	Access	Description
mstp show	limited	show MSTI port
msti <msti>		MSTI identifier

Command	Access	Description
mstp show	limited	show MST configuration ID
mst-cfg-id		MST configuration ID
{vlan-mapping-table}		show MST configuration ID XST to VLAN mapping table
{xst-mapping-table}		show MST configuration ID VLAN to XST mapping table

multicast-services

multicast services group

Command	Access	Description
multicast-services channel-stream add	admin	add channel-stream groups

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vlan <vlan>		VLAN to add group for
{group-address <IP multicast address range>}		multicast IP group address(s)

Command	**Access**	**Description**
multicast-services channel-stream add	admin	add channel-stream group
vs <vs>		VS to add group for
{group-address <IP multicast address range>}		multicast IP group address(s)

Command	**Access**	**Description**
multicast-services channel-stream remove	admin	remove channel-stream group
vlan <vlan>		VLAN to remove group from
{group-address <IP multicast address range>}		multicast IP group address

Command	**Access**	**Description**
multicast-services channel-stream remove	admin	remove channel-stream group
vs <vs>		VS to remove group from
{group-address <IP multicast address range>}		multicast IP group address

Command	**Access**	**Description**
multicast-services channel-stream exclude	admin	exclude port from channel-stream
vlan <vlan>		VLAN to add group for
{port <Port list>}		port

Command	**Access**	**Description**
multicast-services channel-stream exclude	admin	exclude port from channel-stream
vs <vs>		VS to add group for
{port <Port list>}		port
{mpls-vc <VS-Attached MPLS Virtual Circuit Name>}		mpls-vc

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Command	Access	Description
multicast-services channel-stream include	admin	include port with channel-stream
vlan <vlan>		VLAN to add group for
{port <Port list>}		port

Command	Access	Description
multicast-services channel-stream include	admin	include port with channel-stream
vs <vs>		VS to add group for
{port <Port list>}		port
{mpls-vc <VS-Attached MPLS Virtual Circuit Name>}		mpls-vc

Command	Access	Description
multicast-services igmp-snooping disable	admin	disable snooping services

Command	Access	Description
multicast-services igmp-snooping disable	admin	disable snooping services on a VLAN
vlan <vlan>		VLAN(s) on which to disable igmp-snooping

Command	Access	Description
multicast-services igmp-snooping disable	admin	disable snooping services on a VLAN
vs <vs>		VS(s) on which to disable igmp-snooping

Command	Access	Description
multicast-services igmp-snooping enable	admin	enable snooping services on a switch

Command	Access	Description
multicast-services igmp-snooping enable	admin	enable snooping services on a switch
vlan <vlan>		VLAN(s) on which to enable igmp-snooping

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Command	Access	Description
multicast-services igmp-snooping enable	admin	enable snooping services on a switch
vs <vs>		VS(s) on which to enable igmp-snooping

Command	Access	Description
multicast-services igmp-snooping set	admin	set multicast attributes for a VLAN access
vlan <vlan>		VLAN(s) to configure
{active-linger-timeout <SECONDS: 0-300>}		seconds, default 30
{default-router-port <Port>}		set default router port
{fork <on | off>}		fork igmp frames, default off
{last-member-query-interval <DECISECONDS>}		deciseconds, default 10
{leave-mode <fast | inquisitive>}		how to handle leave message, default fast
{linger-timeout <SECONDS: 10-300>}		seconds, default 120
{server-topology <centralized | distributed>}		centralized or distributed, default centralized
{priority <NUMBER: 0-7>}		layer-2 packet priority (0-7), default 7
{querier-compatibility-mode <v2 | v3>}		protocol querier compatibility mode, default v3
{query-delay <DECISECONDS>}		deciseconds, default 10
{query-engine <on | off>}		query engine, default off
{query-interval <SECONDS: 10-31744>}		seconds, default 125
{query-ip-source-addr <IP address>}		query IP source address
{query-response-interval <DECISECONDS>}		deciseconds, default 100
{rapid-recovery-mode <on | off>}		rapid query mode, default off
{robustness <NUMBER: 1-2>}		robustness, default 2
{router-address-range <IP multicast address range>}		group address range reserved for router range (224.0.0.3 - 239.255.255.255)
{router-query-interval <SECONDS: 10-31744>}		seconds, default 250

Command	Access	Description
multicast-services igmp-snooping set	admin	set multicast attributes for a VS access
vs <vs>		VS(s) to configure
{active-linger-timeout <SECONDS: 0-300>}		seconds, default 30
{default-router-port <Port>}		set default router port

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{default-router-mpls-vc <VS-Attached MPLS Virtual Circuit Name>}		set default router mpls-vc
{last-member-query-interval <DECISECONDS>}		deciseconds, default 10
{leave-mode <fast | inquisitive>}		how to handle leave message, default fast
{linger-timeout <SECONDS: 10-300>}		seconds, default 120
{server-topology <centralized | distributed>}		centralized or distributed, default centralized
{priority <NUMBER: 0-7>}		layer-2 packet priority (0-7), default 7
{querier-compatibility-mode <v2 | v3>}		protocol querier compatibility mode, default v3
{query-delay <DECISECONDS>}		deciseconds, default 10
{query-engine <on | off>}		query engine, default off
{query-interval <SECONDS: 10-31744>}		seconds, default 125
{query-ip-source-addr <IP address>}		query IP source address
{query-response-interval <DECISECONDS>}		deciseconds, default 100
{rapid-recovery-mode <on | off>}		rapid query mode, default off
{robustness <NUMBER: 1-2>}		robustness, default 2
{router-address-range <IP multicast address range>}		group address range reserved for router range (224.0.0.3 - 239.255.255.255)
{router-query-interval <SECONDS: 10-31744>}		seconds, default 250

Command	**Access**	**Description**
multicast-services igmp-snooping unset	admin	unset IGMP to default value
vlan <vlan>		VLAN(s) on which to act
{default-router-port}		default router port
{fork}		fork igmp frames, default off
{instance-timers}		Reset all multicast service timers on that instance
{leave-mode}		how to handle leave message, default fast
{priority}		layer-2 packet priority (0-7), default 7
{querier-compatibility-mode}		protocol querier compatibility mode, default v3
{query-engine}		query engine, default off
{query-ip-source-addr}		query IP source address
{rapid-recovery-mode}		rapid query mode, default off
{robustness}		robustness, default 2
{router-address-range}		router address range
{server-topology}		centralized or distributed, default centralized

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Command	Access	Description
multicast-services igmp-snooping unset	admin	unset IGMP to default value
vs <vs>		VS(s) on which to act
{default-router-interface}		default router interface
{instance-timers}		Reset all multicast service timers on that instance
{leave-mode}		how to handle leave message, default fast
{priority}		layer-2 packet priority (0-7), default 7
{querier-compatibility-mode}		protocol querier compatibility mode, default v3
{query-engine}		query engine, default off
{query-ip-source-addr}		query IP source address
{rapid-recovery-mode}		rapid query mode, default off
{robustness}		robustness, default 2
{router-address-range}		router address range
{server-topology}		centralized or distributed, default centralized

Command	Access	Description
multicast-services server-interface add	admin	add port to server interface group
vlan <vlan>		VLANs on which to add server interface
[port <Port list>]		port

Command	Access	Description
multicast-services server-interface add	admin	add port/mpls-vc to server interface group
vs <vs>		VSs on which to add server interface
[port <Port list>]		port
[mpls-vc <VS-Attached MPLS Virtual Circuit Name>]		mpls-vc

Command	Access	Description
multicast-services server-interface remove	admin	remove port from server port group
vlan <vlan>		VLANs from which to remove server port
[port <Port list>]		port

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Command	Access	Description
multicast-services server-interface remove	admin	remove port/mpls-vc from server interface group
vs <vs>		VSs from which to remove server interface
[port <Port list>]		port
[mpls-vc <VS-Attached MPLS Virtual Circuit Name>]		mpls-vc

Command	Access	Description
multicast-services show brief	limited	brief summary of multicast configuration and status

Command	Access	Description
multicast-services show configuration	limited	show all configuration settings
{vlan <VLAN list>}		VLAN(s)
{vs <Virtual Switch Name>}		VSs

Command	Access	Description
multicast-services show everything	limited	all configuration and status
{vlan <VLAN list>}		VLAN(s)
{vs <Virtual Switch Name>}		VSs

Command	Access	Description
multicast-services show group-status	limited	show group status
{vlan <VLAN list>}		VLAN(s)
{vs <Virtual Switch Name>}		VSs)
{group-address <IP multicast address range>}		group address(s)

Command	Access	Description
multicast-services show groups	limited	show all active multicast groups
{vlan <VLAN list>}		VLAN(s)

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{vs <Virtual Switch Name>}		VSs
{port <Port list>}		port list
{mpls-vc <VS-Attached MPLS Virtual Circuit Name>}		mpls-vc(s)

Command	Access	Description
multicast-services show resources	limited	show global resources consumed by igmp

Command	Access	Description
multicast-services show statistics	limited	show all statistics
{vlan <VLAN list>}		VLAN(s)
{vs <Virtual Switch Name>}		VSs

Command	Access	Description
multicast-services show status	limited	show all configuration settings
{vlan <VLAN list>}		VLAN(s)
{vs <Virtual Switch Name>}		VSs

Command	Access	Description
multicast-services umf drop	admin	drop unresolved multicast
vlan <vlan>		VLAN(s) to enable unresolved multicast filtering on

Command	Access	Description
multicast-services umf flood	admin	flood unresolved multicast
vlan <vlan>		VLAN(s) to disable unresolved multicast filtering on

Command	Access	Description
multicast-services umf drop	admin	drop unresolved multicast

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vs <vs>		VS(s) to enable unresolved multicast filtering on

Command	Access	Description
multicast-services umf flood	admin	flood unresolved multicast
vs <vs>		VS(s) to disable unresolved multicast filtering on

Command	Access	Description
multicast-services clear	admin	clear multicast statistics
{statistics}		clear all multicast statistics

Command	Access	Description
multicast-services clear	admin	clear multicast statistics
vlan <vlan>		VLAN(s) to select
{statistics}		clear multicast VLAN statistics

Command	Access	Description
multicast-services clear	admin	clear multicast statistics
vs <vs>		VS(s) to select
{statistics}		clear multicast VS statistics

Command	Access	Description
multicast-services create	admin	create multicast services
vlan <vlan>		VLAN on which to start multicast services

Command	Access	Description
multicast-services create	admin	create multicast services
vs <vs>		VS on which to start multicast services

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Command	Access	Description
multicast-services delete	admin	delete all configuration for a multicast service
vlan <vlan>		VLAN on which to delete multicast services

Command	Access	Description
multicast-services delete	admin	delete all configuration for a multicast service
vs <vs>		VS on which to delete multicast services

Command	Access	Description
multicast-services disable	admin	disable multicast services

Command	Access	Description
multicast-services disable	admin	disable multicast services
vlan <vlan>		VLAN on which to disable multicast services

Command	Access	Description
multicast-services disable	admin	disable multicast services
vs <vs>		VS on which to disable multicast services

Command	Access	Description
multicast-services enable	admin	enable multicast services

Command	Access	Description
multicast-services enable	admin	enable multicast services
vlan <vlan>		VLAN on which to enable multicast services

Command	Access	Description

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multicast-services enable	admin	enable multicast services
vs <vs>		VS on which to enable multicast services

ndp

Neighbor Discovery Protocol (NDP)

Command	Access	Description
ndp delete	admin	delete NDP entry
{ip <IP address>}		IPv6 Address to delete
[ip-interface <Interface Name>]		IP Interface associated with the IPv6 address

Command	Access	Description
ndp flush	admin	flush NDP cache for all management interfaces

Command	Access	Description
ndp flush	admin	flush NDP cache for specified interface
{interface <local | remote>}		interface to flush

Command	Access	Description
ndp flush	admin	flush NDP cache for a specified interface
ip-interface <ip-interface>		Interface name

Command	Access	Description
ndp set	admin	set NDP options
{cachetime <SECONDS: 60-3600>}		cache timeout in seconds

Command	Access	Description
ndp unset	admin	unset NDP options
{cachetime}		set cache timeout back to default

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Command	Access	Description
ndp show	limited	show NDP information

Command	Access	Description
ndp show	limited	show NDP information for interface
{interface <local | remote>}		interface to display

Command	Access	Description
ndp show	limited	show NDP information for a specified interface
ip-interface <ip-interface>		Interface name

netconf

netconf user management

Command	Access	Description
netconf auto-config-save disable	admin	Disable auto config save

Command	Access	Description
netconf auto-config-save enable	admin	Enable auto config save

Command	Access	Description
netconf add	admin	Add netconf user
{user <String[32]>}		username

Command	Access	Description
netconf disable	admin	Disable netconfd server

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Command	Access	Description
netconf enable	admin	Enable netconfd server

Command	Access	Description
netconf remove	admin	Remove netconf user
{user <String[32]>}		username

Command	Access	Description
netconf set	admin	Set netconf listener port
{listener-port <NUMBER: 22-65535>}		port to listen for netconf SSH connections, default : 830

Command	Access	Description
netconf show	limited	Show netconf operational state

Command	Access	Description
netconf unset	admin	Unset netconf listener port
[listener-port]		unset port to listen for Netconf SSH connections (Default: 830)

ntp

Network Time Protocol (NTP)

Command	Access	Description
ntp client add	admin	add NTP server
server <server>		NTP server IP address or hostname
{key-id <Server authentication key>}		authentication key ID

Command	Access	Description
ntp client add	admin	add NTP multicast server IP

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multicast-server <multicast-server>		NTP IPv6 multicast server address (range FF0x::101)

Command	Access	Description
ntp client clear	admin	clear the NTP drift value
{drift}	admin	clear the NTP drift value

Command	Access	Description
ntp client disable	admin	disable NTP protocol

Command	Access	Description
ntp client disable	admin	disable NTP server
server <server>		NTP server IP address or hostname

Command	Access	Description
ntp client enable	admin	enable NTP protocol

Command	Access	Description
ntp client enable	admin	enable NTP server
server <server>		NTP server IP address or hostname

Command	Access	Description
ntp client remove	admin	remove NTP server
server <server>		NTP server IP address or hostname

Command	Access	Description
ntp client remove	admin	remove NTP multicast server IP
multicast-server <multicast-server>		NTP multicast server IP address

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Command	Access	Description
ntp client set	admin	set preferred-source-ip
preferred-source-ip <preferred-source-ip>		Preferred Source Interface to be set

Command	Access	Description
ntp client unset	admin	unset preferred source ip
{preferred-source-ip}		Preferred Source IP

Command	Access	Description
ntp client set	admin	set NTP client attributes
{mode <polling | broadcast | multicast>}		ntp mode
{min-polling-interval <SECONDS>}		interval (seconds) between ntp polls when not sync'd
{max-polling-interval <SECONDS>}		interval (seconds) between ntp polls when sync'd
{polling-interval <SECONDS>}		interval (seconds) between ntp polls (only valid in polling mode)
{sync-change-notification <on | off>}		turn on for NTP sync lost notifications

Command	Access	Description
ntp client set	admin	NTP client set server
server <server>		NTP server IP address or hostname
{key-id <Server authentication key>}		authentication key ID

Command	Access	Description
ntp client show	limited	show NTP information
{oper}		shows operational NTP servers in priority order
{state}		shows NTP client state configuration
{keys}		shows NTP authentication configuration

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Command	Access	Description
ntp client show	limited	show NTP information
server <server>		NTP server IP address or hostname

Command	Access	Description
ntp authentication add	admin	add NTP message digest authentication key
key-id <key-id>		NTP auth key object
[md5 <MD5 auth key>]		MD5 authentication key
[sha1 <SHA-1 auth key>]		SHA-1 authentication key

Command	Access	Description
ntp authentication disable	admin	disable NTP authentication

Command	Access	Description
ntp authentication enable	admin	enable NTP authentication

Command	Access	Description
ntp authentication import	admin	import NTP authentication keys from a file
{filename <String>}		authentication key filename
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[auth-interactive]		allow interactive password entry when requested by the remote server
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively

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Command	Access	Description
ntp authentication remove	admin	remove NTP key
key-id <key-id>		NTP authentication key object

Command	Access	Description
ntp authentication show	limited	show NTP authentication summary

Command	Access	Description
ntp server peering disable	admin	disable NTP server peering

Command	Access	Description
ntp server peering enable	admin	enable NTP server peering

Command	Access	Description
ntp server show	limited	show NTP server info

Command	Access	Description
ntp show	limited	show NTP summary information

ospf

OSPF protocol

Command	Access	Description
ospf instance create	admin	create OSPF instance
ospf-instance <ospf-instance>		OSPF instance name

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Command	Access	Description
ospf instance delete	admin	delete OSPF instance
ospf-instance <ospf-instance>		OSPF instance name

Command	Access	Description
ospf instance clear	admin	clear OSPF instance
ospf-instance <ospf-instance>		OSPF instance name
{statistics}		statistics

Command	Access	Description
ospf instance enable	admin	enable OSPF instance
ospf-instance <ospf-instance>		OSPF instance name

Command	Access	Description
ospf instance disable	admin	disable OSPF instance
ospf-instance <ospf-instance>		OSPF instance name

Command	Access	Description
ospf instance set	admin	set OSPF attribute
ospf-instance <ospf-instance>		OSPF instance name
{rfc-1583-compatible <on | off>}		rfc 1583 compatible
{router-id <IP address>}		router id
{spf-delay-interval <MILLISECONDS: 0-2147483647>}		SPF delay interval in msec default(5000)

Command	Access	Description
ospf instance unset	admin	unset OSPF configuration
ospf-instance <ospf-instance>		OSPF instance name
{router-id}		OSPF router ID

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Command	Access	Description
ospf instance show	limited	show OSPF instance protocol details
ospf-instance <ospf-instance>		instance details
[statistics]		protocol statistics

Command	Access	Description
ospf interface attach	admin	attach an ip interface to OSPF instance
ip-interface <ip-interface>		ip interface name
{area <IP address>}		Ospf area
{ospf-instance <OSPF Instance>}		OSPF instance name

Command	Access	Description
ospf interface detach	admin	detach an ip interface from the OSPF instance
ip-interface <ip-interface>		ip interface name

Command	Access	Description
ospf interface enable	admin	enable OSPF on the ip interface
ip-interface <ip-interface>		ip interface name

Command	Access	Description
ospf interface disable	admin	disable OSPF on the ip interface
ip-interface <ip-interface>		ip interface name

Command	Access	Description
ospf interface set	admin	set interface attribute
ip-interface <ip-interface>		ip interface name
[bfd-monitor <enable | disable>]		BFD based fault monitoring on interface
{delay-interval <SECONDS: 1-2147483647>}		delay interval of the interface in seconds
{hello-interval <SECONDS: 1-49999>}		hello interval of the interface in seconds
{poll-interval <SECONDS: 1-2147483647>}		poll interval for the interface in seconds
{priority <NUMBER: 0-255>}		priority used for the interface

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{retransmit-delay <SECONDS: 1-3000>}		retransmit delay interval for the interface in seconds
{transmit-delay <MILLISECONDS: 1-429496799>}		transmit delay interval for the interface in msec
{cost-metric <NUMBER: 1-65535>}		cost the interface
{authentication-type <md5 | text>}		authentication type
{echoless-password}		collect authentication password interactively
{passive}		passive OSPF interface

Command	**Access**	**Description**
ospf interface unset	admin	unset interface attribute
ip-interface <ip-interface>		ip interface name
[bfd-monitor]		BFD based fault monitoring on interface
{delay-interval}		delay interval of the interface in seconds, default: 40
{hello-interval}		hello interval of the interface in seconds, default: 10
{poll-interval}		poll interval for the interface in seconds, default: 120
{priority}		priority used for the interface, default: 1
{retransmit-delay}		retransmit delay interval for the interface in seconds, default: 5
{transmit-delay}		transmit delay interval for the interface in msec, default: 100
{cost-metric}		cost the interface, default: 30
{authentication-type}		authentication type, default: None
{passive}		passive OSPF interface

Command	**Access**	**Description**
ospf interface show	limited	show
{detail}	limited	details OSPF interface information

Command	**Access**	**Description**
ospf interface show	limited	show
ip-interface <ip-interface>		interface name
{statistics}	limited	OSPF interface statistics

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Command	Access	Description
ospf interface clear	admin	clear
ip-interface <ip-interface>		interface name
{statistics}	limited	ospf interface statistics

Command	Access	Description
ospf area create	admin	create area
area-ip <area-ip>		area IP address
ospf-instance <ospf-instance>		OSPF instance name
{type <normal>}		type of area

Command	Access	Description
ospf area delete	admin	delete area
area-ip <area-ip>		area IP address
ospf-instance <ospf-instance>		OSPF instance name

Command	Access	Description
ospf area add	admin	add area attribute
area-ip <area-ip>		area IP address
ospf-instance <ospf-instance>		OSPF instance name
{prefix-filter <IP address in CIDR notation>}		filter out inter-area prefix
{range <IP address in CIDR notation>}		Route summarization on ABR or ASBR
{advertise}		Advertise Summarized route
{not-advertise}		Not advertise Summarized route

Command	Access	Description
ospf area remove	admin	remove area attribute
area-ip <area-ip>		area IP address
ospf-instance <ospf-instance>		OSPF instance name
{prefix-filter <IP address in CIDR notation>}		filter out inter-area prefix
{range <IP address in CIDR notation>}		Route summarization on ABR

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Command	Access	Description
ospf area show	limited	show OSPF area
ospf-instance <ospf-instance>		OSPF instance name
{area-ip <IP address>}		Area IP address
{statistics}		statistics
{range}		summary route

Command	Access	Description
ospf neighbor show	limited	enable
ospf-instance <ospf-instance>		OSPF instance name
{neighbor-ip <IP address>}		neighbor IP
[detail]	limited	details OSPF neighbor information

Command	Access	Description
ospf database show	limited	show
ospf-instance <ospf-instance>		OSPF instance name
{router}	limited	displays OSPF router lsa
{network}	limited	displays OSPF network lsa
{summary}	limited	displays OSPF summary lsa
{external}	limited	displays OSPF external lsa
{nssa}	limited	displays OSPF nssa lsa
{asbr-summary}	limited	displays OSPF asbr-summary lsa
{self-originate}	limited	displays OSPF self originate lsa
{opq-area}	limited	displays OSPF opaque-area lsa

bgp

BGP protocol

Command	Access	Description
bgp neighbor add	admin	add a BGP neighbor
as <as>		local autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String[32]>}		BGP peer group
{remote-as <NUMBER: 1-65535>}		neighbor's autonomous system number

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Command	Access	Description
bgp neighbor remove	admin	remove a BGP neighbor
as <as>		local autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String[32]>}		BGP peer group

Command	Access	Description
bgp neighbor enable	admin	enable a BGP neighbor administratively. The default is that a BGP neighbor is added as enabled
as <as>		local autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String[32]>}		BGP peer group

Command	Access	Description
bgp neighbor disable	admin	disable a BGP neighbor administratively
as <as>		local autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String[32]>}		BGP peer group

Command	Access	Description
bgp neighbor set	admin	set BGP neighbor configuration
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String[32]>}		BGP peer group
{activate}		activate the exchange of specific AF info with neighbor
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier

Command	Access	Description
bgp neighbor unset	admin	unset BGP neighbor configuration

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as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String>}		BGP peer group
{activate}		activate the exchange of specific AF info with neighbor
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier

Command	**Access**	**Description**
bgp address-family add	admin	add address family
as <as>		autonomous system number
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier

Command	**Access**	**Description**
bgp address-family remove	admin	remove address family
as <as>		autonomous system number
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier

Command	**Access**	**Description**
bgp router-id set	admin	set BGP router-id
as <as>		autonomous system number
{id <IP address>}		ip address

Command	**Access**	**Description**
bgp router-id unset	admin	unset BGP router-id
as <as>		autonomous system number

Command	**Access**	**Description**
bgp advertisement-interval set	admin	set BGP advertisement interval
as <as>		autonomous system number

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{nbr <IP address>}		BGP neighbor
{peer-group <String[32]>}		BGP peer group
{adv-time <SECONDS: 0-65535>}		advertisement interval in seconds

Command	Access	Description
bgp advertisement-interval unset	admin	unset BGP advertisement interval (default is 5 seconds for IBGP routes, 30 seconds for EBGP routes)
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String>}		BGP peer group

Command	Access	Description
bgp connect-retry set	admin	set BGP connection retry interval
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String[32]>}		BGP peer group
{retry-time <SECONDS: 1-65535>}		retry interval in seconds

Command	Access	Description
bgp connect-retry unset	admin	unset BGP connection retry interval (default is 120 seconds)
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String>}		BGP peer group

Command	Access	Description
bgp description set	admin	set BGP neighbor description
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String[32]>}		BGP peer group
{desc <String[80]>}		description of neighbor

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Command	Access	Description
bgp description unset	admin	unset BGP neighbor description
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String>}		BGP peer group

Command	Access	Description
bgp ebgp-multihop set	admin	set EBGP session configuration
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{hop <NUMBER: 1-255>}		hop count

Command	Access	Description
bgp ebgp-multihop unset	admin	unset EBGP session configuration
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor

Command	Access	Description
bgp bfd-monitor enable	admin	enable bidirectional forward detection
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String[32]>}		BGP peer group
[multihop]		set Multihop if BGP neighbor is Multihop away

Command	Access	Description
bgp bfd-monitor disable	admin	disable bidirectional forward detection
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String[32]>}		BGP peer group

Command	Access	Description

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bgp prefix-list add	admin	add prefix list for filtering BGP advertisements
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String[32]>}		BGP peer group
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier
{list-name <String[20]>}		prefix list name
{dir <in | out>}		direction of prefix list

Command	**Access**	**Description**
bgp prefix-list remove	admin	remove prefix list for filtering BGP advertisement
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String[32]>}		BGP peer group
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier
{dir <in | out>}		direction of prefix list

Command	**Access**	**Description**
bgp password set	admin	set MD5 neighbor authentication
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String[32]>}		BGP peer group
{echoless-password}		collect password interactively

Command	**Access**	**Description**
bgp password unset	admin	unset MD5 neighbor authentication
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String>}		BGP peer group

Command	**Access**	**Description**
bgp next-hop-self add	admin	enable BGP speaker itself as the next-hop

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as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier

Command	**Access**	**Description**
bgp next-hop-self remove	admin	disable BGP speaker itself as the next hop
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier

Command	**Access**	**Description**
bgp timers set	admin	set keepalive timer and hold time for a neighbor
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String[32]>}		BGP peer group
{keepalive <SECONDS: 0-65535>}		keepalive, default=30
{hold-time <SECONDS: 0-65535>}		hold-time, default=90

Command	**Access**	**Description**
bgp timers unset	admin	unset keepalive timer and hold time for a neighbor (default is 30 seconds for keepalive timer and 90 seconds for hold timer)
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String>}		BGP peer group

Command	**Access**	**Description**
bgp frr add	admin	enable fast reroute
as <as>		autonomous system number
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier

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Command	Access	Description
bgp frr remove	admin	disable fast reroute
as <as>		autonomous system number
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier

Command	Access	Description
bgp update-source set	admin	set interface for TCP connection
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String[32]>}		BGP peer group
{if-name <MPLS Interface>}		name of the interface

Command	Access	Description
bgp update-source unset	admin	unset interface for TCP connection
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String>}		BGP peer group

Command	Access	Description
bgp update-delay set	admin	set advertisement delay during graceful restart
as <as>		autonomous system number
{time <SECONDS: 1-3600>}		advertisement delay time,default=120

Command	Access	Description
bgp update-delay unset	admin	unset advertisement delay during graceful restart (default is 120 seonds)
as <as>		autonomous system number

Command	Access	Description

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bgp aggregate-nexthop-check enable	admin	enable aggregation upon matching next-hop ip address

Command	**Access**	**Description**
bgp aggregate-nexthop-check disable	admin	disable aggregation upon matching next-hop ip address

Command	**Access**	**Description**
bgp aggregate-address add	admin	add BGP aggregate entry
as <as>		autonomous system number
{afi <ipv4>}		address family identifier
{safi <unicast>}		subsequent address family identifier
{ipaddress/mask <IP address in CIDR notation>}		ip-address with subnet mask
[as-set]		autonomous system number
[summary-only]		advertises the prefix only, suppressing the more-specific routes

Command	**Access**	**Description**
bgp aggregate-address remove	admin	remove BGP aggregation entry
as <as>		autonomous system number
{afi <ipv4>}		address family identifier
{safi <unicast>}		subsequent address family identifier
{ipaddress/mask <IP address in CIDR notation>}		ip-address with subnet mask

Command	**Access**	**Description**
bgp route-reflector-client add	admin	set a BGP peer as a route-reflector client
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier

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Command	Access	Description
bgp route-reflector-client remove	admin	unset a BGP peer as a route-reflector client
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier

Command	Access	Description
bgp client-to-client enable	admin	enable client-to-client reflection on the route reflector
as <as>		autonomous system number

Command	Access	Description
bgp client-to-client disable	admin	disable client-to-client reflection on the route reflector
as <as>		autonomous system number

Command	Access	Description
bgp cluster-id-index set	admin	set cluster id value
as <as>		autonomous system number
{id <NUMBER: 1-4294967295>}		cluster id value

Command	Access	Description
bgp cluster-id-index unset	admin	unset cluster id value
as <as>		autonomous system number

Command	Access	Description
bgp cluster-id-addr set	admin	set cluster id using ip address
as <as>		autonomous system number
{addr <IP address>}		ip address

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Command	Access	Description
bgp cluster-id-addr unset	admin	unset cluster id using ip address
as <as>		autonomous system number

Command	Access	Description
bgp unsuppress-map add	admin	add selective leak of more specific routes
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{afi <ipv4>}		address family identifier
{safi <unicast>}		subsequent address family identifier
{name <String[20]>}		route map name

Command	Access	Description
bgp unsuppress-map remove	admin	remove selective leak of more specific routes
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
[afi <ipv4>]		address family identifier
[safi <unicast>]		subsequent address family identifier

Command	Access	Description
bgp graceful-restart enable	admin	enable graceful restart
as <as>		autonomous system number

Command	Access	Description
bgp graceful-restart disable	admin	disable graceful restart
as <as>		autonomous system number

Command	Access	Description
bgp gr-restart-time set	admin	set graceful restart time
as <as>		autonomous system number

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[nbr <IP address>]		neighbor ip address
{time <SECONDS: 1-3600>}		restart time,default=90

Command	**Access**	**Description**
bgp gr-restart-time unset	admin	unset the graceful restart time (default is 90 seconds)
as <as>		autonomous system number
[nbr <IP address>]		neighbor ip address

Command	**Access**	**Description**
bgp stalepath-time set	admin	set graceful restart stalepath time
as <as>		autonomous system number
{time <SECONDS: 1-3600>}		stalepath time,default=360

Command	**Access**	**Description**
bgp stalepath-time unset	admin	unset the graceful restart stalepath time (default is 360 seconds)
as <as>		autonomous system number

Command	**Access**	**Description**
bgp gr-capability add	admin	configure to advertise the graceful restart capability to the neighbor
as <as>		autonomous system number
nbr <nbr>		BGP neighbor
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier

Command	**Access**	**Description**
bgp gr-capability remove	admin	configure to not advertise the graceful restart capability to the neighbor
as <as>		autonomous system number
nbr <nbr>		BGP neighbor

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{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier

Command	Access	Description
bgp g-shutdown-capability enable	admin	enable graceful shutdown for E-BGP neighbors. The g-shut for I-BGP session is not currently supported
as <as>		autonomous system number

Command	Access	Description
bgp g-shutdown-capability disable	admin	disable graceful shutdown for E-BGP neighbors. The g-shut for I-BGP session is not currently supported
as <as>		autonomous system number

Command	Access	Description
bgp g-shutdown-local-preference set	admin	set graceful shutdown local preference value
as <as>		autonomous system number
{local-preference <NUMBER: 0-4294967295>}		local preference value, default = 0

Command	Access	Description
bgp g-shutdown-local-preference unset	admin	unset graceful shutdown local preference value
as <as>		autonomous system number

Command	Access	Description
bgp g-shutdown enable	admin	enable graceful shutdown
as <as>		autonomous system number
[nbr <IP address>]		neighbor ip address

Command	Access	Description

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bgp g-shutdown disable	admin	disable graceful shutdown
as <as>		autonomous system number
[nbr <IP address>]		neighbor ip address

Command	**Access**	**Description**
bgp g-shutdown-timer set	admin	set graceful shutdown timer
as <as>		autonomous system number
nbr <nbr>		BGP neighbor
{time <SECONDS: 10-65535>}		shutdown timer, default = 60sec

Command	**Access**	**Description**
bgp g-shutdown-timer unset	admin	unset graceful restart time
as <as>		autonomous system number
nbr <nbr>		BGP neighbor

Command	**Access**	**Description**
bgp orf add	admin	enable outbound route filtering capability
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String[32]>}		BGP peer group
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier
{orf-type <prefix-list>}		outbound router filtering function type
{dir <rx | tx | both>}		direction

Command	**Access**	**Description**
bgp orf remove	admin	disable outbound route filtering capability
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String[32]>}		BGP peer group
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier
{orf-type <prefix-list>}		outbound router filtering function type
{dir <rx | tx | both>}		direction

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Command	Access	Description
bgp add-path set	admin	enable BGP neighbor addtional path
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier
{capability <both | send | receive | disable>}		capability option to set
advertise <all | best-2 | best-3>		

Command	Access	Description
bgp add-path unset	admin	disable BGP neighbor addtional path
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier
{capability}		capability option to unset
advertise		

Command	Access	Description
bgp allocate-label set	admin	set label allocation for BGP routes
as <as>		autonomous system number
{all}		for all routes
{route-map <String[20]>}		for matched routes

Command	Access	Description
bgp allocate-label unset	admin	unset label allocation for BGP routes
as <as>		autonomous system number

Command	Access	Description
bgp redistribute add	admin	enable redistribution of routes in BGP instance
as <as>		autonomous system number

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{type <kernel | connected | static | isis>}		type of routes to redistribute
[route-map <String[20]>]		map name

Command	**Access**	**Description**
bgp redistribute remove	admin	disable redistribution of routes in BGP instance
as <as>		autonomous system number
{type <kernel | connected | static | isis>}		type of routes to redistribute
[route-map]		remove used route map

Command	**Access**	**Description**
bgp network add	admin	add network to be advertised
as <as>		autonomous system number
{ipaddress/mask <IP address in CIDR notation>}		ip-address with subnet mask
{afi <ipv4>}		address family identifier
{safi <unicast>}		subsequent address family identifier
[route-map <String[20]>]		map name

Command	**Access**	**Description**
bgp network remove	admin	remove network from being advertised
as <as>		autonomous system number
{ipaddress/mask <IP address in CIDR notation>}		ip-address with subnet mask
{afi <ipv4>}		address family identifier
{safi <unicast>}		subsequent address family identifier

Command	**Access**	**Description**
bgp bestpath enable	admin	enable bestpath option
as <as>		autonomous system number
{aigp-ignore}		enable aigp-ignore in best path calculation when both paths have aigp attribute
{compare-routerid}		enable compare-routerid in best path calculation, always selecting a path with lower router id

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{as-path <ignore>}		enable as-path ignore in best path calculation when paths have different lengths of as path
{dont-compare-originator-id}		enable dont-compare-originator-id in best path calculation, by not comparing an originator id for an identical EBGP
{tie-break-on-age}		enable tie-break-on-age in best path calculation, always selecting a previous selected route even when the BGP bestpath compare-routerid command is configured.
{always-compare-med}		enable always-compare-med in best path calculation, selecting the path with lower MED

Command	**Access**	**Description**
bgp bestpath disable	admin	disable bestpath option
as <as>		autonomous system number
{aigp-ignore}		disable aigp-ignore in best path calculation when both paths have aigp attribute
{compare-routerid}		disable compare-routerid in best path calculation
{as-path <ignore>}		disable as-path ignore in best path calculation when paths have different lengths of as path
{dont-compare-originator-id}		disable dont-compare-originator-id in best path calculation
{tie-break-on-age}		disable tie-break-on-age in best path calculation
{always-compare-med}		disable always-compare-med in best path calculation

Command	**Access**	**Description**
bgp fast-external-failover enable	admin	enable the reset of BGP session immediately if the interface used for the session goes down
as <as>		autonomous system number

Command	**Access**	**Description**
bgp fast-external-failover disable	admin	disable the reset of BGP session immediately if the interface used for the session goes down
as <as>		autonomous system number

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Command	Access	Description
bgp aigp add	admin	add aigp
as <as>		autonomous system number
nbr <nbr>		BGP neighbor
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier
{med}		send aigp value in med
{cost-community <NUMBER: 0-255>}		send aigp value in cost community
{poi <igp-cost | pre-bestpath>}		point of insertion for bestpath calculation
[transitive]		enable transitive cost community

Command	Access	Description
bgp aigp remove	admin	remove aigp
as <as>		autonomous system number
nbr <nbr>		BGP neighbor
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier
{med}		send aigp value in med
{cost-community}		send aigp value in cost community

Command	Access	Description
bgp weight add	admin	add a weight value
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier
{value <NUMBER: 0-65535>}		weight value

Command	Access	Description
bgp weight remove	admin	remove a weight value
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{afi <ipv4>}		address family identifier

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{safi <unicast | labeled-unicast>}		subsequent address family identifier

Command	Access	Description
bgp lockout set	admin	set BGP lockout neighbor
as <as>		autonomous system number
nbr <nbr>		BGP neighbor

Command	Access	Description
bgp lockout unset	admin	unset BGP lockout neighbor
as <as>		autonomous system number
nbr <nbr>		BGP neighbor

Command	Access	Description
bgp route-map add	admin	add route-map for BGP neighbor
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String[32]>}		BGP peer group
{route-map <String[20]>}		map name
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier
{in}		route-map inbound add
{out}		route-map outbound add

Command	Access	Description
bgp route-map remove	admin	remove route-map for BGP neighbor
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String[32]>}		BGP peer group
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier
{in}		route-map inbound remove
{out}		route-map outbound remove

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Command	Access	Description
bgp peer-group set	admin	set peer-group to a neighbor
as <as>		autonomous system number
nbr <nbr>		BGP neighbor
{peer-group <String[32]>}		BGP peer group

Command	Access	Description
bgp peer-group unset	admin	unset peer-group
as <as>		autonomous system number
nbr <nbr>		BGP neighbor

Command	Access	Description
bgp dampening add	admin	enable BGP route flap dampening
as <as>		autonomous system number
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier
[reach-half-life <NUMBER: 1-45>]		reachability half-life time for the penalty in minutes
[reuse <NUMBER: 1-20000>]		when the penalty for a route exceeds the reuse value, the route becomes unsuppressed
{suppress <NUMBER: 1-20000>}		when the penalty for a route exceeds the suppress value, the route is suppressed
{max-suppress-time <NUMBER: 1-255>}		maximum duration to suppress a stable route in minutes
{unreach-half-life <NUMBER: 1-45>}		unreachablity half-life time for the penalty in minutes
[route-map <String[20]>]		route map to specify criteria for dampening

Command	Access	Description
bgp dampening remove	admin	disable BGP route flap dampening
as <as>		autonomous system number
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier

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Command	Access	Description
bgp default-originate set	admin	set BGP speaker to generate a default route to its peers
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String[32]>}		BGP peer group
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier
[route-map <String[20]>]		for default route attributes

Command	Access	Description
bgp default-originate unset	admin	unset BGP speaker to generate a default route to its peers
as <as>		autonomous system number
{nbr <IP address>}		BGP neighbor
{peer-group <String>}		BGP peer group
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier

Command	Access	Description
bgp create	admin	create BGP
as <as>		local autonomous system number

Command	Access	Description
bgp delete	admin	delete BGP instance
as <as>		local autonomous system number

Command	Access	Description
bgp enable	admin	enable BGP instance globally

Command	Access	Description

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bgp disable	admin	disable BGP instance globally

Command	**Access**	**Description**
bgp show	admin	show
[neighbor]		BGP neighbor
[route]		BGP route
[summary]		BGP summary
[bestpath-settings]		BGP Best path configured Settings
[peer-group]		BGP show peer-group
[prefix <IP address in CIDR notation>]		specified route
[afi <ipv4>]		address family identifier
{afi <ipv4>}		address family identifier
[safi <unicast | labeled-unicast>]		subsequent address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier
[nbr <IP address>]		specified neighbor
[received]		received from neighbor
[advertised-routes]		advertised routes to neighbor
{prefix-filter}		prefix filter
[group-name <String[32]>]		specify peer-group name

Command	**Access**	**Description**
bgp show	admin	show
dampening		BGP route flap dampening
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier
{dampened-paths}		dampened paths
{flap-statistics}		route flap statistics
{parameters}		configured parameters

Command	**Access**	**Description**
bgp clear	admin	clear
as <as>		local autonomous system number
[afi <ipv4>]		address family identifier
{afi <ipv4>}		address family identifier
[safi <unicast | labeled-unicast>]		subsequent address family identifier

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{safi <unicast | labeled-unicast>}		subsequent address family identifier
[in]		soft reconfig inbound update
[out]		soft reconfig outbound update
[prefix-filter]		prefix-list ORF and do inbound soft reconfig

Command	**Access**	**Description**
bgp clear	admin	clear
table-map		BGP table-map
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier

Command	**Access**	**Description**
bgp clear	admin	clear
neighbor		BGP peer
[nbr <IP address>]		BGP neighbor
[peer-group <String[32]>]		BGP peer group
[afi <ipv4>]		address family identifier
{afi <ipv4>}		address family identifier
[safi <unicast | labeled-unicast>]		subsequent address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier
[type <all | external>]		clear type
[in]		soft reconfig inbound update
[out]		soft reconfig outbound update
[prefix-filter]		prefix-list ORF and do inbound soft reconfig

Command	**Access**	**Description**
bgp clear	admin	clear
dampening		BGP route flap dampening
{afi <ipv4>}		address family identifier
{safi <unicast | labeled-unicast>}		subsequent address family identifier
[flap-statistics]		route flap statistics
[prefix <IP address in CIDR notation>]		specified route

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community-list-standard

Standard Community List

Command	Access	Description
community-list-standard create	admin	create standard community-list
list-name <list-name>		community-list name or community-list number (1-99)

Command	Access	Description
community-list-standard delete	admin	delete standard community list
list-name <list-name>		community-list name or community-list number (1-99)

Command	Access	Description
community-list-standard add	admin	add standard community-list entry
list-name <list-name>		community-list name
{action <permit | deny>}		
{value <String[255]>}		Specify community number in the form of aa:nn|internet|local-AS|no-advertise|no-export.

Command	Access	Description
community-list-standard remove	admin	remove standard community-list entry
list-name <list-name>		community-list name or community-list number (1-99)
{action <permit | deny>}		
{value <String[255]>}		Specify community number in the form of aa:nn|internet|local-AS|no-advertise|no-export.

Command	Access	Description
community-list-standard show	limited	show community-list-standard

Command	Access	Description

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community-list-standard show	limited	show community-list-standard
list-name <list-name>		community-list-standard name

community-list-expanded

Expanded Community List

Command	Access	Description
community-list-expanded create	admin	create expanded community-list
list-name <list-name>		community-list name or community-list number (100-500)

Command	Access	Description
community-list-expanded delete	admin	delete expanded community list
list-name <list-name>		community-list name or community-list number (100-500)

Command	Access	Description
community-list-expanded add	admin	add expanded community-list entry
list-name <list-name>		community-list name
{action <permit | deny>}		
{value <String[255]>}		An ordered list as a regular expression

Command	Access	Description
community-list-expanded remove	admin	remove expanded community-list entry
list-name <list-name>		community-list name or community-list number (100-500)
{action <permit | deny>}		
{value <String[255]>}		An ordered list as a regular expression

Command	Access	Description
community-list-expanded show	limited	show community-list-expanded

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Command	Access	Description
community-list-expanded show	limited	show community-list-expanded
list-name <list-name>		community-list-expanded name

extcommunity-list-standard

Standard Extended Community List

Command	Access	Description
extcommunity-list-standard create	admin	create standard extended community-list
list-name <list-name>		community-list name or community-list number (1-99)

Command	Access	Description
extcommunity-list-standard delete	admin	delete standard expanded community list
list-name <list-name>		community-list name or community-list number (1-99)

Command	Access	Description
extcommunity-list-standard add	admin	add standard extended community-list entry
list-name <list-name>		community-list name
{action <permit | deny>}		
{subtype <route-target | site-of-origin>}		
{value <String[255]>}		An ordered list as a regular expression

Command	Access	Description
extcommunity-list-standard remove	admin	remove standard extended community-list entry
list-name <list-name>		community-list name or community-list number (100-500)
{action <permit | deny>}		
{subtype <route-target | site-of-origin>}		
{value <String[255]>}		An ordered list as a regular expression

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Command	Access	Description
extcommunity-list-standard show	limited	show extcommunity-list-standard

Command	Access	Description
extcommunity-list-standard show	limited	show extcommunity-list-standard
list-name <list-name>		extcommunity-list-standard name

extcommunity-list-expanded

Expanded Extended Community List

Command	Access	Description
extcommunity-list-expanded create	admin	create expanded extended community-list
list-name <list-name>		community-list name or community-list number (100-500)

Command	Access	Description
extcommunity-list-expanded delete	admin	delete expanded extended community list
list-name <list-name>		community-list name or community-list number (1-99)

Command	Access	Description
extcommunity-list-expanded add	admin	add expanded extended community-list entry
list-name <list-name>		community-list name
{action <permit | deny>}		
{value <String[255]>}		An ordered list as a regular expression

Command	Access	Description
extcommunity-list-expanded remove	admin	remove standard extended community-list entry
list-name <list-name>		community-list name or community-list number (100-500)
{action <permit | deny>}		

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{value <String[255]>}		An ordered list as a regular expression

Command	Access	Description
extcommunity-list-expanded show	limited	show extcommunity-list-expanded

Command	Access	Description
extcommunity-list-expanded show	limited	show extcommunity-list-expanded
list-name <list-name>		extcommunity-list-expanded name

as-path

AS Path

Command	Access	Description
as-path access-list create	admin	create as-path access list
list-name <list-name>		as-path access list name

Command	Access	Description
as-path access-list delete	admin	delete as-path access list
list-name <list-name>		as-path access list name

Command	Access	Description
as-path access-list add	admin	add as-path
list-name <list-name>		access-list name
{action <permit | deny>}		
{regexp <String>}		regular expression

Command	Access	Description
as-path access-list remove	admin	remove access-list entry
list-name <list-name>		access-list name
{action <permit | deny>}		

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{regexp <String>}		regular expression

Command	Access	Description
as-path access-list show	limited	show as-path access-list

Command	Access	Description
as-path access-list show	limited	show as-path access-list
list-name <list-name>		as-path access-list name

prefix-list

prefix-list

Command	Access	Description
prefix-list create	admin	create prefix-list
list-name <list-name>		prefix-list name

Command	Access	Description
prefix-list delete	admin	delete prefix-list
list-name <list-name>		prefix-list name

Command	Access	Description
prefix-list add	admin	add prefix-list entry
list-name <list-name>		prefix-list name
{seq <NUMBER: 1-4294967295>}		sequence number
{action <permit | deny>}		
{ipaddress/mask <IP address in CIDR notation>}		ip-address with subnet mask
[ge <NUMBER: 1-32>]		Minimum prefix length to be matched
[le <NUMBER: 1-32>]		Maximum prefix length to be matched

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Command	Access	Description
prefix-list remove	admin	remove prefix-list entry
list-name <list-name>		prefix-list name
{seq <NUMBER: 1-4294967295>}		sequence number

Command	Access	Description
prefix-list show	limited	show prefix-list

Command	Access	Description
prefix-list show	limited	show prefix-list
list-name <list-name>		prefix-list name

route-map

route-map

Command	Access	Description
route-map match-as-path add	admin	add match as path entry
map-name <map-name>		route-map name
{seq <NUMBER: 10-65535>}		sequence number
{action <permit | deny>}		
{access-list-name <String[20]>}		access list name

Command	Access	Description
route-map match-as-path remove	admin	remove match as path entry
map-name <map-name>		route-map name
{seq <NUMBER: 10-65535>}		sequence number
{action <permit | deny>}		

Command	Access	Description
route-map match-community add	admin	add match community entry
map-name <map-name>		route-map name

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{seq <NUMBER: 10-65535>}		sequence number
{action <permit | deny>}		
{community-list-number <NUMBER: 1-500>}		community list number
{community-list-name <String[20]>}		community list name
[exact-match]		exact matching of communities

Command	**Access**	**Description**
route-map match-community remove	admin	remove match community entry
map-name <map-name>		route-map name
{seq <NUMBER: 10-65535>}		sequence number
{action <permit | deny>}		

Command	**Access**	**Description**
route-map match-ext-community add	admin	add match extcommunity entry
map-name <map-name>		route-map name
{seq <NUMBER: 10-65535>}		sequence number
{action <permit | deny>}		
{community-list-number <NUMBER: 1-500>}		community list number
{community-list-name <String[20]>}		community list name
[exact-match]		exact matching of ext-communities

Command	**Access**	**Description**
route-map match-ext-community remove	admin	remove match extcommunity entry
map-name <map-name>		route-map name
{seq <NUMBER: 10-65535>}		sequence number
{action <permit | deny>}		

Command	**Access**	**Description**
route-map set-dampening add	admin	add dampening
map-name <map-name>		route-map name
{seq <NUMBER: 10-65535>}		sequence number
{action <permit>}		
[reach-half-life <NUMBER: 1-45>]		Reachability half-life time for the penalty in minutes

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[reuse <NUMBER: 1-20000>]		When the penalty for a route exceeds the reuse value, the route becomes unsuppressed
{suppress <NUMBER: 1-20000>}		When the penalty for a route exceeds the suppress value, the route is suppressed
{max-suppress-time <NUMBER: 1-255>}		Maximum duration to suppress a stable route in minutes
[unreach-half-life <NUMBER: 1-45>]		Unreachablity half-life time for the penalty in minutes

Command	**Access**	**Description**
route-map set-dampening remove	admin	remove BGP route flap dampening
map-name <map-name>		route-map name
{seq <NUMBER: 10-65535>}		sequence number
{action <permit>}		

Command	**Access**	**Description**
route-map set-community add	admin	add community set
map-name <map-name>		route-map name
{seq <NUMBER: 10-65535>}		sequence number
{action <permit>}		
{none}		no community
{community}		community
{aa:nn <AA:NN [,...], AA is AS number, NN is network number>}		AA:NN [,...]
[aa:nn <AA:NN [,...], AA is AS number, NN is network number>]		AA:NN [,...]
{internet}		Internet (well-known community)
[internet]		Internet (well-known community)
{local-AS}		do not send outside local AS (well-known community)
[local-AS]		do not send outside local AS (well-known community)
{no-advertise}		do not advertise to any peer (well-known community)
[no-advertise]		do not advertise to any peer (well-known community)
{no-export}		do not export to next AS (well-known community)

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[no-export]		do not export to next AS (well-known community)
[additive]		Add to the existing community

Command	**Access**	**Description**
route-map set-community remove	admin	remove community set
map-name <map-name>		route-map name
{seq <NUMBER: 10-65535>}		sequence number
{action <permit>}		

Command	**Access**	**Description**
route-map set-ext-community add	admin	add extended community set
map-name <map-name>		route-map name
{seq <NUMBER: 10-65535>}		sequence number
{action <permit>}		
{rt}		route target extended community
{soo}		site-of-origin extended community
{aa:nn <AA:NN [,...], AA is AS number, NN is network number>}		AA:NN [,...]
[additive]		Add to the existing extended community

Command	**Access**	**Description**
route-map set-ext-community remove	admin	remove extended community set
map-name <map-name>		route-map name
{seq <NUMBER: 10-65535>}		sequence number
{action <permit>}		
[rt]		route target extended community
[soo]		site-of-origin extended community

Command	**Access**	**Description**
route-map create	admin	create route-map
map-name <map-name>		route-map name

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Command	Access	Description
route-map delete	admin	delete route-map
map-name <map-name>		route-map name

Command	Access	Description
route-map remove	admin	remove route-map entry
map-name <map-name>		route-map name
{seq <NUMBER: 10-65535>}		sequence number

Command	Access	Description
route-map show	limited	show route-map

Command	Access	Description
route-map show	limited	show route-map
map-name <map-name>		route-map name

patch

In-service patching

Command	Access	Description
patch add	admin	add a patch to the patch database
filename <filename>		absolute pathname of patch shared object file

Command	Access	Description
patch remove	admin	remove a patch from the patch database
patch <patch>		patch shared object file

Command	Access	Description
patch set	admin	set the state of a patch

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patch <patch>		patch shared object file
{state <active | inactive | committed>}		patch state

Command	Access	Description
patch show	limited	show entries in the patch database
{all}		details of all patches

Command	Access	Description
patch show	limited	show entries in the patch database
patch <patch>		patch shared object file

pm

Performance Monitor (PM)

Command	Access	Description
pm bulkstats add	admin	bulkstats collector add
bulkstats-collector <bulkstats-collector>		bulkstats collector name
[bulkstats-instance <Bulkstats Instance List>]		bulkstats collector instance

Command	Access	Description
pm bulkstats add	admin	bulkstats instance add
bulkstats-instance <bulkstats-instance>		bulkstats instance name
[statistics <String List>]		bulkstats collection statistics

Command	Access	Description
pm bulkstats clear	admin	clear bulkstats instance statistics
bulkstats-instance <bulkstats-instance>		bulkstats instance name

Command	Access	Description
pm bulkstats create	admin	create a bulkstats collector
bulkstats-collector <bulkstats-collector>		bulkstats collector name
[bulkstats-instance <Bulkstats Instance List>]		bulkstats collector instance

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[push-interval <duration: {N[yMwdhms]}* e.g. 1h10m3s>]		collector file push interval, 1h to 1y, default: 1h
[remote-file-prefix <String[127]>]		remote filename prefix
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively

Command	**Access**	**Description**
pm bulkstats create	admin	create a bulkstats instance
bulkstats-instance <bulkstats-instance>		bulkstats instance name
[duration <duration: {N[yMwdhms]}* e.g. 1h10m3s>]		bulkstats collection duration, up to 1M, default: 8h
[interval <5m | 10m | 15m | 30m | 60m | 3h | 12h | 24h>]		bulkstats collection interval, default: 15m
[statistics <String List>]		bulkstats collection statistics

Command	**Access**	**Description**
pm bulkstats delete	admin	delete a bulkstats collector
bulkstats-collector <bulkstats-collector>		bulkstats collector name

Command	**Access**	**Description**
pm bulkstats delete	admin	delete a bulkstats instance
bulkstats-instance <bulkstats-instance>		bulkstats instance name

Command	**Access**	**Description**
pm bulkstats disable	admin	disable bulkstats globally

Command	**Access**	**Description**

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pm bulkstats disable	admin	disable a bulkstats collector
bulkstats-collector <bulkstats-collector>		bulkstats collector name

Command	**Access**	**Description**
pm bulkstats disable	admin	disable a bulkstats instance
bulkstats-instance <bulkstats-instance>		bulkstats instance name

Command	**Access**	**Description**
pm bulkstats enable	admin	enable bulkstats globally

Command	**Access**	**Description**
pm bulkstats enable	admin	enable a bulkstats collector
bulkstats-collector <bulkstats-collector>		bulkstats collector name

Command	**Access**	**Description**
pm bulkstats enable	admin	enable a bulkstats instance
bulkstats-instance <bulkstats-instance>		bulkstats instance name

Command	**Access**	**Description**
pm bulkstats push	admin	push bulkstats collector file
bulkstats-collector <bulkstats-collector>		bulkstats collector name

Command	**Access**	**Description**
pm bulkstats remove	admin	bulkstats collector remove
bulkstats-collector <bulkstats-collector>		bulkstats collector name
[bulkstats-instance <Bulkstats Instance List>]		bulkstats collector instance

Command	**Access**	**Description**
pm bulkstats remove	admin	bulkstats instance remove

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bulkstats-instance <bulkstats-instance>		bulkstats instance name
[statistics <String List>]		bulkstats collection statistics

Command	**Access**	**Description**
pm bulkstats set	admin	bulkstats collector set
bulkstats-collector <bulkstats-collector>		bulkstats collector name
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively
[remote-file-prefix <String[127]>]		remote filename prefix

Command	**Access**	**Description**
pm bulkstats show	limited	show bulkstats information

Command	**Access**	**Description**
pm bulkstats show	limited	show a bulkstats collector
bulkstats-collector <bulkstats-collector>		bulkstats collector name list

Command	**Access**	**Description**
pm bulkstats show	limited	show a bulkstats instance
bulkstats-instance <bulkstats-instance>		bulkstats instance name list

Command	**Access**	**Description**
pm bulkstats unset	admin	bulkstats collector unset
bulkstats-collector <bulkstats-collector>		bulkstats collector name
[remote-file-prefix]		remote filename prefix
[server]		server

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Command	Access	Description
pm threshold clear	admin	clear pm instance threshold statistics
pm-instance <pm-instance>		PM instance name list
{alert}		clear alert TCA
{history}		threshold history
{statistics}		threshold statistics

Command	Access	Description
pm threshold create	admin	create a interval profile
interval-profile <interval-profile>		interval profile name
[adjustment-interval <duration: {N[yMwdhms]}* e.g. 1h10m3s>]		interval for periodic adjustment TCA check, 1m to 1M
[adjustment-threshold <NUMBER: 0-2147483647>]		absolute range for adjustment TCA [bps]
[adjustment-threshold-percentage <NUMBER: 0-100>]		percentage range for adjustment TCA
[alert-interval <duration: {N[yMwdhms]}* e.g. 1h10m3s>]		interval for periodic alert TCA check, 1m to 1M
[alert-threshold-percentage <NUMBER: 0-100>]		percentage range for alert TCA
[overflow-count <NUMBER: 1-2147483647>]		consecutive overflow samples for TCA
[overflow-threshold <NUMBER: 0-2147483647>]		absolute value of overflow region [bps]
[overflow-threshold-percentage <NUMBER: 0-100>]		percentage value of overflow region
[profile-type <basic | crc-drop | queue-drop | tdm-opr | tdm-opt>]		interval profile type,egress queue-drop: rx crc-drop: default: basic
{sample-interval <1m | 5m | 10m | 15m | 30m | 60m | 24h>}		interval for high watermark updates
[underflow-count <NUMBER: 1-2147483647>]		consecutive underflow samples for TCA
[underflow-threshold <NUMBER: 0-2147483647>]		absolute value of underflow region [bps]
[underflow-threshold-percentage <NUMBER: 0-100>]		percentage value of underflow region

Command	Access	Description
pm threshold delete	admin	delete an interval profile

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interval-profile <interval-profile>		interval profile name

Command	Access	Description
pm threshold set	admin	set an interval profile attribute
interval-profile <interval-profile>		interval profile name
[adjustment-interval <duration: {N[yMwdhms]}* e.g. 1h10m3s>]		interval for periodic adjustment TCA check, 1m to 1M
[adjustment-threshold <NUMBER: 0-2147483647>]		absolute range for adjustment TCA [bps]
[adjustment-threshold-percentage <NUMBER: 0-100>]		percentage range for adjustment TCA
{alert-boundary <NUMBER: 1-2147483647>}		absolute boundary value for alert TCA[packets/sample-int]
[alert-interval <duration: {N[yMwdhms]}* e.g. 1h10m3s>]		interval for periodic alert TCA check, 1m to 1M
[alert-threshold-percentage <NUMBER: 0-100>]		percentage range for alert TCA
[crc]		rx crc
{crc-alert-boundary <NUMBER: 1-2147483647>}		absolute boundary value for rx crc alert TCA[packets/sample-int]
[overflow-count <NUMBER: 1-2147483647>]		consecutive overflow samples for TCA
[overflow-threshold <NUMBER: 0-2147483647>]		absolute value of overflow region [bps]
[overflow-threshold-percentage <NUMBER: 0-100>]		percentage value of overflow region
[queue <NUMBER: 0-7>]		queue index within Queue Group
[underflow-count <NUMBER: 1-2147483647>]		consecutive underflow samples for TCA
[underflow-threshold <NUMBER: 0-2147483647>]		absolute value of underflow region [bps]
[underflow-threshold-percentage <NUMBER: 0-100>]		percentage value of underflow region

Command	Access	Description
pm threshold show	limited	show threshold configuration summary

Command	Access	Description
pm threshold show	limited	show an interval profile

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interval-profile <interval-profile>		interval profile

Command	Access	Description
pm threshold show	admin	show pm instance threshold info
pm-instance <pm-instance>		PM instance name

Command	Access	Description
pm threshold unset	admin	unset an interval profile attribute
interval-profile <interval-profile>		interval profile name
[adjustment-interval]		interval for periodic adjustment TCA check
[adjustment-threshold]		absolute range for adjustment TCA [bps]
[adjustment-threshold-percentage]		percentage range for adjustment TCA
{alert-boundary}		absolute boundary value for alert TCA
[alert-interval]		interval for periodic alert TCA check
[alert-threshold-percentage]		percentage range for alert TCA
[crc]		rx crc
{crc-alert-boundary}		absolute boundary value for rx crc alert TCA
[overflow-count]		consecutive overflow samples for TCA
[overflow-threshold]		absolute value of overflow region [bps]
[overflow-threshold-percentage]		percentage value of overflow region
[queue <NUMBER>]		queue
[underflow-count]		consecutive underflow samples for TCA
[underflow-threshold]		absolute value of underflow region [bps]
[underflow-threshold-percentage]		percentage value of underflow region

Command	Access	Description
pm clear	admin	clear performance monitor statistics
pm-instance <pm-instance>		PM instance name
[history]		clear performance monitor history

Command	Access	Description
pm create	admin	create a PM instance
mpls-bgp-egress <mpls-bgp-egress>		MPLS bgp egress tunnel name
pm-instance <pm-instance>		PM instance name

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[alignment <local-clock | start-time>]		bin time alignment, default: local-clock
[bin-count <NUMBER: 0-96>]		number of history bins, default: 32
[bin-duration <1m | 5m | 10m | 15m | 30m | 60m | 24h>]		duration (in minutes) of each history bin, default: 15m
[end-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to end collecting stats
[end-time <time: hh:mm:ss or hh:mm>]		time to end collecting stats
[instance-type <on-demand | proactive>]		PM instance type, default: on-demand
{profile-type <BasicRx>}		PM instance profile type
[start-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to start collecting stats
[start-time <time: hh:mm:ss or hh:mm>]		time to start collecting stats

Command	**Access**	**Description**
pm create	admin	create a PM instance
mpls-bgp-ingress <mpls-bgp-ingress>		MPLS bgp ingress tunnel name
pm-instance <pm-instance>		PM instance name
[alignment <local-clock | start-time>]		bin time alignment, default: local-clock
[bin-count <NUMBER: 0-96>]		number of history bins, default: 32
[bin-duration <1m | 5m | 10m | 15m | 30m | 60m | 24h>]		duration (in minutes) of each history bin, default: 15m
[end-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to end collecting stats
[end-time <time: hh:mm:ss or hh:mm>]		time to end collecting stats
[instance-type <on-demand | proactive>]		PM instance type, default: on-demand
{profile-type <BasicTx>}		PM instance profile type
[start-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to start collecting stats
[start-time <time: hh:mm:ss or hh:mm>]		time to start collecting stats

Command	**Access**	**Description**
pm create	admin	create a PM instance
mpls-bgp-transit <mpls-bgp-transit>		MPLS bgp transit tunnel name
pm-instance <pm-instance>		PM instance name
[alignment <local-clock | start-time>]		bin time alignment, default: local-clock
[bin-count <NUMBER: 0-96>]		number of history bins, default: 32
[bin-duration <1m | 5m | 10m | 15m | 30m | 60m | 24h>]		duration (in minutes) of each history bin, default: 15m

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[end-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to end collecting stats
[end-time <time: hh:mm:ss or hh:mm>]		time to end collecting stats
[instance-type <on-demand | proactive>]		PM instance type, default: on-demand
{profile-type <BasicTxRx>}		PM instance profile type
[start-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to start collecting stats
[start-time <time: hh:mm:ss or hh:mm>]		time to start collecting stats

Command	**Access**	**Description**
pm create	admin	create a PM instance
mpls-rsvp-ingress <mpls-rsvp-ingress>		MPLS ingress rsvp tunnel name
pm-instance <pm-instance>		PM instance name
[alignment <local-clock | start-time>]		bin time alignment, default: local-clock
[bin-count <NUMBER: 0-96>]		number of history bins, default: 32
[bin-duration <1m | 5m | 10m | 15m | 30m | 60m | 24h>]		duration (in minutes) of each history bin, default: 15m
[end-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to end collecting stats
[end-time <time: hh:mm:ss or hh:mm>]		time to end collecting stats
[instance-type <on-demand | proactive>]		PM instance type, default: on-demand
{interval-profile <Performance Monitor Interval Profile>}		PM instance interval profile
{profile-type <BasicTx>}		PM instance profile type
[start-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to start collecting stats
[start-time <time: hh:mm:ss or hh:mm>]		time to start collecting stats

Command	**Access**	**Description**
pm create	admin	create a PM instance
port <port>		port name
pm-instance <pm-instance>		PM instance name
[alignment <local-clock | start-time>]		bin time alignment, default: local-clock
[bin-count <NUMBER: 0-96>]		number of history bins, default: 32
[bin-duration <1m | 5m | 10m | 15m | 30m | 60m | 24h>]		duration (in minutes) of each history bin, default: 15m
[end-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to end collecting stats

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[instance-type <on-demand | proactive>]		PM instance type, default: on-demand
[end-time <time: hh:mm:ss or hh:mm>]		time to end collecting stats
{interval-profile <Performance Monitor Interval Profile>}		PM instance interval profile
{profile-type <ExtendedTxRx>}		PM instance profile type
[start-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to start collecting stats
[start-time <time: hh:mm:ss or hh:mm>]		time to start collecting stats

Command	**Access**	**Description**
pm create	admin	create a PM instance
port-queue-group <port-queue-group>		egress port queue group name
pm-instance <pm-instance>		PM instance name
[alignment <local-clock | start-time>]		bin time alignment, default: local-clock
[bin-count <NUMBER: 0-96>]		number of history bins, default: 32
[bin-duration <1m | 5m | 10m | 15m | 30m | 60m | 24h>]		duration (in minutes) of each history bin, default: 15m
[end-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to end collecting stats
[end-time <time: hh:mm:ss or hh:mm>]		time to end collecting stats
[instance-type <on-demand | proactive>]		PM instance type, default: on-demand
{interval-profile <Performance Monitor Interval Profile>}		PM instance interval profile
{profile-type <QueueGroup>}		PM instance profile type
[start-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to start collecting stats
[start-time <time: hh:mm:ss or hh:mm>]		time to start collecting stats

Command	**Access**	**Description**
pm create	admin	create a PM instance
queue-group-profile <queue-group-profile>		egress queue group
pm-instance <pm-instance>		PM instance name
{port <Port>}		root port
[alignment <local-clock | start-time>]		bin time alignment, default: local-clock
[bin-count <NUMBER: 0-96>]		number of history bins, default: 32
[bin-duration <1m | 5m | 10m | 15m | 30m | 60m | 24h>]		duration (in minutes) of each history bin, default: 15m

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[end-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to end collecting stats
[end-time <time: hh:mm:ss or hh:mm>]		time to end collecting stats
[instance-type <on-demand | proactive>]		PM instance type, default: on-demand
{interval-profile <Performance Monitor Interval Profile>}		PM instance interval profile
{profile-type <QueueGroup>}		PM instance profile type
[start-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to start collecting stats
[start-time <time: hh:mm:ss or hh:mm>]		time to start collecting stats

Command	**Access**	**Description**
pm create	admin	create a PM instance
tp-rsvp-ingress-corout <tp-rsvp-ingress-corout>		MPLS dynamic ingress corout tunnel name
pm-instance <pm-instance>		PM instance name
[alignment <local-clock | start-time>]		bin time alignment, default: local-clock
[bin-count <NUMBER: 0-96>]		number of history bins, default: 32
[bin-duration <1m | 5m | 10m | 15m | 30m | 60m | 24h>]		duration (in minutes) of each history bin, default: 15m
[end-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to end collecting stats
[end-time <time: hh:mm:ss or hh:mm>]		time to end collecting stats
[instance-type <on-demand | proactive>]		PM instance type, default: on-demand
{interval-profile <Performance Monitor Interval Profile>}		PM instance interval profile
{profile-type <BasicTxRx>}		PM instance profile type
[start-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to start collecting stats
[start-time <time: hh:mm:ss or hh:mm>]		time to start collecting stats

Command	**Access**	**Description**
pm create	admin	create a PM instance
tp-rsvp-ingress-unidir <tp-rsvp-ingress-unidir>		MPLS dynamic ingress unidir tunnel name
pm-instance <pm-instance>		PM instance name
[alignment <local-clock | start-time>]		bin time alignment, default: local-clock
[bin-count <NUMBER: 0-96>]		number of history bins, default: 32
[bin-duration <1m | 5m | 10m | 15m | 30m | 60m | 24h>]		duration (in minutes) of each history bin, default: 15m

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[end-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to end collecting stats
[end-time <time: hh:mm:ss or hh:mm>]		time to end collecting stats
[instance-type <on-demand | proactive>]		PM instance type, default: on-demand
{profile-type <BasicTx>}		PM instance profile type
[start-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to start collecting stats
[start-time <time: hh:mm:ss or hh:mm>]		time to start collecting stats

Command	**Access**	**Description**
pm create	admin	create a PM instance
tp-rsvp-egress-corout <tp-rsvp-egress-corout>		MPLS dynamic egress corout tunnel name
pm-instance <pm-instance>		PM instance name
[alignment <local-clock | start-time>]		bin time alignment, default: local-clock
[bin-count <NUMBER: 0-96>]		number of history bins, default: 32
[bin-duration <1m | 5m | 10m | 15m | 30m | 60m | 24h>]		duration (in minutes) of each history bin, default: 15m
[end-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to end collecting stats
[end-time <time: hh:mm:ss or hh:mm>]		time to end collecting stats
[instance-type <on-demand | proactive>]		PM instance type, default: on-demand
{profile-type <BasicTxRx>}		PM instance profile type
[start-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to start collecting stats
[start-time <time: hh:mm:ss or hh:mm>]		time to start collecting stats

Command	**Access**	**Description**
pm create	admin	create a PM instance
tp-rsvp-transit-corout <tp-rsvp-transit-corout>		MPLS dynamic transit corout tunnel name
pm-instance <pm-instance>		PM instance name
[alignment <local-clock | start-time>]		bin time alignment, default: local-clock
[bin-count <NUMBER: 0-96>]		number of history bins, default: 32
[bin-duration <1m | 5m | 10m | 15m | 30m | 60m | 24h>]		duration (in minutes) of each history bin, default: 15m
[end-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to end collecting stats
[end-time <time: hh:mm:ss or hh:mm>]		time to end collecting stats
[instance-type <on-demand | proactive>]		PM instance type, default: on-demand

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{profile-type <BasicTxRxBiDir>}		PM instance profile type
[start-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to start collecting stats
[start-time <time: hh:mm:ss or hh:mm>]		time to start collecting stats

Command	**Access**	**Description**
pm create	admin	create a PM instance
tdm-port <tdm-port>		TDM port name
pm-instance <pm-instance>		PM instance name
[alignment <local-clock>]		bin time alignment, default: local-clock
[bin-count <NUMBER: 0-96>]		number of history bins, default: 32
[bin-duration <15m>]		duration (minutes) of each history bin, default: 15m
[end-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to end collecting statistics
[end-time <time: hh:mm:ss or hh:mm>]		time to end collecting statistics
[instance-type <on-demand | proactive>]		PM instance type, default: on-demand
{interval-profile <Performance Monitor Interval Profile>}		PM instance interval profile
{profile-type <TdmAnsiPortStats | TdmDs3PortStats | TdmE3PortStats | TdmE1PortStats | TdmEtsiPortStats | TdmOcnPortStats | TdmStmnPortStats | TdmT1PortStats | TdmPortOpticalStats>}		PM instance profile type
[start-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to start collecting statistics
[start-time <time: hh:mm:ss or hh:mm>]		time to start collecting statistics

Command	**Access**	**Description**
pm create	admin	create a PM instance
tdm-vc <tdm-vc>		TDM virtual-circuit name
pm-instance <pm-instance>		PM instance name
[alignment <local-clock>]		bin time alignment, default: local-clock
[bin-count <NUMBER: 0-96>]		number of history bins, default: 32
[bin-duration <15m>]		duration (minutes) of each history bin, default: 15m
[end-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to end collecting statistics
[end-time <time: hh:mm:ss or hh:mm>]		time to end collecting statistics

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[instance-type <on-demand | proactive>]		PM instance type, default: on-demand
{profile-type <TdmPwStats>}		PM instance profile type
[start-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>]		date to start collecting statistics
[start-time <time: hh:mm:ss or hh:mm>]		time to start collecting statistics

Command	**Access**	**Description**
pm delete	admin	delete a PM instance
pm-instance <pm-instance>		PM instance name

Command	**Access**	**Description**
pm disable	admin	disable PM globally

Command	**Access**	**Description**
pm disable	admin	disable a PM instance
pm-instance <pm-instance>		PM instance name

Command	**Access**	**Description**
pm enable	admin	enable PM globally

Command	**Access**	**Description**
pm enable	admin	enable a PM instance
pm-instance <pm-instance>		PM instance name

Command	**Access**	**Description**
pm monitor	limited	monitor PM instances on the screen
pm-instance <pm-instance>		PM instance name list
[active]		only show active statistics
[count <NUMBER: 0-4294967295>]		number of times to repeat the command
[delay <SECONDS: 1-86400>]		time between samples (seconds), default: 5

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[display <clear | scroll>]		statistics output screen control, default: clear
[scale <tera | giga | mega | kilo | none>]		scale used to show statistics, default: none
{statistics}		statistics
{throughput}		throughput since last call
{total-statistics}		total statistics

Command	Access	Description
pm set	admin	set global PM attributes
[persistence-interval <SECONDS: 60-86400>]		set interval (seconds) for saving history bins, default: 900
[persistence-storage <on-board | usb-flash>]		location for pm persistent storage, default: on-board

Command	Access	Description
pm set	admin	set PM instance attributes
pm-instance <pm-instance>		PM instance name list
{interval-profile <Performance Monitor Interval Profile>}		PM instance interval profile

Command	Access	Description
pm show	limited	show a PM instance
{auto-created}		show detail for just auto-created instances
{persistence}		show history bin persistence information
{user-created}		show detail for just user-created instances

Command	Access	Description
pm show	limited	show a PM instance
pm-instance <pm-instance>		PM instance name list
{24hr-history}		show details for 24hr history
[active]		only show active statistics
{bin-number <NUMBER: 1-96>}		show details for specific bin number
[count <NUMBER: 0-4294967295>]		number of times to repeat the command
[delay <SECONDS: 1-86400>]		time between samples (seconds), default: 5
[display <clear | scroll>]		statistics output screen control, default: scroll

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{from-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>}		from date for the statistics range
{from-time <time: hh:mm:ss or hh:mm>}		from time for the statistics range
{history}		show detail with history
[scale <tera | giga | mega | kilo | none>]		scale used to show statistics, default: none
{statistics}		statistics
{throughput}		throughput since last call
{to-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>}		end date for the statitics range
{to-time <time: hh:mm:ss or hh:mm>}		end time for the statistics range
{total-statistics}		total statistics

Command	Access	Description
pm unset	admin	unset global PM attributes
{persistence-interval}		set the persistence interval back to default (900 seconds)
{persistence-storage}		set the persistence storage back to default (on-board)

Command	Access	Description
pm unset	admin	unset PM instance attributes
pm-instance <pm-instance>		PM instance name list
{interval-profile}		PM instance interval profile

port

port

Command	Access	Description
port state-mirror-group add	admin	add ports to state mirror group
group <group>		port state mirror group
{dst-port <Port list>}		destination port
{src-port <Port list>}		source port group

Command	Access	Description
port state-mirror-group create	admin	create port state mirror group

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group <group>		port state mirror group

Command	**Access**	**Description**
port state-mirror-group delete	admin	delete port state mirror group
group <group>		port state mirror group

Command	**Access**	**Description**
port state-mirror-group remove	admin	remove ports from state mirror group
group <group>		port state mirror group
{port <Port list>}		port member

Command	**Access**	**Description**
port state-mirror-group rename	admin	rename port state mirror group
group <group>		port state mirror group
{name <Name (no ,) String>}		new name

Command	**Access**	**Description**
port state-mirror-group set	admin	set port state mirror group attributes
group <group>		port state mirror group
[type <uni-directional | bi-directional>]		set mirroring type one way or two
[name <Name (no ,) String>]		new name

Command	**Access**	**Description**
port state-mirror-group show	limited	show port state mirror groups

Command	**Access**	**Description**
port state-mirror-group show	limited	show port state mirror group
group <group>		port state mirror group

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Command	Access	Description
port xcvr show	limited	show transceiver information

Command	Access	Description
port xcvr show	limited	show port transceiver information
port <port>		port to show
{state}		show transceiver state
{vendor}		show transceiver vendor data
{diagnostics}		show transceiver diagnostic data
{tunability}		show transceiver tunable data

Command	Access	Description
port xcvr show	limited	show all supported transceivers
[supported]		show all supported transceivers

Command	Access	Description
port xcvr debug	limited	show port transceiver debug information

Command	Access	Description
port xcvr set	admin	set transceiver information
port <port>		port(s) to set
{frequency <NUMBER>}		set transceiver frequency in GHz
{wavelength <String>}		set transceiver wavelength in nanometer
{channel <NUMBER>}		set transceiver channel number
{forward-error-correction-mode <gfec | efec>}		set forward error correction mode

Command	Access	Description
port xcvr unset	admin	unset transceiver information
port <port>		port(s) to unset
{frequency}		unset transceiver frequency
{wavelength}		unset transceiver wavelength

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{channel}		unset transceiver channel number
{forward-error-correction-mode}		unset forward error correction mode

Command	Access	Description
port tdm sync frequency protection-group add	admin	add a list of input references to a protection group
group <group>		add a list of input references to a TDM port protection group
{input-ref <Configured TDM input timing reference>}		add a list of input references to a TDM port protection group

Command	Access	Description
port tdm sync frequency protection-group clear	admin	clear attributes of a TDM port protection group
group <group>		clear attributes of a TDM port group
{ref-switch-count}		reset reference switch count to zero

Command	Access	Description
port tdm sync frequency protection-group create	admin	create a TDM port protection group
group <group>		create a TDM port protection group
{threshold-ql <Clock Quality level>}		set threshold quality level

Command	Access	Description
port tdm sync frequency protection-group delete	admin	delete a TDM port protection group
group <group>		delete a time-of-day protection group

Command	Access	Description
port tdm sync frequency protection-group remove	admin	remove a list of input references from a protection group
group <group>		remove a list of input references from a TDM port protection group

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{input-ref <Configured TDM input timing reference>}		remove a list of input references from a TDM port protection group

Command	Access	Description
port tdm sync frequency protection-group set	admin	set attributes of a TDM port protection group
group <group>		set attributes of a TDM port protection group
{forced-ref <Configured TDM input timing reference>}		force switch to an input reference
{threshold-ql <Clock Quality level>}		set threshold quality level

Command	Access	Description
port tdm sync frequency protection-group show	limited	display details of TDM port protection group reference
group <group>		display attributes of a TDM port protection group

Command	Access	Description
port tdm sync frequency protection-group unset	admin	unset attributes of a TDM port protection group
group <group>		unset attributes of a TDM port protection group
{forced-ref}		clear a force switch operation

Command	Access	Description
port tdm sync frequency protection-group show	limited	display all TDM port protection group references

Command	Access	Description
port tdm sync set	admin	set TDM port global parameters
{reversion-mode <non-revertive | revertive>}		set reversion mode
{wait-to-restore <MINUTES>}		set wait-to-restore timeout (minutes)

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Command	Access	Description
port tdm sync unset	admin	unset attributes of a TDM input timing reference
{reversion-mode}		set reversion mode
{wait-to-restore}		set wait-to-restore timeout (minutes)

Command	Access	Description
port tdm sync show	admin	show TDM port attributes

Command	Access	Description
port tdm e1 ssm enable	admin	enable ssm
e1 <e1>		e1 port name

Command	Access	Description
port tdm e1 ssm disable	admin	disable ssm
e1 <e1>		e1 port name

Command	Access	Description
port tdm e1 ssm set	admin	set ssm attributes
e1 <e1>		e1 port name
[ssm-location <sa4 | sa5 | sa6 | sa7 | sa8>]		SAN bit

Command	Access	Description
port tdm e1 ssm unset	admin	unset ssm attributes
e1 <e1>		e1 port name
[ssm-location]		SAN bit

Command	Access	Description
port tdm e1 ssm show	admin	show e1 ssm attributes

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e1 <e1>		e1 port name

Command	**Access**	**Description**
port tdm e1 loopback set	admin	set loopback attributes
e1 <e1>		e1 port name
[mode <facility | terminal>]		loopback mode

Command	**Access**	**Description**
port tdm e1 loopback unset	admin	unset loopback attributes
e1 <e1>		e1 port name
[mode]		loopback mode

Command	**Access**	**Description**
port tdm e1 loopback enable	admin	enable loopback
e1 <e1>		e1 port name

Command	**Access**	**Description**
port tdm e1 loopback disable	admin	disable loopback
e1 <e1>		e1 port name

Command	**Access**	**Description**
port tdm e1 loopback show	admin	show e1 loopback attributes
e1 <e1>		e1 port name
[statistics]		statistics

Command	**Access**	**Description**
port tdm e1 loopback clear	admin	clear loopback statistics
e1 <e1>		e1 port name
{statistics}		statistics

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Command	Access	Description
port tdm e1 prbs set	admin	set PRBS attributes
e1 <e1>		e1 port name
[insert <line | network | none>]		Set PRBS Insertion on a channel
{ins-channel <NUMBER: 0-31>}		channel
[monitoring <line | network | none>]		Set PRBS Monitoring on a channel
{mon-channel <NUMBER: 0-31>}		channel

Command	Access	Description
port tdm e1 prbs unset	admin	unset prbs attributes
e1 <e1>		e1 port name
[insert]		PRBS Insertion on a channel
[monitoring]		PRBS Monitoring on a channel

Command	Access	Description
port tdm e1 jitter-buffer-monitoring set	admin	set jitter-buffer-monitoring attributes
e1 <e1>		e1 port name
{channel <NUMBER: 0-1343>}		JB Monitoring Channel
{duration <NUMBER: 1-1440>}		JB Monitoring Duration(in minutes)

Command	Access	Description
port tdm e1 jitter-buffer-monitoring unset	admin	unset jitter-buffer-monitoring attributes
e1 <e1>		e1 port name
{channel}		Unset JB Monitoring for the channel

Command	Access	Description
port tdm e1 jitter-buffer-monitoring show	admin	show e1 jitter-buffer-monitoring attributes
e1 <e1>		e1 port name
{channel <NUMBER: 0-1343>}		JB Monitoring Channel

Command	Access	Description

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port tdm e1 jitter-buffer-snapshot show	admin	show e1 jitter-buffer-monitoring attributes
e1 <e1>		e1 port name
{channel <NUMBER: 0-1343>}		Get current JB fill level for the channel

Command	**Access**	**Description**
port tdm e1 create	admin	create e1 port
e1 <e1>		e1 port name
{port <Physical port>}		physical port number associated with TDM
[mac <port-mac | sfp-factory-mac>]		source MAC associated with TDM

Command	**Access**	**Description**
port tdm e1 delete	admin	delete e1 port
e1 <e1>		e1 port name

Command	**Access**	**Description**
port tdm e1 set	admin	set e1 attributes
port <port>		e1 port
[clock-mode <internal | recovered | adaptive | dcr-epar>]		clock mode
[master-clock-src-port <TDM Port Name>]		TDM port used as the master clock source when clock mode is set to recovered
[master-clock-src-tdm-vc <TDM VC Name>]		TDM VC used as the master clock source when clock mode is set to adaptive
[protection-group <Configured TDM port protection group>]		TDM port group used for clock selection
[framing <unframed | basic | crc-multiframe>]		framing type
[line-code <hdb3 | ami>]		line coding type
[c-tpid <8100 | 9100 | 88A8>]		Set default customer TPID

Command	**Access**	**Description**
port tdm e1 unset	admin	unset e1 attributes
port <port>		e1 port
[clock-mode]		clock mode
[framing]		framing type

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[line-code]		line coding type
[master-clock-src-port]		TDM port used as the master clock source when clock mode is configured to recovered
{protection-group}		TDM port group used for clock selection
{c-tpid}		Set default customer TPID

Command	Access	Description
port tdm e1 show	admin	show e1 attributes

Command	Access	Description
port tdm e1 show	admin	show e1 attributes
e1 <e1>		e1 port name

Command	Access	Description
port tdm t1 loopback set	admin	set loopback attributes
t1 <t1>		t1 port name
[mode <facility | terminal>]		loopback mode

Command	Access	Description
port tdm t1 loopback unset	admin	unset loopback attributes
t1 <t1>		t1 port name
[mode]		loopback mode

Command	Access	Description
port tdm t1 loopback enable	admin	enable loopback
t1 <t1>		t1 port name

Command	Access	Description
port tdm t1 loopback disable	admin	disable loopback
t1 <t1>		t1 port name

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Command	Access	Description
port tdm t1 loopback show	admin	show t1 loopback attributes
t1 <t1>		t1 port name
[statistics]		statistics

Command	Access	Description
port tdm t1 loopback clear	admin	clear loopback statistics
t1 <t1>		t1 port name
{statistics}		statistics

Command	Access	Description
port tdm t1 loopcode set	admin	Set loopcode
t1 <t1>		t1 port name
[codeword <network-side-loopback-activate | universal-loopback-deactivate | line-loopback-activate | line-loopback-deactivate | niu-loopback-activate | niu-loopback-deactivate | loopback-retention | idle>]		codeword

Command	Access	Description
port tdm t1 loopcode clear	admin	clear loopcode history
t1 <t1>		t1 port name
{history}		history

Command	Access	Description
port tdm t1 loopcode enable	admin	enable loopcode
t1 <t1>		t1 port name

Command	Access	Description
port tdm t1 loopcode disable	admin	disable loopcode

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t1 <t1>		t1 port name

Command	Access	Description
port tdm t1 loopcode show	admin	show t1 loopcode attributes
t1 <t1>		t1 port name

Command	Access	Description
port tdm t1 prbs set	admin	set PRBS attributes
t1 <t1>		t1 port name
[insert <line | network | none>]		Set PRBS Insertion on a channel
{ins-channel <NUMBER: 0-31>}		channel
[monitoring <line | network | none>]		Set PRBS Monitoring on a channel
{mon-channel <NUMBER: 0-31>}		channel

Command	Access	Description
port tdm t1 prbs unset	admin	unset prbs attributes
t1 <t1>		t1 port name
[insert]		PRBS Insertion on a channel
[monitoring]		PRBS Monitoring on a channel

Command	Access	Description
port tdm t1 jitter-buffer-monitoring set	admin	set jitter-buffer-monitoring attributes
t1 <t1>		t1 port name
{channel <NUMBER: 0-1343>}		JB Monitoring Channel
{duration <NUMBER: 1-1440>}		JB Monitoring Duration(in minutes)

Command	Access	Description
port tdm t1 jitter-buffer-monitoring unset	admin	unset jitter-buffer-monitoring attributes
t1 <t1>		t1 port name
{channel}		Unset JB Monitoring for the channel

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Command	Access	Description
port tdm t1 jitter-buffer-monitoring show	admin	show t1 jitter-buffer-monitoring attributes
t1 <t1>		t1 port name
{channel <NUMBER: 0-1343>}		JB Monitoring Channel

Command	Access	Description
port tdm t1 jitter-buffer-snapshot show	admin	show t1 jitter-buffer-monitoring attributes
t1 <t1>		e1 port name
{channel <NUMBER: 0-1343>}		Get current JB fill level for the channel

Command	Access	Description
port tdm t1 create	admin	create t1 port
t1 <t1>		t1 port name
{port <Physical port>}		physical port number associated with TDM
[mac <port-mac | sfp-factory-mac>]		source MAC associated with TDM

Command	Access	Description
port tdm t1 delete	admin	delete t1 port
t1 <t1>		t1 port name

Command	Access	Description
port tdm t1 set	admin	set t1 attributes
port <port>		t1 port
[framing <unframed | super-frame | extended-super-frame>]		framing type
[line-code <b8zs | ami>]		line coding type
[line-build-out <133 | 266 | 399 | 533 | 655>]		short haul line build out length
[clock-mode <internal | recovered | adaptive | dcr-epar>]		clock mode
[master-clock-src-port <TDM Port Name>]		TDM port used as the master clock source when clock mode is set to recovered
[master-clock-src-tdm-vc <TDM VC Name>]		TDM VC used as the master clock source when clock mode is set to adaptive

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[protection-group <Configured TDM port protection group>]		TDM port group used for clock selection
[c-tpid <8100 | 9100 | 88A8>]		Set default customer TPID

Command	**Access**	**Description**
port tdm t1 unset	admin	set t1 attributes
port <port>		t1 port
[clock-mode]		clock mode
[framing]		framing type
[line-build-out]		short haul line build out length
[line-code]		line coding type
[master-clock-src-port]		TDM port used as the master clock source when clock mode is set to recovered
[protection-group]		TDM port group used for clock selection
[c-tpid]		Set default customer TPID

Command	**Access**	**Description**
port tdm t1 show	admin	show t1 attributes

Command	**Access**	**Description**
port tdm t1 show	admin	show t1 attributes
t1 <t1>		t1 port name

Command	**Access**	**Description**
port tdm oc3-stm1 loopback set	admin	set loopback attributes
oc3-stm1 <oc3-stm1>		oc3 port name
[channel <NUMBER: 0-83>]		channel
[type <port | sts1-vc3 | sts3c-vc4c | ds1-e1>]		loopback type
[mode <facility | terminal>]		loopback mode

Command	**Access**	**Description**
port tdm oc3-stm1 loopback unset	admin	unset loopback attributes

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oc3-stm1 <oc3-stm1>		oc3 port name
[channel]		channel
[type]		loopback type
[mode]		loopback mode

Command	**Access**	**Description**
port tdm oc3-stm1 loopback enable	admin	enable loopback
oc3-stm1 <oc3-stm1>		oc3 port name

Command	**Access**	**Description**
port tdm oc3-stm1 loopback disable	admin	disable loopback
oc3-stm1 <oc3-stm1>		oc3 port name

Command	**Access**	**Description**
port tdm oc3-stm1 loopback show	admin	show oc3 loopback attributes
oc3-stm1 <oc3-stm1>		oc3 port name
[statistics]		statistics

Command	**Access**	**Description**
port tdm oc3-stm1 loopback clear	admin	clear loopback statistics
oc3-stm1 <oc3-stm1>		oc3 port name
{statistics}		statistics

Command	**Access**	**Description**
port tdm oc3-stm1 prbs set	admin	set PRBS attributes
oc3-stm1 <oc3-stm1>		oc3 port name
[insert <line | network | none>]		Set PRBS Insertion on a channel
{ins-channel <NUMBER: 0-83>}		channel
[monitoring <line | network | none>]		Set PRBS Monitoring on a channel
{mon-channel <NUMBER: 0-83>}		channel

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Command	Access	Description
port tdm oc3-stm1 prbs unset	admin	unset prbs attributes
oc3-stm1 <oc3-stm1>		oc3 port name
[insert]		PRBS Insertion on a channel
[monitoring]		PRBS Monitoring on a channel

Command	Access	Description
port tdm oc3-stm1 create	admin	create oc3 port
oc3-stm1 <oc3-stm1>		oc3 port name
{port <Physical port>}		physical port number associated with TDM
[mac <port-mac | sfp-factory-mac>]		source MAC associated with TDM

Command	Access	Description
port tdm oc3-stm1 delete	admin	delete oc3 port
oc3-stm1 <oc3-stm1>		oc3 port name

Command	Access	Description
port tdm oc3-stm1 set	admin	set oc3 attributes
oc3-stm1 <oc3-stm1>		oc3 port name
[section-trace <String[15]>]		user-defined section trace value
[clock-mode <dcr-epar | internal>]		clock mode
[c-tpid <8100 | 9100 | 88A8>]		Set default customer TPID
[signal-degrade <NUMBER: 5-9>]		signal degrade
[signal-fail <NUMBER: 3-5>]		signal fail

Command	Access	Description
port tdm oc3-stm1 unset	admin	unset oc3 attributes
oc3-stm1 <oc3-stm1>		oc3 port name
[section-trace]		user-defined section trace value
[clock-mode]		clock mode
[c-tpid]		Set default customer TPID
[signal-degrade]		signal degrade

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[signal-fail]		signal fail

Command	Access	Description
port tdm oc3-stm1 show	admin	show oc3 attributes

Command	Access	Description
port tdm oc3-stm1 show	admin	show oc3 attributes
oc3-stm1 <oc3-stm1>		oc3 port name

Command	Access	Description
port tdm oc3-stm1-cem loopback set	admin	set loopback attributes
oc3-stm1-cem <oc3-stm1-cem>		oc3 oc48-FRU TDM port name
[channel <NUMBER: 0-83>]		channel
[type <sts1-vc3 | sts3c-vc4c | ds1-e1>]		loopback type
[mode <facility | terminal>]		loopback mode

Command	Access	Description
port tdm oc3-stm1-cem loopback unset	admin	unset loopback attributes
oc3-stm1-cem <oc3-stm1-cem>		oc3 oc48-FRU TDM port name
[channel]		channel
[type]		loopback type
[mode]		loopback mode

Command	Access	Description
port tdm oc3-stm1-cem loopback enable	admin	enable loopback
oc3-stm1-cem <oc3-stm1-cem>		oc3 oc48-FRU TDM port name

Command	Access	Description
port tdm oc3-stm1-cem loopback disable	admin	disable loopback
oc3-stm1-cem <oc3-stm1-cem>		oc3 oc48-FRU TDM port name

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Command	Access	Description
port tdm oc3-stm1-cem loopback show	admin	show oc3 loopback attributes
oc3-stm1-cem <oc3-stm1-cem>		oc3 oc48-FRU TDM port name
[statistics]		statistics

Command	Access	Description
port tdm oc3-stm1-cem loopback clear	admin	clear loopback statistics
oc3-stm1-cem <oc3-stm1-cem>		oc3 oc48-FRU TDM port name
{statistics}		statistics

Command	Access	Description
port tdm oc3-stm1-cem prbs set	admin	set PRBS attributes
oc3-stm1-cem <oc3-stm1-cem>		oc3 oc48-FRU TDM port name
[insert <line | none>]		Set PRBS Insertion on a channel
{ins-channel <NUMBER: 0-83>}		channel
[monitoring <line | none>]		Set PRBS Monitoring on a channel
{mon-channel <NUMBER: 0-83>}		channel

Command	Access	Description
port tdm oc3-stm1-cem prbs unset	admin	unset prbs attributes
oc3-stm1-cem <oc3-stm1-cem>		oc3 oc48-FRU TDM port name
[insert]		PRBS Insertion on a channel
[monitoring]		PRBS Monitoring on a channel

Command	Access	Description
port tdm oc3-stm1-cem create	admin	create oc3 port
oc3-stm1-cem <oc3-stm1-cem>		oc3 oc48-FRU TDM port name
{port <Combo FRU OCn port>}		physical port number associated with TDM

Command	Access	Description

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port tdm oc3-stm1-cem delete	admin	delete oc3 port
oc3-stm1-cem <oc3-stm1-cem>		oc3 oc48-FRU TDM port name

Command	**Access**	**Description**
port tdm oc3-stm1-cem set	admin	set oc3 attributes
oc3-stm1-cem <oc3-stm1-cem>		oc3 oc48-FRU TDM port name
[section-trace <String[15]>]		user-defined section trace value
[clock-mode <dcr-epar | internal>]		clock mode
[signal-degrade <NUMBER: 5-9>]		signal degrade
[signal-fail <NUMBER: 3-5>]		signal fail

Command	**Access**	**Description**
port tdm oc3-stm1-cem unset	admin	unset oc3 attributes
oc3-stm1-cem <oc3-stm1-cem>		oc3 oc48-FRU TDM port name
[section-trace]		user-defined section trace value
[clock-mode]		clock mode
[signal-degrade]		signal degrade
[signal-fail]		signal fail

Command	**Access**	**Description**
port tdm oc3-stm1-cem show	admin	show oc3 attributes

Command	**Access**	**Description**
port tdm oc3-stm1-cem show	admin	show oc3 attributes
oc3-stm1-cem <oc3-stm1-cem>		oc3 oc48-FRU TDM port name

Command	**Access**	**Description**
port tdm oc12-stm4 loopback set	admin	set loopback attributes
oc12-stm4 <oc12-stm4>		oc12 port name
[channel <NUMBER: 0-335>]		channel
[type <port | sts12c-vc4-4c | sts3c-vc4c | sts1-vc3 | ds1-e1>]		loopback type

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[mode <facility | terminal>]		loopback mode

Command	**Access**	**Description**
port tdm oc12-stm4 loopback unset	admin	unset loopback attributes
oc12-stm4 <oc12-stm4>		oc12 port name
[channel]		channel
[type]		loopback type
[mode]		loopback mode

Command	**Access**	**Description**
port tdm oc12-stm4 loopback enable	admin	enable loopback
oc12-stm4 <oc12-stm4>		oc12 port name

Command	**Access**	**Description**
port tdm oc12-stm4 loopback disable	admin	disable loopback
oc12-stm4 <oc12-stm4>		oc12 port name

Command	**Access**	**Description**
port tdm oc12-stm4 loopback show	admin	show oc12 loopback attributes
oc12-stm4 <oc12-stm4>		oc12 port name
[statistics]		statistics

Command	**Access**	**Description**
port tdm oc12-stm4 loopback clear	admin	clear loopback statistics
oc12-stm4 <oc12-stm4>		oc12 port name
{statistics}		statistics

Command	**Access**	**Description**
port tdm oc12-stm4 prbs set	admin	set PRBS attributes
oc12-stm4 <oc12-stm4>		oc12 port name

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[insert <line | network | none>]		Set PRBS Insertion on a channel
{ins-channel <NUMBER: 0-335>}		channel
[monitoring <line | network | none>]		Set PRBS Monitoring on a channel
{mon-channel <NUMBER: 0-335>}		channel

Command	**Access**	**Description**
port tdm oc12-stm4 prbs unset	admin	unset prbs attributes
oc12-stm4 <oc12-stm4>		oc12 port name
[insert]		PRBS Insertion on a channel
[monitoring]		PRBS Monitoring on a channel

Command	**Access**	**Description**
port tdm oc12-stm4 create	admin	create oc12 port
oc12-stm4 <oc12-stm4>		oc12 port name
{port <Physical port>}		physical port number associated with TDM
[mac <port-mac | sfp-factory-mac>]		source MAC associated with TDM

Command	**Access**	**Description**
port tdm oc12-stm4 delete	admin	delete oc12 port
oc12-stm4 <oc12-stm4>		oc12 port name

Command	**Access**	**Description**
port tdm oc12-stm4 set	admin	set oc12 attributes
oc12-stm4 <oc12-stm4>		oc12 port name
[section-trace <String[15]>]		user-defined section trace value
[clock-mode <dcr-epar | internal>]		clock mode
[c-tpid <8100 | 9100 | 88A8>]		Set default customer TPID
[signal-degrade <NUMBER: 5-9>]		signal degrade
[signal-fail <NUMBER: 3-5>]		signal fail

Command	**Access**	**Description**
port tdm oc12-stm4 unset	admin	unset oc12 attributes

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oc12-stm4 <oc12-stm4>		oc12 port name
[section-trace]		user-defined section trace value
[clock-mode]		clock mode
[c-tpid]		Set default customer TPID
[signal-degrade]		signal degrade
[signal-fail]		signal fail

Command	Access	Description
port tdm oc12-stm4 show	admin	show oc12 attributes

Command	Access	Description
port tdm oc12-stm4 show	admin	show oc12 attributes
oc12-stm4 <oc12-stm4>		oc12 port name

Command	Access	Description
port tdm oc12-stm4-cem loopback set	admin	set loopback attributes
oc12-stm4-cem <oc12-stm4-cem>		oc12 oc48-FRU TDM port name
[channel <NUMBER: 0-335>]		channel
[type <sts12c-vc4-4c | sts3c-vc4c | sts1-vc3 | ds1-e1>]		loopback type
[mode <facility | terminal>]		loopback mode

Command	Access	Description
port tdm oc12-stm4-cem loopback unset	admin	unset loopback attributes
oc12-stm4-cem <oc12-stm4-cem>		oc12 oc48-FRU TDM port name
[channel]		channel
[type]		loopback type
[mode]		loopback mode

Command	Access	Description
port tdm oc12-stm4-cem loopback enable	admin	enable loopback
oc12-stm4-cem <oc12-stm4-cem>		oc12 oc48-FRU TDM port name

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Command	Access	Description
port tdm oc12-stm4-cem loopback disable	admin	disable loopback
oc12-stm4-cem <oc12-stm4-cem>		oc12 oc48-FRU TDM port name

Command	Access	Description
port tdm oc12-stm4-cem loopback show	admin	show oc12 loopback attributes
oc12-stm4-cem <oc12-stm4-cem>		oc12 oc48-FRU TDM port name
[statistics]		statistics

Command	Access	Description
port tdm oc12-stm4-cem loopback clear	admin	clear loopback statistics
oc12-stm4-cem <oc12-stm4-cem>		oc12 oc48-FRU TDM port name
{statistics}		statistics

Command	Access	Description
port tdm oc12-stm4-cem prbs set	admin	set PRBS attributes
oc12-stm4-cem <oc12-stm4-cem>		oc12 oc48-FRU TDM port name
[insert <line | none>]		Set PRBS Insertion on a channel
{ins-channel <NUMBER: 0-335>}		channel
[monitoring <line | none>]		Set PRBS Monitoring on a channel
{mon-channel <NUMBER: 0-335>}		channel

Command	Access	Description
port tdm oc12-stm4-cem prbs unset	admin	unset prbs attributes
oc12-stm4-cem <oc12-stm4-cem>		oc12 oc48-FRU TDM port name
[insert]		PRBS Insertion on a channel
[monitoring]		PRBS Monitoring on a channel

Command	Access	Description
port tdm oc12-stm4-cem create	admin	create oc12 port

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oc12-stm4-cem <oc12-stm4-cem>		oc12 oc48-FRU TDM port name
{port <Combo FRU OCn port>}		physical port number associated with TDM

Command	**Access**	**Description**
port tdm oc12-stm4-cem delete	admin	delete oc12 port
oc12-stm4-cem <oc12-stm4-cem>		oc12 oc48-FRU TDM port name

Command	**Access**	**Description**
port tdm oc12-stm4-cem set	admin	set oc12 attributes
oc12-stm4-cem <oc12-stm4-cem>		oc12 oc48-FRU TDM port name
[section-trace <String[15]>]		user-defined section trace value
[clock-mode <dcr-epar | internal>]		clock mode
[signal-degrade <NUMBER: 5-9>]		signal degrade
[signal-fail <NUMBER: 3-5>]		signal fail

Command	**Access**	**Description**
port tdm oc12-stm4-cem unset	admin	unset oc12 attributes
oc12-stm4-cem <oc12-stm4-cem>		oc12 oc48-FRU TDM port name
[section-trace]		user-defined section trace value
[clock-mode]		clock mode
[signal-degrade]		signal degrade
[signal-fail]		signal fail

Command	**Access**	**Description**
port tdm oc12-stm4-cem show	admin	show oc12 attributes

Command	**Access**	**Description**
port tdm oc12-stm4-cem show	admin	show oc12 attributes
oc12-stm4-cem <oc12-stm4-cem>		oc12 oc48-FRU TDM port name

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Command	Access	Description
port tdm oc48-stm16 loopback set	admin	set loopback attributes
oc48-stm16 <oc48-stm16>		oc48 port name
[channel <NUMBER: 0-1343>]		channel
[type <port | sts48c-vc4-16c | sts12c-vc4-4c | sts3c-vc4c | sts1-vc3 | ds1-e1>]		loopback type
[mode <facility | terminal>]		loopback mode

Command	Access	Description
port tdm oc48-stm16 loopback unset	admin	unset loopback attributes
oc48-stm16 <oc48-stm16>		oc48 port name
[channel]		channel
[type]		loopback type
[mode]		loopback mode

Command	Access	Description
port tdm oc48-stm16 loopback enable	admin	enable loopback
oc48-stm16 <oc48-stm16>		oc48 port name

Command	Access	Description
port tdm oc48-stm16 loopback disable	admin	disable loopback
oc48-stm16 <oc48-stm16>		oc48 port name

Command	Access	Description
port tdm oc48-stm16 loopback show	admin	show oc48 loopback attributes
oc48-stm16 <oc48-stm16>		oc48 port name
[statistics]		statistics

Command	Access	Description
port tdm oc48-stm16 loopback clear	admin	clear loopback statistics
oc48-stm16 <oc48-stm16>		oc48 port name

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{statistics}		statistics

Command	Access	Description
port tdm oc48-stm16 prbs set	admin	set PRBS attributes
oc48-stm16 <oc48-stm16>		oc48 port name
[insert <line | network | none>]		Set PRBS Insertion on a channel
{ins-channel <NUMBER: 0-1344>}		channel
[monitoring <line | network | none>]		Set PRBS Monitoring on a channel
{mon-channel <NUMBER: 0-1344>}		channel

Command	Access	Description
port tdm oc48-stm16 prbs unset	admin	unset prbs attributes
oc48-stm16 <oc48-stm16>		oc48 port name
[insert]		PRBS Insertion on a channel
[monitoring]		PRBS Monitoring on a channel

Command	Access	Description
port tdm oc48-stm16 create	admin	create oc48 port
oc48-stm16 <oc48-stm16>		oc48 port name
{port <Physical port>}		physical port number associated with TDM
[mac <port-mac | sfp-factory-mac>]		source MAC associated with TDM

Command	Access	Description
port tdm oc48-stm16 delete	admin	delete oc48 port
oc48-stm16 <oc48-stm16>		oc48 port name

Command	Access	Description
port tdm oc48-stm16 set	admin	set oc48 attributes
oc48-stm16 <oc48-stm16>		oc48 port name
[section-trace <String[15]>]		user-defined section trace value
[clock-mode <dcr-epar | internal>]		clock mode
[c-tpid <8100 | 9100 | 88A8>]		Set default customer TPID

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[signal-degrade <NUMBER: 5-9>]		signal degrade
[signal-fail <NUMBER: 3-5>]		signal fail

Command	**Access**	**Description**
port tdm oc48-stm16 unset	admin	unset oc48 attributes
oc48-stm16 <oc48-stm16>		oc48 port name
[section-trace]		user-defined section trace value
[clock-mode]		clock mode
[c-tpid]		Set default customer TPID
[signal-degrade]		signal degrade
[signal-fail]		signal fail

Command	**Access**	**Description**
port tdm oc48-stm16 show	admin	show oc48 attributes

Command	**Access**	**Description**
port tdm oc48-stm16 show	admin	show oc48 attributes
oc48-stm16 <oc48-stm16>		oc48 port name

Command	**Access**	**Description**
port tdm oc48-stm16-cem loopback set	admin	set loopback attributes
oc48-stm16-cem <oc48-stm16-cem>		oc48 oc48-FRU TDM port name
[channel <NUMBER: 0-1343>]		channel
[type <sts1-vc3 | sts3c-vc4c | sts12c-vc4-4c | sts48c-vc4-16c | ds1-e1>]		loopback type
[mode <facility | terminal>]		loopback mode

Command	**Access**	**Description**
port tdm oc48-stm16-cem loopback unset	admin	unset loopback attributes
oc48-stm16-cem <oc48-stm16-cem>		oc48 oc48-FRU TDM port name
[channel]		channel
[type]		loopback type

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[mode]		loopback mode

Command	**Access**	**Description**
port tdm oc48-stm16-cem loopback enable	admin	enable loopback
oc48-stm16-cem <oc48-stm16-cem>		oc48 oc48-FRU TDM port name

Command	**Access**	**Description**
port tdm oc48-stm16-cem loopback disable	admin	disable loopback
oc48-stm16-cem <oc48-stm16-cem>		oc48 oc48-FRU TDM port name

Command	**Access**	**Description**
port tdm oc48-stm16-cem loopback show	admin	show oc48 loopback attributes
oc48-stm16-cem <oc48-stm16-cem>		oc48 oc48-FRU TDM port name
[statistics]		statistics

Command	**Access**	**Description**
port tdm oc48-stm16-cem loopback clear	admin	clear loopback statistics
oc48-stm16-cem <oc48-stm16-cem>		oc48 oc48-FRU TDM port name
{statistics}		statistics

Command	**Access**	**Description**
port tdm oc48-stm16-cem prbs set	admin	set PRBS attributes
oc48-stm16-cem <oc48-stm16-cem>		oc48 oc48-FRU TDM port name
[insert <line | none>]		Set PRBS Insertion on a channel
{ins-channel <NUMBER: 0-1344>}		channel
[monitoring <line | none>]		Set PRBS Monitoring on a channel
{mon-channel <NUMBER: 0-1344>}		channel

Command	**Access**	**Description**
port tdm oc48-stm16-cem prbs unset	admin	unset prbs attributes

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oc48-stm16-cem <oc48-stm16-cem>		oc48 oc48-FRU TDM port name
[insert]		PRBS Insertion on a channel
[monitoring]		PRBS Monitoring on a channel

Command	**Access**	**Description**
port tdm oc48-stm16-cem create	admin	create oc48 port
oc48-stm16-cem <oc48-stm16-cem>		oc48 oc48-FRU TDM port name
{port <Combo FRU OCn port>}		physical port number associated with TDM

Command	**Access**	**Description**
port tdm oc48-stm16-cem delete	admin	delete oc48 port
oc48-stm16-cem <oc48-stm16-cem>		oc48 oc48-FRU TDM port name

Command	**Access**	**Description**
port tdm oc48-stm16-cem set	admin	set oc48 attributes
oc48-stm16-cem <oc48-stm16-cem>		oc48 oc48-FRU TDM port name
[section-trace <String[15]>]		user-defined section trace value
[clock-mode <dcr-epar | internal>]		clock mode

Command	**Access**	**Description**
port tdm oc48-stm16-cem unset	admin	unset oc48 attributes
oc48-stm16-cem <oc48-stm16-cem>		oc48 oc48-FRU TDM port name
[section-trace]		user-defined section trace value
[clock-mode]		clock mode

Command	**Access**	**Description**
port tdm oc48-stm16-cem show	admin	show oc48 attributes

Command	**Access**	**Description**
port tdm oc48-stm16-cem show	admin	show oc48 attributes

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oc48-stm16-cem <oc48-stm16-cem>		oc48 oc48-FRU TDM port name

Command	**Access**	**Description**
port tdm ds3-e3 loopback set	admin	set loopback attributes
ds3-e3 <ds3-e3>		ds3 port name
[channel <NUMBER: 0-27>]		channel
[type <port | ds1-e1>]		loopback type
[mode <facility | terminal>]		loopback mode

Command	**Access**	**Description**
port tdm ds3-e3 loopback unset	admin	unset loopback attributes
ds3-e3 <ds3-e3>		ds3 port name
[mode]		loopback mode
[type]		loopback type
[channel]		channel

Command	**Access**	**Description**
port tdm ds3-e3 loopback enable	admin	enable loopback
ds3-e3 <ds3-e3>		ds3 port name

Command	**Access**	**Description**
port tdm ds3-e3 loopback disable	admin	disable loopback
ds3-e3 <ds3-e3>		ds3 port name

Command	**Access**	**Description**
port tdm ds3-e3 loopback show	admin	show ds3 loopback attributes
ds3-e3 <ds3-e3>		ds3 port name
[statistics]		statistics

Command	**Access**	**Description**

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port tdm ds3-e3 loopback clear	admin	clear loopback statistics
ds3-e3 <ds3-e3>		ds3 port name
{statistics}		statistics

Command	**Access**	**Description**
port tdm ds3-e3 prbs set	admin	set PRBS attributes
ds3-e3 <ds3-e3>		ds3 port name
[insert <line | network | none>]		Set PRBS Insertion on a channel
[ins-channel <NUMBER: 0-27>]		channel
[monitoring <line | network | none>]		Set PRBS Monitoring on a channel
[mon-channel <NUMBER: 0-27>]		channel

Command	**Access**	**Description**
port tdm ds3-e3 prbs unset	admin	unset prbs attributes
ds3-e3 <ds3-e3>		ds3 port name
[insert]		PRBS Insertion on a channel
[monitoring]		PRBS Monitoring on a channel

Command	**Access**	**Description**
port tdm ds3-e3 create	admin	create ds3 port
ds3-e3 <ds3-e3>		ds3 port name
{port <Physical port>}		physical port number associated with TDM
[mac <port-mac | sfp-factory-mac>]		source MAC associated with TDM

Command	**Access**	**Description**
port tdm ds3-e3 set	admin	set ds3 attributes
ds3-e3 <ds3-e3>		ds3 port name
[cable-length <normal | extended>]		Set the cable length. normal: 0..225FT extended: 225..450FT. Default: normal
[clock-mode <adaptive | dcr-epar | internal | recovered>]		clock mode
[c-tpid <8100 | 9100 | 88A8>]		Set default customer TPID
[framing <unframed | c-bit | m13 | g751>]		Set DS3/E3 framing type

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[master-clock-src-port <TDM Port Name>]		TDM port used as the master clock source when clock mode is set to recovered
[master-clock-src-tdm-vc <TDM VC Name>]		TDM VC used as the master clock source when clock mode is set to adaptive

Command	Access	Description
port tdm ds3-e3 unset	admin	unset ds3 attributes
ds3-e3 <ds3-e3>		ds3 port name
[cable-length]		Set the cable length. normal: 0..225FT extended: 225..450FT. Default: normal
[clock-mode]		clock mode
[c-tpid]		Set default customer TPID
[framing]		Unset DS3/E3 framing type
[master-clock-src-port]		TDM port used as the master clock source when clock mode is configured to recovered

Command	Access	Description
port tdm ds3-e3 delete	admin	delete ds3 port
ds3-e3 <ds3-e3>		ds3 port name

Command	Access	Description
port tdm ds3-e3 show	admin	show ds3 attributes

Command	Access	Description
port tdm ds3-e3 show	admin	show ds3 attributes
ds3-e3 <ds3-e3>		ds3 port name

Command	Access	Description
port tdm clear	admin	clear port statistics
port <port>		port(s) to clear
{statistics}		statistics table

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Command	Access	Description
port tdm disable	admin	disable TDM ports
port <port>		TDM port

Command	Access	Description
port tdm enable	admin	enable TDM ports
port <port>		TDM port

Command	Access	Description
port tdm set	admin	set TDM port global parameters
[mode <ansi | etsi | e1 | t1>]		select ansi or etsi mode
[c-tpid <8100 | 9100 | 88A8>]		Set default customer TPID

Command	Access	Description
port tdm unset	admin	unset TDM port global parameters
{c-tpid}		Set default customer TPID

Command	Access	Description
port tdm show	admin	show TDM port attributes
port <port>		TDM port
[statistics]		total statistics

Command	Access	Description
port tdm show	admin	show TDM port attributes

Command	Access	Description
port tdm show	limited	display all TDM port references

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Command	Access	Description
port rx-low-power-detect disable	admin	disable Rx Low Power Detection

Command	Access	Description
port rx-low-power-detect enable	admin	enable Rx Low Power Detection

Command	Access	Description
port clear	admin	clear port statistics
port <port>		port(s) to clear
{statistics}		statistics table

Command	Access	Description
port clear	admin	clear all port statistics
{statistics}		statistics table

Command	Access	Description
port disable	admin	disable port
port <port>		port(s) to disable

Command	Access	Description
port enable	admin	enable port
port <port>		port(s) to enable

Command	Access	Description
port monitor	limited	clear screen repeat show

Command	Access	Description

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port monitor	limited	clear screen repeat show
statistics		port(s) to show
[active]		only show active statistics
[delay <SECONDS: 1-86400>]		time between samples in seconds
[count <NUMBER: 0-4294967295>]		number of times to repeat the command
[scale <tera | giga | mega | kilo | none>]		scale used to show statistics

Command	**Access**	**Description**
port monitor	limited	clear screen repeat show
total-statistics		total port(s) to show
[active]		only show active statistics
[delay <SECONDS: 1-86400>]		time between samples in seconds
[count <NUMBER: 0-4294967295>]		number of times to repeat the command
[scale <tera | giga | mega | kilo | none>]		scale used to show statistics

Command	**Access**	**Description**
port monitor	limited	clear screen repeat show
throughput		port(s) to show
[active]		only show active statistics
[delay <SECONDS: 1-86400>]		time between samples in seconds
[count <NUMBER: 0-4294967295>]		number of times to repeat the command
[scale <tera | giga | mega | kilo | none>]		scale used to show statistics

Command	**Access**	**Description**
port monitor	limited	clear screen repeat show
port <port>		port(s) to show
[active]		only show active statistics
[delay <SECONDS: 1-86400>]		time between samples in seconds
[scale <tera | giga | mega | kilo | none>]		scale used to show statistics
[statistics]		show port statistics
[total-statistics]		show port statistics
[throughput]		show port throughput
[type <all | basic | errors | tx | rx>]		type of stats to show to show throughput

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Command	Access	Description
port set	admin	set port attributes
port <port>		port(s) to set
{acceptable-frame-type <all | tagged-only | untagged-only>}		Set acceptable frame types mode
{advertised-flow-control <asym-tx | off | sym | sym-asym-rx>}		Set advertised value for flow control
{advertised-speed <ten | hundred | gigabit | tengigabit | ten-hundred-gigabit | hundred-gigabit-tengigabit>}		Set advertised value for speed
{advertised-duplex <half | full | half-full>}		Set advertised value for duplex
{auto-neg <on | off>}		Set auto-negotiation
{duplex <half | full>}		Set duplex
{description <String[128]>}		Set port description
{egress-capture <Egress Capture Profile>}	super	Set egress port based packet capture
{egress-frame-cos-policy <ignore | rcos-to-l2-outer-pcp-map>}		Set egress frame CoS policy
{egress-untag-vlan <VLAN>}		Set VLAN for egressing untagged frames
{egress-mirror <Port>}		Set egress port mirroring
{facility-loopback <on | off>}		Set facility loopback state
{fixed-rcos <NUMBER: 0-7>}		Set fixed resolved CoS
{fixed-rcolor <green | yellow>}		Set fixed resolved Color
{flow-ctrl <asym-rx | asym-tx | off | sym>}		Set flow control
{frame-cos-map <RCOS to FCOS Map>}		egress RCOS->FCOS Map to use
{ingress-capture <Ingress Capture Profile>}	super	Set ingress port based packet capture
{ingress-cos-policy <fixed | leave | ip-prec-inherit | phbg-inherit>}		ingress CoS policy
{hold-off <on | off>}		Set port hold-off state, default: off
{hold-off-time <DECISECONDS>}		Set the port hold-off time in deciseconds (1ds = 100ms), default: 10ds
{ingress-fixed-dot1dpri <NUMBER: 0-7>}		Set ingress fixed 802.1D value
{ingress-mirror <Port>}		Set ingress port mirroring
{inter-packet-gap-size <8 | 12>}	admin	Set the number of bytes that will be the size of the inter packet gap
{link-flap-detect <on | off>}		Set link flap detection state, default: off
{link-flap-count <NUMBER: 1-64>}		Set the link transition count that will cause a link flap event, default: 5
{link-flap-detect-time <SECONDS: 1-600>}		Set the link flap detection window in seconds, default: 10
{link-flap-hold-time <SECONDS: 0-600>}		Set the link flap port re-enable time in seconds, default: 300

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{ingress-to-egress-qmap <RCOS Queue Map>}		Set ingress to egress queue map
{max-frame-size <NUMBER: 512-12288>}		Set the maximum frame size
{mirror-encap <none | vlan-tag>}		Set port mirroring encapsulation
{mirror-encap-tpid <8100 | 9100 | 88A8>}		Set port mirroring encapsulation TPID
{mirror-encap-vid <NUMBER: 1-4094>}		Set port mirroring encapsulation VID
{mirror-port <on | off>}		Set port mirroring state
{mode <default | rj45 | sfp>}		Set physical interface connector mode
{loopback <on | off>}		Set physical loopback state
{mac-swap <on | off>}		Set MAC SA/DA swap state
{mac-swap-vlan <VLAN>}		Set MAC SA/DA swap state to only one VLAN
{power-over-ethernet <on | off>}		Set Power-over-Ethernet state
{pvid <VLAN>}		Set PVID
{resolved-cos-policy <dot1d-tag1-cos | dot1d-tag2-cos | fixed-cos | l3-dscp-cos>}		Set resolved CoS policy
{resolved-cos-map <FCOS to RCOS Map>}		Set FCOS->RCOS Map to use
{resolved-cos-remark-l2 <true | false>}		Set L2 Remark based on L3
{speed <ten | hundred | gigabit | ten-gig | auto>}		Set speed
{signal-degrade-detection <off | y1731-synthetic-loss | y1731-performance-monitoring>}		Set Signal Degrade detection
{untagged-ctrl-vs <Virtual Switch Name>}		Set virtual switch for untagged ctrl frames
{untagged-data-vs <Virtual Switch Name>}		Set virtual switch for untagged data frames
{untagged-data-vid <NUMBER>}		Push/pop specified VLAN ID for untagged data frames
{vlan-ingress-filter <on | off>}		Set VLAN ingress filter
{vlan-range-index <NUMBER: 1-8>}		Set vlan range index
{vlan-range <VLAN ID List>}		VLAN ID List, 1 to 4094
{vs-ingress-filter <on | off>}		Set virtual switch ingress filter
{vs-egress-filter <on | off>}		Set virtual switch egress filter
{vs-ingress-filter-strict <on | off>}		Set strict ingress filter enforcement
{vs-l2-transform <i-push,e-pop | i-push,e-pop:stamp | i-stamp:push,e-match-pop:stamp>}		Set L2 transform action for virtual switch subscribers
{y-protection <none | primary | secondary>}		Set y-protection support
{ingress-acl <ACL Profile>}		The ACL profile to be applied on the ingress direction of this port

Command	**Access**	**Description**

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port show	limited	show port information
[capabilities]		show port capabilities
[ethernet-config]		show ethernet configuration
[network-config]		show network configuration
[status]		show port status
[vlan-range-indexes]		show port ingress vlan ranges

Command	**Access**	**Description**
port show	limited	show port information
statistics		statistics for all ports
[active]		only show active statistics
[delay <SECONDS: 1-86400>]		time between samples in seconds
[count <NUMBER: 0-4294967295>]		number of repetitions for throughput
[scale <tera | giga | mega | kilo | none>]		scale used to show statistics

Command	**Access**	**Description**
port show	limited	show port information
total-statistics		total statistics for all ports
[active]		only show active statistics
[delay <SECONDS: 1-86400>]		time between samples in seconds
[count <NUMBER: 0-4294967295>]		number of repetitions for throughput
[scale <tera | giga | mega | kilo | none>]		scale used to show statistics

Command	**Access**	**Description**
port show	limited	show port information
throughput		port(s) to show
[active]		only show active statistics
[delay <SECONDS: 1-86400>]		time between samples in seconds
[count <NUMBER: 0-4294967295>]		number of repetitions for throughput
[scale <tera | giga | mega | kilo | none>]		scale used to show statistics

Command	**Access**	**Description**
port show	limited	show port information

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Command	Access	Description
port show	limited	show port information
port <port>		port(s) to show
[active]		only show active statistics
[count <NUMBER: 0-4294967295>]		number of repetitions for throughput
[capabilities]		show port capabilities
[delay <SECONDS: 1-86400>]		time between samples in seconds
[statistics]		show port statistics
[total-statistics]		show total port statistics
[throughput]		show port throughput
[scale <tera | giga | mega | kilo | none>]		scale used to show statistics
[vlan]		show port vlan membership
[type <all | basic | errors | tx | rx>]		type of stats to show to show throughput
[vlan-range-indexes]		show port ingress vlan ranges

Command	Access	Description
port unset	admin	unset port attributes
port <port>		port(s) to set
{description}		unset port description
{egress-capture}	super	unset egress port based capture
{egress-mirror}		unset egress port mirroring
{ingress-capture}	super	unset ingress port based capture
{ingress-mirror}		unset ingress port mirroring
{inter-packet-gap-size}		unset value for inter packet gap size
{mirror-encap}		unset port mirroring encapsulation
{mirror-encap-vid}		unset port mirroring encapsulation VID
{mirror-encap-tpid}		unset port mirroring encapsulation TPID
{untagged-ctrl-vs}		unset virtual switch for untagged ctrl frames
{untagged-data-vs}		unset virtual switch for untagged data frames
{untagged-data-vid}		unset push/pop of VLAN ID for untagged data frames
{mac-swap-vlan}		unset MAC SA/DA swap VLAN ID
{advertised-speed}		unset advertised value for speed
{advertised-duplex}		unset advertised value for duplex
{power-over-ethernet}		unset state of power over ethernet module
{ingress-acl}		Unset the ACL profile applied on the ingress direction of this port

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{vs-egress-filter}		Unset vs egress filter of this port
{hold-off-time}		Unset hold-off time of this port
{hold-off}		Unset hold-off state of this port
{vlan-range-index <NUMBER>}		Unset vlan range index
{y-protection}		Unset y-cable support

private-forwarding-groups

Private Forwarding Groups (PFGs)

Command	Access	Description
private-forwarding-groups port-forwarding egress-profile add	admin	add one or more ports to an egress profile
profile <profile>		list of egress profiles
port <port>		list of ports to add to egress profile

Command	Access	Description
private-forwarding-groups port-forwarding egress-profile create	admin	create an egress profile
profile <profile>		egress profile name
{port <Port list>}		list of ports to add to egress profile
{flood-type <String List>}		allowed flood traffic types

Command	Access	Description
private-forwarding-groups port-forwarding egress-profile delete	admin	delete egress profile
profile <profile>		egress profile to delete

Command	Access	Description
private-forwarding-groups port-forwarding egress-profile remove	admin	remove one or more ports from egress profile
profile <profile>		list of egress profiles
port <port>		list of ports

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Command	Access	Description
private-forwarding-groups port-forwarding egress-profile set	admin	change allowed flood traffic types for egress profile
profile <profile>		list of egress profiles
{flood-type <String List>}		allowed flood traffic types

Command	Access	Description
private-forwarding-groups port-forwarding egress-profile show	admin	display specific egress profiles
profile <profile>		list of egress profiles

Command	Access	Description
private-forwarding-groups port-forwarding egress-profile show	admin	display a list of egress profiles

Command	Access	Description
private-forwarding-groups port-forwarding egress-profile unset	admin	reverts an egress profile attribute to the default value
profile <profile>		list of egress profiles

Command	Access	Description
private-forwarding-groups port-forwarding add	admin	assign egress profile to ingress port
port <port>		port to be assigned with egress profile
profile <profile>		list of egress profiles

Command	Access	Description
private-forwarding-groups port-forwarding disable	admin	disable port-based PFG globally

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Command	Access	Description
private-forwarding-groups port-forwarding enable	admin	enable port-based PFG globally

Command	Access	Description
private-forwarding-groups port-forwarding remove	admin	remove egress profile assignment from ingress port
port <port>		list of ports
profile <profile>		list of egress profiles

Command	Access	Description
private-forwarding-groups port-forwarding show	admin	display all port-based PFG settings

Command	Access	Description
private-forwarding-groups port-forwarding show	admin	display port-based PFG settings for port
port <port>		list of ports

Command	Access	Description
private-forwarding-groups set	admin	set the forwarding group for a specific port
port <port>		port object
policy <policy>		PFG policy object
{fwd-group <private forwarding group>}		the forwarding group the specified port will be associated with

Command	Access	Description
private-forwarding-groups set	admin	set a global PFG policy
policy <policy>		PFG policy object
[policy-group-A <private forwarding group list>]		forwarding rules for forwarding group A
[policy-group-B <private forwarding group list>]		forwarding rules for forwarding group B

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Command	Access	Description
private-forwarding-groups disable	admin	disable PFG for the specified VLAN
vlan <vlan>		VLAN(s) to disable PFG on

Command	Access	Description
private-forwarding-groups disable	admin	disable PFG for the specified VS
vs <vs>		VS to disable PFG on

Command	Access	Description
private-forwarding-groups disable	admin	disable PFG for the specified PFG policy
policy <policy>		PFG policy to disable

Command	Access	Description
private-forwarding-groups disable	admin	disable PFG globally

Command	Access	Description
private-forwarding-groups enable	admin	enable PFG for the specified VLAN
vlan <vlan>		VLAN(s) to enable PFG on

Command	Access	Description
private-forwarding-groups enable	admin	enable PFG for the specified VS
vs <vs>		VS to enable PFG on

Command	Access	Description
private-forwarding-groups enable	admin	enable PFG for the specified policy
policy <policy>		PFG policy to enabled

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Command	Access	Description
private-forwarding-groups enable	admin	enable PFG globally

Command	Access	Description
private-forwarding-groups show	limited	show global PFG configuration settings

Command	Access	Description
private-forwarding-groups show	limited	show PFG configuration settings
[port]		show PFG settings for port membership
[policy]		show PFG policy configuration settings
[vlan]		show VLAN specific PFG settings
[vs]		show VS specific PFG settings

radius

Remote Authentication Dial-In User Service (RADIUS)

Command	Access	Description
radius user-login add	admin	add a RADIUS server
server <server>		RADIUS server IP address or host name
{priority <NUMBER: 1-8>}		priority of the RADIUS server
{udp-port <NUMBER: 1-65535>}		UDP port of the RADIUS server, default: 1812

Command	Access	Description
radius user-login clear	admin	clear RADIUS user login statistics
{statistics}		clear RADIUS user login statistics

Command	Access	Description
radius user-login clear	admin	clear RADIUS user login statistics
server <server>		RADIUS server IP address or host name
{statistics}		clear RADIUS user login statistics

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Command	Access	Description
radius user-login disable	admin	disable a RADIUS server
server <server>		RADIUS server IP address or host name

Command	Access	Description
radius user-login enable	admin	enable a RADIUS server
server <server>		RADIUS server IP address or host name

Command	Access	Description
radius user-login remove	admin	remove a RADIUS server
server <server>		RADIUS server IP address or host name

Command	Access	Description
radius user-login set	admin	set RADIUS user login attributes
{key <Password String>}		set RADIUS key
{retries <NUMBER: 0-3>}		set RADIUS maximum retries
{search-method <priority | cached>}		set RADIUS search method
{timeout <SECONDS: 1-30>}		set RADIUS server response timeout in seconds
{service-type <on | off>}		set RADIUS authentication service type attribute

Command	Access	Description
radius user-login set	admin	set RADIUS server attributes
server <server>		RADIUS server IP address or host name
{priority <NUMBER: 1-8>}		priority of the RADIUS server
{udp-port <NUMBER: 1-65535>}		UDP port of the RADIUS server, default: 1812

Command	Access	Description

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radius user-login unset	admin	set RADIUS user login server attributes to defaults
server <server>		RADIUS server IP address or host name
{udp-port}		set the RADIUS UDP port to its default value

Command	**Access**	**Description**
radius user-login unset	admin	set RADIUS user login attributes back to defaults
{retries}		set RADIUS retries to its default value
{search-method}		set the RADIUS search method to its default value
{timeout}		set the RADIUS timeout to its default value

Command	**Access**	**Description**
radius user-login show	limited	show RADIUS user login information
{statistics}		show RADIUS user-login statistics

Command	**Access**	**Description**
radius user-login show	limited	show RADIUS user login information
server <server>		RADIUS server IP address or host name
{statistics}		show RADIUS user-login statistics

Command	**Access**	**Description**
radius user-acct add	admin	add a RADIUS server
server <server>		RADIUS server IP address or host name
{priority <NUMBER: 1-8>}		priority of the RADIUS server
{udp-port <NUMBER: 1-65535>}		UDP port of the RADIUS server, default: 1812

Command	**Access**	**Description**
radius user-acct clear	admin	clear RADIUS user login accounting statistics
{statistics}		clear RADIUS user login accounting statistics

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Command	Access	Description
radius user-acct clear	admin	clear RADIUS user login accounting statistics
server <server>		RADIUS server IP address or host name
{statistics}		clear RADIUS user login accounting statistics

Command	Access	Description
radius user-acct disable	admin	disable RADIUS user login accounting

Command	Access	Description
radius user-acct enable	admin	enable RADIUS user login accounting

Command	Access	Description
radius user-acct disable	admin	disable a RADIUS server
server <server>		RADIUS server IP address or host name

Command	Access	Description
radius user-acct enable	admin	enable a RADIUS server
server <server>		RADIUS server IP address or host name

Command	Access	Description
radius user-acct remove	admin	remove a RADIUS server
server <server>		RADIUS server IP address or host name

Command	Access	Description
radius user-acct set	admin	set RADIUS user login accounting attributes
{key <Password String>}		set RADIUS key
{retries <NUMBER: 0-3>}		set RADIUS maximum retries
{search-method <priority | cached>}		set RADIUS search method

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{timeout <SECONDS: 1-30>}		set RADIUS server response timeout in seconds

Command	Access	Description
radius user-acct set	admin	set RADIUS server attributes
server <server>		RADIUS server IP address or host name
{priority <NUMBER: 1-8>}		priority of the RADIUS server
{udp-port <NUMBER: 1-65535>}		UDP port of the RADIUS server, default: 1812

Command	Access	Description
radius user-acct unset	admin	set RADIUS user login accounting server attributes to defaults
server <server>		RADIUS server IP address or host name
{udp-port}		set the RADIUS UDP port to its default value

Command	Access	Description
radius user-acct unset	admin	set RADIUS user login accounting attributes back to defaults
{retries}		set RADIUS retries to its default value
{search-method}		set the RADIUS search method to its default value
{timeout}		set the RADIUS timeout to its default value

Command	Access	Description
radius user-acct show	limited	show RADIUS user login accounting information
{statistics}		show RADIUS user-login statistics

Command	Access	Description
radius user-acct show	limited	show RADIUS user login accounting information
server <server>		RADIUS server IP address or host name
{statistics}		show RADIUS user-login statistics

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Command	Access	Description
radius dot1x-auth add	admin	add a RADIUS server
server <server>		RADIUS server IP address or host name
{priority <NUMBER: 1-8>}		priority of the RADIUS server
{udp-port <NUMBER: 1-65535>}		UDP port of the RADIUS server, default: 1812

Command	Access	Description
radius dot1x-auth clear	admin	clear RADIUS 802.1x authentication statistics
{statistics}		clear RADIUS 802.1x authentication statistics

Command	Access	Description
radius dot1x-auth clear	admin	clear RADIUS 802.1x authentication statistics
server <server>		RADIUS server IP address or host name
{statistics}		clear RADIUS 802.1x authentication statistics

Command	Access	Description
radius dot1x-auth disable	admin	disable a RADIUS server
server <server>		RADIUS server IP address or host name

Command	Access	Description
radius dot1x-auth enable	admin	enable a RADIUS server
server <server>		RADIUS server IP address or host name

Command	Access	Description
radius dot1x-auth remove	admin	remove a RADIUS server
server <server>		RADIUS server IP address or host name

Command	Access	Description

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radius dot1x-auth set	admin	set RADIUS 802.1x authentication attributes
{greylist-timeout <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		set RADIUS greylist timeout, 1min to 4hr (N[yMwdhms]...)
{key <Password String>}		set RADIUS key
{retries <NUMBER: 0-3>}		set RADIUS maximum retries
{search-method <priority | load-balanced>}		set RADIUS search method
{timeout <SECONDS: 1-30>}		set RADIUS server response timeout in seconds
{config-reauth <on | off>}		enable or disable RADIUS config reauthorization

Command	**Access**	**Description**
radius dot1x-auth set	admin	set RADIUS 802.1x authentication server attributes
server <server>		RADIUS server IP address or host name
{priority <NUMBER: 1-8>}		priority of the RADIUS server
{udp-port <NUMBER: 1-65535>}		UDP port of the RADIUS server, default: 1812

Command	**Access**	**Description**
radius dot1x-auth unset	admin	set RADIUS 802.1x authentication server attributes to defaults
server <server>		RADIUS server IP address or host name
{udp-port}		set the RADIUS UDP port to its default value

Command	**Access**	**Description**
radius dot1x-auth unset	admin	set RADIUS 802.1x authentication attributes back to defaults
{greylist-timeout}		set RADIUS greylist timeout to its default value
{retries}		set RADIUS retries to its default value
{search-method}		set the RADIUS search method to its default value
{timeout}		set the RADIUS timeout to its default value
{config-reauth}		set RADIUS reauth to its default value

Command	**Access**	**Description**

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radius dot1x-auth show	limited	show RADIUS 802.1x authentication information
{statistics}		show RADIUS 802.1x authentication statistics

Command	**Access**	**Description**
radius dot1x-auth show	limited	show RADIUS 802.1x authentication information
server <server>		RADIUS server IP address or host name
{statistics}		show 802.1x authentication statistics

Command	**Access**	**Description**
radius dot1x-acct add	admin	add a RADIUS server
server <server>		RADIUS server IP address or host name
{priority <NUMBER: 1-8>}		priority of the RADIUS server
{udp-port <NUMBER: 1-65535>}		UDP port of the RADIUS server, default: 1813

Command	**Access**	**Description**
radius dot1x-acct clear	admin	clear RADIUS 802.1x accounting statistics
{statistics}		clear RADIUS 802.1x accounting statistics

Command	**Access**	**Description**
radius dot1x-acct clear	admin	clear RADIUS 802.1x accounting statistics
server <server>		RADIUS server IP address or host name
{statistics}		clear RADIUS 802.1x accounting statistics

Command	**Access**	**Description**
radius dot1x-acct disable	admin	disable RADIUS 802.1x accounting

Command	**Access**	**Description**
radius dot1x-acct enable	admin	enable RADIUS 802.1x accounting

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Command	Access	Description
radius dot1x-acct disable	admin	disable a RADIUS server
server <server>		RADIUS server IP address or host name

Command	Access	Description
radius dot1x-acct enable	admin	enable a RADIUS server
server <server>		RADIUS server IP address or host name

Command	Access	Description
radius dot1x-acct remove	admin	remove a RADIUS server
server <server>		RADIUS server IP address or host name

Command	Access	Description
radius dot1x-acct set	admin	set RADIUS 802.1x accounting attributes
{greylist-timeout <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		set RADIUS greylist timeout, 1min to 4hr (N[yMwdhms]...)
{interval <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		set RADIUS accounting interval 10min to 24hr (N[yMwdhms]...)
{key <Password String>}		set RADIUS key
{retries <NUMBER: 0-3>}		set RADIUS maximum retries
{search-method <priority | load-balanced>}		set RADIUS search method
{timeout <SECONDS: 1-30>}		set RADIUS server response timeout in seconds

Command	Access	Description
radius dot1x-acct set	admin	set RADIUS 802.1x accounting server attributes
server <server>		RADIUS server IP address or host name
{priority <NUMBER: 1-8>}		priority of the RADIUS server
{udp-port <NUMBER: 1-65535>}		UDP port of the RADIUS server, default: 1813

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Command	Access	Description
radius dot1x-acct unset	admin	set RADIUS 802.1x accounting server attributes to defaults
server <server>		RADIUS server IP address or host name
{udp-port}		set the RADIUS UDP port to its default value

Command	Access	Description
radius dot1x-acct unset	admin	set RADIUS 802.1x accounting attributes back to defaults
{greylist-timeout}		set RADIUS greylist timeout to its default value
{interval}		set RADIUS accounting interval to its default value
{retries}		set RADIUS retries to its default value
{search-method}		set the RADIUS search method to its default value
{timeout}		set the RADIUS timeout to its default value

Command	Access	Description
radius dot1x-acct show	limited	show RADIUS 802.1x accounting information
{statistics}		show RADIUS 802.1x accounting statistics

Command	Access	Description
radius dot1x-acct show	limited	show RADIUS 802.1x accounting information
server <server>		RADIUS server IP address or host name
{statistics}		show RADIUS 802.1x accounting statistics

Command	Access	Description
radius clear	admin	clear RADIUS statistics
{statistics}		clear RADIUS statistics

Command	Access	Description

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radius disable	admin	disable RADIUS functions

Command	**Access**	**Description**
radius enable	admin	enable RADIUS functions

Command	**Access**	**Description**
radius show	limited	show RADIUS information
{statistics}		show all RADIUS statistics

Command	**Access**	**Description**
radius set	admin	set RADIUS source ip
preferred-source-ip <preferred-source-ip>		Preferred Source IP to be set

Command	**Access**	**Description**
radius set	admin	set RADIUS attributes
{preferred-source-address <loopback | default>}		Preferred Source Address

Command	**Access**	**Description**
radius unset	admin	set RADIUS attributes to defaults
server <server>		RADIUS server IP address or host name
{udp-port}		set the RADIUS UDP port to its default value

Command	**Access**	**Description**
radius unset	admin	set RADIUS attributes back to defaults
{preferred-source-ip}		Preferred Source IP to be set

radsec

radsec configuration

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Command	Access	Description
radsec algorithm cipher-suite disable	super	disable cipher suite
cipher-suite <cipher-suite>		cipher suite

Command	Access	Description
radsec algorithm cipher-suite enable	super	enable cipher suite
cipher-suite <cipher-suite>		cipher suite

Command	Access	Description
radsec algorithm cipher-suite set	super	set cipher suite attributes
cipher-suite <cipher-suite>		cipher suite
{priority <NUMBER: 1-51>}		cipher suite priority

Command	Access	Description
radsec algorithm cipher-suite show	limited	show cipher suite info

Command	Access	Description
radsec algorithm cipher-suite unset	super	unset cipher suite attributes
cipher-suite <cipher-suite>		TLS cipher suite
{priority}		cipher suite priority

Command	Access	Description
radsec algorithm elliptic-curve disable	super	disable elliptic curve
elliptic-curve <elliptic-curve>		TLS elliptic curves

Command	Access	Description
radsec algorithm elliptic-curve enable	super	enable elliptic curve
elliptic-curve <elliptic-curve>		TLS elliptic curves

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Command	Access	Description
radsec algorithm elliptic-curve set	super	set elliptic curve attributes
elliptic-curve <elliptic-curve>		TLS elliptic curves
{priority <NUMBER: 1-13>}		cipher suite priority

Command	Access	Description
radsec algorithm elliptic-curve show	limited	show elliptic curve info

Command	Access	Description
radsec algorithm elliptic-curve unset	super	unset elliptic curve attributes
elliptic-curve <elliptic-curve>		TLS elliptic curves
{priority}		elliptic curve priority

Command	Access	Description
radsec algorithm show	limited	show algorithm info

Command	Access	Description
radsec ocsp disable	super	disable ocsp

Command	Access	Description
radsec ocsp enable	super	enable ocsp

Command	Access	Description
radsec ocsp show	admin	show ocsp attributes

Command	Access	Description
radsec ocsp set	super	set ocsp attributes

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{default-responder <String[255]>}		default ocsp responder url starting with http://
{nonce <on | off>}		send nonce with ocsp request
{responder-preference <aia | default-responder>}	admin	set which ocsp responder to try and stop after first aia/default responder

Command	Access	Description
radsec ocsp unset	super	unset ocsp attributes
{default-responder}		clear the default responder
{nonce}		unset send nonce, default: off

Command	Access	Description
radsec user-login add	super	add a radsec server
server <server>		radsec server IP address or host name
{fingerprint <a SHA1 certificate fingerprint>}		trusted fingerprint for peer's certificate
{port <NUMBER: 1-65535>}		set port of the radsec server (Default: 2083)
{priority <NUMBER: 1-8>}		priority of the radsec server
{trusted-dns <a fully qualified domain name that can accept a leading wildcard period>}		trusted dns name used to check peer's certificate

Command	Access	Description
radsec user-login clear	super	clear radsec user login statistics
{statistics}		clear radsec user login statistics

Command	Access	Description
radsec user-login clear	super	clear radsec user login statistics
server <server>		radsec server IP address or host name
{statistics}		clear radsec user login statistics

Command	Access	Description
radsec user-login disable	super	disable a radsec server
server <server>		radsec server IP address or host name

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Command	Access	Description
radsec user-login enable	super	enable a radsec server
server <server>		radsec server IP address or host name

Command	Access	Description
radsec user-login remove	super	remove a radsec server
server <server>		radsec server IP address or host name

Command	Access	Description
radsec user-login set	super	set radsec server attributes
server <server>		radsec server IP address or host name
{fingerprint <a SHA1 certificate fingerprint>}		set fingerprint of the radsec server
{port <NUMBER: 1-65535>}		set port of the radsec server (Default: 2083)
{priority <NUMBER: 1-8>}		set priority of the radsec server
{trusted-dns <a fully qualified domain name that can accept a leading wildcard period>}		set trusted dns of the radsec server

Command	Access	Description
radsec user-login unset	super	set radsec user login server attributes to defaults
server <server>		radsec server IP address or host name
{fingerprint}		unset fingerprint of the radsec server
{port}		unset port of the radsec server (Default: 2083)
{trusted-dns}		unset trusted dns of the radsec server

Command	Access	Description
radsec user-login show	limited	show radsec user login information
{statistics}		show radsec user-login statistics

Command	Access	Description
radsec user-login show	limited	show radsec user login information

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server <server>		radsec server IP address or host name
{statistics}		show radsec user-login statistics

Command	Access	Description
radsec user-acct add	super	add a radsec server
server <server>		radsec server IP address or host name
{fingerprint <a SHA1 certificate fingerprint>}		fingerprint of the radsec server
{port <NUMBER: 1-65535>}		port of the radsec server (Default: 2083)
{priority <NUMBER: 1-8>}		priority of the radsec server
{trusted-dns <a fully qualified domain name that can accept a leading wildcard period>}		trusted dns of the radsec server

Command	Access	Description
radsec user-acct clear	super	clear radsec user login accounting statistics
{statistics}		clear radsec user login accounting statistics

Command	Access	Description
radsec user-acct clear	super	clear radsec user login accounting statistics
server <server>		radsec server IP address or host name
{statistics}		clear radsec user login accounting statistics

Command	Access	Description
radsec user-acct disable	super	disable radsec user login accounting

Command	Access	Description
radsec user-acct disable	super	disable a radsec server
server <server>		radsec server IP address or host name

Command	Access	Description
radsec user-acct enable	super	enable radsec user login accounting

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Command	Access	Description
radsec user-acct enable	super	enable a radsec server
server <server>		radsec server IP address or host name

Command	Access	Description
radsec user-acct remove	super	remove a radsec server
server <server>		radsec server IP address or host name

Command	Access	Description
radsec user-acct set	super	set radsec server attributes
server <server>		radsec server IP address or host name
{fingerprint <a SHA1 certificate fingerprint>}		set fingerprint of the radsec server
{port <NUMBER: 1-65535>}		set port of the radsec server (Default: 2083)
{priority <NUMBER: 1-8>}		priority of the radsec server
{trusted-dns <a fully qualified domain name that can accept a leading wildcard period>}		set trusted-dns of the radsec server

Command	Access	Description
radsec user-acct unset	super	set radsec user login accounting server attributes to defaults
server <server>		radsec server IP address or host name
{fingerprint}		unset fingerprint of the radsec server
{port}		unset port of the radsec server (Default: 2083)
{trusted-dns}		unset trusted-dns of the radsec server

Command	Access	Description
radsec user-acct show	limited	show radsec user login accounting information
{statistics}		show radsec user-login statistics

Command	Access	Description

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radsec user-acct show	limited	show radsec user login accounting information
server <server>		radsec server IP address or host name
{statistics}		show radsec user-login statistics

Command	Access	Description
radsec clear	super	clear radsec statistics
{statistics}		clear radsec statistics

Command	Access	Description
radsec disable	super	disable radsec functions

Command	Access	Description
radsec enable	super	enable radsec functions

Command	Access	Description
radsec set	super	set Preferred-source-ip
preferred-source-ip <preferred-source-ip>		Interface Name

Command	Access	Description
radsec set	super	set radsec attributes
[cert-name <Certificate name>]		certificate to use
{check-cert-time <on | off>}		determines if certificate dates are checked or ignore when authenticating servers, default on
{check-fingerprint <on | off>}		determines if the fingerprint of the peer's certificate is checked, default on
{check-ip-host <on | off>}		determines if peer's specified ip or hostname is checked against it's certificate, default on
{check-peer-cert <on | off>}		determines if peer's certificate is authenticated, default on
{greylist-timeout <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		set radsec greylist timeout, 1min to 4hr, default 10m (N[yMwdhms]...)
{minimum-tls-version <TLSv1.0 | TLSv1.1 | TLSv1.2>}		set radsec minimum TLS version, default is TLSv1.1

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{search-method <cached | priority>}		set radsec search method (Default: priority)
{timeout <NUMBER: 1-30>}		set radsec timeout (Default: 6)

Command	Access	Description
radsec show	limited	show radsec information
{certificate}		show radsec certificate
{statistics}		show all radsec statistics

Command	Access	Description
radsec unset	super	unset radsec attributes
{cert-name}		unset certificate name, default: radsec
{check-cert-time}		unset radsec check-cert-time, default on
{preferred-source-ip}		Set Preferred Source Ip to default
{check-fingerprint}		unset radsec check-fingerprint, default on
{check-ip-host}		unset radsec check-ip-host, default on
{check-peer-cert}		unset radsec check-peer-cert, default on
{greylist-timeout}		unset radsec greylist timeout, default: 10m
{minimum-tls-version}		unset radsec minimum TLS version, default TLSv1.1
{search-method}		unset radsec search method, default: priority
{timeout}		unset radsec timeout, default: 6

resource-manager

Resource Manager

Command	Access	Description
resource-manager pool set	admin	set allocation
{resource <classifier | meter | counter>}		resource type
{feature <accelerated-cfm-over-pbt | access-list | broadcast-containment | cfm | dhcp-relay | loss-measurement | traffic-profiling | transport-oam | vc-statistics | vc-transform | vs-enhanced-l2-transform | mpls-queuing | mpls-mspw-queuing | advanced-l3>}		feature
{count <NUMBER>}		resource count

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Command	Access	Description
resource-manager system-resources show	limited	show
{service-counter}		show service counter resource usage
{service-meter}		show service meter resource usage
{virtual-port-multicast-group}		show virtual port multicast group resource usage

Command	Access	Description
resource-manager show	limited	show
{active}		show active resource configuration
{candidate}		show candidate resource configuration
{feature <access-list | cfm | egress-tx-statistics | traffic-profiling | vc-transform>}		show additional feature resource information

Command	Access	Description
resource-manager validate	admin	validate

ring-protection

ethernet ring protection switching

Command	Access	Description
ring-protection logical-ring clear	admin	clear command
ring <ring>		logical ring
[west-port]		west port
[east-port]		east port

Command	Access	Description
ring-protection logical-ring create	admin	create logical ring
logical-ring-name <logical-ring-name>		logical ring
{ring-id <NUMBER: 1-255>}		ring ID
{west-port <Port list>}		west port
{east-port <Port list>}		east port
[guard-time <MILLISECONDS: 10-2000>]		guard time

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[wtr <MINUTES>]		wait to restore time

Command	Access	Description
ring-protection logical-ring delete	admin	delete logical ring
ring <ring>		logical ring

Command	Access	Description
ring-protection logical-ring force	admin	force switch
ring <ring>		logical ring
[west-port]		west port
[east-port]		east port

Command	Access	Description
ring-protection logical-ring set	admin	set logical ring attributes
ring <ring>		logical ring
[guard-time <MILLISECONDS: 10-2000>]		guard time, default: 500
[wtr <MINUTES>]		wait to restore time, default: 5
[west-port-holdoff-time <MILLISECONDS: 0-10000>]		west port holdoff time, default: 0
[east-port-holdoff-time <MILLISECONDS: 0-10000>]		east port holdoff time, default: 0
[west-port-cfm-service-name <CFM Service Name>]		west port CFM service name
[east-port-cfm-service-name <CFM Service Name>]		east port CFM service name

Command	Access	Description
ring-protection logical-ring show	limited	show all logical rings

Command	Access	Description
ring-protection logical-ring show	limited	show logical ring
ring <ring>		logical ring

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Command	Access	Description
ring-protection logical-ring unset	admin	unset logical ring attributes
ring <ring>		logical ring
[guard-time]		guard time, default: 500
[wtr]		wait to restore time, default: 5
[west-port-holdoff-time]		west port holdoff time, default: 0
[east-port-holdoff-time]		east port holdoff time, default: 0
[west-port-cfm-service-name]		west port CFM service name
[east-port-cfm-service-name]		east port CFM service name

Command	Access	Description
ring-protection virtual-ring add	admin	add member
ring <ring>		virtual ring name
{vid <VLAN list>}		list of VLANs

Command	Access	Description
ring-protection virtual-ring clear	admin	clear statistics for all virtual rings
{statistics}		virtual ring statistics

Command	Access	Description
ring-protection virtual-ring clear	admin	clear virtual ring
ring <ring>		virtual ring
{statistics}		virtual ring statistics

Command	Access	Description
ring-protection virtual-ring create	admin	create virtual ring
virtual-ring-name <virtual-ring-name>		virtual ring
{logical-ring <Logical ring name>}		logical ring
{raps-vid <NUMBER: 1-4094>}		RAPS VID
[mel <NUMBER: 0-7>]		maintenance entity group level, default: 0

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[sub-ring <no-port-termination | west-port-termination | east-port-termination>]		sub-ring

Command	Access	Description
ring-protection virtual-ring delete	admin	delete virtual ring
ring <ring>		virtual ring

Command	Access	Description
ring-protection virtual-ring remove	admin	remove member
ring <ring>		virtual ring name
{vid <VLAN list>}		list of VLANs

Command	Access	Description
ring-protection virtual-ring set	admin	set virtual ring attributes
ring <ring>		virtual ring
[flush-propagate <off | on>]		flush propagation
[mel <NUMBER: 0-7>]		maintenance entity group level, default: 0
[revertive <off | on>]		revertive
[west-port-rpl <owner>]		RPL
[east-port-rpl <owner>]		RPL

Command	Access	Description
ring-protection virtual-ring show	limited	show all virtual rings

Command	Access	Description
ring-protection virtual-ring show	limited	show virtual ring
ring <ring>		virtual ring

Command	Access	Description
ring-protection virtual-ring unset	admin	unset virtual ring attributes

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ring <ring>		virtual ring name
[flush-propagate]		flush propagation
[mel]		maintenance entity group level
[revertive]		revertive
[west-port-rpl]		RPL
[east-port-rpl]		RPL

Command	Access	Description
ring-protection disable	admin	disable ring protection switching

Command	Access	Description
ring-protection enable	admin	enable ring protection switching

Command	Access	Description
ring-protection show	limited	show global configuration

rmon

Remote Monitoring (RMON)

Command	Access	Description
rmon alarm add	admin	add RMON alarm attributes
alarm-index <alarm-index>		index in the alarm table
{data-source <String[127]>}		interface oid name
{falling-event-index <NUMBER: 0-65535>}		falling event index
{falling-threshold <NUMBER: 0-2147483647>}		falling alarm threshold
{interval <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		interval to be used for sending alarms, 1sec to 1year (N[yMwdhms]...)
[owner <String[127]>]		name of the owner
{rising-event-index <NUMBER: 0-65535>}		rising event index
{rising-threshold <NUMBER: 0-2147483647>}		rising alarm threshold
{sample-type <absolute | delta>}		type of sample
{startup-alarm <falling | rising | both>}		startup alarm

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Command	Access	Description
rmon alarm set	admin	set RMON alarm attributes
alarm-index <alarm-index>		index in the alarm table
[data-source <String[127]>]		interface oid name
[falling-event-index <NUMBER: 0-65535>]		falling event index
[falling-threshold <NUMBER: 0-2147483647>]		falling alarm threshold
[interval <duration: {N[yMwdhms]}* e.g. 1h10m3s>]		interval to be used for sending alarms, 1sec to 1year (N[yMwdhms]...)
[owner <String[127]>]		name of the owner
[rising-event-index <NUMBER: 0-65535>]		rising event index
[rising-threshold <NUMBER: 0-2147483647>]		rising alarm threshold
[sample-type <absolute | delta>]		type of sample
[startup-alarm <falling | rising | both>]		startup alarm

Command	Access	Description
rmon alarm remove	admin	remove alarm table entry
{alarm-index <NUMBER: 1-65535>}		index in the alarm table

Command	Access	Description
rmon alarm unset	admin	unset RMON alarm attributes
alarm-index <alarm-index>		index in the alarm table
[interval]		interval to be used for sending alarms
[owner]		name of the owner
[sample-type]		type of sample
[startup-alarm]		startup alarm

Command	Access	Description
rmon alarm show	limited	show RMON alarms

Command	Access	Description
rmon alarm show	limited	show RMON alarms
alarm-index <alarm-index>		alarm table object

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Command	Access	Description
rmon event add	admin	set RMON event attributes
event-index <event-index>		index in the history table
[community <String[127]>]		event community name to use
[description <String>]		description of the event
[owner <String[127]>]		name of the owner
{type <none | log | snmp-trap | log-and-snmptrap>}		type of event

Command	Access	Description
rmon event set	admin	set RMON event attributes
event-index <event-index>		index in the history table
[community <String[127]>]		event community name to use
[description <String>]		description of the event
[owner <String[127]>]		name of the owner
[type <none | log | snmp-trap | log-and-snmptrap>]		type of event

Command	Access	Description
rmon event remove	admin	remove event table entry
{event-index <NUMBER: 1-65535>}		index in the event table

Command	Access	Description
rmon event show	limited	show RMON events

Command	Access	Description
rmon event unset	admin	set RMON event attributes
event-index <event-index>		index in the history table
[community]		event community name to use
[description]		description of the event
[owner]		name of the owner
[type]		type of event

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Command	Access	Description
rmon history auto-configure disable	admin	disable RMON history auto-configure

Command	Access	Description
rmon history auto-configure enable	admin	enable RMON history auto-configure

Command	Access	Description
rmon history auto-configure set	admin	set global rmon history settings
[file-logging <on | off>]		save history in a file
[interval <duration: {N[yMwdhms]}* e.g. 1h10m3s>]		interval to be used for monitoring history statistics, 1sec to 1hr (N[yMwdhms]...)
[num-buckets <NUMBER: 1-65535>]		number of buckets to use
[owner <String[127]>]		name of the owner
[statistics <String List>]		which per port statistics to place in the file

Command	Access	Description
rmon history auto-configure show	limited	show RMON history auto-configure

Command	Access	Description
rmon history auto-configure unset	admin	unset global rmon history settings
[file-logging]		save history in a file
[interval]		interval used for monitoring
[num-buckets]		number of buckets to use
[owner]		name of the owner
[statistics]		which per port statistics to place in the file

Command	Access	Description
rmon history add	admin	set RMON history attributes
hist-index <hist-index>		index in the history table
[file-logging <on | off>]		save history in a file

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[interval <duration: {N[yMwdhms]}* e.g. 1h10m3s>]		interval to be used for monitoring history statistics, 1sec to 1hr (N[yMwdhms]...)
[num-buckets <NUMBER: 1-65535>]		number of buckets to use
[owner <String[127]>]		name of the owner
{port <Port>}		the port to monitor
[sample-type <absolute | delta>]		absolute or delta for sample
[statistics <String List>]		which per port statistics to place in the file

Command	**Access**	**Description**
rmon history remove	admin	remove history table entry
{hist-index <NUMBER: 1-65535>}		index in the history table

Command	**Access**	**Description**
rmon history set	admin	set RMON history attributes
hist-index <hist-index>		index in the history table
[file-logging <on | off>]		save history in a file
[interval <duration: {N[yMwdhms]}* e.g. 1h10m3s>]		interval to be used for monitoring history statistics, 1sec to 1hr (N[yMwdhms]...)
[num-buckets <NUMBER: 1-65535>]		number of buckets to use
[owner <String[127]>]		name of the owner
{port <Port>}		the port to monitor
[sample-type <absolute | delta>]		absolute or delta for sample
[statistics <String List>]		which per port statistics to place in the file

Command	**Access**	**Description**
rmon history unset	admin	set RMON history attributes
hist-index <hist-index>		index in the history table
[file-logging]		save history in a file
[interval]		interval used for monitoring
[num-buckets]		number of buckets to use
[owner]		name of the owner
[sample-type]		sample type
[statistics]		which per port statistics to place in the file.

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Command	Access	Description
rmon history show	limited	show RMON history

Command	Access	Description
rmon statistics add	admin	set ether statistics entry

Command	Access	Description
rmon statistics add	admin	set ethernet statistics entry
stat-index <stat-index>		index in the ethernet statistics table
{port <Port>}		the port to monitor
[owner <String[127]>]		name of the owner

Command	Access	Description
rmon statistics remove	admin	remove ethernet statistics entry
{stat-index <NUMBER: 1-65535>}		index in the ethernet statistics table

Command	Access	Description
rmon statistics show	limited	show RMON statistics

Command	Access	Description
rmon transfer disable	admin	disable RMON file logging

Command	Access	Description
rmon transfer enable	admin	enable RMON file logging

Command	Access	Description
rmon transfer push	admin	push all local RMON files to the remote server

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Command	Access	Description
rmon transfer set	admin	set RMON file settings
[interval <duration: {N[yMwdhms]}* e.g. 1h10m3s>]		interval to be used for monitoring file transfers, 1h to 1y (N[yMwdhms]...)
[name <String[16]>]		name of RMON file
[num-files <NUMBER: 1-4>]		interval used for monitoring
[remote-file-dir <String[127]>]		remote file directory
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively

Command	Access	Description
rmon transfer show	limited	show RMON destination config

Command	Access	Description
rmon transfer unset	admin	unset RMON file transfer settings
[interval]		interval used for monitoring
[name]		unset name of RMON file
[num-files]		interval used for monitoring
[remote-file-dir]		remote file directory
{ftp-server}		unset FTP server
{sftp-server}		unset SFTP server
[server]		server
{tftp-server}		unset TFTP server

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Command	Access	Description
rmon usr-history set control	admin	change an user history control
[buckets <NUMBER: 1-65535>]		number of buckets to use
[file-logging <on | off>]		save history in a file
{index <NUMBER: 1-65535>}		index in the user history control table
[interval <duration: {N[yMwdhms]}* e.g. 1h10m3s>]		interval to be used for monitoring usr-history objects, 1sec to 1y (N[yMwdhms]...)
[owner <String[127]>]		name of the owner

Command	Access	Description
rmon usr-history add	admin	add usr-history table entries
[buckets <NUMBER: 1-65535>]		number of buckets to use
[file-logging <on | off>]		save history in a file
[interval <duration: {N[yMwdhms]}* e.g. 1h10m3s>]		interval to be used for monitoring usr-history objects, 1sec to 1y (N[yMwdhms]...)
[owner <String[127]>]		name of the owner
{control-index <NUMBER: 1-1200>}		index of the usr-history control table to associate with
[usr-index <NUMBER: 1-65545>]		index of the usr-history object table to associate with
{object <String[127]>}		OID name
[sample-type <absolute | delta>]		absolute or delta for sample

Command	Access	Description
rmon usr-history remove	admin	remove control table entry
{control-index <NUMBER: 1-1200>}		index of history control table to associate with
[usr-index <NUMBER: 1-65535>]		index in the user history object table

Command	Access	Description
rmon usr-history set	admin	add user history table entries
control-index <control-index>		index of history control table to associate with
[buckets <NUMBER: 1-65535>]		number of buckets to use
[file-logging <on | off>]		save history in a file
[interval <duration: {N[yMwdhms]}* e.g. 1h10m3s>]		interval to be used for monitoring usr-history objects, 1sec to 1y (N[yMwdhms]...)

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[owner <String[127]>]		name of the owner

Command	Access	Description
rmon usr-history show	limited	show RMON usr-history

Command	Access	Description
rmon usr-history unset	admin	add user history table entries
control-index <control-index>		index of history control table to associate with
[buckets]		number of buckets to use
[file-logging]		save history in a file
[interval]		interval used for monitoring
[owner]		name of the owner

Command	Access	Description
rmon show	limited	show RMON configuration
{alarm}		shows alarm table
{auto-configuration}		shows configuration data
{event}		shows event table
{history}		shows ether history table
{statistics}		shows RMON statistics table
{transfer}		shows file persistence data
{usr-history}		shows RMON user history tables

routing-domain

routing domain

rstp

Rapid Spanning Tree Protocol (RSTP)

Command	Access	Description
rstp timer-default reset	admin	reset timer default values

Command	Access	Description

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rstp assign	admin	assign a port to a spanning tree domain
rstpd <rstpd>		RSTP domain name
{port <Port list>}		port list

Command	**Access**	**Description**
rstp create	admin	create an RSTP domain
{rstpd <Name (no ,) String>}		RSTP domain name
[domain-id <NUMBER: 1-255>]		RSTP domain identifier

Command	**Access**	**Description**
rstp delete	admin	delete an RSTP domain
rstpd <rstpd>		RSTP domain name

Command	**Access**	**Description**
rstp disable	admin	disable RSTP globally

Command	**Access**	**Description**
rstp disable	admin	disable RSTP on ports
{port <Port list>}		port list

Command	**Access**	**Description**
rstp enable	admin	enable RSTP globally

Command	**Access**	**Description**
rstp enable	admin	enable RSTP on ports
{port <Port list>}		port list

Command	**Access**	**Description**
rstp set	admin	set RSTP attributes

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{forward-delay <SECONDS: 4-30>}		set bridge RSTP forward delay timer
{hello-time <SECONDS: 1-10>}		set bridge RSTP hello time
{loopback-blocking <on | off>}		set bridge RSTP loopback port blocking
{max-age <SECONDS: 6-40>}		set bridge RSTP max-age
{mode <rstp | rstp-domain>}		set bridge RSTP mode
{path-cost-def <8021d | 8021t>}		set bridge RSTP path-cost default
{priority <NUMBER: 0-15>}		set bridge RSTP priority
{tx-hold-count <NUMBER: 1-10>}		set bridge RSTP tx hold count
{compliance <8021w | 8021D | ciena-enhanced>}		set RSTP standards compliance level
{enhancement-resend-agree <on | off>}		set RSTP resend agree bpdu
{pvst-notification <on | off>}		turn on or off PVST notifications

Command	**Access**	**Description**
rstp set	admin	set RSTP port attributes
port <port>		port list
{dynamic-path-cost <on | off>}		turn dynamic port cost on/off
{edge-port <on | off>}		turn port edge port state on/off
{legacy-tx <on | off>}		turn on/off using 802.1W compliant RSTP BPDU transmit in non-8021W compliance modes
{migration-check}		turn port migration check on/off
{path-cost <NUMBER: 1-400000000>}		set port RSTP path cost
{point-point-mac <auto | force-false | force-true>}		set point-to-point MAC mode
{priority <NUMBER: 0-15>}		set port RSTP priority

Command	**Access**	**Description**
rstp set	admin	set RSTP domain attributes
rstpd <rstpd>		RSTP domain name
{compliance <8021w | 8021D | ciena-enhanced>}		set RSTP standards compliance level
{priority <NUMBER: 0-15>}		set domain RSTP priority

Command	**Access**	**Description**
rstp show	limited	show RSTP

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Command	Access	Description
rstp show	limited	show RSTP bridge
{bridge}		bridge

Command	Access	Description
rstp show	limited	show RSTP port
port <port>		port list

Command	Access	Description
rstp show	limited	show RSTP domain
rstpd <rstpd>		RSTP domain name

rsvp-te

RSVP-TE protocol

Command	Access	Description
rsvp-te graceful-restart enable	admin	enable RSVP-TE Graceful Restart

Command	Access	Description
rsvp-te graceful-restart disable	admin	disable RSVP-TE Graceful Restart

Command	Access	Description
rsvp-te authentication set	admin	set authentication
{ip <IP address>}		neighbor IP address
{authentication-type <md5>}		authentication type
{echoless-password}		collect authentication message digest interactively

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Command	Access	Description
rsvp-te authentication unset	admin	unset authentication
{ip <IP address>}		neighbor IP address

Command	Access	Description
rsvp-te authentication show	limited	show

Command	Access	Description
rsvp-te interface show	limited	show RSVP-TE interfaces

Command	Access	Description
rsvp-te path-error show	limited	show RSVP-TE path-error
[detail]	limited	RSVP-TE patherror show detail

Command	Access	Description
rsvp-te path create	admin	create
rsvp-path <rsvp-path>		create RSVP-TE path

Command	Access	Description
rsvp-te path delete	admin	delete
rsvp-path <rsvp-path>		RSVP-TE path name

Command	Access	Description
rsvp-te path show	limited	show
rsvp-path <rsvp-path>		RSVP-TE path name

Command	Access	Description

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rsvp-te path show	limited	show

Command	**Access**	**Description**
rsvp-te path set	admin	set
rsvp-path <rsvp-path>		RSVP-TE path name
{index <NUMBER: 1-16>}	admin	position of node in the RSVP-TE path list
{ip <IP address>}	admin	ip address
[hop-type <strict | loose>]	admin	hop type
[exclude <enable | disable>]	admin	Exclude-IP-Address from the path

Command	**Access**	**Description**
rsvp-te path unset	admin	unset
rsvp-path <rsvp-path>		RSVP-TE path name
{index <NUMBER>}	admin	position of node in the RSVP-TE path list

Command	**Access**	**Description**
rsvp-te disable	admin	disable RSVP-TE on the interface
ip-interface <ip-interface>		Interface Name

Command	**Access**	**Description**
rsvp-te enable	admin	enable RSVP-TE on the interface
ip-interface <ip-interface>		Interface Name

Command	**Access**	**Description**
rsvp-te disable	admin	disable RSVP-TE globally

Command	**Access**	**Description**
rsvp-te enable	admin	enable RSVP-TE globally

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Command	Access	Description
rsvp-te set	admin	set RSVP-TE interface property
ip-interface <ip-interface>		Interface Name
[advertised-label <implicit-null | non-reserved>]	admin	the type of label to advertise
[hello-interval <SECONDS: 0-30>]		specifies the RSVP-TE hello interval in sec, 0 means disable
[hello-tolerance <NUMBER: 0-10>]		specifies the number of RSVP-TE hello tolerance
{authentication-type <md5>}		authentication type
{echoless-password}		collect authentication message digest interactively

Command	Access	Description
rsvp-te unset	admin	unset RSVP-TE interface property
ip-interface <ip-interface>		Interface Name
[hello-interval]		RSVP-TE hello interval
[hello-tolerance]		RSVP-TE hello tolerance
[authentication-type]		authentication type
[advertised-label]		the type of label to advertise

Command	Access	Description
rsvp-te set	admin	set RSVP-TE global parameters
[retry-interval <SECONDS: 3-65>]	admin	specifies the retry interval in seconds for tunnels
[retry-infinite <on | off>]	admin	enables infinite retries for RSVP-TE tunnels
[refresh-interval <SECONDS: 1-65>]	admin	specifies the refresh interval in seconds for tunnels

Command	Access	Description
rsvp-te unset	admin	unset RSVP-TE global parameters
[retry-interval]	admin	RSVP-TE retry interval
[retry-infinite]	admin	RSVP-TE infinite retries for tunnels
[refresh-interval]	admin	RSVP-TE refresh interval

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Command	Access	Description
rsvp-te show	limited	show RSVP-TE protocol
[counters]	limited	RSVP-TE protocol counters
[timers]	limited	RSVP-TE protocol timers

Command	Access	Description
rsvp-te clear	admin	Clear RSVP-TE counters
{counters}	admin	RSVP-TE counters

snmp

SNMP

Command	Access	Description
snmp context-map attach	super	attach SNMP context to routing instance
context <context>		SNMP context name
{isis-instance <ISIS Instance>}		isis routing instance
{ospf-instance <OSPF Instance>}		ospf routing instance

Command	Access	Description
snmp context-map detach	super	detach SNMP user to security group
context <context>		SNMP context name
{isis-instance <ISIS Instance>}		isis routing instance
{ospf-instance <OSPF Instance>}		ospf routing instance

Command	Access	Description
snmp notification ciena CIENA-CES-ALARM-MIB enable	super	enable ciena notification
notification-name <notification-name>		ciena notifications

Command	Access	Description

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snmp notification ciena CIENA-CES-ALARM-MIB disable	super	disable ciena notification
notification-name <notification-name>		ciena notifications

Command	**Access**	**Description**
snmp notification ciena CIENA-CES-BENCHMARK-MIB enable	super	enable ciena notification
notification-name <notification-name>		ciena notifications

Command	**Access**	**Description**
snmp notification ciena CIENA-CES-BENCHMARK-MIB disable	super	disable ciena notification
notification-name <notification-name>		ciena notifications

Command	**Access**	**Description**
snmp notification ciena CIENA-CES-BFD-MIB enable	super	enable ciena notification
notification-name <notification-name>		ciena notifications

Command	**Access**	**Description**
snmp notification ciena CIENA-CES-BFD-MIB disable	super	disable ciena notification
notification-name <notification-name>		ciena notifications

Command	**Access**	**Description**
snmp notification ciena CIENA-CES-BGP-LSP-MIB enable	super	enable ciena notification
notification-name <notification-name>		ciena notifications

Command	**Access**	**Description**

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snmp notification ciena CIENA-CES-BGP-LSP-MIB disable	super	disable ciena notification
notification-name <notification-name>		ciena notifications

Command	**Access**	**Description**
snmp notification ciena CIENA-CES-CONFIG-MGMT-MIB enable	super	enable ciena notification
notification-name <notification-name>		ciena notifications

Command	**Access**	**Description**
snmp notification ciena CIENA-CES-CONFIG-MGMT-MIB disable	super	disable ciena notification
notification-name <notification-name>		ciena notifications

Command	**Access**	**Description**
snmp notification ciena CIENA-CES-CONFIG-MGMT-MIB set	super	set ciena notification
notification-name <notification-name>		ciena notifications
[delay <NUMBER: 1-300>]		config change notification aggregation delay in seconds
[count <NUMBER: 0-65535>]		config change notification aggregation count

Command	**Access**	**Description**
snmp notification ciena CIENA-CES-ICL-MIB enable	super	enable ciena notification
notification-name <notification-name>		ciena notifications

Command	**Access**	**Description**
snmp notification ciena CIENA-CES-ICL-MIB disable	super	disable ciena notification
notification-name <notification-name>		ciena notifications

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Command	Access	Description
snmp notification ciena CIENA-CES-LAPS-MIB enable	super	enable ciena notification
notification-name <notification-name>		ciena notifications

Command	Access	Description
snmp notification ciena CIENA-CES-LAPS-MIB disable	super	disable ciena notification
notification-name <notification-name>		ciena notifications

Command	Access	Description
snmp notification ciena CIENA-CES-MCAST-FILTER-MIB enable	super	enable ciena notification
notification-name <notification-name>		ciena notifications

Command	Access	Description
snmp notification ciena CIENA-CES-MCAST-FILTER-MIB disable	super	disable ciena notification
notification-name <notification-name>		ciena notifications

Command	Access	Description
snmp notification ciena CIENA-CES-MGMT-INTERFACE-MIB enable	super	enable ciena notification
notification-name <notification-name>		ciena notifications

Command	Access	Description
snmp notification ciena CIENA-CES-MGMT-INTERFACE-MIB disable	super	disable ciena notification
notification-name <notification-name>		ciena notifications

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Command	Access	Description
snmp notification ciena CIENA-CES-MODULE-MIB enable	super	enable ciena notification
notification-name <notification-name>		ciena notifications

Command	Access	Description
snmp notification ciena CIENA-CES-MODULE-MIB disable	super	disable ciena notification
notification-name <notification-name>		ciena notifications

Command	Access	Description
snmp notification ciena CIENA-CES-MPLS-MIB enable	super	enable ciena notification
notification-name <notification-name>		ciena notifications

Command	Access	Description
snmp notification ciena CIENA-CES-MPLS-MIB disable	super	disable ciena notification
notification-name <notification-name>		ciena notifications

Command	Access	Description
snmp notification ciena CIENA-CES-OSPF-MIB enable	super	enable ciena notification
notification-name <notification-name>		ciena notifications

Command	Access	Description
snmp notification ciena CIENA-CES-OSPF-MIB disable	super	disable ciena notification
notification-name <notification-name>		ciena notifications

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Command	Access	Description
snmp notification ciena CIENA-CES-PM-MIB enable	super	enable ciena notification
notification-name <notification-name>		ciena notifications

Command	Access	Description
snmp notification ciena CIENA-CES-PM-MIB disable	super	disable ciena notification
notification-name <notification-name>		ciena notifications

Command	Access	Description
snmp notification ciena CIENA-CES-SECURITY-MIB enable	super	enable ciena notification
notification-name <notification-name>		ciena notifications

Command	Access	Description
snmp notification ciena CIENA-CES-SECURITY-MIB disable	super	disable ciena notification
notification-name <notification-name>		ciena notifications

Command	Access	Description
snmp notification ciena CIENA-CES-SYSTEM-CONFIG-MIB enable	super	enable ciena notification
notification-name <notification-name>		ciena notifications

Command	Access	Description
snmp notification ciena CIENA-CES-SYSTEM-CONFIG-MIB disable	super	disable ciena notification
notification-name <notification-name>		ciena notifications

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Command	Access	Description
snmp notification ciena CIENA-CES-TIME-SYNC-MIB enable	super	enable ciena notification
notification-name <notification-name>		ciena notifications

Command	Access	Description
snmp notification ciena CIENA-CES-TIME-SYNC-MIB disable	super	disable ciena notification
notification-name <notification-name>		ciena notifications

Command	Access	Description
snmp notification ciena CIENA-CES-VLLI-MIB enable	super	enable ciena notification
notification-name <notification-name>		ciena notifications

Command	Access	Description
snmp notification ciena CIENA-CES-VLLI-MIB disable	super	disable ciena notification
notification-name <notification-name>		ciena notifications

Command	Access	Description
snmp notification standard BGP4-MIB enable	super	enable standard notification
notification-name <notification-name>		standard notifications

Command	Access	Description
snmp notification standard BGP4-MIB disable	super	disable standard notification
notification-name <notification-name>		standard notifications

Command	Access	Description

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snmp notification standard BRIDGE-MIB enable	super	enable standard notification
notification-name <notification-name>		standard notifications

Command	Access	Description
snmp notification standard BRIDGE-MIB disable	super	disable standard notification
notification-name <notification-name>		standard notifications

Command	Access	Description
snmp notification standard DS1-MIB enable	super	enable standard notification
notification-name <notification-name>		standard notifications

Command	Access	Description
snmp notification standard DS1-MIB disable	super	disable standard notification
notification-name <notification-name>		standard notifications

Command	Access	Description
snmp notification standard IF-MIB enable	super	enable standard notification
notification-name <notification-name>		standard notifications

Command	Access	Description
snmp notification standard IF-MIB disable	super	disable standard notification
notification-name <notification-name>		standard notifications

Command	Access	Description
snmp notification standard ISIS-MIB enable	super	enable standard notification
notification-name <notification-name>		standard notifications

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Command	Access	Description
snmp notification standard ISIS-MIB disable	super	disable standard notification
notification-name <notification-name>		standard notifications

Command	Access	Description
snmp notification standard LLDP-MIB enable	super	enable standard notification
notification-name <notification-name>		standard notifications

Command	Access	Description
snmp notification standard LLDP-MIB disable	super	disable standard notification
notification-name <notification-name>		standard notifications

Command	Access	Description
snmp notification standard MEF-SOAM-PM-MIB enable	super	enable standard notification
notification-name <notification-name>		standard notifications

Command	Access	Description
snmp notification standard MEF-SOAM-PM-MIB disable	super	disable standard notification
notification-name <notification-name>		standard notifications

Command	Access	Description
snmp notification standard PW-STD-MIB enable	super	enable standard notification
notification-name <notification-name>		standard notifications

Command	Access	Description

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snmp notification standard PW-STD-MIB disable	super	disable standard notification
notification-name <notification-name>		standard notifications

Command	**Access**	**Description**
snmp notification standard RMON-MIB enable	super	enable standard notification
notification-name <notification-name>		standard notifications

Command	**Access**	**Description**
snmp notification standard RMON-MIB disable	super	disable standard notification
notification-name <notification-name>		standard notifications

Command	**Access**	**Description**
snmp notification standard SNMPv2-MIB enable	super	enable standard notification
notification-name <notification-name>		standard notifications

Command	**Access**	**Description**
snmp notification standard SNMPv2-MIB disable	super	disable standard notification
notification-name <notification-name>		standard notifications

Command	**Access**	**Description**
snmp notification wwp WWP-LEOS-8021X-MIB enable	super	enable wwp notification
notification-name <notification-name>		wwp notifications

Command	**Access**	**Description**
snmp notification wwp WWP-LEOS-8021X-MIB disable	super	disable wwp notification
notification-name <notification-name>		wwp notifications

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Command	Access	Description
snmp notification wwp WWP-LEOS-BENCHMARK-MIB enable	super	enable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-BENCHMARK-MIB disable	super	disable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-BLADE-MIB enable	super	enable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-BLADE-MIB disable	super	disable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-BROADCAST-CONTAINMENT-MIB enable	super	enable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-BROADCAST-CONTAINMENT-MIB disable	super	disable wwp notification
notification-name <notification-name>		wwp notifications

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Command	Access	Description
snmp notification wwp WWP-LEOS-CFM-MIB enable	super	enable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-CFM-MIB disable	super	disable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-CHASSIS-MIB enable	super	enable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-CHASSIS-MIB disable	super	disable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-DHCP-CLIENT-MIB enable	super	enable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-DHCP-CLIENT-MIB disable	super	disable wwp notification
notification-name <notification-name>		wwp notifications

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Command	Access	Description
snmp notification wwp WWP-LEOS-EXT-LAG-MIB enable	super	enable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-EXT-LAG-MIB disable	super	disable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-FEATURE-LICENSE-MIB enable	super	enable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-FEATURE-LICENSE-MIB disable	super	disable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-FILE-TRANSFER-MIB enable	super	enable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-FILE-TRANSFER-MIB disable	super	disable wwp notification
notification-name <notification-name>		wwp notifications

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Command	Access	Description
snmp notification wwp WWP-LEOS-FLOW-MIB enable	super	enable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-FLOW-MIB disable	super	disable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-IP-INTERFACE-MIB enable	super	enable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-IP-INTERFACE-MIB disable	super	disable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-MSTP-MIB enable	super	enable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-MSTP-MIB disable	super	disable wwp notification
notification-name <notification-name>		wwp notifications

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Command	Access	Description
snmp notification wwp WWP-LEOS-NTP-CLIENT-MIB enable	super	enable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-NTP-CLIENT-MIB disable	super	disable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-OAM-MIB enable	super	enable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-OAM-MIB disable	super	disable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-PORT-MIB enable	super	enable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-PORT-MIB disable	super	disable wwp notification
notification-name <notification-name>		wwp notifications

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Command	Access	Description
snmp notification wwp WWP-LEOS-PORT-XCVR-MIB enable	super	enable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-PORT-XCVR-MIB disable	super	disable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-RAPS-MIB enable	super	enable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-RAPS-MIB disable	super	disable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-RSTP-MIB enable	super	enable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-RSTP-MIB disable	super	disable wwp notification
notification-name <notification-name>		wwp notifications

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Command	Access	Description
snmp notification wwp WWP-LEOS-SW-XGRADE-MIB enable	super	enable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-SW-XGRADE-MIB disable	super	disable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-SYSTEM-CONFIG-MIB enable	super	enable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-SYSTEM-CONFIG-MIB disable	super	disable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-TACACS-CLIENT-MIB enable	super	enable wwp notification
notification-name <notification-name>		wwp notifications

Command	Access	Description
snmp notification wwp WWP-LEOS-TACACS-CLIENT-MIB disable	super	disable wwp notification
notification-name <notification-name>		wwp notifications

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Command	Access	Description
snmp notification show	limited	show notification tables

Command	Access	Description
snmp port-traps disable	super	disable traps on the port
port <port>		port number
[all]		all traps
[link-up-down-trap <enhanced | standard>]		link up down trap

Command	Access	Description
snmp port-traps enable	super	enable traps on the port
port <port>		port number
[all]		all traps
[link-up-down-trap <enhanced | standard>]		link up down trap

Command	Access	Description
snmp reliable-trap clear	super	clear statistics
statistics		manager IP address
{manager <IP address>}	limited	manager IP address
{udp-port <NUMBER: 0-65535>}		UDP trap port

Command	Access	Description
snmp reliable-trap disable	super	disable reliable trap feature

Command	Access	Description
snmp reliable-trap enable	super	enable reliable trap feature

Command	Access	Description
snmp reliable-trap show	limited	display statistics

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statistics		statistics display request
[manager <IP address>]	limited	manager IP address
{udp-port <NUMBER: 0-65535>}		udp trap port
{manager <IP address>}	limited	manager IP address
[udp-port <NUMBER: 0-65535>]		udp trap port

Command	**Access**	**Description**
snmp security-to-group attach	super	attach SNMP user to security group
user <user>		SNMP user name
{group <String[32]>}		SNMP group name
{sec-model <v1 | v2c | v3>}		security model for the user

Command	**Access**	**Description**
snmp security-to-group detach	super	detach SNMP user to security group
user <user>		SNMP user name
{sec-model <v1 | v2c | v3>}		security model for the user

Command	**Access**	**Description**
snmp wizard create	super	create a community
community <community>		SNMP community wizard
[community-index <String[127]>]		Community index
[context-name <String[32]>]		Context Name
[group-name <String[32]>]		access entry group name
[notify-view <SNMP ViewTree>]		notify view name
[read-view <SNMP ViewTree>]		read view name
[sec-model <v1 | v2c>]		security model options
[sec-name <String[32]>]		security name
[transport-tag <String[32]>]		Transport Tag
[write-view <SNMP ViewTree>]		write view name

Command	**Access**	**Description**
snmp wizard create	super	create an inform server
inform-server <inform-server>		SNMP inform server wizard
[notify-tag <String[32]>]		notify view tag

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[param-name <String[32]>]		target param name
[retry-count <NUMBER: 0-255>]		number of retiries
[retry-timeout <CENTI-SECONDS>]		tryry-timeout
[sec-level <authWithPriv | authNoPriv | noAuth>]		security level for target param
[sec-model <v1 | v2c | v3>]		security model for target param
{sec-name <String>}		security name
[target-name <String[32]>]		targt name
[transport-domain <snmp-udp | v4-udp | v6-udp>]		transport domain
[udp-port <NUMBER: 0-65535>]		udp trap port

Command	**Access**	**Description**
snmp wizard create	super	create a trap server
trap-server <trap-server>		SNMP trap server wizard
[notify-tag <String[32]>]		notify view tag
[param-name <String[32]>]		target param name
[sec-level <authWithPriv | authNoPriv | noAuth>]		security level for target param
[sec-model <v1 | v2c | v3>]		security model for target param
[sec-name <String>]		security name
[target-name <String[32]>]		targt name
[transport-domain <snmp-udp | v4-udp | v6-udp>]		transport domain
[udp-port <NUMBER: 0-65535>]		udp trap port

Command	**Access**	**Description**
snmp wizard create	super	create a user
user <user>		SNMP user wizard
[auth-protocol <noAuth | md5 | sha>]		Authentication Protocol
[echoless-auth-password]		collect authentication password interactively
[priv-protocol <aes-128 | des | 3des | noPriv>]		Privacy Protocol
[echoless-priv-password]		collect privacy password interactively
[auth-secret <String[40]>]	super	set the SNMP user auth password using a pre-encrypted string
[priv-secret <String[64]>]	super	set the SNMP user priv password using a pre-encrypted string

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[engine-id <SNMP EngineID:XX:XX..(5-32 octets)Default:LocalSnmpEngineId>]		snmp engine ID
[group-name <String[32]>]		access entry group name
[read-view <SNMP ViewTree>]		read view name
[write-view <SNMP ViewTree>]		write view name
[notify-view <SNMP ViewTree>]		notify view name

Command	**Access**	**Description**
snmp check	super	SNMP CLI verification command
community <community>		SNMP community verification

Command	**Access**	**Description**
snmp check	super	SNMP CLI verification command
target <target>		SNMP target (trap target and inform target) verification

Command	**Access**	**Description**
snmp check	super	SNMP CLI verification command
user <user>		SNMP user verification
[engine-id <SNMP EngineID:XX:XX..(5-32 octets)Default:LocalSnmpEngineId>]		snmp engine ID

Command	**Access**	**Description**
snmp clear	super	clear inform statistics
statistics		statistics clear request
[snmp-target <IP address>]	limited	SNMP target IP address
{snmp-target-port <NUMBER: 0-65535>}		SNMP Target udp trap port
{snmp-target <IP address>}	limited	SNMP target IP address
[snmp-target-port <NUMBER: 0-65535>]		SNMP Target udp trap port

Command	**Access**	**Description**
snmp create	super	create SNMP access entry
access-entry <access-entry>		SNMP access entry

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[context-prefix <String[64]>]		context name
[notify-view <SNMP ViewTree>]		notify view name
{read-view <SNMP ViewTree>}		read view name
{sec-level <authWithPriv | authNoPriv | noAuth>}		security level
{sec-model <v1 | v2c | v3>}		security model for access entry
[write-view <SNMP ViewTree>]		write view name

Command	**Access**	**Description**
snmp create	super	Create SNMP community mapping
community-index <community-index>		SNMP community to sec-name mapping
{community <String[127]>}		Community name
[context-name <String[32]>]		Context Name
[transport-tag <String[32]>]		Transport Tag
{sec-name <String[32]>}		security name

Command	**Access**	**Description**
snmp create	super	Create SNMP context entry
context <context>		SNMP context entry

Command	**Access**	**Description**
snmp create	super	Create SNMP notify entry
notify <notify>		SNMP notify entry
{notify-tag <String[32]>}		notify view tag
{notify-type <inform | trap>}		Notification Type

Command	**Access**	**Description**
snmp create	super	Create SNMP target entry
target <target>		SNMP target entry
{addr <IP address (w/optional mask) or host name>}		target IP address with optional mask, or host name
{param-name <String[32]>}		target param name
[retry-count <NUMBER: 0-255>]		number of retiries
[retry-timeout <CENTI-SECONDS>]		tryry-timeout

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[tag <String[32]>]		Transport Tag must be set to TrapTag for V1 Trap, (default = TrapTag)
[transport-domain <snmp-udp | v4-udp | v6-udp>]		transport domain
[udp-port <NUMBER: 0-65535>]		udp trap port

Command	Access	Description
snmp create	super	Create SNMP target params
target-param <target-param>		SNMP target params
[sec-level <authWithPriv | authNoPriv | noAuth>]		security level for target param
[sec-model <v1 | v2c | v3>]		security model for target param
{sec-name <String>}		security name

Command	Access	Description
snmp create	super	Create SNMP user
user <user>		SNMP user name
{auth-protocol <md5 | noAuth | sha>}		Authentication Protocol
[auth-secret <Encrypted Password String>]	super	set the SNMP user auth password using a pre-encrypted string
[echoless-auth-password]		collect authentication password interactively
[echoless-priv-password]		collect privacy password interactively
{engine-id <SNMP EngineID:XX:XX..(5-32 octets)Default:LocalSnmpEngineId>}		snmp engine ID
[priv-protocol <aes-128 | des | 3des | noPriv>]		Privacy Protocol
[priv-secret <Encrypted Password String>]	super	set the SNMP user priv password using a pre-encrypted string

Command	Access	Description
snmp create	super	create SNMP view tree
viewtree <viewtree>		SNMP view tree name
[mask <Octet String>]		sub tree mask in hex format xx:xx:xx (UP to 16 octets)
{sub-tree <String[64]>}		sub tree mib OID
{type <exclude | include>}		tree type include or exclude

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Command	Access	Description
snmp delete	super	Delete SNMP access entry
access-entry <access-entry>		SNMP acess entry
[context-prefix <String[64]>]		context name
{sec-level <authWithPriv | authNoPriv | noAuth>}		Security level
{sec-model <v1 | v2c | v3>}		security model for access group

Command	Access	Description
snmp delete	super	Delete SNMP community to sec-name map
community-index <community-index>		SNMP community map

Command	Access	Description
snmp delete	super	Delete SNMP context entry
context <context>		SNMP context entry

Command	Access	Description
snmp delete	super	Delete SNMP notify entry
notify <notify>		SNMP notify entry

Command	Access	Description
snmp delete	super	Delete SNMP target entry
target <target>		SNMP target entry

Command	Access	Description
snmp delete	super	Delete SNMP target param
target-param <target-param>		SNMP target param

Command	Access	Description

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snmp delete	super	Delete SNMP user
user <user>		SNMP user name
{engine-id <SNMP EngineID:XX:XX..(5-32 octets)Default:LocalSnmpEngineId>}		snmp engine ID

Command	**Access**	**Description**
snmp delete	super	Delete SNMP view-tree
viewtree <viewtree>		SNMP user name
{sub-tree <String[64]>}		sub tree mib OID

Command	**Access**	**Description**
snmp disable	super	Disable SNMP agent

Command	**Access**	**Description**
snmp enable	super	Enable SNMP agent

Command	**Access**	**Description**
snmp set	super	set SNMP global attributes
{bulk-repetitions <NUMBER: 0-1024>}		bulk repetitions
{contact <String>}		system contact
{location <String>}		system location
{max-inform-queue-length <NUMBER: 0-30000>}		Setting Max standard Inform queue length. Setting 0 length corresponds to default behavior (No Limit)
{pdu-size <NUMBER: 256-9216>}		max PDU size
{preferred-source-address <default | loopback>}		Preferred Source Address

Command	**Access**	**Description**
snmp set	super	set SNMP notify entry
notify <notify>		SNMP target entry
{notify-tag <String[32]>}		notify view tag
{notify-type <trap>}		Notification Type

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Command	Access	Description
snmp set	super	Preferred-source-interface to be set
preferred-source-ip <preferred-source-ip>		Interface Name

Command	Access	Description
snmp set	super	Change parameters for SNMP user
user <user>		SNMP user name
{auth-protocol <md5 | noAuth | sha>}		authentication protocol
[auth-secret <Encrypted Password String>]	super	set the SNMP user auth password using a pre-encrypted string
[echoless-auth-password]		collect authentication password interactively
[echoless-priv-password]		collect privacy password interactively
{engine-id <SNMP EngineID:XX:XX..(5-32 octets)Default:LocalSnmpEngineId>}		snmp engine ID
[priv-protocol <aes-128 | des | 3des | noPriv>]		Privacy protocol
[priv-secret <Encrypted Password String>]	super	set the SNMP user priv password using a pre-encrypted string

Command	Access	Description
snmp show	limited	show SNMP configuration per port
port <port>		physical port to show
{port-traps}		show port port-traps

Command	Access	Description
snmp show	limited	show SNMP configuration
{access-entry}	limited	Display all entries in the SNMP VACM access entry table
{bulk-repetitions}	limited	Display bulk repetition limit
{community-map}	admin	Displays configured communities mapping table
{contact}	limited	display system contact information
{context}	limited	Display all entries in snmp vacm context table
{context-map}	limited	Display all entries in snmp vacm context table
{location}	limited	display system location information

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{max-inform-queue-length}	limited	Display configured Max Standard Inform queue length
{notify}	limited	Display all entries in the SNMP notify table
{pdu-size}	limited	Display pdu-size limit
{port-traps}	limited	Displays global port traps status
{security-to-group}	limited	Display all entries in the SNMP security group table
{target}	limited	Display all entries in the SNMP target table
{target-params}	limited	Display all entries in the SNMP target params table
{users}	admin	Display all entries in the SNMP user table
{viewtree}	limited	Display all entries in the SNMP view tree table

Command	Access	Description
snmp show	limited	display snmp Inform statistics
statistics		statistics display request
[snmp-target <IP address>]	limited	SNMP target IP address
{snmp-target-port <NUMBER: 0-65535>}		SNMP Target udp trap port
{snmp-target <IP address>}	limited	SNMP target IP address
[snmp-target-port <NUMBER: 0-65535>]		SNMP Target udp trap port

Command	Access	Description
snmp unset	admin	unset global SNMP attributes
[bulk-repetitions]		bulk repetitions
[contact]		system contact
[location]		system location
[max-inform-queue-length]		Unset Max standard Inform queue length to 0. Setting 0 length corresponds to default behavior (No Limit)
[pdu-size]		max PDU size
{preferred-source-address}		Preferred Source Address
{preferred-source-ip}		Preferred Source IP to be set

software

software version management

Command	Access	Description

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software fpga show	limited	show board support and datapath FPGA version information

Command	**Access**	**Description**
software license install	admin	install premium feature license key
[file <String>]		license file name and path
[license-key <String[14]>]		license key string
[module <NUMBER: 1-3>]		module number
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively

Command	**Access**	**Description**
software license show	limited	show software license configuration

Command	**Access**	**Description**
software license uninstall	admin	uninstall premium feature license key
feature-name <feature-name>		License Feature name
[module <NUMBER: 1-3>]		module number

Command	**Access**	**Description**
software report-sequence install	admin	install software package
{package <String>}		software package path
[package-path <String>]		full path to the package directory
[defer-activation]		defer activation of the software bank
[default-server]		use the default xFTP server

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[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively

Command	**Access**	**Description**
software report-sequence run	admin	download and run command file
{command-file <String>}		command file file name including path
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively

Command	**Access**	**Description**
software report-sequence upgrade	admin	install and activate software package
{package <String>}		software package path
[package-path <String>]		full path to the package directory
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server

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[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively

Command	**Access**	**Description**
software upgrade	admin	upgrade transceiver firmware
port <port>		port(s) to upgrade
{now}		upgrade immediately
{stop}		stop bulk upgrade

Command	**Access**	**Description**
software upgrade	admin	upgrade module firmware
module		module
{now}		upgrade immediately

Command	**Access**	**Description**
software activate	admin	activate software release
[force-standby]		force the activation of the standby software bank
[package <String>]		package release name
[service-disruption <allow | deny>]		service disruption permission

Command	**Access**	**Description**
software install	admin	install software package
[defer-activation]		defer activation of the software bank
{package <String>}		software package path
[package-path <String>]		full path to the package directory
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server

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[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively

Command	**Access**	**Description**
software reset	admin	reset saved filenames
{last-config-file}		erase the filename only
{last-command-file}		erase the filename only

Command	**Access**	**Description**
software run	admin	download and run command file
{command-file <String>}		command file file name including path
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively

Command	**Access**	**Description**
software show	limited	show software configuration

Command	**Access**	**Description**
software show	limited	show port software version
port <port>		port(s) to show

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Command	Access	Description
software show	limited	show module software version
module		show module software

Command	Access	Description
software upgrade	admin	install and activate software package
{package <String>}		software package path
[package-path <String>]		full path to the package directory
[cold-start]		Start the system fresh, including POST as well as resetting all the HW components
[service-disruption <allow | deny>]		service disruption permission
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively

Command	Access	Description
software validate	admin	validate software

Command	Access	Description
software protect	admin	protect software

ssh

secure shell

Command	Access	Description

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ssh client algorithm encryption disable	admin	disable algorithm
algorithm <algorithm>		encryption algorithm

Command	**Access**	**Description**
ssh client algorithm encryption enable	admin	enable algorithm
algorithm <algorithm>		encryption algorithm

Command	**Access**	**Description**
ssh client algorithm encryption set	admin	set algorithm attributes
algorithm <algorithm>		encryption algorithm
{priority <NUMBER: 1-16>}		algorithm priority

Command	**Access**	**Description**
ssh client algorithm encryption show	limited	show encryption algorithm info

Command	**Access**	**Description**
ssh client algorithm encryption unset	admin	unset algorithm attributes
algorithm <algorithm>		encryption algorithm
{priority}		algorithm priority

Command	**Access**	**Description**
ssh client algorithm host-key-authentication disable	admin	disable algorithm
algorithm <algorithm>		host key authentication algorithm

Command	**Access**	**Description**
ssh client algorithm host-key-authentication enable	admin	enable algorithm
algorithm <algorithm>		host key authentication algorithm

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Command	Access	Description
ssh client algorithm host-key-authentication set	admin	set algorithm attributes
algorithm <algorithm>		host key authentication algorithm
{priority <NUMBER: 1-16>}		algorithm priority

Command	Access	Description
ssh client algorithm host-key-authentication show	limited	show host key authentication algorithm info

Command	Access	Description
ssh client algorithm host-key-authentication unset	admin	unset algorithm attributes
algorithm <algorithm>		host key authentication algorithm
{priority}		algorithm priority

Command	Access	Description
ssh client algorithm kex disable	admin	disable algorithm
algorithm <algorithm>		key-exchange algorithm

Command	Access	Description
ssh client algorithm kex enable	admin	enable algorithm
algorithm <algorithm>		key-exchange algorithm

Command	Access	Description
ssh client algorithm kex set	admin	set algorithm attributes
algorithm <algorithm>		key-exchange algorithm
{priority <NUMBER: 1-8>}		algorithm priority

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Command	Access	Description
ssh client algorithm kex show	limited	show kex algorithm info

Command	Access	Description
ssh client algorithm kex unset	admin	unset algorithm attributes
algorithm <algorithm>		key-exchange algorithm
{priority}		algorithm priority

Command	Access	Description
ssh client algorithm mac disable	admin	disable algorithm
algorithm <algorithm>		message-authentication-code algorithm

Command	Access	Description
ssh client algorithm mac enable	admin	enable algorithm
algorithm <algorithm>		message-authentication-code algorithm

Command	Access	Description
ssh client algorithm mac set	admin	set algorithm attributes
algorithm <algorithm>		message-authentication-code algorithm
{priority <NUMBER: 1-19>}		algorithm priority

Command	Access	Description
ssh client algorithm mac show	limited	show mac algorithm info

Command	Access	Description
ssh client algorithm mac unset	admin	unset algorithm attributes
algorithm <algorithm>		message-authentication-code algorithm
{priority}		algorithm priority

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Command	Access	Description
ssh client algorithm show	limited	show algorithm info

Command	Access	Description
ssh client certificate csr generate	super	generate a new csr based on user provided config file
user <user>		certificate signing request for users on ssh client
[echoless-passphrase]		collect passphrase interactively
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[auth-interactive]		allow interactive password entry when requested by the remote server
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively
{filename <String[127]>}		remote file name
[filename <String[127]>]		remote file name

Command	Access	Description
ssh client certificate install	super	install user x509 certificate on client
user <user>		SSH user certificate
{filename <String[127]>}		remote file name
[echoless-passphrase]		collect passphrase interactively
{force}		force overwrite of existing certificate
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server

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[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[auth-interactive]		allow interactive password entry when requested by the remote server
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively
{filename <String[127]>}		remote file name
[filename <String[127]>]		remote file name
[url <String>]		remote file url

Command	**Access**	**Description**
ssh client certificate show	limited	show SSH client information

Command	**Access**	**Description**
ssh client certificate uninstall	super	uninstall ssh x509 client certificate and private key
user <user>		SSH user certificate uninstall

Command	**Access**	**Description**
ssh client key generate	admin	generate client key
user <user>		SSH/SFTP user name
[force]		force overwrite of existing key
[echoless-passphrase]		collect the passphrase interactively
[key-type <dsa1024\0ssh-ds | ecdsa256\0ecdsa-sha2-nistp256 | ecdsa384\0ecdsa-sha2-nistp384 | ecdsa521\0ecdsa-sha2-nistp521 | rsa2048\0ssh-rsa | secp256r1\0ecdsa-sha2-nistp256 | secp384r1\0ecdsa-sha2-nistp384 | secp521r1\0ecdsa-sha2-nistp521>]		private key type

Command	**Access**	**Description**

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ssh client key install	admin	install key from xftp server
user <user>		SSH/SFTP user name
[force]		force overwrite of existing key
{filename <String[127]>}		remote file name
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[auth-interactive]		allow interactive password entry when requested by the remote server
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively

Command	**Access**	**Description**
ssh client key export	admin	export public key to xftp server
user <user>		SSH/SFTP user name
[echoless-passphrase]		collect the passphrase interactively
{filename <String[127]>}		remote file name
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[auth-interactive]		allow interactive password entry when requested by the remote server
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively

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Command	Access	Description
ssh client key delete	admin	delete key
user <user>		SSH/SFTP user name

Command	Access	Description
ssh client key show	limited	show SSH client information

Command	Access	Description
ssh client ocsp disable	admin	disable ocsp

Command	Access	Description
ssh client ocsp enable	admin	enable ocsp

Command	Access	Description
ssh client ocsp set	admin	set ocsp attributes
{default-responder <String[255]>}		default ocsp responder url starting with http://
{responder-preference <aia | default-responder>}		set which ocsp responder to try and stop after first aia/default responder

Command	Access	Description
ssh client ocsp show	limited	show ocsp attributes

Command	Access	Description
ssh client ocsp unset	admin	set ocsp attributes back to default
{default-responder}		unset the default responder for ocsp
{responder-preference}		unset which ocsp responder to try and stop after first aia/default responder

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Command	Access	Description
ssh client peer-cert-reauth disable	admin	disable certificate reauthentication

Command	Access	Description
ssh client peer-cert-reauth enable	admin	enable certificate reauthentication

Command	Access	Description
ssh client peer-cert-reauth set	admin	set certificate reauthentication attributes
{ocsp-multiplier <NUMBER: 0-50>}		set the multiplier used to determine the max OCSP period, default: 24
{period <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		set the reauthentication period, default: 1h (N[yMwdhms]...)

Command	Access	Description
ssh client peer-cert-reauth show	limited	show certificate reauthentication attributes

Command	Access	Description
ssh client peer-cert-reauth unset	admin	set certificate reauthentication attributes back to default
{ocsp-multiplier}		unset the OCSP multiplier, default: 24
{period}		unset the reauthentication period, default: 1h (N[yMwdhms]...)

Command	Access	Description
ssh client system-client remove	super	remove host from known_hosts
ip <ip>		IP address or host name

Command	Access	Description
ssh client system-client set	super	set system-client attributes

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{host-key-checking <ignore | non-strict | strict>}		sets the value host key checking for system-client (Default: ignore)

Command	**Access**	**Description**
ssh client system-client show	admin	show system-client attributes

Command	**Access**	**Description**
ssh client system-client unset	super	set system-client attributes back to default
{host-key-checking}		sets host key checking to default value (Default: ignore)

Command	**Access**	**Description**
ssh client system-client validate	super	validate a SFTP server
{login-id <String[32]>}		SFTP username
[server-port <NUMBER: 1-65535>]		remote port to connect to
{sftp-server <IP address or host name>}		SFTP server

Command	**Access**	**Description**
ssh client set	admin	set SSH client attributes
{preferred-source-ip <Interface Name>}		Preferred Source IP to be set

Command	**Access**	**Description**
ssh client unset	admin	unset SSH client attributes
{preferred-source-ip}		Preferred Source IP to be unset

Command	**Access**	**Description**
ssh client connect	admin	connect via ssh
ip <ip>		IP address or host name
{user <String[32]>}		user ID
[port <NUMBER: 1-65535>]		port to connect to

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Command	Access	Description
ssh client disable	super	disable ssh client

Command	Access	Description
ssh client enable	super	enable ssh client

Command	Access	Description
ssh client remove	admin	remove host from known_hosts
ip <ip>		IP address or host name

Command	Access	Description
ssh client show	limited	show ssh client configuration

Command	Access	Description
ssh server algorithm encryption disable	admin	disable algorithm
algorithm <algorithm>		encryption algorithm

Command	Access	Description
ssh server algorithm encryption enable	admin	enable algorithm
algorithm <algorithm>		encryption algorithm

Command	Access	Description
ssh server algorithm encryption set	admin	set algorithm attributes
algorithm <algorithm>		encryption algorithm
{priority <NUMBER: 1-16>}		algorithm priority

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Command	Access	Description
ssh server algorithm encryption show	limited	show encryption algorithm info

Command	Access	Description
ssh server algorithm encryption unset	admin	unset algorithm attributes
algorithm <algorithm>		encryption algorithm
{priority}		algorithm priority

Command	Access	Description
ssh server algorithm kex disable	admin	disable algorithm
algorithm <algorithm>		key-exchange algorithm

Command	Access	Description
ssh server algorithm kex enable	admin	enable algorithm
algorithm <algorithm>		key-exchange algorithm

Command	Access	Description
ssh server algorithm kex set	admin	set algorithm attributes
algorithm <algorithm>		key-exchange algorithm
{priority <NUMBER: 1-8>}		algorithm priority

Command	Access	Description
ssh server algorithm kex show	limited	show kex algorithm info

Command	Access	Description
ssh server algorithm kex unset	admin	unset algorithm attributes
algorithm <algorithm>		key-exchange algorithm
{priority}		algorithm priority

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Command	Access	Description
ssh server algorithm mac disable	admin	disable algorithm
algorithm <algorithm>		message-authentication-code algorithm

Command	Access	Description
ssh server algorithm mac enable	admin	enable algorithm
algorithm <algorithm>		message-authentication-code algorithm

Command	Access	Description
ssh server algorithm mac set	admin	set algorithm attributes
algorithm <algorithm>		message-authentication-code algorithm
{priority <NUMBER: 1-19>}		algorithm priority

Command	Access	Description
ssh server algorithm mac show	limited	show mac algorithm info

Command	Access	Description
ssh server algorithm mac unset	admin	unset algorithm attributes
algorithm <algorithm>		message-authentication-code algorithm
{priority}		algorithm priority

Command	Access	Description
ssh server algorithm public-key-authentication disable	admin	disable algorithm
algorithm <algorithm>		public key authentication algorithm

Command	Access	Description
ssh server algorithm public-key-authentication enable	admin	enable algorithm

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algorithm <algorithm>		public key authentication algorithm

Command	Access	Description
ssh server algorithm public-key-authentication show	limited	show public key authentication algorithm info

Command	Access	Description
ssh server algorithm show	limited	show algorithm info

Command	Access	Description
ssh server certificate csr generate	super	generate a new csr based on user provided config file
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[auth-interactive]		allow interactive password entry when requested by the remote server
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively
{filename <String[127]>}		remote file name
[filename <String[127]>]		remote file name

Command	Access	Description
ssh server certificate install	super	install server ssh x509 certificate or certificate and private key
{force}		force overwrite of existing certificate
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server

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[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[auth-interactive]		allow interactive password entry when requested by the remote server
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively
{filename <String[127]>}		remote file name
[filename <String[127]>]		remote file name
[url <String>]		remote file url

Command	**Access**	**Description**
ssh server certificate install	super	map user x509 certificate to ssh server
user <user>		SSH user
{force}		force overwrite of existing certificate
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[auth-interactive]		allow interactive password entry when requested by the remote server
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively
{filename <String[127]>}		remote file name
[filename <String[127]>]		remote file name
[url <String>]		remote file url

Command	**Access**	**Description**

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ssh server certificate show	limited	show SSH server information

Command	**Access**	**Description**
ssh server certificate uninstall	super	uninstall ssh x509 client certificate and private key

Command	**Access**	**Description**
ssh server certificate uninstall	super	de-map the user certificate information from ssh server
user <user>		SSH user

Command	**Access**	**Description**
ssh server key delete	admin	delete SSH key
{user <String[32]>}		user key

Command	**Access**	**Description**
ssh server key generate	admin	generate key
[key-type <dsa1024\0ssh-ds | ecdsa256\0ecdsa-sha2-nistp256 | ecdsa384\0ecdsa-sha2-nistp384 | ecdsa521\0ecdsa-sha2-nistp521 | rsa2048\0ssh-rsa | secp256r1\0ecdsa-sha2-nistp256 | secp384r1\0ecdsa-sha2-nistp384 | secp521r1\0ecdsa-sha2-nistp521>]		private key type

Command	**Access**	**Description**
ssh server key install	admin	retrieve key from xFTP server
user <user>		SSH user name
{filename <String[127]>}		public key directory or filename
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server

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[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[auth-interactive]		allow interactive password entry when requested by the remote server
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively

Command	**Access**	**Description**
ssh server key show	limited	show SSH key information

Command	**Access**	**Description**
ssh server ocsp disable	admin	disable ocsp

Command	**Access**	**Description**
ssh server ocsp enable	admin	enable ocsp

Command	**Access**	**Description**
ssh server ocsp set	admin	set ocsp attributes
{default-responder <String[255]>}		set default ocsp responder url starting with http://
{responder-preference <aia | default-responder>}		set which ocsp responder to try and stop after first aia/default responder

Command	**Access**	**Description**
ssh server ocsp show	limited	show ocsp attributes

Command	**Access**	**Description**
ssh server ocsp unset	admin	set ocsp attributes back to default

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{default-responder}		unset the default responder for ocsp
{responder-preference}		unset which ocsp responder to try and stop after first aia/default responder

Command	Access	Description
ssh server peer-cert-reauth disable	admin	disable certificate reauthentication

Command	Access	Description
ssh server peer-cert-reauth enable	admin	enable certificate reauthentication

Command	Access	Description
ssh server peer-cert-reauth set	admin	set certificate reauthentication attributes
{ocsp-multiplier <NUMBER: 0-50>}		set the multiplier used to determine the max OCSP period, default: 24
{period <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		set the reauthentication period, default: 1h (N[yMwdhms]...)

Command	Access	Description
ssh server peer-cert-reauth show	limited	show certificate reauthentication attributes

Command	Access	Description
ssh server peer-cert-reauth unset	admin	set certificate reauthentication attributes back to default
{ocsp-multiplier}		unset the OCSP multiplier, default: 24
{period}		unset the reauthentication period, default: 1h (N[yMwdhms]...)

Command	Access	Description
ssh server add	admin	add an allowed SSH client IP address
client <client>		SSH client IP address

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Command	Access	Description
ssh server disable	admin	disable SSH server

Command	Access	Description
ssh server enable	admin	enable SSH server

Command	Access	Description
ssh server remove	admin	remove an allowed client IP address
client <client>		SSH server address

Command	Access	Description
ssh server set	admin	set SSH attributes
{auth-policy <public-key | all>}		sets the authentication policy
{authentication-retries <NUMBER: 1-3>}		maximum retries (Default: 3)
{client-alive-count <NUMBER: 0-10>}		specifies the number of client alive messages (Default: 0)
{client-alive-interval <SECONDS: 0-2147483646>}		specifies the client timeout interval (Normal default: 0 seconds, Enhanced security default: 60 seconds)
{listener-address-group <all | mgmt-interfaces>}		addresses group to listen for SSH connections (Default: all)
{listener-port <NUMBER: 22-65535>}		port to listen for SSH connections (Default: 22)
{login-grace-time <SECONDS: 0-2147483647>}		specifies the login grace timeout (Default: 120 seconds)
{max-shared-sessions <NUMBER: 1-10>}		set max sessions per network connection (Normal default: 10, Enhanced security default: 1)
{multi-factor-auth <on | off>}		turns ssh multi factor authentication on or off (Normal default: off)
{rekey-limit <4G | 2G | 1G | 500M | default>}		specifies the number of bytes that is transmitted before the session key is renegotiated (Normal default: default, Enhanced security default: 1G)
{rekey-timeout <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		specifies the max time that may pass before the session key is renegotiated (Normal default: 0, Enhanced security default: 1h)

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{strict-modes <on | off>}		sets support for ssh strict mode (Normal default: off, Enhanced security default: on)
{tcp-forwarding <on | off>}		turns TCP forwarding on or off (Normal default: on, Enhanced security default: off)
{tcp-keepalive <on | off>}		turns TCP keep alive on or off (Normal default: on, Enhanced security default: off)
{x509-host-key <disabled | enabled | only>}		sets x509 host key usage (default: enabled)

Command	Access	Description
ssh server show	limited	show SSH information

Command	Access	Description
ssh server unset	admin	set SSH attributes back to defaults
[authentication-retries]		unset maximum retries (Default: 3)
{client-alive-count}		specifies the number of client alive messages (Default: 0)
{client-alive-interval}		specifies the client timeout interval (Normal default: 0 seconds, Enhanced security default: 60 seconds)
[listener-address-group]		unset address group to listen for SSH connections (Default: all)
[listener-port]		unset port to listen for SSH connections (Default: 22)
[login-grace-time]		sets the LoginGraceTime option to default (Default: 120 seconds)
{max-shared-sessions}		set max sessions per network connection to default (Normal default: 10, Enhanced security default: 1)
{multi-factor-auth}		sets the multi factor auth to default value (Normal default: off)
{rekey-limit}		specifies the number of bytes that is transmitted before the session key is renegotiated (Normal default: default, Enhanced security default: 1G)
{rekey-timeout}		specifies the max time that may pass before the session key is renegotiated (Normal default: 0, Enhanced security default: 1h)
{strict-modes}		sets strict modes to default value (Normal default: off, Enhanced security default: on)

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{tcp-forwarding}		sets TCP forwarding to default value (Normal default: on, Enhanced security default: off
{tcp-keepalive}		sets TCP keep alive to default (Normal default: on, Enhanced security default: off
{auth-policy}		sets the authentication policy to default (default: all)
{x509-host-key}		sets x509 host key usage (default: enabled)

sub-port

sub-port interfaces

Command	Access	Description
sub-port create	admin	create a sub-port interface
sub-port <sub-port>		sub-port name
{parent-port <Port>}		parent port
{vtag-stack <VLAN ID>}		vlan classifier
{vlan-untagged-data}		untagged classifier
[statistics <on | off>]		subp-port statistics

Command	Access	Description
sub-port delete	admin	delete a sub-port interface
sub-port <sub-port>		sub-port name

Command	Access	Description
sub-port clear	admin	clear statistics on a sub-port interface
sub-port <sub-port>		sub-port name
{statistics}		statistics

Command	Access	Description
sub-port clear	admin	clear statistics on all sub-port interfaces
{statistics}		statistics

Command	Access	Description

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sub-port set	admin	set sub-port attributes
sub-port <sub-port>		sub-port name
[statistics <on | off>]		statistics

Command	**Access**	**Description**
sub-port unset	admin	set sub-port attributes back to the default values
sub-port <sub-port>		sub-port name
{statistics}		statistics

Command	**Access**	**Description**
sub-port show	limited	display a summary of sub-port attributes
sub-port <sub-port>		sub-port name
[statistics]		statistics

Command	**Access**	**Description**
sub-port show	limited	display a summary of all sub-port attributes on a parent port
[statistics]		statisticss
[parent-port <Port>]		the parent port

sync

system timing synchronization menu

Command	**Access**	**Description**
sync bits input create	admin	create a BITS timing reference
ref <ref>		create a BITS input timing reference
{bits-interface <BITS interface>}		set BITS interface
{bits-mode <e1 | t1 | 2048khz>}		set BITS mode
{encoding <ami | b8zs | hdb3>}		set BITS encoding
{e1-ssm-location <sa4 | sa5 | sa6 | sa7 | sa8>}		set BITS E1 SSM location
{forced-ql <Clock Quality level>}		set forced quality level
{format <esf | e1-crc | e1-no-crc | sf>}		set BITS format
{override-priority <NUMBER: 1-255>}		set override priority, 1 being highest

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{priority <NUMBER: 1-255>}		set priority, 1 being highest
{ql-receive <disable | enable>}		quality level receiving configuration

Command	**Access**	**Description**
sync bits input delete	admin	delete a BITS input timing reference
ref <ref>		delete a BITS input timing reference

Command	**Access**	**Description**
sync bits input set	admin	set attributes of a BITS input timing reference
ref <ref>		set attributes of a BITS input timing reference
{encoding <ami | b8zs | hdb3>}		set BITS encoding
{e1-ssm-location <sa4 | sa5 | sa6 | sa7 | sa8>}		set BITS E1 SSM location
{forced-ql <Clock Quality level>}		set forced quality level
{override-priority <NUMBER: 1-255>}		set override priority, 1 being highest
{priority <NUMBER: 1-255>}		set priority, 1 being highest
{ql-receive <disable | enable>}		quality level receiving configuration

Command	**Access**	**Description**
sync bits input show	limited	display all BITS input timing references

Command	**Access**	**Description**
sync bits input show	limited	display details of a BITS input timing reference
ref <ref>		display details of a BITS input timing reference

Command	**Access**	**Description**
sync bits input unset	admin	unset attributes of a BITS input timing reference
ref <ref>		unset attributes of a BITS input timing reference
{encoding}		unset BITS encoding
{e1-ssm-location}		unset BITS E1 SSM location
{forced-ql}		unset forced quality level

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{override-priority}		unset override priority
{priority}		unset priority
{ql-receive}		unset quality level receiving configuration

Command	Access	Description
sync bits output create	admin	create a BITS output timing reference
ref <ref>		create a BITS output timing reference
{bits-interface <BITS interface>}		set BITS interface
{bits-mode <e1 | t1 | 2048khz>}		set BITS mode
{encoding <ami | b8zs | hdb3>}		set BITS encoding
{e1-ssm-location <sa4 | sa5 | sa6 | sa7 | sa8>}		set BITS E1 SSM location
{format <esf | e1-crc | e1-no-crc | sf>}		set BITS format
{t1-line-build-out <133 | 266 | 399 | 533 | 655>}		set BITS T1 line build out (feet)

Command	Access	Description
sync bits output delete	admin	delete a BITS output timing reference
ref <ref>		delete a BITS output timing reference

Command	Access	Description
sync bits output set	admin	set attributes of a BITS output timing reference
ref <ref>		set attributes of a BITS output timing reference
{encoding <ami | b8zs | hdb3>}		set BITS encoding
{t1-line-build-out <133 | 266 | 399 | 533 | 655>}		set BITS T1 line build out (feet)
{e1-ssm-location <sa4 | sa5 | sa6 | sa7 | sa8>}		set BITS E1 SSM location

Command	Access	Description
sync bits output show	limited	display all BITS output timing references

Command	Access	Description
sync bits output show	limited	display details of a BITS output timing reference

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ref <ref>		display details of a BITS output timing reference

Command	Access	Description
sync bits output unset	admin	unset attributes of a BITS output reference
ref <ref>		unset attributes of a BITS output reference
{encoding}		unset BITS encoding
{e1-ssm-location}		unset BITS E1 SSM location
{t1-line-build-out}		unset BITS T1 line build out

Command	Access	Description
sync bits show	limited	display BITS timing information

Command	Access	Description
sync frequency input show	limited	display all frequency input references

Command	Access	Description
sync frequency output show	limited	display all frequency output references

Command	Access	Description
sync frequency protection-group add	admin	add a list of input references to a protection group
group <group>		add a list of input references to a frequency protection group
{input-ref <List of configured frequency input timing references>}		add a list of input references to a frequency protection group

Command	Access	Description
sync frequency protection-group clear	admin	clear attributes of a frequency protection group
group <group>		clear attributes of a frequency protection group
{ref-switch-count}		reset reference switch count to zero

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Command	Access	Description
sync frequency protection-group create	admin	create a frequency protection group
group <group>		create a frequency protection group
{threshold-ql <Clock Quality level>}		set threshold quality level

Command	Access	Description
sync frequency protection-group delete	admin	delete a frequency protection group
group <group>		delete a frequency protection group

Command	Access	Description
sync frequency protection-group remove	admin	remove a list of input references from a protection group
group <group>		remove a list of input references from a frequency protection group
{input-ref <List of configured frequency input timing references>}		remove a list of input references from a frequency protection group

Command	Access	Description
sync frequency protection-group set	admin	set attributes of a frequency protection group
group <group>		set attributes of a frequency protection group
{forced-ref <Configured frequency input timing reference>}		force switch to an input reference
{threshold-ql <Clock Quality level>}		set threshold quality level

Command	Access	Description
sync frequency protection-group show	limited	display details of frequency protection group reference
group <group>		display details of a frequency protection group

Command	Access	Description

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sync frequency protection-group unset	admin	unset attributes of a frequency protection group
group <group>		unset attributes of a frequency protection group
{forced-ref}		clear a force switch operation

Command	Access	Description
sync frequency show	limited	display all frequency references

Command	Access	Description
sync gps input create	admin	create a GPS timing reference
ref <ref>		create a GPS input timing reference
{clock-mode <frequency | phase>}		set GPS clock mode
{forced-ql <Clock Quality level>}		set forced quality level
{frequency-clock <10mhz | 1544khz | 2048khz>}		set GPS frequency clock
{gps-interface <GPS interface>}		set GPS interface
{override-priority <NUMBER: 1-255>}		set override priority, 1 being highest
{priority <NUMBER: 1-255>}		set priority, 1 being highest

Command	Access	Description
sync gps input delete	admin	delete a GPS input timing reference
ref <ref>		delete a GPS input timing reference

Command	Access	Description
sync gps input set	admin	set attributes of a GPS input timing reference
ref <ref>		set attributes of a GPS input timing reference
{forced-ql <Clock Quality level>}		set forced quality level
{override-priority <NUMBER: 1-255>}		set override priority, 1 being highest
{priority <NUMBER: 1-255>}		set priority, 1 being highest

Command	Access	Description

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sync gps input show	limited	display all gps input timing references

Command	**Access**	**Description**
sync gps input show	limited	display details of a GPS input timing reference
ref <ref>		display details of a GPS input timing reference

Command	**Access**	**Description**
sync gps input unset	admin	unset attributes of a GPS input timing reference
ref <ref>		unset attributes of a GPS input timing reference
{override-priority}		unset override priority
{priority}		unset priority

Command	**Access**	**Description**
sync gps output create	admin	create a GPS timing reference
ref <ref>		create a GPS output timing reference
{clock-mode <frequency | phase>}		set GPS clock mode
{frequency-clock <10mhz | 1544khz | 2048khz>}		set GPS frequency clock
{gps-interface <GPS interface>}		set GPS interface

Command	**Access**	**Description**
sync gps output delete	admin	delete a GPS output timing reference
ref <ref>		delete a GPS output timing reference

Command	**Access**	**Description**
sync gps output set	admin	set attributes of GPS output timing
{1pps-pulse-width <MICROSECONDS>}		set GPS output 1pps pulse width (microseconds)

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Command	Access	Description
sync gps output show	limited	display all GPS output timing references

Command	Access	Description
sync gps output show	limited	display details of a GPS output timing reference
ref <ref>		display details of a GPS output timing reference

Command	Access	Description
sync gps output unset	admin	unset attributes of GPS output timing
{1pps-pulse-width}		unset GPS output 1pps pulse width

Command	Access	Description
sync gps show	limited	display GPS timing information

Command	Access	Description
sync phase input show	limited	display all phase input references

Command	Access	Description
sync phase output show	limited	display all phase output references

Command	Access	Description
sync phase protection-group add	admin	add a list of input references to a protection group
group <group>		add a list of input references to a phase protection group
{input-ref <List of configured phase input timing references>}		add a list of input references to a phase protection group

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Command	Access	Description
sync phase protection-group clear	admin	clear attributes of a phase protection group
group <group>		clear attributes of a phase protection group
{ref-switch-count}		reset reference switch count to zero

Command	Access	Description
sync phase protection-group create	admin	create a phase protection group
group <group>		create a phase protection-group
{threshold-ql <Clock Quality level>}		set threshold quality level
{threshold-clock-class <NUMBER: 0-255>}		set threshold clock-class

Command	Access	Description
sync phase protection-group delete	admin	delete a phase protection group
group <group>		delete a phase protection group

Command	Access	Description
sync phase protection-group set	admin	set attributes of a phase protection group
group <group>		set attributes of a phase protection group
{forced-ref <Configured phase input timing reference>}		force switch to an input reference
{threshold-ql <Clock Quality level>}		set threshold quality level
{threshold-clock-class <NUMBER: 0-255>}		set threshold clock-class

Command	Access	Description
sync phase protection-group show	limited	display details of phase protection-group reference
group <group>		display details of a phase protection group

Command	Access	Description

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sync phase protection-group remove	admin	remove a list of input references from a protection group
group <group>		remove a list of input references from a phase protection group
{input-ref <List of configured phase input timing references>}		remove a list of input references from a phase protection group

Command	**Access**	**Description**
sync phase protection-group unset	admin	unset attributes of a phase protection group
group <group>		unset attributes of a phase protection group
{forced-ref}		clear a force switch operation

Command	**Access**	**Description**
sync phase show	limited	display all phase references

Command	**Access**	**Description**
sync ptp input clear	admin	clear PTP master pdu-statistics
master <master>		clear PTP master pdu-statistics
{pdu-statistics}		clear PTP master pdu-statistics

Command	**Access**	**Description**
sync ptp input create	admin	create a PTP input timing reference
ref <ref>		create a PTP input timing reference
{forced-clock-class <NUMBER: 80-110>}		set forced clock class
{forced-ql <Clock Quality level>}		set forced quality level
{ip-interface <Interface Name>}		IP interface name
{master-ip-address <IP address>}		set master IP address
{override-priority <NUMBER: 1-255>}		set override priority, 1 being highest
{priority <NUMBER: 1-255>}		set priority, 1 being highest
{ql-receive <disable | enable>}		set quality level receiving configuration
{port <Port list>}		set port

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Command	Access	Description
sync ptp input delete	admin	delete a PTP input timing reference
ref <ref>		delete a PTP input timing reference

Command	Access	Description
sync ptp input set	admin	set global attributes of PTP input timing
{announce-rx-loss-num <NUMBER: 2-10>}		set PTP input announce RX loss num (announce intervals)
{announce-tx-rate-request <1 | 1-2nd | 1-4th | 1-8th>}		set PTP input announce TX rate request (packets per second)
{delay-request-tx-rate <1 | 1-2nd | 1-4th | 1-8th | 1-16th | 128 | 2 | 4 | 8 | 16 | 32 | 64>}		set PTP input delay request TX rate (packets per second)
{sync-tx-rate-request <1 | 1-2nd | 2 | 4 | 8 | 16 | 32 | 64>}		set PTP input sync TX rate request (packets per second)
{unicast-request-duration <SECONDS: 60-1000>}		set PTP input unicast request duration (seconds)

Command	Access	Description
sync ptp input set	admin	set attributes of a PTP input timing reference
ref <ref>		set attributes of a PTP input timing reference
{forced-clock-class <NUMBER: 80-110>}		set forced clock class
{forced-ql <Clock Quality level>}		set forced quality level
{override-priority <NUMBER: 1-255>}		set override priority, 1 being highest
{priority <NUMBER: 1-255>}		set priority, 1 being highest
{ql-receive <disable | enable>}		set quality level receiving configuration

Command	Access	Description
sync ptp input show	limited	display all PTP input timing references

Command	Access	Description
sync ptp input show	admin	display details of a PTP input timing reference
ref <ref>		display details of a PTP input timing reference

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Command	Access	Description
sync ptp input show	limited	display PTP master pdu-statistics
master <master>		display PTP master pdu-statistics
{pdu-statistics}		display PTP master pdu-statistics

Command	Access	Description
sync ptp input show	limited	display PTP master list
{master-list}		display PTP master list

Command	Access	Description
sync ptp input unset	admin	unset global attributes of PTP input timing
{announce-rx-loss-num}		unset PTP input announce RX loss num
{announce-tx-rate-request}		unset PTP input announce TX rate request
{delay-request-tx-rate}		unset PTP input delay request TX rate
{sync-tx-rate-request}		unset PTP input sync TX rate request
{unicast-request-duration}		unset PTP input unicast request duration

Command	Access	Description
sync ptp input unset	admin	unset attributes of a PTP input timing reference
ref <ref>		unset attributes of a PTP input timing reference
{forced-clock-class}		unset forced clock class
{forced-ql}		unset forced quality level
{override-priority}		unset override priority
{priority}		unset priority
{ql-receive}		unset quality level receiving configuration

Command	Access	Description
sync ptp output clear	admin	clear PTP client pdu-statistics
client <client>		clear PTP client pdu-statistics
{pdu-statistics}		clear PTP client pdu-statistics

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Command	Access	Description
sync ptp output create	admin	create a PTP output timing reference
ref <ref>		create a PTP output timing reference
{ip-interface <Interface Name>}		IP interface name
{port <Port list>}		set port

Command	Access	Description
sync ptp output delete	admin	delete a PTP output timing reference
ref <ref>		delete a PTP output timing reference

Command	Access	Description
sync ptp output set	admin	set global attributes of PTP output timing
{max-slave-sessions <NUMBER: 0-16>}		set maximum number of clients the master will support
{priority2 <NUMBER: 0-255>}		set priority2 configuration
{timestamp-mode <one-step | two-step>}		set PTP timestamping mode
{announce-tx-rate <1 | 1-2nd | 1-4th | 1-8th | 2 | 4 | 8>}		set PTP output announce TX rate (packets per second)
{sync-tx-rate <1 | 1-2nd | 1-4th | 1-8th | 1-16th | 128 | 2 | 4 | 8 | 16 | 32 | 64>}		set PTP output sync TX rate (packets per second)

Command	Access	Description
sync ptp output show	limited	display all PTP output timing references

Command	Access	Description
sync ptp output show	admin	display details of a PTP output timing reference
ref <ref>		display details of a PTP output timing reference

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Command	Access	Description
sync ptp output show	limited	display PTP client pdu-statistics
client <client>		display PTP client pdu-statistics
{pdu-statistics}		display PTP client pdu-statistics

Command	Access	Description
sync ptp output show	limited	display PTP client list
{client-list}		display PTP client list

Command	Access	Description
sync ptp output unset	admin	unset global attributes of PTP output timing
{max-slave-sessions}		unset maximum number of clients the master will support
{priority2}		unset priority2 configuration
{timestamp-mode}		unset PTP timestamp mode
{announce-tx-rate}		unset PTP output announce TX rate request
{sync-tx-rate}		unset PTP output sync TX rate request

Command	Access	Description
sync ptp set	admin	set global attributes of PTP timing
{clock-type <bc | oc-slave>}		set PTP clock type
{domain-number <NUMBER: 4-43>}		set PTP domain number
{dscp <NUMBER: 0-63>}		set PTP DSCP
{profile <none | g.8265.1 | g.8275.1>}		set PTP profile
{profile-identifier <MAC address: XX:XX:XX:XX:XX:XX>}		set PTP profile identifier address
{profile-version <1.0>}		set PTP profile version
{protocol-version <2>}		set PTP protocol-version
{tag-priority <NUMBER: 0-7>}		set PTP tag priority
{destination-mac <forwardable | non-forwardable>}		set type of PTP destination MAC address forwardable (00:1b:19:00:00:00) or non-forwardable (01:80:c2:00:00:0e)

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Command	Access	Description
sync ptp show	limited	display PTP timing information

Command	Access	Description
sync ptp show	limited	display PTP timing information
{performance-statistics}		display PTP performance statistics

Command	Access	Description
sync ptp unset	admin	unset global attributes of PTP timing
{clock-type}		unset PTP clock type
{domain-number}		unset PTP domain number
{dscp}		unset PTP DSCP
{profile-identifier}		unset PTP profile identifier address
{profile-version}		unset PTP profile version
{profile}		unset PTP profile
{protocol-version}		unset PTP protocol version
{tag-priority}		unset PTP tag priority
{destination-mac}		unset type of PTP destination MAC address

Command	Access	Description
sync synce input create	admin	create a SyncE input timing reference
ref <ref>		create a SyncE input timing reference
{forced-ql <Clock Quality level>}		set forced quality level
{override-priority <NUMBER: 1-255>}		set override priority, 1 being highest
{port <Physical port list>}		set physical port
{priority <NUMBER: 1-255>}		set priority, 1 being highest
{ql-receive <disable | enable>}		set quality level receiving configuration

Command	Access	Description
sync synce input delete	admin	delete a SyncE input timing reference
ref <ref>		delete a SyncE input timing reference

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Command	Access	Description
sync synce input set	admin	set attributes of a SyncE input timing reference
ref <ref>		set attributes of a SyncE input timing reference
{forced-ql <Clock Quality level>}		set forced quality level
{override-priority <NUMBER: 1-255>}		set override priority, 1 being highest
{priority <NUMBER: 1-255>}		set priority, 1 being highest
{ql-receive <disable | enable>}		set quality level receiving configuration

Command	Access	Description
sync synce input show	limited	display all SyncE input timing references

Command	Access	Description
sync synce input show	limited	display details of a SyncE input timing reference
ref <ref>		display details of a SyncE input timing reference

Command	Access	Description
sync synce input unset	admin	unset attributes of a SyncE input timing reference
ref <ref>		unset attributes of a SyncE input timing reference
{forced-ql}		unset forced quality level
{override-priority}		unset override priority
{priority}		unset priority
{ql-receive}		unset quality level receiving configuration

Command	Access	Description
sync synce output create	admin	create a SyncE output timing reference
ref <ref>		create a SyncE output timing reference
{port <Physical port list>}		set physical port

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Command	Access	Description
sync synce output delete	admin	delete a SyncE output timing reference
ref <ref>		delete a SyncE output timing reference

Command	Access	Description
sync synce output show	limited	display all SyncE output timing references

Command	Access	Description
sync synce output show	limited	display details of a SyncE output timing reference
ref <ref>		display details of a SyncE output timing reference

Command	Access	Description
sync synce clear	admin	clear SyncE timing information
{statistics}		clear SyncE timing statistics

Command	Access	Description
sync synce show	limited	display SyncE timing information

Command	Access	Description
sync synce show	limited	display SyncE timing information
{statistics}		display SyncE timing statistics

Command	Access	Description
sync tdm input create	admin	create a TDM input timing reference
ref <ref>		create a TDM input timing reference
[clock-mode <acr | dcr | line | internal>]		set tdm clock recovery mode
[forced-ql <Clock Quality level>]		set forced quality level

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{override-priority <NUMBER: 1-255>}		set override priority, 1 being highest
{port <TDM Port Name>}		set tdm port
{vc <TDM VC Name>}		set tdm vc
{priority <NUMBER: 1-255>}		set priority, 1 being highest

Command	**Access**	**Description**
sync tdm input delete	admin	delete a TDM input timing reference
ref <ref>		delete a TDM input timing reference

Command	**Access**	**Description**
sync tdm input set	admin	set attributes of a TDM input timing reference
ref <ref>		set attributes of a TDM input timing reference
{forced-ql <Clock Quality level>}		set forced quality level
{override-priority <NUMBER: 1-255>}		set override priority, 1 being highest
{priority <NUMBER: 1-255>}		set priority, 1 being highest

Command	**Access**	**Description**
sync tdm input show	limited	display all TDM input timing references

Command	**Access**	**Description**
sync tdm input show	limited	display details of a TDM input timing reference
ref <ref>		display details of a TDM input timing reference

Command	**Access**	**Description**
sync tdm input unset	admin	unset attributes of a TDM input timing reference
ref <ref>		unset attributes of a TDM input timing reference
{forced-ql}		unset forced quality level
{override-priority}		unset override priority
{priority}		unset priority

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Command	Access	Description
sync tdm show	limited	display TDM timing information

Command	Access	Description
sync time-of-day input show	limited	display all time-of-day input references

Command	Access	Description
sync time-of-day output show	limited	display all time-of-day output references

Command	Access	Description
sync time-of-day protection-group add	admin	add a list of input references to a protection group
group <group>		add a list of input references to a time-of-day protection group
{input-ref <List of configured time-of-day input timing references>}		add a list of input references to a time-of-day protection group

Command	Access	Description
sync time-of-day protection-group clear	admin	clear attributes of a time-of-day protection group
group <group>		clear attributes of a time-of-day protection group
{ref-switch-count}		reset reference switch count to zero

Command	Access	Description
sync time-of-day protection-group create	admin	create a time-of-day protection group
group <group>		create a time-of-day protection group
{threshold-ql <Clock Quality level>}		set threshold quality level

Command	Access	Description

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sync time-of-day protection-group delete	admin	delete a time-of-day protection group
group <group>		delete a time-of-day protection group

Command	**Access**	**Description**
sync time-of-day protection-group remove	admin	remove a list of input references from a protection group
group <group>		remove a list of input references from a time-of-day protection group
{input-ref <List of configured time-of-day input timing references>}		remove a list of input references from a time-of-day protection group

Command	**Access**	**Description**
sync time-of-day protection-group set	admin	set attributes of a time-of-day protection group
group <group>		set attributes of a time-of-day protection group
{forced-ref <Configured time-of-day input timing reference>}		force switch to an input reference
{threshold-ql <Clock Quality level>}		set threshold quality level

Command	**Access**	**Description**
sync time-of-day protection-group show	limited	display details of time-of-day protection group reference
group <group>		display attributes of a time-of-day protection group

Command	**Access**	**Description**
sync time-of-day protection-group unset	admin	unset attributes of a time-of-day protection group
group <group>		unset attributes of a time-of-day protection group
{forced-ref}		clear a force switch operation

Command	**Access**	**Description**
sync time-of-day show	limited	display all time-of-day references

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Command	Access	Description
sync disable	admin	globally disable sync feature

Command	Access	Description
sync enable	admin	globally enable sync feature

Command	Access	Description
sync set	admin	set global sync attributes
{holdover-interval <24-hrs | indefinite>}		set holdover interval
{option-type <none | option1 | option2>}		set option type
{reversion-mode <non-revertive | revertive>}		set reversion mode
{wait-to-restore <MINUTES>}		set wait-to-restore timeout (minutes)

Command	Access	Description
sync show	limited	display sync information

Command	Access	Description
sync show	limited	display sync information
{all}		display all configured timing references
{ql-hierarchy-table}		display the quality level hierarchy table

Command	Access	Description
sync unset	admin	unset global sync attributes
{holdover-interval}		unset holdover interval
{option-type}		unset option type
{reversion-mode}		unset reversion mode
{wait-to-restore}		unset wait-to-restore timeout

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syslog

syslog

Command	Access	Description
syslog tls algorithm cipher-suite disable	super	disable cipher suite
cipher-suite <cipher-suite>		cipher suite

Command	Access	Description
syslog tls algorithm cipher-suite enable	super	enable cipher suite
cipher-suite <cipher-suite>		cipher suite

Command	Access	Description
syslog tls algorithm cipher-suite set	super	set cipher suite attributes
cipher-suite <cipher-suite>		cipher suite
{priority <NUMBER: 1-51>}		cipher suite priority

Command	Access	Description
syslog tls algorithm cipher-suite show	limited	show cipher suite info

Command	Access	Description
syslog tls algorithm cipher-suite unset	super	unset cipher suite attributes
cipher-suite <cipher-suite>		TLS cipher suite
{priority}		cipher suite priority

Command	Access	Description
syslog tls algorithm elliptic-curve disable	super	disable elliptic curve
elliptic-curve <elliptic-curve>		TLS elliptic curves

Command	Access	Description
syslog tls algorithm elliptic-curve enable	super	enable elliptic curve

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elliptic-curve <elliptic-curve>		TLS elliptic curves

Command	Access	Description
syslog tls algorithm elliptic-curve set	super	set elliptic curve attributes
elliptic-curve <elliptic-curve>		TLS elliptic curves
{priority <NUMBER: 1-13>}		cipher suite priority

Command	Access	Description
syslog tls algorithm elliptic-curve show	limited	show elliptic curve info

Command	Access	Description
syslog tls algorithm elliptic-curve unset	super	unset elliptic curve attributes
elliptic-curve <elliptic-curve>		TLS elliptic curves
{priority}		elliptic curve priority

Command	Access	Description
syslog tls algorithm show	limited	show algorithm info

Command	Access	Description
syslog tls ocsp disable	super	disable ocsp

Command	Access	Description
syslog tls ocsp enable	super	enable ocsp

Command	Access	Description
syslog tls ocsp show	admin	show ocsp attributes

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Command	Access	Description
syslog tls ocsp set	super	set ocsp attributes
{default-responder <String[255]>}		default ocsp responder url starting with http://
{nonce <on | off>}		send nonce with ocsp request
{responder-preference <aia | default-responder>}	admin	set which ocsp responder to try and stop after first aia/default responder

Command	Access	Description
syslog tls ocsp unset	super	unset ocsp attributes
{default-responder}		clear the default responder
{nonce}		unset send nonce, default: off

Command	Access	Description
syslog tls peer-cert-reauth disable	super	disable certificate reauthentication

Command	Access	Description
syslog tls peer-cert-reauth enable	super	enable certificate reauthentication

Command	Access	Description
syslog tls peer-cert-reauth set	super	set certificate reauthentication attributes
{ocsp-multiplier <NUMBER: 0-50>}		set the multiplier used to determine the max OCSP period, default: 24
{period <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		set the reauthentication period, default: 1h (N[yMwdhms]...)

Command	Access	Description
syslog tls peer-cert-reauth show	limited	show certificate reauthentication attributes

Command	Access	Description

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syslog tls peer-cert-reauth unset	super	set certificate reauthentication attributes back to default
{ocsp-multiplier}		unset the OCSP multiplier, default: 24
{period}		unset the reauthentication period, default: 1h (N[yMwdhms]...)

Command	**Access**	**Description**
syslog tls add	super	add syslogtls collector severity
collector <collector>		syslogtls collector IP address or host name
{severity <String List>}		add severity to severity list

Command	**Access**	**Description**
syslog tls clear	super	clear syslogtls statistics
{statistics}		clear syslogtls statistics

Command	**Access**	**Description**
syslog tls clear	super	clear syslogtls collector statistics
collector <collector>		syslogtls collector IP address or host name
{statistics}		clear syslogtls collector statistics

Command	**Access**	**Description**
syslog tls create	super	create a syslogtls collector
collector <collector>		syslogtls collector IP address or host name
{custom-prefix <String[15]>}		syslogtls message prefix
{facility <NUMBER: 0-24>}		syslogtls facility
{fingerprint <a SHA1 certificate fingerprint>}		trusted fingerprint for peer's certificate
{port <NUMBER: 1-65535>}		set port of the syslogtls collector, default: 2083
{severity <String List>}		syslog severity list, default: emergency,alert
{seclog-only <on | off>}		turns security log only on or off, default: off
{trusted-dns <a fully qualified domain name that can accept a leading wildcard period>}		trusted dns name used to check peer's certificate

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Command	Access	Description
syslog tls delete	super	delete a syslogtls collector
collector <collector>		syslogtls collector IP address or host name

Command	Access	Description
syslog tls disable	super	disable syslogtls functions

Command	Access	Description
syslog tls disable	super	disable a syslogtls collector
collector <collector>		syslogtls collector IP address or host name

Command	Access	Description
syslog tls enable	super	enable syslogtls functions

Command	Access	Description
syslog tls enable	super	enable a syslogtls collector
collector <collector>		syslogtls collector IP address or host name

Command	Access	Description
syslog tls remove	super	remove syslogtls collector severity
collector <collector>		syslogtls collector IP address or host name
{severity <String List>}		remove severity from severity list

Command	Access	Description
syslog tls set	super	set Preferred-source-ip
preferred-source-ip <preferred-source-ip>		Interface Name

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Command	Access	Description
syslog tls set	super	set syslogtls attributes
[cert-name <Certificate name>]		certificate to use
{check-cert-time <on | off>}		determines if certificate dates are checked or ignore when authenticating collectors, default: on
{check-fingerprint <on | off>}		determines if the fingerprint of the peer's certificate is checked, default: on
{check-ip-host <on | off>}		determines if peer's specified ip or hostname is checked against it's certificate, default: on
{check-peer-cert <on | off>}		determines if peer's certificate is authenticated, default: on
{greylist-timeout <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		set syslogtls greylist timeout, 1min to 4hr, default: 10m (N[yMwdhms]...)
{minimum-tls-version <TLSv1.0 | TLSv1.1 | TLSv1.2>}		set syslogtls minimum TLS version, default: is TLSv1.1
{timeout <NUMBER: 1-30>}		set syslogtls timeout, default: 6
{session-resumption-timeout <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		set syslog tls session resumption timeout, default: 1h (N[yMwdhms]...)

Command	Access	Description
syslog tls set	super	set syslogtls collector attributes
collector <collector>		syslogtls collector IP address or host name
{custom-prefix <String[15]>}		syslog message prefix
{facility <NUMBER: 0-24>}		syslog facility
{fingerprint <a SHA1 certificate fingerprint>}		set fingerprint of the syslogtls collector
{port <NUMBER: 1-65535>}		set port of the syslogtls collector, default: 2083
{severity <String List>}		syslog severity list, default: emergency,alert
{seclog-only <on | off>}		turns security log only on or off, default: off
{trusted-dns <a fully qualified domain name that can accept a leading wildcard period>}		set trusted dns of the syslogtls collector

Command	Access	Description
syslog tls show	limited	show syslogtls information
{certificate}		show syslogtls certificate
{statistics}		show all syslogtls statistics

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Command	Access	Description
syslog tls show	limited	show syslogtls collector information
collector <collector>		syslogtls collector IP address or host name
{statistics}		show syslogtls collector statistics

Command	Access	Description
syslog tls unset	super	unset syslogtls attributes
{cert-name}		unset certificate name, default: syslogtls
{check-cert-time}		unset syslogtls check-cert-time, default: on
{preferred-source-ip}		Set Preferred Source Ip to default
{check-fingerprint}		unset syslogtls check-fingerprint, default: on
{check-ip-host}		unset syslogtls check-ip-host, default: on
{check-peer-cert}		unset syslogtls check-peer-cert, default: on
{greylist-timeout}		unset syslogtls greylist timeout, default: 10m
{minimum-tls-version}		unset syslogtls minimum TLS version, default: TLSv1.1
{timeout}		unset syslogtls timeout, default: 6
{session-resumption-timeout}		unset syslog tls session resumption timeout, default: 1h)

Command	Access	Description
syslog tls unset	super	set syslogtls collector attributes to defaults
collector <collector>		syslogtls collector IP address or host name
{custom-prefix}		unset syslog message prefix
{facility}		unset syslog facility
{fingerprint}		unset fingerprint of the syslogtls collector
{port}		unset port of the syslogtls collector, default: 2083
{severity}		unset severity of syslog messages, default: emergency,alert
{seclog-only}		unset security log only, default: off
{trusted-dns}		unset trusted dns of the syslogtls collector

Command	Access	Description
syslog add	admin	add syslog collector

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collector <collector>		IP address of syslog collector
{custom-prefix <String[15]>}		syslog message prefix
{facility <NUMBER: 0-23>}		syslog facility
{severity <String List>}		syslog severity value that will be allowed to egress
{udp-port <NUMBER: 514-65535>}		UDP port of collector (default=514)

Command	**Access**	**Description**
syslog create	admin	create syslog collector
collector <collector>		IP address of syslog collector
{custom-prefix <String[15]>}		syslog message prefix
{facility <NUMBER: 0-23>}		syslog facility
{severity <String List>}		syslog severity value that will be allowed to egress
{udp-port <NUMBER: 514-65535>}		UDP port of collector (default=514)

Command	**Access**	**Description**
syslog delete	admin	delete syslog collector
collector <collector>		IP address of syslog collector to remove

Command	**Access**	**Description**
syslog disable	admin	disable syslog globally

Command	**Access**	**Description**
syslog disable	admin	disable syslog collector
collector <collector>		IP address of syslog collector to disable

Command	**Access**	**Description**
syslog enable	admin	enable syslog globally

Command	**Access**	**Description**

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syslog enable	admin	enable syslog collector
collector <collector>		IP address of syslog collector to enable

Command	**Access**	**Description**
syslog remove	admin	remove syslog collector
collector <collector>		IP address of syslog collector to remove
{severity <String List>}		syslog severity value that will be allowed to egress

Command	**Access**	**Description**
syslog send	admin	send debug syslog msg
[event <NUMBER>]		syslog event id
[msg <String>]		syslog debug message
[severity <emergency | alert | critical | error | warning | notice | info | debug>]		severity of debug syslog message

Command	**Access**	**Description**
syslog set	admin	set global syslog attributes
{preferred-source-address <loopback | default>}		Preferred Source Address

Command	**Access**	**Description**
syslog set	admin	set preferred-source-ip
preferred-source-ip <preferred-source-ip>		Interface Name

Command	**Access**	**Description**
syslog set	admin	set syslog collector attributes
collector <collector>		IP address of syslog collector to configure
{custom-prefix <String[15]>}		syslog message prefix
{facility <NUMBER: 0-23>}		syslog facility
{severity <String List>}		severity of syslog messages to log
{udp-port <NUMBER: 514-65535>}		UDP port of collector (default=514)

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Command	Access	Description
syslog show	limited	show syslog information
{severity-mapping}		show event/syslog severity map
{system-events}		show system events
{manager <acl-mgr | ais-mgr | alarm-mgr | alarm-config-mgr | arp-mgr | bcast-containment-mgr | benchmark-mgr | bfd-mgr | blade-mgr | cfm-mgr | chassis-mgr | config-mgr | dhcp-mgr | dhcpv6-mgr | dnld-mgr | dnsc-mgr | dot1x-mgr | event-mgr | flow-mgr | igmp-mgr | interface-mgr | irb-mgr | isis-mgr | l2-protocol-mgr | lacp-mgr | laps-mgr | ldp-mgr | lldp-mgr | logging-mgr | mpls-ldp-mgr | mpls-mgr | mstp-mgr | ndp-mgr | netconf-helper-mgr | ntpc-mgr | ntwrk-mgr | oam-mgr | ospf-mgr | perfmon-mgr | pfg-mgr | port-mgr | prtc-mgr | radius-mgr | raps-mgr | rmon-mgr | routing-domain-mgr | rstp-mgr | rsvp-mgr | rtm-mgr | security-mgr | snmp-mgr | software-mgr | spidd-mgr | ssh-mgr | sub-port-mgr | sync-mgr | tacacs-mgr | tdm-mgr | traffic-profiling-mgr | twamp-mgr | virtual-circuit-mgr | vlli-mgr | xcvr-mgr | xftp-mgr>}		limit to a manager
{severity <emergency | alert | critical | error | warning | notice | info | debug>}		limit to a syslog severity

Command	Access	Description
syslog show	limited	show syslog collector information
collector <collector>		IP address of syslog collector to show

Command	Access	Description
syslog unset	admin	unset global syslog attributes
{preferred-source-address}		Preferred Source Address
{preferred-source-ip}		Preferred Source Ip to default

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Command	Access	Description
syslog unset	admin	unset syslog collector attributes
collector <collector>		IP address of syslog collector to show
{custom-prefix}		unset syslog message prefix

system

system management

Command	Access	Description
system guardian disable	admin	enable guardian

Command	Access	Description
system guardian enable	admin	enable guardian

Command	Access	Description
system guardian set	admin	configure guardian
{limit-number-reboots <on | off>}		limit reboots before disabling guardian

Command	Access	Description
system guardian show	limited	show guardian settings

Command	Access	Description
system server ftp disable	admin	disable FTP server

Command	Access	Description
system server ftp enable	admin	enable FTP server

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Command	Access	Description
system server ftp set	admin	configure FTP server
{anonymous <on | off>}		Anonymous FTP, default: on

Command	Access	Description
system server ftp show	limited	show FTP server

Command	Access	Description
system server scp disable	admin	disable SCP server

Command	Access	Description
system server scp enable	admin	enable SCP server

Command	Access	Description
system server scp show	limited	show SCP server

Command	Access	Description
system server sftp disable	admin	disable SFTP server

Command	Access	Description
system server sftp enable	admin	enable SFTP server

Command	Access	Description
system server sftp show	limited	show SFTP server

Command	Access	Description

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system server tftp disable	admin	disable TFTP server

Command	**Access**	**Description**
system server tftp enable	admin	enable TFTP server

Command	**Access**	**Description**
system server tftp show	limited	show TFTP server

Command	**Access**	**Description**
system server show	limited	show server state(s)

Command	**Access**	**Description**
system ps show	admin	displays information about system processes
[format <wide>]		format of display

Command	**Access**	**Description**
system security log transfer disable	super	disable security log automatic transfer

Command	**Access**	**Description**
system security log transfer enable	super	enable security log automatic transfer

Command	**Access**	**Description**
system security log transfer now	super	security log manual transfer

Command	**Access**	**Description**
system security log transfer set	super	set an FTP server and its attributes
ftp-server <ftp-server>		FTP server IP/Hostname/Credentials

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[login-id <String[32]>]		ftp username
[echoless-password]		collect password interactively
[server-port <NUMBER: 1-65535>]		port to connect to

Command	**Access**	**Description**
system security log transfer set	admin	set a TFTP server
tftp-server <tftp-server>		TFTP server IP/Hostname
[server-port <NUMBER: 1-65535>]		port to connect to

Command	**Access**	**Description**
system security log transfer set	admin	set an SFTP server and its attributes
sftp-server <sftp-server>		SFTP server IP/Hostname/Credentials
[login-id <String[32]>]		sftp username
[echoless-password]		collect password interactively
[echoless-sftp-passphrase]		collect passphrase for SFTP transfer interactively
[server-port <NUMBER: 1-65535>]		port to connect to

Command	**Access**	**Description**
system security log transfer set	super	set the global default xFTP server mode and its attributes
[connection-timeout <SECONDS: 1-100>]		duration (in seconds) before retry times out
[dest-path <String[127]>]		path on destination
[discards-exported <on | off>]		Automatic export of discarded log information
[interval <duration: {N[yMwdhms]}* e.g. 1h10m3s>]		periodic transfer time (N[yMwdhms]...)
[start-plus-or-minus <duration: {N[yMwdhms]}* e.g. 1h10m3s>]		shift first transfer time by up to (N[yMwdhms]...)
[retries <NUMBER: 1-10>]		maximum number of retries allowed
[retry-interval <SECONDS: 1-300>]		delay interval (in seconds) between retries

Command	**Access**	**Description**
system security log transfer unset	admin	unset an xFTP server
{connection-timeout}		restore default connection timeout

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{dest-path}		path on destination
{discards-exported}		restore default log-loss export behavior
{interval}		restore default automatic export of log
{login-id}		restore default login ID
{password}		restore default login password
{start-plus-or-minus}		remove interval stagger
{retries}		restore default retry count
{retry-interval}		restore default retry interval
{server}		unset xFTP server (and mode)
{server-port}		unset xFTP port
{sftp-passphrase}		restore default passphrase thats used for SFTP transfer

Command	**Access**	**Description**
system security log transfer show	super	show security log transfer settings

Command	**Access**	**Description**
system security log transfer unset	super	security log automatic transfer options

Command	**Access**	**Description**
system security log clear	super	clear security log

Command	**Access**	**Description**
system security log clear	super	clear security log statistics
statistics		statistics

Command	**Access**	**Description**
system security log disable	super	disable Event in security log
event-id <event-id>		Event ID

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Command	Access	Description
system security log enable	super	enable Event in security log
event-id <event-id>		Event ID

Command	Access	Description
system security log show	super	show security log
{containing <String[128]>}		containing string
{from-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>}		entries from date (inclusive)
{from-time <time: hh:mm:ss or hh:mm>}		entries from time (inclusive)
{last <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		recent entries into the command log (N[yMwdhms]...)
{recent}		entries into the history log within the last hour
{since-activated}		from system start or failover
{tail <NUMBER: 1-4294967295>}		latest entries to show
{today}		today's entries in the command log
{to-date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>}		entries to date (inclusive)
{to-time <time: hh:mm:ss or hh:mm>}		entries to time (inclusive)
{yesterday}		yesterday's entries in the command log

Command	Access	Description
system security log show	super	show security log
statistics		statistics

Command	Access	Description
system security log show	super	show security log status
status		status

Command	Access	Description
system security pkix ca install	super	install CA certificates
{force}		force overwrite of existing certificate
[default-server]		use the default xFTP server

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[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[auth-interactive]		allow interactive password entry when requested by the remote server
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively
{filename <String[127]>}		remote file name
[filename <String[127]>]		remote file name
[url <String>]		remote file url

Command	**Access**	**Description**
system security pkix ca show	limited	show CA certificates

Command	**Access**	**Description**
system security pkix ca show	limited	show a CA certificate
ca-cert-hash <ca-cert-hash>		CA certificate hash

Command	**Access**	**Description**
system security pkix ca uninstall	super	uninstall CA certificates
ca-cert-hash <ca-cert-hash>		CA certificate hash

Command	**Access**	**Description**
system security pkix certificates csr generate	super	generate a new csr based on user provided .cnf file
cert-name <cert-name>		Name of the certificate
[force]		force overwrite of existing key

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{key-type <rsa1024 | rsa2048 | rsa3072 | dsa1024 | dsa2048 | dsa3072 | secp256r1 | secp384r1 | secp521r1 | use-existing>}		private key type
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[auth-interactive]		allow interactive password entry when requested by the remote server
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively
{filename <String[127]>}		remote file name
[filename <String[127]>]		remote file name

Command	**Access**	**Description**
system security pkix certificates install	super	install X.509 certificate and private key
cert-name <cert-name>		Name of the certificate
{certificate-only}		install certificate to be verified and combined with existing key
{echoless-passphrase}		collect passphrase interactively
{force}		force overwrite of existing certificate
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[auth-interactive]		allow interactive password entry when requested by the remote server
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively

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{filename <String[127]>}		remote file name
[filename <String[127]>]		remote file name
[url <String>]		remote file url

Command	**Access**	**Description**
system security pkix certificates show	limited	show X.509 certificate and private key information

Command	**Access**	**Description**
system security pkix certificates show	limited	show X.509 certificate and private key information
cert-name <cert-name>		Name of the certificate

Command	**Access**	**Description**
system security pkix certificates uninstall	super	uninstall X.509 certificate and private key
cert-name <cert-name>		Name of the certificate

Command	**Access**	**Description**
system security pkix crl install	super	install CRL
{force}		force overwrite of existing CRL
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[auth-interactive]		allow interactive password entry when requested by the remote server
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively
{filename <String[127]>}		remote file name

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[filename <String[127]>]		remote file name
[url <String>]		remote file url

Command	Access	Description
system security pkix crl show	limited	show CRLs

Command	Access	Description
system security pkix crl show	limited	show a CRL
crl-hash <crl-hash>		CRL hash

Command	Access	Description
system security pkix crl uninstall	super	uninstall CRL
crl-hash <crl-hash>		CRL hash

Command	Access	Description
system security pkix expiry disable	super	disable certificate expiry

Command	Access	Description
system security pkix expiry enable	super	enable certificate expiry

Command	Access	Description
system security pkix expiry set	super	Set certificate expiry attributes
{initial-warning <NUMBER: 1-90>}		set certificate expiry initial warning in days (Default: 60)
{repeat-interval <NUMBER: 1-30>}		set certificate expiry repeat interval in days (Default: 14)

Command	Access	Description
system security pkix expiry show	super	Show certificate expiry attributes

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Command	Access	Description
system security pkix expiry unset	super	Unset certificate expiry attributes
{initial-warning}		Restore default certificate expiry initial warning
{repeat-interval}		Restore dfault certificate expiry repeat interval

Command	Access	Description
system security set	super	set system security mode
{encryption-mode <fips-140-2 | normal>}		encryption mode
{security-mode <enhanced | normal>}		security mode
{software-signing-mode <on | off | strict>}		software signing mode

Command	Access	Description
system security unset	super	unset software signing mode
{software-signing-mode}		software signing mode

Command	Access	Description
system security show	limited	show system security mode
{software-signing-mode}		software signing mode

Command	Access	Description
system shell banner add	super	add to banner
<>		banner file
{line <String>}		text line

Command	Access	Description
system shell banner collect	super	create banner interactively
<>		banner file

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Command	Access	Description
system shell banner create	super	create banner
<>		banner file
{line <String>}		first text line

Command	Access	Description
system shell banner delete	super	restore banner to default
<>		banner file

Command	Access	Description
system shell banner edit	super	edit banner
<>		banner file

Command	Access	Description
system shell banner set	super	choose banner file
<>		banner
filename <filename>		filename

Command	Access	Description
system shell banner show	super	display banner
<>		banner file

Command	Access	Description
system shell banner unset	super	restore default banner
<>		banner

Command	Access	Description
system shell session set	limited	set new value
{more <on | off>}	limited	Unix More on/off

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{more-lines <NUMBER: 0-999>}	limited	set terminal height
{tab-more <on | off>}	limited	TAB-completion More on/off
{window-height <NUMBER: 0-999>}	limited	set session's window height
{window-width <NUMBER: 0-999>}	limited	set session's window width

Command	**Access**	**Description**
system shell session show	limited	show shell session settings

Command	**Access**	**Description**
system shell session unset	limited	restore default value
{more}	limited	restore default value
{more-lines}	limited	restore default value
{tab-more}	limited	restore default value

Command	**Access**	**Description**
system shell reset	admin	reset condition
{warning-banners}	admin	warning banner messages

Command	**Access**	**Description**
system shell set	limited	set new value
{login-authentication-message <on | off>}	admin	login authentication message on/off
{global-inactivity-timeout <MINUTES>}	admin	If the shell inactivity timer is enabled, this setting provides the length (in minutes) of inactivity before the user is logged out. This setting applies for telnet and serial.
{global-inactivity-timer <on | off>}	admin	When enabled, the inactivity timer will automatically shut down a shell if it becomes inactive.
{global-more <on | off>}	admin	global setting, unix more on/off
{global-more-lines <NUMBER: 0-999>}	admin	set global terminal height

Command	**Access**	**Description**
system shell unset	limited	restore default value
{login-authentication-message}	admin	login authentication message on

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{global-inactivity-timeout}	admin	restore default value.
{global-inactivity-timer}	admin	restore default value.
{global-more}	admin	restore default value
{global-more-lines}	admin	restore default value

Command	**Access**	**Description**
system shell show	limited	show shell settings

Command	**Access**	**Description**
system health show	limited	displays information about health monitoring
{cpu-utilization}		show system CPU utilization
{cpu-load-average}		show system CPU load average
{memory-utilization}		show system memory utilization
{file-system-utilization}		show file system utilization
{state <normal | warning | degraded | fault | exception>}		show health items currently at certain state
{detail}		show detailed output for system and SAOS virtual memory utilization

Command	**Access**	**Description**
system xftp disable	admin	Disable an xFTP component
{ftp-client}		ftp-client component
{tftp-client}		tftp-client component

Command	**Access**	**Description**
system xftp enable	admin	Enable an xFTP component
{ftp-client}		ftp-client component
{tftp-client}		tftp-client component

Command	**Access**	**Description**
system xftp set	admin	set an xFTP server and its attributes
ftp-server <ftp-server>		FTP server IP/Hostname/Credentials
[login-id <String[32]>]		ftp username

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[echoless-password]		collect password interactively
[server-port <NUMBER: 1-65535>]		port to connect to

Command	**Access**	**Description**
system xftp set	admin	set a TFTP server
tftp-server <tftp-server>		TFTP server IP/Hostname
[server-port <NUMBER: 1-65535>]		port to connect to

Command	**Access**	**Description**
system xftp set	admin	set preferred-source-ip
preferred-source-ip <preferred-source-ip>		Preferred Source IP to be Set

Command	**Access**	**Description**
system xftp set	admin	set an SFTP server and its attributes
sftp-server <sftp-server>		SFTP server IP/Hostname/Credentials
[login-id <String[32]>]		sftp username
[echoless-password]		collect password interactively
[server-port <NUMBER: 1-65535>]		port to connect to
[echoless-sftp-passphrase]		collect the passphrase, interactively, that will be used for SFTP connections

Command	**Access**	**Description**
system xftp set	admin	set the global default xFTP server mode
[mode <ftp | sftp | tftp>]		xFTP mode
[connection-timeout <SECONDS: 1-100>]		duration (in seconds) before retry times out
[retries <NUMBER: 1-10>]		maximum number of retries allowed
[retry-interval <SECONDS: 1-300>]		delay interval (in seconds) between retries

Command	**Access**	**Description**
system xftp unset	admin	unset an xFTP server
{tftp-server}		unset TFTP server
{preferred-source-ip}		Preferred Source IP to be unset

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{ftp-server}		unset FTP server
{sftp-server}		unset SFTP server

Command	**Access**	**Description**
system xftp getfile	admin	get a file from an xFTP server
{remote-filename <String[127]>}		remote file name
[remote-filename <String[127]>]		remote file name
[local-filename <String[127]>]		local file name
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[auth-interactive]		allow interactive password entry when requested by the remote server
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively
[url <String>]		remote file url

Command	**Access**	**Description**
system xftp putfile	admin	put a file on an xFTP server
{local-filename <String[127]>}		local file name
[remote-filename <String[127]>]		remote file name
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server
[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system

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[auth-interactive]		allow interactive password entry when requested by the remote server
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively
[url <String>]		remote file url

Command	Access	Description
system xftp show	limited	show xFTP server configuration and state

Command	Access	Description
system set	admin	set system attributes
{date <date: yyyy-mm-dd or yy-mm-dd or mm-dd>}		system date (yyyy-mm-dd or yy-mm-dd or mm-dd)
{host-name <String[63]>}		system hostname
{time <time: hh:mm:ss or hh:mm>}		system time hh:mm:ss or hh:mm
{time-offset <SECONDS: -43200-50400>}		system time-offset in seconds from UTC -- positive->east, negative->west
{timestamp <local | UTC>}		set log timestamp

Command	Access	Description
system show	limited	show system attributes
{date}		show system date (mm-dd-yyyy or mm-dd-yy)
{host-name}		show system host name
{time}		show system time setting
{time-offset}		show system time offset settings
{uptime}		show system uptime

Command	Access	Description
system state-dump	admin	dump system state to a file (optionally on a xFTP server)
[default-server]		use the default xFTP server
[default-tftp-server]		use the default TFTP server
[default-ftp-server]		use the default FTP server
[default-sftp-server]		use the default SFTP server
[tftp-server <IP address or host name>]		TFTP server

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[ftp-server <IP address or host name>]		FTP server
[sftp-server <IP address or host name>]		SFTP server
[server-port <NUMBER: 1-65535>]		remote port to connect to
[login-id <String[32]>]		FTP/SFTP username
[echoless-password]		collect password interactively on this system
[auth-interactive]		allow interactive password entry when requested by the remote server
[echoless-sftp-passphrase]		collect the passphrase for SFTP interactively
[file-name <String>]		file name
[include-corefiles]		Make TAR file, including any core dumps
[include-datapath]		Make TAR file, including datapath diag dumps

Command	Access	Description
system unset	admin	set system attributes
{host-name}		unset system hostname
{time-offset}	admin	unset time offset.
{timestamp}	admin	unset log timestamp

tacacs

TACACS+

Command	Access	Description
tacacs accounting add	admin	add TACACS+ accounting server
server <server>		TACACS+ accounting server IP address or hostname
{priority <NUMBER: 1-8>}		priority of the TACACS+ server
{tcp-port <NUMBER: 1-65535>}		TCP port of TACACS+ server, default: 49

Command	Access	Description
tacacs accounting clear	admin	clear TACACS+ accounting statistics
server <server>		TACACS+ accounting server IP address or hostname
{statistics}		clear TACACS+ accounting statistics

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Command	Access	Description
tacacs accounting disable	admin	globally disable TACACS+ accounting

Command	Access	Description
tacacs accounting disable	admin	disable TACACS+ accounting server
server <server>		TACACS+ accounting server IP address or hostname

Command	Access	Description
tacacs accounting enable	admin	globally enable TACACS+ accounting

Command	Access	Description
tacacs accounting enable	admin	enable TACACS+ accounting server
server <server>		TACACS+ accounting server IP address or hostname

Command	Access	Description
tacacs accounting remove	admin	remove TACACS+ accounting server
server <server>		TACACS+ accounting server IP address or hostname

Command	Access	Description
tacacs accounting set	admin	set TACACS+ accounting server attributes
server <server>		TACACS+ accounting server IP address or hostname
{priority <NUMBER: 1-8>}		priority of the TACACS+ accounting server
{tcp-port <NUMBER: 1-65535>}		TCP port of TACACS+ accounting server, default: 49

Command	Access	Description

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tacacs accounting set	admin	set TACACS+ accounting attributes
{session <on | off>}		enable logging for login and logout
{command <on | off>}		enable logging for all commands

Command	**Access**	**Description**
tacacs accounting show	limited	show TACACS+ accounting information
{statistics}		show TACACS+ accounting statistics

Command	**Access**	**Description**
tacacs accounting unset	admin	unset TACACS+ accounting server attributes
server <server>		TACACS+ accounting server IP address or hostname
{tcp-port}		set TCP port of TACACS+accounting server to default

Command	**Access**	**Description**
tacacs authentication add	admin	add TACACS+ authentication server
server <server>		TACACS+ authentication server IP address or hostname
{priority <NUMBER: 1-8>}		priority of the TACACS+ authentication server
{tcp-port <NUMBER: 1-65535>}		TCP port of TACACS+ authentication server, default: 49

Command	**Access**	**Description**
tacacs authentication clear	admin	clear TACACS+ authentication statistics
server <server>		TACACS+ authentication server IP address or hostname
{statistics}		clear TACACS+ authentication statistics

Command	**Access**	**Description**
tacacs authentication disable	admin	globally disable TACACS+ authentication

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Command	Access	Description
tacacs authentication disable	admin	disable TACACS+ authentication server
server <server>		TACACS+ authentication server IP address or hostname

Command	Access	Description
tacacs authentication enable	admin	globally enable TACACS+ authentication

Command	Access	Description
tacacs authentication enable	admin	enable TACACS+ authentication server
server <server>		TACACS+ authentication server IP address or hostname

Command	Access	Description
tacacs authentication remove	admin	remove TACACS+ authentication server
server <server>		TACACS+ authentication server IP address or hostname

Command	Access	Description
tacacs authentication set	admin	set TACACS+ authentication server attributes
server <server>		TACACS+ authentication server IP address or hostname
{priority <NUMBER: 1-8>}		priority of the TACACS+ authentication server
{tcp-port <NUMBER: 1-65535>}		TCP port of TACACS+ authentication server, default: 49

Command	Access	Description
tacacs authentication set	admin	set TACACS+ enhanced multi factor authentication
{enhanced-multi-factor <on | off>}		enhanced multi factor authentication

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Command	Access	Description
tacacs authentication show	limited	show TACACS+ authentication information
{statistics}		show TACACS+ authentication statistics

Command	Access	Description
tacacs authentication unset	admin	unset TACACS+ authentication server attributes
server <server>		TACACS+ authentication server IP address or hostname
{tcp-port}		set TCP port of TACACS+ authentication server to default

Command	Access	Description
tacacs authentication unset	admin	set TACACS+ authentication attributes back to default values
{enhanced-multi-factor}		set TACACS+ enhanced-multi-factor to default

Command	Access	Description
tacacs authorization add	admin	add TACACS+ authorization server
server <server>		TACACS+ authorization server IP address or hostname
{priority <NUMBER: 1-8>}		priority of the TACACS+ authorization server
{tcp-port <NUMBER: 1-65535>}		TCP port of TACACS+ authorization server, default: 49

Command	Access	Description
tacacs authorization clear	admin	clear TACACS+ authorization statistics
server <server>		TACACS+ authorization server IP address or hostname
{statistics}		clear TACACS+ authorization statistics

Command	Access	Description

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tacacs authorization disable	admin	globally disable TACACS+ authorization

Command	**Access**	**Description**
tacacs authorization disable	admin	disable TACACS+ authorization server
server <server>		TACACS+ authorization server IP address or hostname

Command	**Access**	**Description**
tacacs authorization enable	admin	globally enable TACACS+ authorization

Command	**Access**	**Description**
tacacs authorization enable	admin	enable TACACS+ authorization server
server <server>		TACACS+ authorization server IP address or hostname

Command	**Access**	**Description**
tacacs authorization remove	admin	remove TACACS+ authorization server
server <server>		TACACS+ authorization server IP address or hostname

Command	**Access**	**Description**
tacacs authorization set	admin	set TACACS+ authorization server attributes
server <server>		TACACS+ authorization server IP address or hostname
{priority <NUMBER: 1-8>}		priority of the TACACS+ authorization server
{tcp-port <NUMBER: 1-65535>}		TCP port of TACACS+ authorization serve, default: 49r

Command	**Access**	**Description**
tacacs authorization show	limited	show TACACS+ authorization information
{statistics}		show TACACS+ authorization statistics

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Command	Access	Description
tacacs authorization unset	admin	unset TACACS+ authorization server attributes
server <server>		TACACS+ authorization server IP address or hostname
{tcp-port}		set TCP port of TACACS+ server to default

Command	Access	Description
tacacs syslog disable	admin	disable TACACS+ syslog messages

Command	Access	Description
tacacs syslog enable	admin	enable TACACS+ syslog messages

Command	Access	Description
tacacs add	admin	add TACACS+ server
server <server>		TACACS+ server IP address or hostname
{priority <NUMBER: 1-8>}		priority of the TACACS+ server
{tcp-port <NUMBER: 1-65535>}		TCP port of TACACS+ server, default: 49

Command	Access	Description
tacacs clear	admin	clear TACACS+
server <server>		TACACS+ server IP address or hostname
{statistics}		clear TACACS+ statistics

Command	Access	Description
tacacs disable	admin	disable TACACS+

Command	Access	Description

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tacacs disable	admin	disable TACACS+ server
server <server>		TACACS+ server IP address or hostname

Command	**Access**	**Description**
tacacs enable	admin	enable TACACS+

Command	**Access**	**Description**
tacacs enable	admin	enable TACACS+ server
server <server>		TACACS+ server IP address or hostname

Command	**Access**	**Description**
tacacs remove	admin	remove TACACS+ server
server <server>		TACACS+ server IP address or hostname

Command	**Access**	**Description**
tacacs set	admin	RADIUS Preferred source ip
preferred-source-ip <preferred-source-ip>		Preferred Source IP to be set

Command	**Access**	**Description**
tacacs set	admin	set TACACS+ attributes
{global-servers <on | off>}	admin	use global server
{key <Password String>}		TACACS+ key
{keyminlen <NUMBER: 2-64>}		secret key minimum length
{preferred-source-address <default | loopback>}		set the preferred source address
{privilegelvladmin <NUMBER: 1-13>}		value for read-write privilege level, default: 2
{privilegelvlrw <NUMBER: 2-14>}		value for read-write-create privilege level, default: 10
{privilegelvldiag <NUMBER: 3-15>}		value for diagnostic privilege level, default: 15
{search-method <priority | cached>}		set the search method for TACACS+ servers
{timeout <SECONDS: 1-30>}		response time from TACACS+ server, default: 6 seconds

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Command	Access	Description
tacacs set	admin	set TACACS+ server attributes
server <server>		TACACS+ server IP address or hostname
{priority <NUMBER: 1-8>}		TACACS+ server priority
{tcp-port <NUMBER: 1-65535>}		TCP port of TACACS+ server, default: 49

Command	Access	Description
tacacs show	limited	show TACACS+ information
{statistics}		show TACACS+ statistics

Command	Access	Description
tacacs unset	admin	set TACACS+ server attributes back to default values
{global-servers}		set global server use to default
{key}		set TACACS+ key to default
{keyminlen}		set key minimum length to default
{preferred-source-address}		set preferred source address to default
{preferred-source-ip}		Preferred Source Interface to be default
{privilegelvladmin}		set value for read-write privilege level to default
{privilegelvlrw}		set value for read-write-create privilege level to default
{privilegelvldiag}		set value for diagnostic privilege level to default
{search-method}		set the search method for TACACS+ servers to default
{timeout}		set response time from TACACS+ server to default

Command	Access	Description
tacacs unset	admin	unset TACACS+ server attributes
server <server>		TACACS+ server IP address or hostname
{tcp-port}		set TCP port of TACACS+ server to default

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file-export

Export files to collector

Command	Access	Description
file-export ocsp disable	super	disable ocsp

Command	Access	Description
file-export ocsp enable	super	enable ocsp

Command	Access	Description
file-export create	admin	Create file collector
collector <collector>		Collector's IP address / hostname
{sftp-server}		Sftp file transfer mode
{login-id <String[32]>}		Collector username
[echoless-password]		Collect collector password interactively
{https-server}		Https file transfer mode
[url <String[256]>]		Url file path
{filetype <pcap | mac | all>}		Type of file to be exported

Command	Access	Description
file-export set	admin	Configure collector details
[cert-name <Certificate name>]		certificate to use

Command	Access	Description
file-export set	admin	Configure collector details
collector <collector>		Collector's IP address / hostname
[sftp-server]		Transfer mode for file transfer
{login-id <String[32]>}		Collector username
[echoless-password]		Collect collector password interactively
[filetype <pcap | mac | all>]		Type of file to be exported
[https-server]		Transfer mode for file transfer

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[url <String[256]>]		Url file path

Command	Access	Description
file-export delete	admin	Delete collector
collector <collector>		Collector's IP address / hostname

Command	Access	Description
file-export enable	admin	Enable collector
collector <collector>		Collector's IP address / hostname

Command	Access	Description
file-export disable	admin	Disable collector
collector <collector>		Collector's IP address / hostname

Command	Access	Description
file-export show	admin	Display collector configuration
{details}		show collector last transfer status
{statistics}		show collector transfer stats

telnet

telnet

Command	Access	Description
telnet client connect	admin	connect via telnet
ip <ip>		IP address or host name

Command	Access	Description
telnet client disable	super	disable telnet client

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Command	Access	Description
telnet client set	admin	set telnet client
{preferred-source-ip <Interface Name>}		Preferred Source IP to be set

Command	Access	Description
telnet client unset	admin	unset Telent client attributes
{preferred-source-ip}		Preferred Source IP to be unset

Command	Access	Description
telnet client enable	super	enable telnet client

Command	Access	Description
telnet client show	limited	show telnet client information

Command	Access	Description
telnet server disable	admin	disable telnet server

Command	Access	Description
telnet server enable	admin	enable telnet server

Command	Access	Description
telnet server set	admin	set telnet server
{dos-max-attempts <NUMBER: 1-60>}		Maximum DoS limit for telnet sessions(Default: 15)

Command	Access	Description
telnet server unset	admin	unset telnet server
{dos-max-attempts}		Reset telnet DoS Limit to default

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Command	Access	Description
telnet server show	limited	show telnet server information

traffic-profiling

traffic profiling

Command	Access	Description
traffic-profiling dynamic-profile add	admin	add service flow to a dynamic profile
profile <profile>		dynamic profile
{port <Port list>}		list of ports
[vlan <VLAN including VID 0>]		Customer VLAN-ID
[vs <Virtual Switch Ethernet Name>]		Virtual Switch

Command	Access	Description
traffic-profiling dynamic-profile create	admin	create a dynamic profile
name <name>		dynamic profile name

Command	Access	Description
traffic-profiling dynamic-profile delete	admin	delete a dynamic profile
profile <profile>		dynamic profile

Command	Access	Description
traffic-profiling dynamic-profile disable	admin	disable dynamic profile globally

Command	Access	Description
traffic-profiling dynamic-profile disable	admin	disable a dynamic profile
profile <profile>		dynamic profile

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Command	Access	Description
traffic-profiling dynamic-profile enable	admin	enable dynamic profile globally

Command	Access	Description
traffic-profiling dynamic-profile enable	admin	enable a dynamic profile
profile <profile>		dynamic profile

Command	Access	Description
traffic-profiling dynamic-profile remove	admin	remove service flow from a dynamic profile
profile <profile>		dynamic profile
{port <Port list>}		list of ports
[vlan <VLAN including VID 0>]		Customer VLAN-ID
[vs <Virtual Switch Ethernet Name>]		Virtual Switch aka EVC

Command	Access	Description
traffic-profiling dynamic-profile set	admin	set dynamic profiling global attributes
{greedy-microflow-monitor-timer <SECONDS: 1-10>}		time in seconds to monitor drop rate of greedy microflows
{microflow-batch-monitor-count <NUMBER: 1-20>}		maximum number of microflows that can be monitored in one iteration to find greedy microflows
{microflow-monitor-timer <SECONDS: 1-10>}		time in seconds to monitor drop rate of microflows under monitoring
{service-flow-monitor-timer <SECONDS: 1-10>}		time in seconds to monitor utilization of service flows

Command	Access	Description
traffic-profiling dynamic-profile set	admin	set dynamic profile attributes
profile <profile>		dynamic profile
{greedy-microflow-cbs <KBYTES>}		meter committed burst size in KBytes for each microflow rate limited using this profile, rounded to nearest size supported in hardware

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{greedy-microflow-cir <Kbps>}		committed information rate in Kbps for each microflow rate limited using this profile, rounded to fit hardware
{greedy-microflow-drop-threshold <Kbps>}		greedy microflow drop thershold in Kbps
{greedy-microflow-under-threshold-count <NUMBER: 1-100>}		drop rate of a greedy microflow should remain below threshold for these many times to mark it as a normal flow
{microflow-monitor-count <NUMBER: 1-1000>}		number of times a microflow need to be monitored to check of it is a greedy microflow
{microflow-over-threshold-count <NUMBER: 1-100>}		drop rate of a monitored microflow should remain above threshold for these many times to mark it as a greedy microflow
{microflow-under-threshold-count <NUMBER: 1-100>}		drop rate of a monitored microflow should remain below threshold for these many times to mark it as a normal microflow
{service-flow-cbs <KBYTES>}		meter committed burst size in KBytes for each service flow added in this profile, rounded to nearest size supported in hardware
{service-flow-cir <Kbps>}		committed information rate in Kbps for each service flow added in this profile, rounded to fit hardware
{service-flow-over-threshold-count <NUMBER: 1-100>}		bandwidth usage of a service flow should remain above threshold for these many times to start detection of microflows
{service-flow-under-threshold-count <NUMBER: 1-100>}		bandwidth usage of a service flow should remain below threshold for these many times to stop detection of microflows
{service-flow-utilization-threshold <Kbps>}		service flow bandwidth usage threshold in Kbps at which detection of microflows should start

Command	**Access**	**Description**
traffic-profiling dynamic-profile show	limited	show dynamic profiling global attributes

Command	**Access**	**Description**
traffic-profiling dynamic-profile show	limited	show dynamic profile attributes
profile <profile>		dynamic profile
{detected-microflows}		detected-microflows
{greedy-microflows}		greedy-microflows

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Command	Access	Description
traffic-profiling dynamic-profile show	limited	show dynamic profile attributes
detected-microflows		detected microflows
{profile <Dynamic Traffic Profile>}		dynamic profile

Command	Access	Description
traffic-profiling dynamic-profile show	limited	show dynamic profile attributes
greedy-microflows		greedy microflows
{profile <Dynamic Traffic Profile>}		dynamic profile

Command	Access	Description
traffic-profiling dynamic-profile unset	admin	unset dynamic profiling global attributes
{greedy-microflow-monitor-timer}		reset to default value
{microflow-batch-monitor-count}		reset to default value
{microflow-monitor-timer}		reset to default value
{service-flow-monitor-timer}		reset to default value

Command	Access	Description
traffic-profiling dynamic-profile unset	admin	unset dynamic profile attributes
profile <profile>		traffic profile
{greedy-microflow-cbs}		reset to default value
{greedy-microflow-cir}		reset to default value
{greedy-microflow-drop-threshold}		reset to default value
{greedy-microflow-under-threshold-count}		reset to default value
{microflow-monitor-count}		reset to default value
{microflow-over-threshold-count}		reset to default value
{microflow-under-threshold-count}		reset to default value
{service-flow-cbs}		reset to default value
{service-flow-cir}		reset to default value
{service-flow-over-threshold-count}		reset to default value
{service-flow-under-threshold-count}		reset to default value
{service-flow-utilization-threshold}		reset to default value

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Command	Access	Description
traffic-profiling envelope add	admin	add flow in an envelope
envelope <envelope>		envelope instance
bw-profile-flow		flow instance
[cbs <KBYTES>]		committed burst size in KBytes, rounded to nearest size supported in hardware
{cir <Kbps>}		committed information rate in Kbps of this traffic meter, rounded to fit hardware
[cir-max <Kbps>]		maximum value of committed information rate in Kbps of this traffic meter, rounded to fit hardware
{dot1dpri <NUMBER: 0-7>}		setting priority of flow on the basis of dot1dpri
[ebs <KBYTES>]		excess burst size in KBytes, rounded to nearest size supported in hardware
{eir <Kbps>}		excess information rate in Kbps of this traffic meter, rounded to fit hardware
[eir-max <Kbps>]		maximum value of excess information rate in Kbps of this traffic meter, rounded to fit hardware
[ingress-color-aware <on | off>]		set meter to be color aware or not
[name <String[33]>]		envelope flow name
{pir <Kbps>}		peak information rate in Kbps of this traffic meter, rounded to fit hardware
{pir-max <Kbps>}		maximum value of peak information rate in Kbps of this traffic meter, rounded to fit hardware
{rank <NUMBER: 0-7>}		setting priority of flow on the basis of rank
{r-cos <NUMBER: 0-7>}		setting priority of flow on the basis of rcos
[vs <Virtual Switch Ethernet Name>]		virtual switch as a classifier aka EVC matching frames

Command	Access	Description
traffic-profiling envelope clear	admin	clear statistics for envelope flows
statistics		clear envelope flow statistics table
{bw-profile-flow <Bandwidth Profile Flow>}		flow in envelope
{envelope <envelope name>}		envelope instance

Command	Access	Description

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traffic-profiling envelope create	admin	create envelope
envelope <envelope>		envelope name
[bw-flow-coupling-flag <on | off>]		envelope flow coupling flag
[bw-flow-statistics <on | off>]		envelope flow statistics
[port <Port>]		port number

Command	**Access**	**Description**
traffic-profiling envelope delete	admin	delete envelope
envelope <envelope>		envelope instance

Command	**Access**	**Description**
traffic-profiling envelope disable	admin	disable envelope
envelope <envelope>		envelope instance

Command	**Access**	**Description**
traffic-profiling envelope enable	admin	enable envelope
envelope <envelope>		envelope instance

Command	**Access**	**Description**
traffic-profiling envelope remove	admin	remove flow from envelope
envelope <envelope>		envelope instance
bw-profile-flow <bw-profile-flow>		flow instance

Command	**Access**	**Description**
traffic-profiling envelope set	admin	modify envelope and flow attributes
envelope <envelope>		envelope instance
[bw-flow-coupling-flag <on | off>]		envelope flow coupling flag
[bw-flow-statistics <on | off>]		envelope flow statistics
[bw-profile-flow <Bandwidth Profile Flow>]		flow of an envelope
[cbs <KBYTES>]		committed burst size in KBytes, rounded to nearest size supported in hardware

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{cir <Kbps>}		committed information rate in Kbps of this traffic meter, rounded to fit hardware
[cir-max <Kbps>]		maximum value of committed information rate in Kbps of this traffic meter, rounded to fit hardware
{dot1dpri <NUMBER: 0-7>}		setting priority of flow on the basis of dot1dpri
[ebs <KBYTES>]		excess burst size in KBytes, rounded to nearest size supported in hardware
{eir <Kbps>}		excess information rate in Kbps of this traffic meter, rounded to fit hardware
[eir-max <Kbps>]		maximum value of excess information rate in Kbps of this traffic meter, rounded to fit hardware
[ingress-color-aware <on | off>]		set meter to be color aware or not
{pir <Kbps>}		peak information rate in Kbps of this traffic meter, rounded to fit hardware
{pir-max <Kbps>}		maximum value of peak information rate in Kbps of this traffic meter, rounded to fit hardware
[port <Port>]		port
{rank <NUMBER: 0-7>}		setting priority of flow on the basis of rank
{r-cos <NUMBER: 0-7>}		setting priority of flow on the basis of rcos

Command	**Access**	**Description**
traffic-profiling envelope show	limited	show all envelopes

Command	**Access**	**Description**
traffic-profiling envelope show	limited	show envelope resource usage
resources		show envelope resources table

Command	**Access**	**Description**
traffic-profiling envelope show	limited	show envelope and its flow table
envelope <envelope>		show envelope table
{bw-profile-flow <Bandwidth Profile Flow>}		flow of an envelope
{statistics}		statistics

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Command	Access	Description
traffic-profiling envelope show	limited	show statistics of envelope flows
statistics		show envelope flow statistics table
[bw-profile-flow <Bandwidth Profile Flow>]		flow of an envelope
{envelope <envelope name>}		envelope name

Command	Access	Description
traffic-profiling envelope unset	admin	setting default values for envelope and flow attributes
envelope <envelope>		envelope instance
[bw-flow-coupling-flag]		envelope flow coupling flag
[bw-flow-statistics]		envelope flow statistics
[bw-profile-flow <Bandwidth Profile Flow>]		flow of an envelope
[cbs]		committed burst size in KBytes, rounded to nearest size supported in hardware
[cir-max]		maximum value of committed information rate in Kbps of this traffic meter, rounded to fit hardware
[ebs]		excess burst size in KBytes, rounded to nearest size supported in hardware
[eir-max]		maximum value of excess information rate in Kbps of this traffic meter, rounded to fit hardware
[ingress-color-aware]		set meter to be color aware or not
[pir-max]		maximum value of peak information rate in Kbps of this traffic meter, rounded to fit hardware
[port]		port

Command	Access	Description
traffic-profiling standard-profile clear	admin	clear statistics for all standard profiles
{statistics}		clear standard profile statistics table

Command	Access	Description
traffic-profiling standard-profile create	admin	create a standard traffic profile

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port <port>		port number
{cbs <KBYTES>}		meter committed burst size in KBytes, rounded to nearest size supported in hardware
{child-mode <standard-dot1dpri | standard-ip-prec | standard-dscp | standard-vlan | vlan-cos>}		remarking mode
{cir <Kbps>}		committed information rate in Kbps of this traffic meter, rounded to fit hardware
{default-profile <true | false>}		whether this profile is default for set
{dot1dpri <NUMBER>}		.1D priority of matching frames
{drop <true | false>}		whether this profile drops all traffic
{dscp <dscp values and ranges>}		DSCP value of matching frames
{dscp-remark-policy <leave | fixed>}		DSCP Remark Policy
{ebs <KBYTES>}		meter excess burst size in KBytes, rounded to nearest size supported in hardware
{eir <Kbps>}		excess information rate in Kbps of this traffic meter, rounded to fit hardware
{fixed-dscp <NUMBER: 0-63>}		Fixed DSCP Value
{green-remark-rcos <NUMBER: 0-7>}		remark meter's green traffic to RCOS value
{ingress-color-aware <on | off>}		set meter to be ingress color aware or not
{ip-prec <NUMBER>}		IP Precedence of matching frames
{name <String[15]>}		traffic profile name
{parent <Traffic Profiling Standard Name>}		parent traffic profile number
{pir <Kbps>}		peak information rate in Kbps of this traffic meter, rounded to fit hardware
{profile <NUMBER: 1-4096>}		traffic profile number
{remark-color-policy <leave | yellow-to-green | green-to-yellow>}		meter output color remarking policy
{remark-rcos-policy <leave | remark-green | remark-yellow | remark-both | remark-green-rcos-only | remark-yellow-rcos-only | remark-both-rcos-only>}		meter output color based rcos remarking policy
[resource-type <default | extended>]		resource-type of traffic profile
[statistics <on | off>]		Statistics control for Traffic Profiling
[untagged]		untagged frame classifier
{vlan <VLAN ID List>}		VLAN-ID to monitor
{vs <Virtual Switch Ethernet Name>}		Virtual Switch as a classifier aka EVC matching frames
{yellow-remark-rcos <NUMBER: 0-7>}		remark meter's yellow traffic to RCOS value

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Command	Access	Description
traffic-profiling standard-profile delete	admin	delete a standard traffic profile
port <port>		port number
profile <profile>		traffic profile

Command	Access	Description
traffic-profiling standard-profile set	admin	set standard traffic profile attributes
port <port>		port number
profile <profile>		traffic profile
{dot1dpri <NUMBER>}		.1D priority of matching frames
{ip-prec <NUMBER>}		IP Precedence of matching frames
{dscp <dscp values and ranges>}		DSCP value of matching frames
{dscp-remark-policy <leave | fixed>}		DSCP Remark Policy
{fixed-dscp <NUMBER: 0-63>}		Fixed DSCP Value
{cir <Kbps>}		committed information rate in Kbps of this traffic meter, rounded to fit hardware
{eir <Kbps>}		excess information rate in Kbps of this traffic meter, rounded to fit hardware
{pir <Kbps>}		peak information rate in Kbps of this traffic meter, rounded to fit hardware
{cbs <KBYTES>}		meter committed burst size in KBytes, rounded to nearest size supported in hardware
{ebs <KBYTES>}		meter excess burst size in KBytes, rounded to nearest size supported in hardware
{name <String[15]>}		traffic profile name
{vlan <VLAN ID List>}		VLAN ID List, 1 to 4094
{vs <Virtual Switch Ethernet Name>}		Virtual Switch aka EVC matching frames
[statistics <on | off>]		Statistics control for Traffic Profiling
[untagged]		untagged frame classifier
{parent <Traffic Profiling Standard Name>}		parent traffic profile number
{child-mode <standard-dot1dpri | standard-ip-prec | standard-dscp | standard-vlan | vlan-cos>}		profiling mode of child profiles
{drop <true | false>}		whether this profile drops all traffic
{ingress-color-aware <on | off>}		set meter to be ingress color aware or not
{remark-color-policy <leave | yellow-to-green | green-to-yellow>}		meter output color remarking policy

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{remark-rcos-policy <leave | remark-green | remark-yellow | remark-both | remark-green-rcos-only | remark-yellow-rcos-only | remark-both-rcos-only>}		meter output color based rcos remarking policy
{green-remark-rcos <NUMBER: 0-7>}		remark meter's green traffic to RCOS value
{yellow-remark-rcos <NUMBER: 0-7>}		remark meter's yellow traffic to RCOS value

Command	Access	Description
traffic-profiling standard-profile show	limited	show standard profiling table
statistics		show standard profiling statistics table
[port <Port>]		port number
[traffic-profile <Traffic Profiling Standard Name>]		traffic profile

Command	Access	Description
traffic-profiling standard-profile show	limited	show standard profiling throughput table
throughput		show standard profiling throughput table
{port <Port>}		port number
{traffic-profile <Traffic Profiling Standard Name>}		traffic profile

Command	Access	Description
traffic-profiling standard-profile show	limited	show standard traffic profile attributes
port <port>		port number
[traffic-profile <Traffic Profiling Standard Name>]		traffic profile

Command	Access	Description
traffic-profiling standard-profile show	limited	show standard traffic profile attributes
[resource-type <default | extended>]		traffic profiling resource-type

Command	Access	Description
traffic-profiling standard-profile unset	admin	unset standard traffic profile attributes

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port <port>		port number
profile <profile>		traffic profile
{dot1dpri <NUMBER>}		.1D priority of matching frames
{ip-prec <NUMBER>}		IP Precedence of matching frames
{dscp <dscp values and ranges>}		DSCP value of matching frames
{vlan}		VLAN to monitor
{untagged}		undo the untagged classifier

Command	**Access**	**Description**
traffic-profiling global-profile parent create	admin	create a global parent traffic profile
name <name>		global parent traffic profile name
{base-etype <Etype value in hex>}		EtherType
{dot1dpri <NUMBER: 0-7>}		.1D priority of matching frames
{dscp <NUMBER: 0-63>}		DSCP value of matching frames
{dst-ip <IP address in CIDR notation>}		IP destination address
{ip-protocol <NUMBER: 0-255>}		IP protocol type
{l4-dst-port <NUMBER: 0-65535>}		IP L4 destination port
{l4-src-port <NUMBER: 0-65535>}		IP L4 source port
{port <Port list>}		list of ports
{src-ip <IP address in CIDR notation>}		IP source address
[untagged]		untagged frame classifier
{vlan <NUMBER: 0-4094>}		VLAN-ID to monitor
{vs <Virtual Switch Ethernet Name>}		Virtual Switch as a classifier aka EVC matching frames
{cir <Kbps>}		committed information rate in Kbps of this traffic meter, rounded to fit hardware
{cbs <KBYTES>}		meter committed burst size in KBytes, rounded to nearest size supported in hardware

Command	**Access**	**Description**
traffic-profiling global-profile parent delete	admin	delete a global parent traffic profile
profile <profile>		traffic profile

Command	**Access**	**Description**
traffic-profiling global-profile parent enable	admin	enable a global parent traffic profile
profile <profile>		traffic profile

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Command	Access	Description
traffic-profiling global-profile parent disable	admin	disable a global parent traffic profile
profile <profile>		traffic profile

Command	Access	Description
traffic-profiling global-profile parent clear	admin	clear statistics for a global parent profile
profile <profile>		traffic profile
{statistics}		clear global profile statistics table

Command	Access	Description
traffic-profiling global-profile parent show	limited	show global parent profiling table
statistics		show global profiling statistics table
[profile <Global Parent Traffic Profile>]		traffic profile

Command	Access	Description
traffic-profiling global-profile parent show	limited	show global parent profiling throughput table
throughput		show global profiling throughput table
{profile <Global Parent Traffic Profile>}		traffic profile

Command	Access	Description
traffic-profiling global-profile parent show	limited	show global parent traffic profile attributes
[profile <Global Parent Traffic Profile>]		traffic profile

Command	Access	Description
traffic-profiling global-profile parent show	limited	show global traffic profile attributes

Command	Access	Description
traffic-profiling global-profile parent set	admin	set global traffic profile attributes

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profile <profile>		traffic profile
{cir <Kbps>}		committed information rate in Kbps of this traffic meter, rounded to fit hardware
{cbs <KBYTES>}		meter committed burst size in KBytes, rounded to nearest size supported in hardware

Command	Access	Description
traffic-profiling global-profile clear	admin	clear statistics for all global profiles
{statistics}		clear global profile statistics table

Command	Access	Description
traffic-profiling global-profile create	admin	create a global traffic profile
name <name>		global traffic profile name
{base-etype <Etype value in hex>}		EtherType
{dot1dpri <NUMBER>}		.1D priority of matching frames
{dscp <dscp values and ranges>}		DSCP value of matching frames
{dst-ip <IP address in CIDR notation>}		IP destination address
{ip-protocol <NUMBER: 0-255>}		IP protocol type
{l4-dst-port <NUMBER: 0-65535>}		IP L4 destination port
{l4-src-port <NUMBER: 0-65535>}		IP L4 source port
{parent-profile <Global Parent Traffic Profile>}		parent profile associated to child profile
{port <Port list>}		list of ports
{precedence <NUMBER: 0-7000>}		precedence
{src-ip <IP address in CIDR notation>}		IP source address
[untagged]		untagged frame classifier
{vlan <VLAN list including VID 0>}		VLAN-ID to monitor
{vs <Virtual Switch Ethernet Name>}		Virtual Switch as a classifier aka EVC matching frames
{cir <Kbps>}		committed information rate in Kbps of this traffic meter, rounded to fit hardware
{eir <Kbps>}		excess information rate in Kbps of this traffic meter, rounded to fit hardware
{pir <Kbps>}		peak information rate in Kbps of this traffic meter, rounded to fit hardware
{cbs <KBYTES>}		meter committed burst size in KBytes, rounded to nearest size supported in hardware
{ebs <KBYTES>}		meter excess burst size in KBytes, rounded to nearest size supported in hardware

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{dscp-remark-policy <leave | fixed>}		DSCP Remark Policy
{fixed-dscp <NUMBER: 0-63>}		Fixed DSCP Value
{ingress-color-aware <on | off>}		set meter to be ingress color aware or not
{remark-color-policy <leave | yellow-to-green | green-to-yellow>}		meter output color remarking policy
{remark-rcos-policy <leave | remark-green | remark-yellow | remark-both | remark-green-rcos-only | remark-yellow-rcos-only | remark-both-rcos-only>}		meter output color based rcos remarking policy
{green-remark-rcos <NUMBER: 0-7>}		remark meter's green traffic to RCOS value
{yellow-remark-rcos <NUMBER: 0-7>}		remark meter's yellow traffic to RCOS value

Command	**Access**	**Description**
traffic-profiling global-profile delete	admin	delete a global traffic profile
profile <profile>		traffic profile

Command	**Access**	**Description**
traffic-profiling global-profile enable	admin	enable a global traffic profile
profile <profile>		traffic profile

Command	**Access**	**Description**
traffic-profiling global-profile disable	admin	disable a global traffic profile
profile <profile>		traffic profile

Command	**Access**	**Description**
traffic-profiling global-profile clear	admin	clear statistics for a global profile
profile <profile>		traffic profile
{statistics}		clear global profile statistics table

Command	**Access**	**Description**
traffic-profiling global-profile set	admin	set global traffic profile attributes
profile <profile>		traffic profile

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{base-etype <Etype value in hex>}		EtherType
{dot1dpri <NUMBER>}		.1D priority of matching frames
{dscp <dscp values and ranges>}		DSCP value of matching frames
{dst-ip <IP address in CIDR notation>}		IP destination address
{ip-protocol <NUMBER: 0-255>}		IP protocol type
{l4-dst-port <NUMBER: 0-65535>}		IP L4 destination port
{l4-src-port <NUMBER: 0-65535>}		IP L4 source port
{name <String[15]>}		traffic profile name
{port <Port list>}		list of ports
[precedence <NUMBER: 0-7000>]		precedence
{src-ip <IP address in CIDR notation>}		IP source address
[untagged]		untagged frame classifier
{vlan <VLAN list including VID 0>}		VLAN-ID to monitor
{vs <Virtual Switch Ethernet Name>}		Virtual Switch aka EVC matching frames
{cir <Kbps>}		committed information rate in Kbps of this traffic meter, rounded to fit hardware
{eir <Kbps>}		excess information rate in Kbps of this traffic meter, rounded to fit hardware
{pir <Kbps>}		peak information rate in Kbps of this traffic meter, rounded to fit hardware
{cbs <KBYTES>}		meter committed burst size in KBytes, rounded to nearest size supported in hardware
{ebs <KBYTES>}		meter excess burst size in KBytes, rounded to nearest size supported in hardware
{dscp-remark-policy <leave | fixed>}		DSCP Remark Policy
{fixed-dscp <NUMBER: 0-63>}		Fixed DSCP Value
{ingress-color-aware <on | off>}		set meter to be ingress color aware or not
{remark-color-policy <leave | yellow-to-green | green-to-yellow>}		meter output color remarking policy
{remark-rcos-policy <leave | remark-green | remark-yellow | remark-both | remark-green-rcos-only | remark-yellow-rcos-only | remark-both-rcos-only>}		meter output color based rcos remarking policy
{green-remark-rcos <NUMBER: 0-7>}		remark meter's green traffic to RCOS value
{yellow-remark-rcos <NUMBER: 0-7>}		remark meter's yellow traffic to RCOS value

Command	**Access**	**Description**
traffic-profiling global-profile show	limited	show global profiling table
statistics		show global profiling statistics table
[profile <Global Traffic Profile (not parent)>]		traffic profile

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Command	Access	Description
traffic-profiling global-profile show	limited	show global profiling throughput table
throughput		show global profiling throughput table
{profile <Global Traffic Profile (not parent)>}		traffic profile

Command	Access	Description
traffic-profiling global-profile show	limited	show global traffic profile attributes
[profile <Global Traffic Profile (not parent)>]		traffic profile

Command	Access	Description
traffic-profiling global-profile show	limited	show global traffic profile attributes

Command	Access	Description
traffic-profiling global-profile unset	admin	unset global traffic profile attributes
profile <profile>		traffic profile
{base-etype}		EtherType
{dot1dpri <NUMBER>}		.1D priority of matching frames
{dscp <dscp values and ranges>}		DSCP value of matching frames
{dst-ip}		IP destination address
{ip-protocol}		IP protocol type
{l4-dst-port}		IP L4 destination port
{l4-src-port}		IP L4 source port
{port}		port
{src-ip}		IP source address
{untagged}		undo the untagged classifier
{vlan <VLAN list including VID 0>}		VLAN to monitor
{vs}		Virtual switch
{dscp-remark-policy}		dscp remark policy
{ingress-color-aware}		ingress color aware
{remark-rcos-policy}		rcos remark policy
{remark-color-policy}		color remark policy
{fixed-dscp-value}		dscp value used for fixed policy
{yellow-remark-rcos}		yellow traffic remark rcos value

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{green-remark-rcos}		green traffic remark rcos value

Command	Access	Description
traffic-profiling enable	admin	enable traffic profiling

Command	Access	Description
traffic-profiling enable	admin	enable traffic profiling
port <port>		port number

Command	Access	Description
traffic-profiling enable	admin	enable traffic profiling
{extended-resource}		enable feature increased traffic profile

Command	Access	Description
traffic-profiling disable	admin	disable traffic profiling

Command	Access	Description
traffic-profiling disable	admin	disable traffic profiling
port <port>		port number

Command	Access	Description
traffic-profiling disable	admin	disable traffic profiling
{extended-resource}		disable increased traffic-profiling

Command	Access	Description
traffic-profiling set	admin	set per-port traffic profiling attributes
port <port>		port number
{arp-standard-profile <Traffic Profiling Standard Name>}		default std PHB DSCP-behavior for ARP frames

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{mode <none | advanced | standard-dot1dpri | standard-ip-prec | standard-dscp | standard-vlan | standard-vlan-dot1dpri | standard-vlan-ip-prec | standard-vlan-dscp | hierarchical-port | hierarchical-vlan>}		remarking mode
{classifier-mode <narrow | wide>}		narrow excludes dropped frames from meters, wide does not
{nonconform-standard-profile <Traffic Profiling Standard Name>}		standard profile to use for non-conforming traffic

Command	**Access**	**Description**
traffic-profiling set	admin	set traffic profiling global attributes
{meter-provisioning <eir | pir>}		Set the metering's rate provisioning to eir or pir units
{profile-mode <port | global-l2-l3 | global-l2-l3-extended>}		Set global profiling mode
{profile-type <global-profile | dynamic-profile>}		Set as global-profile or dynamic-profile

Command	**Access**	**Description**
traffic-profiling unset	admin	Unset traffic profiling global attributes
{meter-provisioning}		Unset the metering's rate provisioning to default value
{profile-mode}		Unset profiling mode to default value
{profile-type}		Unset profile type to default value

Command	**Access**	**Description**
traffic-profiling show	limited	brief traffic profiling information for each port
{classifier-mode}		This displays each port's classification mode

Command	**Access**	**Description**
traffic-profiling show	limited	detail traffic profiling information for each port
port <port>		port number
[standard-profile]		All Standard Traffic profiles on the Port
[statistics]		show standard profiling statistics table

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traffic-services

QoS Traffic Services

Command	Access	Description
traffic-services queuing congestion-avoidance-profile create	admin	Create a Congestion Avoidance Profile
profile <profile>		congestion avoidance profile
[green-threshold <NUMBER: 1-100>]		Lower Threshold % for green-drop-probability
[green-drop-probability <100pct | 6.25pct.....(1/16) | 3.125pct.....(1/32) | 1.5625pct.....(1/64) | 0.78125pct....(1/128) | 0.390625pct...(1/256) | 0.1953125pct..(1/512) | 0.09765625pct.(1/1024)>]		green drop probability %
[yellow-threshold <NUMBER: 1-100>]		Lower Threshold % for yellow-drop-probability
[yellow-drop-probability <100pct | 6.25pct.....(1/16) | 3.125pct.....(1/32) | 1.5625pct.....(1/64) | 0.78125pct....(1/128) | 0.390625pct...(1/256) | 0.1953125pct..(1/512) | 0.09765625pct.(1/1024)>]		yellow-drop-probability %
[tcp-green-threshold <NUMBER: 1-100>]		Lower Threshold % for TCP green-drop-probability
[tcp-green-upper-threshold <NUMBER: 1-100>]		Upper Threshold % for TCP green-drop-probability
[tcp-green-max-drop-probability <100pct | 75pct | 50pct | 25pct | 10pct | 9pct | 8pct | 7pct | 6pct | 5pct | 4pct | 3pct | 2pct | 1pct | 0pct>]		tcp-green-drop-probability %
[green-lower-threshold <NUMBER: 1-100>]		Lower Threshold % for TCP green-drop-probability
[green-upper-threshold <NUMBER: 1-100>]		Upper Threshold % for TCP green-drop-probability
[green-max-drop-probability <100pct | 75pct | 50pct | 25pct | 10pct | 9pct | 8pct | 7pct | 6pct | 5pct | 4pct | 3pct | 2pct | 1pct | 0pct>]		tcp-green-drop-probability %
[tcp-yellow-threshold <NUMBER: 1-100>]		Lower Threshold % for TCP yellow-drop-probability
[tcp-yellow-upper-threshold <NUMBER: 1-100>]		Upper Threshold % for TCP yellow-drop-probability
[tcp-yellow-max-drop-probability <100pct | 75pct | 50pct | 25pct | 10pct | 9pct | 8pct | 7pct | 6pct | 5pct | 4pct | 3pct | 2pct | 1pct | 0pct>]		tcp-yellow-drop-probability %

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[yellow-lower-threshold <NUMBER: 1-100>]		Lower Threshold % for TCP yellow-drop-probability
[yellow-upper-threshold <NUMBER: 1-100>]		Upper Threshold % for TCP yellow-drop-probability
[yellow-max-drop-probability <100pct | 75pct | 50pct | 25pct | 10pct | 9pct | 8pct | 7pct | 6pct | 5pct | 4pct | 3pct | 2pct | 1pct | 0pct>]		tcp-yellow-drop-probability %
[non-tcp-threshold <NUMBER: 1-100>]		Lower Threshold % for non-TCP drop-probability
[non-tcp-upper-threshold <NUMBER: 1-100>]		Upper Threshold % for non-TCP drop-probability
[non-tcp-max-drop-probability <100pct | 75pct | 50pct | 25pct | 10pct | 9pct | 8pct | 7pct | 6pct | 5pct | 4pct | 3pct | 2pct | 1pct | 0pct>]		non-tcp-drop-probability %
[yellow-admit-limit <NUMBER: 1-100>]		yellow frames are limited to consuming this % of the queue

Command	**Access**	**Description**
traffic-services queuing congestion-avoidance-profile delete	admin	Delete a Congestion Avoidance Profile
profile <profile>		congestion avoidance profile

Command	**Access**	**Description**
traffic-services queuing congestion-avoidance-profile rename	admin	Set name for Congestion Avoidance Profile
profile <profile>		congestion avoidance profile
{name <String[15]>}		new name

Command	**Access**	**Description**
traffic-services queuing congestion-avoidance-profile set	admin	Set a Congestion Avoidance Profile Attribute
profile <profile>		congestion avoidance profile
{green-threshold <NUMBER: 1-100>}		Lower Threshold % for green-drop-probability

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{green-drop-probability <100pct | 6.25pct.....(1/16) | 3.125pct.....(1/32) | 1.5625pct.....(1/64) | 0.78125pct....(1/128) | 0.390625pct...(1/256) | 0.1953125pct..(1/512) | 0.09765625pct.(1/1024)>}		green drop probability %
{yellow-threshold <NUMBER: 1-100>}		Lower Threshold % for yellow-drop-probability
{yellow-drop-probability <100pct | 6.25pct.....(1/16) | 3.125pct.....(1/32) | 1.5625pct.....(1/64) | 0.78125pct....(1/128) | 0.390625pct...(1/256) | 0.1953125pct..(1/512) | 0.09765625pct.(1/1024)>}		yellow-drop-probability %
[tcp-green-threshold <NUMBER: 1-100>]		Lower Threshold % for TCP green-drop-probability
[tcp-green-upper-threshold <NUMBER: 1-100>]		Upper Threshold % for TCP green-drop-probability
[tcp-green-max-drop-probability <100pct | 75pct | 50pct | 25pct | 10pct | 9pct | 8pct | 7pct | 6pct | 5pct | 4pct | 3pct | 2pct | 1pct | 0pct>]		tcp-green-drop-probability %
[green-lower-threshold <NUMBER: 1-100>]		Lower Threshold % for TCP green-drop-probability
[green-upper-threshold <NUMBER: 1-100>]		Upper Threshold % for TCP green-drop-probability
[green-max-drop-probability <100pct | 75pct | 50pct | 25pct | 10pct | 9pct | 8pct | 7pct | 6pct | 5pct | 4pct | 3pct | 2pct | 1pct | 0pct>]		tcp-green-drop-probability %
[tcp-yellow-threshold <NUMBER: 1-100>]		Lower Threshold % for TCP yellow-drop-probability
[tcp-yellow-upper-threshold <NUMBER: 1-100>]		Upper Threshold % for TCP yellow-drop-probability
[tcp-yellow-max-drop-probability <100pct | 75pct | 50pct | 25pct | 10pct | 9pct | 8pct | 7pct | 6pct | 5pct | 4pct | 3pct | 2pct | 1pct | 0pct>]		tcp-yellow-drop-probability %
[yellow-lower-threshold <NUMBER: 1-100>]		Lower Threshold % for TCP yellow-drop-probability
[yellow-upper-threshold <NUMBER: 1-100>]		Upper Threshold % for TCP yellow-drop-probability
[yellow-max-drop-probability <100pct | 75pct | 50pct | 25pct | 10pct | 9pct | 8pct | 7pct | 6pct | 5pct | 4pct | 3pct | 2pct | 1pct | 0pct>]		tcp-yellow-drop-probability %
[non-tcp-threshold <NUMBER: 1-100>]		Lower Threshold % for non-TCP drop-probability
[non-tcp-upper-threshold <NUMBER: 1-100>]		Upper Threshold % for non-TCP drop-probability

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[non-tcp-max-drop-probability <100pct | 75pct | 50pct | 25pct | 10pct | 9pct | 8pct | 7pct | 6pct | 5pct | 4pct | 3pct | 2pct | 1pct | 0pct>]		non-tcp-drop-probability %
[yellow-admit-limit <NUMBER: 1-100>]		yellow frames are limited to consuming this % of the queue

Command	Access	Description
traffic-services queuing congestion-avoidance-profile show	limited	Show a Congestion Avoidance Profile
profile <profile>		congestion avoidance profile

Command	Access	Description
traffic-services queuing congestion-avoidance-profile show	limited	Show all Congestion Avoidance Profiles

Command	Access	Description
traffic-services queuing queue-map create	admin	Create an RCOS Mapping for a Queue
rcos-map <rcos-map>		queue map

Command	Access	Description
traffic-services queuing queue-map delete	admin	Delete an RCOS Mapping for a Queue
rcos-map <rcos-map>		queue map

Command	Access	Description
traffic-services queuing queue-map rename	admin	Set name for RCOS to Queue Mapping
rcos-map <rcos-map>		queue map
{name <String[15]>}		new name

Command	Access	Description
traffic-services queuing queue-map set	admin	Set an RCOS Mapping for a Queue
rcos-map <rcos-map>		queue map

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{rcos <NUMBER>}		RCOS range value
{queue <NUMBER: 0-7>}		Queue value

Command	Access	Description
traffic-services queuing queue-map show	limited	Show an RCOS based Queue Map
rcos-map <rcos-map>		queue map

Command	Access	Description
traffic-services queuing queue-map show	limited	Show all Queue Maps

Command	Access	Description
traffic-services queuing egress-port clear	admin	Clear all queue statistics for an Egress Port Queuing Instance
port <port>		egress queuing instance
{statistics}		statistics for port queue group

Command	Access	Description
traffic-services queuing egress-port clear	admin	Clear all egress statistics for all Egress Port Queuing Instances
{statistics}		statistics for all queue group instances

Command	Access	Description
traffic-services queuing egress-port show	limited	Show an Egress Port
port <port>		egress port
{statistics}		statistics for egress port

Command	Access	Description
traffic-services queuing egress-port show	limited	Show all Egress Ports
{statistics}		statistics for egress port

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Command	Access	Description
traffic-services queuing egress-port set	admin	Set an attribute in an Egress Port
port <port>		egress port
{burst-size <NUMBER: 4-131040>}		Shaper burst size in KBytes rounded up to nearest size supported by hardware for an Egress Port
{dynamic-max-queue-depth <low | medium | medium-high | high>}		Egress queue depth
{scheduler-algorithm <round-robin | weighted-deficit-round-robin | weighted-round-robin>}		Scheduler Algorithm for all Queue group attached to the Egress port
{shaper-rate <NUMBER: 0-80000000>}		Shaper rate in Kbps rounded up to nearset size supported by hardware for an Egress Port
{traffic-shaping <on | off>}		Shaper enabled state for all Queues in an Egress Queuing Group

Command	Access	Description
traffic-services queuing egress-port unset	admin	Unset an attribute in an Egress Port
port <port>		egress port
{burst-size}		Shaper burst size for an Egress Port
{dynamic-max-queue-depth}		Egress queue depth
{scheduler-algorithm}		Scheduler Algorithm for Egress Port
{traffic-shaping}		Shaper enabled state for an Egress Port
{shaper-rate}		Shaper rate for an Egress Port

Command	Access	Description
traffic-services queuing egress-port-queue-group clear	admin	Clear a queue's statistics in a Egress Port Queuing Instance
queue <queue>		queue
port <port>		egress queuing instance
{statistics}		statistics for a single queue

Command	Access	Description
traffic-services queuing egress-port-queue-group clear	admin	Clear all queue statistics for an Egress Port Queuing Instance
port <port>		egress queuing instance

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{statistics}		statistics for port queue group

Command	Access	Description
traffic-services queuing egress-port-queue-group clear	admin	Clear all egress statistics for all Egress Port Queuing Instances
{statistics}		statistics for all queue group instances

Command	Access	Description
traffic-services queuing egress-port-queue-group set	admin	Set an attribute for a Queue in a Queue Group
queue <queue>		queue
port <port>		egress queuing instance
{scheduler-weight <NUMBER: 0-1000>}		Scheduler Weight for a Queue in the Queue Group
{cir <NUMBER: 0-80000000>}		Committed Information Rate in Kbps rounded up to nearest size supported by hardware for a Queue in the Queue Group
{cbs <NUMBER: 0-262144>}		Committed Burst Size in KBytes rounded up to nearest size supported by hardware for a Queue in the Queue Group
{eir <NUMBER: 0-80000000>}		Excess Information Rate in Kbps rounded up to nearest size supported by hardware for a Queue in the Queue Group
{ebs <NUMBER: 0-262144>}		Excess Burst Size in KBytes rounded up to nearest size supported by hardware for a Queue in the Queue Group
{congestion-avoidance-profile <Congestion Avoidance Profile Name>}		Congestion Avoidance Profile of a Queue in the Queue Group
{eir-policy <configure | inherit>}		Where EIR value is chosen

Command	Access	Description
traffic-services queuing egress-port-queue-group set	admin	Set an attribute in an Egress Port Queuing Instance
port <port>		egress queuing instance
{scheduler-algorithm <strict | round-robin | weighted-deficit-round-robin | weighted-round-robin>}		Scheduler Algorithm for all Queues in the Egress Queuing Instance

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{shaper-rate <NUMBER: 0-80000000>}		Shaper rate in Kbps rounded up to nearset size supported by hardware for an Egress Queuing Group
{traffic-shaping <on | off>}		Shaper enabled state for all Queues in an Egress Queuing Group
{burst-size <NUMBER: 4-262144>}		Shaper burst size in KBytes rounded up to nearest size supported by hardware for an Egress Queuing Group
{wdrr-scheduler-granularity <NUMBER: 50-1600>}		scheduling granularity when in WDRR mode
{dynamic-max-queue-depth <low | medium | medium-high | high>}		Egress queue depth
{scheduler-weight <NUMBER: 0-127>}		Scheduler Weight for the Queue Group
{cir <NUMBER: 1024-80000000>}		Committed Information Rate in Kbps rounded up to nearest size supported by hardware for the Queue Group
{cbs <NUMBER: 0-262144>}		Committed Burst Size in KBytes rounded up to nearest size supported by hardware for the Queue Group
{eir <NUMBER: 0-80000000>}		Excess Information Rate in Kbps rounded up to nearest size supported by hardware for the Queue Group
{ebs <NUMBER: 0-262144>}		Excess Burst Size in KBytes rounded up to nearest size supported by hardware for the Queue Group
{eir-policy <configure | inherit>}		Where EIR value is chosen

Command	**Access**	**Description**
traffic-services queuing egress-port-queue-group unset	admin	Unset an attribute in an Egress Port Queuing Instance
port <port>		egress queuing instance
{scheduler-algorithm}		Scheduler Algorithm for all Queues in the Egress Queuing Instance
{traffic-shaping}		Shaper enabled state for all Queues in an Egress Queuing Group
{shaper-rate}		Shaper rate in Kbps rounded up to nearset size supported by hardware for an Egress Queuing Group
{burst-size}		Shaper burst size in KBytes rounded up to nearest size supported by hardware for an Egress Queuing Group
{wdrr-scheduler-granularity}		scheduling granularity when in WDRR mode

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{dynamic-max-queue-depth}		Egress queue depth
{eir-policy}		Where EIR value is chosen

Command	Access	Description
traffic-services queuing egress-port-queue-group show	limited	Show Attributes or Stats of a Queue in a Egress Port Queuing Instance
queue <queue>		queue
port <port>		egress queuing instance
{statistics}		statistics for a single queue

Command	Access	Description
traffic-services queuing egress-port-queue-group show	limited	Show Attributes or Stats in an Egress Port Queuing Instance
port <port>		egress queuing instance
{statistics}		statistics for port queue group

Command	Access	Description
traffic-services queuing egress-port-queue-group show	limited	Show all attributes or statistics for all Egress Port Queuing Instances
{statistics}		statistics for all queue group instances

Command	Access	Description
traffic-services queuing egress-port-queue-group unset	admin	Unset an attribute for a Queue in an Egress Port Queuing Instance
queue <queue>		queue
port <port>		egress queuing instance
{congestion-avoidance-profile}		Congestion Avoidance Profile of a Queue in the Egress Queue Instance

Command	Access	Description
traffic-services queuing egress-queue-group create	admin	Create an Egress Queue Group
queue-group <queue-group>		egress queue group

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{profile <Egress Queue Group Profile>}		egress queue group profile to be used

Command	**Access**	**Description**
traffic-services queuing egress-queue-group set	admin	Set an attribute in an Egress Queue Group
queue-group <queue-group>		egress queue group
{profile <Egress Queue Group Profile>}		egress queue group profile to be used

Command	**Access**	**Description**
traffic-services queuing egress-queue-group unset	admin	Unset an attribute in an Egress Port Queue Group
queue-group <queue-group>		egress queue group
{profile}		egress queue group profile

Command	**Access**	**Description**
traffic-services queuing egress-queue-group delete	admin	Delete an Egress Queue Group
queue-group <queue-group>		egress queue group

Command	**Access**	**Description**
traffic-services queuing egress-queue-group add	admin	Add port to an Egress Queue Group
port <port>		port
queue-group <queue-group>		egress queue group
[cir <NUMBER: 0-80000000>]		Committed Information Rate in Kbps rounded up to nearest size supported by hardware for the Queue Group
[cbs <NUMBER: 0-131040>]		Committed Burst Size in KBytes rounded up to nearest size supported by hardware for the Queue Group
[eir <NUMBER: 0-80000000>]		Excess Information Rate in Kbps rounded up to nearest size supported by hardware for the Queue Group

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[ebs <NUMBER: 0-131040>]		Excess Burst Size in KBytes rounded up to nearest size supported by hardware for the Queue Group
[eir-policy <configure | inherit>]		Where EIR value is chosen
{priority <NUMBER: 0-63>}		Queue group priority
{scheduler-weight <NUMBER: 10-127>}		Scheduler Weight for the Queue Group

Command	**Access**	**Description**
traffic-services queuing egress-queue-group remove	admin	remove port from an Egress Queue Group
port <port>		port
queue-group <queue-group>		egress queue group

Command	**Access**	**Description**
traffic-services queuing egress-queue-group set	admin	set port attributes for an Egress Queue Group
port <port>		port
queue-group <queue-group>		egress queue group
{cir <NUMBER: 0-80000000>}		Committed Information Rate in Kbps rounded up to nearest size supported by hardware for the Queue Group
{cbs <NUMBER: 0-131040>}		Committed Burst Size in KBytes rounded up to nearest size supported by hardware for the Queue Group
{eir <NUMBER: 0-80000000>}		Excess Information Rate in Kbps rounded up to nearest size supported by hardware for the Queue Group
{ebs <NUMBER: 0-131040>}		Excess Burst Size in KBytes rounded up to nearest size supported by hardware for the Queue Group
{eir-policy <inherit | configure>}		Where EIR value is chosen
{priority <NUMBER: 0-63>}		Queue group priority
{scheduler-weight <NUMBER: 10-127>}		Scheduler Weight for the Queue Group

Command	**Access**	**Description**
traffic-services queuing egress-queue-group show	limited	Show Attributes or Stats in an Egress Queue Group

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queue-group <queue-group>		egress queue group
{statistics}		statistics for queue group

Command	Access	Description
traffic-services queuing egress-queue-group show	limited	Show all attributes or statistics for all Egress Queue Groups
{statistics}		statistics for all queue group instances

Command	Access	Description
traffic-services queuing egress-queue-group show	limited	show port attributes for an Egress Queue Group
port <port>		port
queue-group <queue-group>		egress queue group
{statistics}		statistics of a queue group instance for a single port

Command	Access	Description
traffic-services queuing egress-queue-group clear	admin	Clear a port's queue statistics in an Egress Queue Group
port <port>		port
queue-group <queue-group>		egress queue group
{statistics}		statistics for a single queue
{queue <NUMBER: 0-7>}		egress queue

Command	Access	Description
traffic-services queuing egress-queue-group clear	admin	Clear all queue statistics for an Egress Queue Group
queue-group <queue-group>		egress queue group
{statistics}		statistics for given egress queue group

Command	Access	Description
traffic-services queuing egress-queue-group clear	admin	Clear all egress statistics for all Egress Queue Groups

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{statistics}		statistics for all egress queue groups

Command	Access	Description
traffic-services queuing egress-queue-group-profile create	admin	Create an Egress Port Queue Group Profile
profile <profile>		egress queue group profile

Command	Access	Description
traffic-services queuing egress-queue-group-profile delete	admin	Delete an egress queue group profile
profile <profile>		egress queue group profile

Command	Access	Description
traffic-services queuing egress-queue-group-profile set	admin	Set an attribute for a Queue in a Egress Queue Group Profile
queue <queue>		queue
profile <profile>		egress queue group profile
{cir <NUMBER: 0-80000000>}		Committed Information Rate in Kbps rounded up to nearest size supported by hardware for a Queue in the Queue Group
{cbs <NUMBER: 0-131040>}		Committed Burst Size in KBytes rounded up to nearest size supported by hardware for a Queue in the Queue Group
{eir <NUMBER: 0-80000000>}		Excess Information Rate in Kbps rounded up to nearest size supported by hardware for a Queue in the Queue Group
{ebs <NUMBER: 0-131040>}		Excess Burst Size in KBytes rounded up to nearest size supported by hardware for a Queue in the Queue Group
{congestion-avoidance-profile <Congestion Avoidance Profile Name>}		Congestion Avoidance Profile of a Queue in the Queue Group
{eir-policy <configure | inherit>}		Where EIR value is chosen
{scheduler-weight <NUMBER: 0-127>}		Scheduler Weight for a Queue in the Queue Group

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Command	Access	Description
traffic-services queuing egress-queue-group-profile show	limited	Show attributes of a Queue in an Egress Queue Group Profile
queue <queue>		queue
profile <profile>		egress queue group profile

Command	Access	Description
traffic-services queuing egress-queue-group-profile show	limited	Show attributes of an Egress Queue Group Profile
profile <profile>		egress queue group profile

Command	Access	Description
traffic-services queuing egress-queue-group-profile show	limited	Show all attributes for all Egress Queue Group Profiles

Command	Access	Description
traffic-services queuing egress-queue-group-profile unset	admin	Unset an attribute for a Queue in an Egress Queue Group Profile
queue <queue>		queue
profile <profile>		egress queue group profile
{congestion-avoidance-profile}		Congestion Avoidance Profile of a Queue in the Egress Queue Group Profile
{eir-policy}		Where EIR value is chosen

Command	Access	Description
traffic-services queuing dynamic-egress-queue-group-profile create	admin	Create a Dynamic Egress Port Queue Group Profile
profile <profile>		dynamic egress queue group profile

Command	Access	Description

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traffic-services queuing dynamic-egress-queue-group-profile delete	admin	Delete a Dynamic Egress Queue Group Profile
profile <profile>		dynamic egress queue group profile

Command	**Access**	**Description**
traffic-services queuing dynamic-egress-queue-group-profile set	admin	Set an attribute for a Queue in a Dynamic Egress Queue Group Profile
queue <queue>		queue
profile <profile>		dynamic egress queue group profile
{cir-percent <NUMBER: 0-100>}		Committed Information Rate in percentage for a Queue in the Queue Group
{cbs <NUMBER: 0-131040>}		Committed Burst Size in KBytes rounded up to nearest size supported by hardware for a Queue in the Queue Group
{eir-percent <NUMBER: 0-100>}		Excess Information Rate in percentage for a Queue in the Queue Group
{ebs <NUMBER: 0-131040>}		Excess Burst Size in KBytes rounded up to nearest size supported by hardware for a Queue in the Queue Group
{congestion-avoidance-profile <Congestion Avoidance Profile Name>}		Congestion Avoidance Profile of a Queue in the Queue Group
{scheduler-weight <NUMBER: 0-127>}		Scheduler Weight for a Queue in the Queue Group

Command	**Access**	**Description**
traffic-services queuing dynamic-egress-queue-group-profile show	limited	Show attributes of a Queue in a Dynamic Egress Queue Group Profile
queue <queue>		queue
profile <profile>		dynamic egress queue group profile

Command	**Access**	**Description**
traffic-services queuing dynamic-egress-queue-group-profile show	limited	Show attributes of a Dynamic Egress Queue Group Profile
profile <profile>		dynamic egress queue group profile

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Command	Access	Description
traffic-services queuing dynamic-egress-queue-group-profile show	limited	Show all attributes for all Dynamic Egress Queue Group Profiles

Command	Access	Description
traffic-services queuing dynamic-egress-queue-group-profile unset	admin	Unset an attribute for a Queue in a Dynamic Egress Queue Group Profile
queue <queue>		queue
profile <profile>		dynamic egress queue group profile
{cir-percent}		Committed Information Rate in percentage for a Queue in the Queue Group
{eir-percent}		Excess Information Rate in percentage for a Queue in the Queue Group
{congestion-avoidance-profile}		Congestion Avoidance Profile of a Queue in the Dynamic Egress Queue Group Profile

Command	Access	Description
traffic-services queuing resource set	admin	set resources used for each port for egress queuing
port <port>		physical port
{queue-group-count <NUMBER: 0-7>}		Number of queue groups allocated for this port

Command	Access	Description
traffic-services queuing resource show	limited	Show resources used and available for egress queuing

Command	Access	Description
traffic-services queuing resource unset	admin	set resources used to default settings for egress queuing
port <port>		physical port
{queue-group-count}		Number of queue groups allocated for this port

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Command	Access	Description
traffic-services cos-mapping resolved-cos-map create	admin	create ingress COS to RCOS priority map
cos-map <cos-map>		FCOS->RCOS map name

Command	Access	Description
traffic-services cos-mapping resolved-cos-map delete	admin	delete FCOS to RCOS mapl
cos-map <cos-map>		FCOS->RCOS map name

Command	Access	Description
traffic-services cos-mapping resolved-cos-map set	admin	set FCOS to RCOS map entry
cos-map <cos-map>		FCOS->RCOS name
[l3-cos-dscp <dscp values and ranges>]		ingress DSCP value to map
[dot1dpri-cos <dot1d values and ranges>]		ingress.1D value to map
[dot1dpri-dei <NUMBER: 0-1>]		ingress frame color cfi/dei value
[mpls-tc <mpls-tc values and ranges>]		mpls tc/exp value to map
{r-cos <NUMBER: 0-7>}		RCOS value to use
[r-color <green | yellow>]		resolved color

Command	Access	Description
traffic-services cos-mapping resolved-cos-map show	limited	show Ingress COS to RCOS maps
[detail]		provide long, detailed output

Command	Access	Description
traffic-services cos-mapping resolved-cos-map show	limited	show Ingress COS to RCOS maps
cos-map <cos-map>		FCOS->RCOS name
[detail]		provide long, detailed output

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Command	Access	Description
traffic-services cos-mapping frame-cos-map create	admin	create egress RCOS to FCOS map
cos-map <cos-map>		RCOS->FCOS map name
{type <l2-only>}		Types of RCOS->FCOS Maps --> l2-only : Indicates that a map assigned this type will only be able to modify L2 (i.e. Ethernet) header fields based on the assigned CoS for a L2 Network Only.

Command	Access	Description
traffic-services cos-mapping frame-cos-map delete	admin	delete FCOS to RCOS mapl
cos-map <cos-map>		RCOS->FCOS map name

Command	Access	Description
traffic-services cos-mapping frame-cos-map set	admin	set RCOS to FCOS map entry
cos-map <cos-map>		RCOS->FCOS name
{r-cos <NUMBER: 0-7>}		RCOS value to use
{r-color <green | yellow>}		resolved color
{dot1dpri-cos <NUMBER: 0-7>}		egress frame COS (pcp) value
{dot1dpri-dei <NUMBER: 0-1>}		egress frame color
[mpls-tc <NUMBER: 0-7>]		egress mpls tc/exp value

Command	Access	Description
traffic-services cos-mapping frame-cos-map show	limited	show RCOS to Egress Cos maps

Command	Access	Description
traffic-services cos-mapping frame-cos-map show	limited	show RCOS to Egress Cos maps
cos-map <cos-map>		RCOS->FCOS name

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Command	Access	Description
traffic-services cos-mapping protocol-cos-map disable	admin	disable protocol-cos-map entry
cos-map <cos-map>		protocol cos map name

Command	Access	Description
traffic-services cos-mapping protocol-cos-map enable	admin	enable protocol-cos-map entry
cos-map <cos-map>		protocol cos map name

Command	Access	Description
traffic-services cos-mapping protocol-cos-map set	admin	set protocol-cos-map entry
cos-map <cos-map>		protocol cos map name
{protocol <arp | bgp | is-is | ldp | rsvp | ptp | telnet | dhcp-l3-relay | ssh | snmp-trap | syslog | single-hop-bfd | multi-hop-bfd | icmp | ip-traceroute | mpls-tunnel-ping | mpls-vc-ping | dhcp-client>}		protocol name
[dscp-cos <NUMBER: 0-63>]		cos derived from dscp
[dot1d-cos <NUMBER: 0-7>]		cos derived from dot1d pcp
[dscp-mode <preserve | map>]		dscp mode for transit or reply frames

Command	Access	Description
traffic-services cos-mapping protocol-cos-map unset	admin	unset protocol-cos-map entry
cos-map <cos-map>		protocol cos map name
{protocol <arp | bgp | is-is | ldp | rsvp | ptp | telnet | dhcp-l3-relay | ssh | snmp-trap | syslog | single-hop-bfd | multi-hop-bfd | icmp | ip-traceroute | mpls-tunnel-ping | mpls-vc-ping | dhcp-client>}		protocol name
[dot1d-cos]		cos derived from dot1d pcp
[dscp-cos]		cos derived from dscp

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[dscp-mode]		dscp mode for transit or reply frames

Command	Access	Description
traffic-services cos-mapping protocol-cos-map show	limited	show protocol-cos-map entry
cos-map <cos-map>		protocol cos map name

Command	Access	Description
traffic-services cos-mapping set	admin	Set CPU transmitted frame CoS remarking on/off
[cpu-cos-remark-l2 <on | off>]		In case of remarking off, egress frame CoS(pcp) shall be preserved
[cpu-l3-protocol-pcp-ctrl <dscp-mapping | interface-pri>]		In case of pcp-ctrl set to dscp-mapping, L3 protocol frame's pcp shall be obtained from dscp of frame

Command	Access	Description
traffic-services cos-mapping show	limited	Show CPU transmitted frames CoS remarking

Command	Access	Description
traffic-services cos-mapping unset	admin	Set CPU transmitted frame CoS remarking to default value
{cpu-cos-remark-l2}		CPU transmitted frame CoS remarking
{cpu-l3-protocol-pcp-ctrl}		CPU L3 protocol frame pcp control

Command	Access	Description
traffic-services frame-integrity disable	admin	disable frame integrity checking

Command	Access	Description
traffic-services frame-integrity enable	admin	enable frame integrity checking

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Command	Access	Description
traffic-services frame-integrity set	admin	set frame integrity attibutes
[address-invalid-discard <on | off>]		discard frames with invalid addresses
[icmp-oversize-discard <on | off>]		discard oversized ICMP packets
[tcp-malformed-discard <on | off>]		discard malformed TCP packets

Command	Access	Description
traffic-services frame-integrity unset	admin	unset frame integrity attibutes
{address-invalid-discard}		discard frames with invalid addresses, default off
{icmp-oversize-discard}		discard oversized ICMP packets, default off
{tcp-malformed-discard}		discard malformed TCP packets, default off

Command	Access	Description
traffic-services frame-integrity show	limited	show frame integrity status

tunnel

Transport Tunneling

Command	Access	Description
tunnel decap create	admin	create static decap tunnel
static-lsp <static-lsp>		tunnel name
{label <NUMBER: 16-1048575>}		decap tunnel label

Command	Access	Description
tunnel decap delete	admin	delete static decap tunnel
lsp <lsp>		tunnel name

Command	Access	Description
tunnel decap set	admin	set static decap tunnel
static-lsp <static-lsp>		tunnel name

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{label <NUMBER: 16-1048575>}		decap tunnel label

Command	Access	Description
tunnel decap show	limited	show all decap tunnels

Command	Access	Description
tunnel decap show	limited	show decap tunnel
lsp <lsp>		tunnel name

Command	Access	Description
tunnel encap create	admin	create static encap tunnel
static-lsp <static-lsp>		tunnel name
{encap-cos-policy <fixed | vc-inherit | vs-inherit>}		encapsulation CoS policy
{encap-fixed-exp <NUMBER: 0-7>}		encapsulation fixed EXP value
{ip <IP address>}		Destination IP address
{label <NUMBER: 16-1048575>}		encap tunnel label
{ttl-policy <pipe | uniform>}		TTL policy

Command	Access	Description
tunnel encap delete	admin	delete encap tunnel
lsp <lsp>		tunnel name

Command	Access	Description
tunnel encap delete	admin	delete backup tunnel
backup-rsvp-lsp <backup-rsvp-lsp>		tunnel name

Command	Access	Description
tunnel encap disable	admin	disable encap tunnel
lsp <lsp>		tunnel name

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Command	Access	Description
tunnel encap disable	admin	disable backup tunnel
backup-rsvp-lsp <backup-rsvp-lsp>		tunnel name

Command	Access	Description
tunnel encap enable	admin	enable encap tunnel
lsp <lsp>		tunnel name

Command	Access	Description
tunnel encap enable	admin	enable backup tunnel
backup-rsvp-lsp <backup-rsvp-lsp>		tunnel name

Command	Access	Description
tunnel encap set	admin	set static encap tunnel
static-lsp <static-lsp>		tunnel name
{encap-cos-policy <fixed | vc-inherit | vs-inherit>}		encapsulation CoS policy
{encap-fixed-exp <NUMBER: 0-7>}		encapsulation fixed EXP value
{ip <IP address>}		Destination IP address
{label <NUMBER: 16-1048575>}		encap tunnel label
{ttl-policy <pipe | uniform>}		TTL policy

Command	Access	Description
tunnel encap show	limited	show all encap tunnels

Command	Access	Description
tunnel encap show	limited	show encap tunnel
lsp <lsp>		tunnel name

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Command	Access	Description
tunnel encap show	limited	show backup tunnel
backup-rsvp-lsp <backup-rsvp-lsp>		backup tunnel name

Command	Access	Description
tunnel rename	admin	rename tunnel
lsp <lsp>		tunnel name
{name <String[15]>}		new tunnel name

Command	Access	Description
tunnel set	admin	set global attributes
{fixed-ttl <NUMBER: 2-255>}		fixed TTL value

Command	Access	Description
tunnel show	limited	show all tunnel info
{statistics}		tunnel statistics

Command	Access	Description
tunnel show	limited	show tunnel
lsp <lsp>		tunnel name

twamp

TWAMP test management

Command	Access	Description
twamp client session create	admin	create test session entry
[commport <NUMBER: 256-65535>]		TWAMP target test port
[cos-policy <dscp | ip-prec>]	admin	which attribute to use for CoS control
[dot1dpri <NUMBER: 0-7>]		TWAMP Session 802.1d Priority
[dscp <NUMBER: 0-63>]		TWAMP CoS using DiffServ Code Point
{host <IP address>}	admin	host to test

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[ip-prec <NUMBER: 0-7>]		TWAMP CoS using IP Precedence
{name <String[15]>}	admin	user-defined ID/name for session
[pkt-size <NUMBER: 64-1500>]		TWAMP test packet size
[repeat <on | off>]		continually repeat test cycle
[type <fixed | poisson>]	admin	test type to run
[packets <NUMBER: 272-1000000>]		TWAMP test session packet count

Command	**Access**	**Description**
twamp client session delete	admin	delete session entry
{name <TWAMP Session Name>}	admin	user-defined name for session

Command	**Access**	**Description**
twamp client session set	admin	change test session entry
[commport <NUMBER: 256-65535>]		TWAMP target test port
[cos-policy <dscp | ip-prec>]	admin	test type to run
[dot1dpri <NUMBER: 0-7>]		TWAMP Session 802.1d Priority
[dscp <NUMBER: 0-63>]		TWAMP CoS using DiffServ Code Point
[host <IP address>]	admin	host to test
[ip-prec <NUMBER: 0-7>]		TWAMP CoS using IP Precendence
{name <TWAMP Session Name>}	admin	name of session to modify
[pkt-size <NUMBER: 64-1500>]		TWAMP test packet size
[repeat <on | off>]		continually repeat test cycle
[type <fixed | poisson>]	admin	test type to run
[packets <NUMBER: 272-1000000>]		TWAMP test session packet count

Command	**Access**	**Description**
twamp client clear	admin	clear client session TWAMP statistics
statistics		Statistics clear request
[name <TWAMP Session Name>]	admin	name of session to affect
[all]	admin	clear statistics for all defined sessions

Command	**Access**	**Description**
twamp client disable	admin	disable TWAMP client globally

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Command	Access	Description
twamp client enable	admin	enable TWAMP client globally

Command	Access	Description
twamp client show	limited	display client session info
[host <IP address>]	limited	host to test
[name <TWAMP Session Name>]	limited	session name to display

Command	Access	Description
twamp client show	limited	display client session statistics
statistics		Statistics display request
[host <IP address>]	limited	host to test
[mode <short | long>]	limited	attribute list display
[name <TWAMP Session Name>]	limited	user-defined ID/name for session
[period <last | 8-hour | 24-hour>]	limited	request performance monitoring statistics display

Command	Access	Description
twamp client test	admin	start TWAMP test session against specified target
host <host>		test a specific host
[stop]	admin	stop current test cycle

Command	Access	Description
twamp client test	admin	start TWAMP test session against specified target
name <name>		execute a named test
[stop]	admin	stop current test cycle

Command	Access	Description
twamp client test	admin	TWAMP test all defined targets
all		test all targets

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[stop]	admin	stop current test cycle

Command	Access	Description
twamp light disable	admin	disable TWAMP light reflector control globally

Command	Access	Description
twamp light enable	admin	enable TWAMP light reflector control globally

Command	Access	Description
twamp server session-deny add	admin	add an entry to the session-deny list
{ip <IP address>}		IP address of the interface to deny sessions for
{port <Port>}		ingress port number on which the incoming TWAMP session request/test packets with the specified IP address should be rejected

Command	Access	Description
twamp server session-deny remove	admin	remove an entry from the session-deny list
ip <ip>		IP address of the interface to deny sessions for

Command	Access	Description
twamp server session-deny set	admin	change the ingress port of the session deny entry with the given IP address
ip <ip>		IP address of the interface to deny sessions for
{port <Port>}		new ingress port number on which the incoming TWAMP session request/test packets with the specified IP address should be rejected

Command	Access	Description

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twamp server session-deny show	limited	show list of entries currently configured in the session-deny list

Command	**Access**	**Description**
twamp server session-deny clear	admin	clear the statistics for each entry currently configured in the session deny list
{statistics}		clear the statistics for each session deny entry

Command	**Access**	**Description**
twamp server clear	admin	disable TWAMP server controls globally
{session <NUMBER: 1-30>}		clear active TWAMP server control session (and its child test sessions)

Command	**Access**	**Description**
twamp server disable	admin	disable TWAMP server controls globally

Command	**Access**	**Description**
twamp server enable	admin	enable TWAMP server controls globally

Command	**Access**	**Description**
twamp server show	limited	show TWAMP server information

Command	**Access**	**Description**
twamp disable	admin	disable TWAMP globally

Command	**Access**	**Description**
twamp disable	admin	disable TWAMP on port(s)
port <port>		physical port list

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Command	Access	Description
twamp enable	admin	enable TWAMP globally

Command	Access	Description
twamp enable	admin	enable TWAMP on port(s)
port <port>		physical port list

Command	Access	Description
twamp set	admin	set TWAMP attributes
[client-dscp <NUMBER: 0-63>]		TWAMP Client TCP DiffServ Code Point
[client-hw-assist <on | off>]		use client hardware assist
[server-dscp <NUMBER: 0-63>]		TWAMP Server TCP DiffServ Code Point
[server-hw-assist <on | off>]		use server hardware assist
[port <NUMBER: 256-65535>]		set TWAMP TCP/UDP port
[timeout <SECONDS: 60-86400>]		set TWAMP Server TCP session timeout (seconds)

Command	Access	Description
twamp show	limited	show TWAMP information

Command	Access	Description
twamp unset	admin	unset TWAMP attributes
[port]		unset (restore default) TWAMP TCP/UDP port
[timeout]		unset (restore default) TWAMP Server TCP session timeout

usb-flash

USB flash menu

Command	Access	Description
usb-flash disable	limited	disable USB flash mounting

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Command	Access	Description
usb-flash enable	limited	enable USB flash mounting

Command	Access	Description
usb-flash format	admin	format (already-inserted) USB flash
{quick}		quickly rather than thoroughly (seconds versus hours)

Command	Access	Description
usb-flash mount	admin	mount USB flash

Command	Access	Description
usb-flash set	admin	set attributes of the USB flash
{label <String[11]>}		set the USB flash label

Command	Access	Description
usb-flash show	limited	show USB flash status and information

Command	Access	Description
usb-flash unmount	admin	unmount USB flash

Command	Access	Description
usb-flash unset	admin	unset attributes of the USB flash
{label}	admin	unset the USB flash label

vpls-irb

virtual private LAN service integrated routing and bridging (VPLS IRB)

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Command	Access	Description
vpls-irb disable	admin	disable VPLS IRB globally

Command	Access	Description
vpls-irb enable	admin	enable VPLS IRB globally

Command	Access	Description
vpls-irb show	limited	show VPLS IRB operational information
{statistics}	admin	VPLS IRB global statistics

Command	Access	Description
vpls-irb clear	admin	clear VPLS IRB global statistics
{statistics}	admin	VPLS IRB global statistics

user

user management

Command	Access	Description
user acct set	super	set accounting method
{method <default | radius | tacacs | radsec>}		accounting method

Command	Access	Description
user acct show	super	show accounting information

Command	Access	Description
user auth clear	super	clear authentication statistics
{priority <NUMBER: 1-3>}		authorization priority

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Command	Access	Description
user auth show	super	show authentication providers

Command	Access	Description
user auth set	super	set authentication providers
{priority <NUMBER: 1-4>}		authorization priority
{method <none | local | radius | tacacs | radsec>}		authorization method
[scope <all | serial | remote>]		authentication scope

Command	Access	Description
user lockout-policy disable	super	disable user lockout

Command	Access	Description
user lockout-policy enable	super	enable user lockout

Command	Access	Description
user lockout-policy set	super	set user lockout settings
{fail-limit <NUMBER: 1-5>}		set the number of times a user can fail logging in before lockout
{lockout-time <duration: {N[yMwdhms]}* e.g. 1h10m3s>}		set the amount of time a user is locked out (default: 20m)

Command	Access	Description
user lockout-policy unset	super	unset user lockout settings
{fail-limit}		unset fail-limit to default: 3
{lockout-time}		unset time to default: 20m

Command	Access	Description
user lockout-policy reset	super	reset fail count and allow user to log in

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<>		reset lockout on a user

Command	Access	Description
user lockout-policy show	super	show locked out users and settings

Command	Access	Description
user password-policy set	super	set user password policy
{disallow-dict-words <on | off>}	super	disallow passwords containing words in the dictionary
{disallow-username <on | off>}	super	disallow passwords containing the user name or its reverse
{max-repeated-chars <NUMBER: 0-128>}	super	maximum run of the same character in user account passwords
{min-character-change <NUMBER: 0-128>}	super	minimum number of characters in password that must change
{min-length <NUMBER: 0-128>}	super	minimum length of user account passwords
{min-lowercase-chars <NUMBER: 0-128>}	super	minimum number of lower case letters in user account passwords
{min-numeric-chars <NUMBER: 0-128>}	super	minimum number of numeric characters in user account passwords
{min-special-chars <NUMBER: 0-128>}	super	minimum number of special characters in user account passwords, such as !@#$%^*()
{min-uppercase-chars <NUMBER: 0-128>}	super	minimum number of upper case letters in user account passwords

Command	Access	Description
user password-policy show	super	show user password attributes

Command	Access	Description
user password-policy unset	super	set user password policy to default values
{disallow-dict-words}	super	disallow passwords containing words in the dictionary, Default: off
{disallow-username}	super	disallow passwords containing the user name or its reverse, Default: off
{max-repeated-chars}	super	maximum run of the same character in user account passwords, Default: 0

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{min-character-change}	super	minimum number of characters in password that must change, Default: 0
{min-length}	super	minimum length of user account passwords, Default: 0
{min-lowercase-chars}	super	minimum number of lower case letters in user account passwords, Default: 0
{min-numeric-chars}	super	minimum number of numeric characters in user account passwords, Default: 0
{min-special-chars}	super	minimum number of special characters in user account passwords, such as !@#$%^*(), Default: 0
{min-uppercase-chars}	super	minimum number of upper case letters in user account passwords, Default: 0

Command	**Access**	**Description**
user username-policy set	super	set username policy
{min-length <NUMBER: 1-32>}	super	minimum length of username

Command	**Access**	**Description**
user username-policy show	super	show username attributes

Command	**Access**	**Description**
user create	super	create a local user
<>		local user name
{access-level <limited | admin | super | diag>}		user access level
[echoless-password]		collect user password interactively
{max-session-limit <NUMBER: 0-12>}		maximum simultaneous user logins

Command	**Access**	**Description**
user delete	super	delete a local user
<>		local user name to delete

Command	**Access**	**Description**

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user relogin-as	limited	re-login as a different user
<>		user name to become

Command	**Access**	**Description**
user set	super	set local user attributes
<>		local user name to configure
{access-level <limited | admin | super | diag>}		user access level
[echoless-password]		collect user password interactively
{nopassword}		no password
{max-session-limit <NUMBER: 0-12>}		maximum simultaneous user logins

Command	**Access**	**Description**
user set	admin	set user limits
{max-limited-users <NUMBER: 0-9>}		maximum simultaneous limited user logins
{max-admin-users <NUMBER: 0-10>}		maximum simultaneous admin user logins
{max-super-users <NUMBER: 1-10>}		maximum simultaneous super user logins

Command	**Access**	**Description**
user show	limited	show user attributes

Command	**Access**	**Description**
user unset	super	restore local user attributes
<>		local user name to configure
{max-session-limit}		no simultaneous session limit

Command	**Access**	**Description**
user who	limited	displays the current users who are logged in

Command	**Access**	**Description**
user whoami	limited	display your username

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Command	Access	Description
user write	admin	send message to a user
[user <String[32]>]		whom to send to
{message <String>}		message to send

Command	Access	Description
user kill	super	kill user login/shell
{all-but-me}		all users but myself
{pid <Session ID>}		session id of login/shell process to kill
{sid <Session ID>}		session id of login/shell process to kill

virtual-circuit

virtual circuit

Command	Access	Description
virtual-circuit tdm create	admin	create tdm profile
tdm-profile <tdm-profile>		tdm profile name
{pwType <satop | cesop>}		pseudowire type
{payload-size <BYTES>}		payload size in bytes

Command	Access	Description
virtual-circuit tdm set	admin	set tdm profile
tdm-profile <tdm-profile>		tdm profile name
[pwType <satop | cesop>]		pseudowire type
[payload-size <BYTES>]		payload size in bytes

Command	Access	Description
virtual-circuit tdm delete	admin	delete tdm profile
tdm-profile <tdm-profile>		tdm profile name

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Command	Access	Description
virtual-circuit tdm show	limited	show tdm profile
tdm-profile <tdm-profile>		tdm profile name

Command	Access	Description
virtual-circuit tdm show	limited	show all tdm profiles

Command	Access	Description
virtual-circuit tdm-mef8 create	admin	create tdm virtual circuit
vc <vc>		tdm virtual circuit name
{ac <Attachment Circuit Name>}		attachment circuit
[c-vid <NUMBER: 1-4094>]		Customer vlan
{c-vid <NUMBER: 1-4094>}		Customer vlan
[c-pcp <NUMBER: 0-7>]		customer priority
[c-tpid <8100 | 9100 | 88A8>]		Customer TPID
[cas <on | off>]		channel associated signaling
[payload-size <NUMBER: 1-4000>]		payload size
{peer-mac <MAC address: XX:XX:XX:XX:XX:XX>}		destination mac address
[pdv <NUMBER: 10-32000>]		packet delay variation
{in-ecn <NUMBER: 1-65535>}		incoming PW id
{out-ecn <NUMBER: 1-65535>}		outgoing PW id
[tdm-profile <TDM Profile Name>]		tdm profile

Command	Access	Description
virtual-circuit tdm-mef8 set	admin	set tdm virtual circuit
vc <vc>		tdm virtual circuit name
[c-vid <NUMBER: 1-4094>]		Customer vlan
[c-pcp <NUMBER: 0-7>]		customer priority
[c-tpid <8100 | 9100 | 88A8>]		Customer TPID
[cas <on | off>]		channel associated signaling
[payload-size <NUMBER: 1-4000>]		payload size
[peer-mac <MAC address: XX:XX:XX:XX:XX:XX>]		destination mac address

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[pdv <NUMBER: 10-32000>]		packet delay variation
[in-ecn <NUMBER: 1-65535>]		incoming PW id
[out-ecn <NUMBER: 1-65535>]		outgoing PW id
[tdm-profile <TDM Profile Name>]		tdm profile

Command	**Access**	**Description**
virtual-circuit tdm-mef8 unset	admin	unset tdm virtual circuit
vc <vc>		tdm virtual circuit name
[c-pcp]		customer priority
{c-pcp}		customer priority
[c-tpid]		Customer TPID
[c-vid]		Customer vlan
[cas]		channel associated signaling
[payload-size]		payload size
[pdv]		packet delay variation

Command	**Access**	**Description**
virtual-circuit tdm-mef8 delete	admin	delete tdm virtual circuit
vc <vc>		tdm virtual circuit name

Command	**Access**	**Description**
virtual-circuit tdm-mef8 show	limited	show tdm virtual circuit
vc <vc>		tdm virtual circuit name

Command	**Access**	**Description**
virtual-circuit tdm-mef8 show	limited	show all tdm virtual circuits

Command	**Access**	**Description**
virtual-circuit tdm-dry-martini create	admin	create tdm virtual circuit
vc <vc>		tdm virtual circuit name
{ac <Attachment Circuit Name>}		attachment circuit
[c-vid <NUMBER: 1-4094>]		Customer vlan

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{c-vid <NUMBER: 1-4094>}		Customer vlan
[c-pcp <NUMBER: 0-7>]		customer priority
[c-tpid <8100 | 9100 | 88A8>]		Customer TPID
[cas <on | off>]		channel associated signaling
{peer-mac <MAC address: XX:XX:XX:XX:XX:XX>}		destination mac address
[pdv <NUMBER: 1000-32000>]		packet delay variation
{in-label <NUMBER: 1-1048575>}		incoming PW id
{out-label <NUMBER: 1-1048575>}		outgoing PW id
{tdm-profile <TDM Profile Name>}		tdm profile

Command	**Access**	**Description**
virtual-circuit tdm-dry-martini set	admin	set tdm virtual circuit
vc <vc>		tdm virtual circuit name
[c-vid <NUMBER: 1-4094>]		Customer vlan
[c-pcp <NUMBER: 0-7>]		customer priority
[c-tpid <8100 | 9100 | 88A8>]		Customer TPID
[cas <on | off>]		channel associated signaling
[peer-mac <MAC address: XX:XX:XX:XX:XX:XX>]		destination mac address
[pdv <NUMBER: 1000-32000>]		packet delay variation
[in-label <NUMBER: 1-1048575>]		incoming PW id
[out-label <NUMBER: 1-1048575>]		outgoing PW id
[tdm-profile <TDM Profile Name>]		tdm profile

Command	**Access**	**Description**
virtual-circuit tdm-dry-martini unset	admin	unset tdm virtual circuit
vc <vc>		tdm virtual circuit name
[c-pcp]		customer priority
{c-pcp}		customer priority
[c-tpid]		Customer TPID
[c-vid]		Customer vlan
[cas]		channel associated signaling
[pdv]		packet delay variation

Command	**Access**	**Description**

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virtual-circuit tdm-dry-martini delete	admin	delete tdm virtual circuit
vc <vc>		tdm virtual circuit name

Command	**Access**	**Description**
virtual-circuit tdm-dry-martini show	limited	show tdm virtual circuit
vc <vc>		tdm virtual circuit name

Command	**Access**	**Description**
virtual-circuit tdm-dry-martini show	limited	show all tdm virtual circuits

Command	**Access**	**Description**
virtual-circuit tdm-mpls create	admin	create tdm virtual circuit
vc <vc>		tdm virtual circuit name
{ac <Attachment Circuit Name>}		attachment circuit
[cas <on | off>]		channel associated signaling
[payload-size <NUMBER: 1-4000>]		payload size
[pdv <NUMBER: 10-32000>]		packet delay variation
[tdm-profile <TDM Profile Name>]		tdm profile

Command	**Access**	**Description**
virtual-circuit tdm-mpls set	admin	set tdm virtual circuit
vc <vc>		tdm virtual circuit name
[cas <on | off>]		channel associated signaling
[payload-size <NUMBER: 1-4000>]		payload size
[pdv <NUMBER: 10-32000>]		packet delay variation
[tdm-profile <TDM Profile Name>]		tdm profile

Command	**Access**	**Description**
virtual-circuit tdm-mpls unset	admin	unset tdm virtual circuit
vc <vc>		tdm virtual circuit name
[cas]		channel associated signaling
[payload-size]		payload size

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[pdv]		packet delay variation

Command	Access	Description
virtual-circuit tdm-mpls delete	admin	delete tdm virtual circuit
vc <vc>		tdm virtual circuit name

Command	Access	Description
virtual-circuit tdm-mpls show	limited	show tdm virtual circuit
vc <vc>		tdm virtual circuit name

Command	Access	Description
virtual-circuit tdm-mpls show	limited	show all tdm mpls virtual circuits

Command	Access	Description
virtual-circuit transform create	admin	create transform profile
l2-transform <l2-transform>		transform profile name
{vid <NUMBER: 1-4094>}		VLAN ID
[dei <NUMBER: 0-1>]		drop eligible indication
[pcp <NUMBER: 0-7>]		priority code point
[tpid <8100 | 9100 | 88A8>]		VLAN Ethertype

Command	Access	Description
virtual-circuit transform enable	admin	enable transform profile
l2-transform <l2-transform>		transform profile name

Command	Access	Description
virtual-circuit transform delete	admin	delete transform profile
l2-transform <l2-transform>		transform profile name

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Command	Access	Description
virtual-circuit transform disable	admin	disable transform profile
l2-transform <l2-transform>		transform profile name

Command	Access	Description
virtual-circuit transform set	admin	set transform profile
l2-transform <l2-transform>		transform profile name
{dei <NUMBER: 0-1>}		drop eligible indication
{pcp <NUMBER: 0-7>}		priority code point
{tpid <8100 | 9100 | 88A8>}		VLAN Ethertype
{vid <NUMBER: 1-4094>}		VLAN ID

Command	Access	Description
virtual-circuit transform show	limited	show transform profile
l2-transform <l2-transform>		transform profile name

Command	Access	Description
virtual-circuit transform unset	admin	unset transform profile
l2-transform <l2-transform>		transform profile name
{dei}		drop eligible indication
{pcp}		priority code point
{tpid}		VLAN Ethertype

Command	Access	Description
virtual-circuit transform show	limited	show all transform profiles

Command	Access	Description
virtual-circuit ethernet create	admin	create ethernet virtual circuit
vc <vc>		virtual circuit name
{vlan <VLAN>}		provider VLAN
[l2-transform <VC Transform Profile>]		L2 transform profile

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[vlan-transform <i-push,e-pop>]		Set L2 transform action for virtual circuit VLAN
[statistics <on | off>]		Statistics control for Virtual Circuit

Command	**Access**	**Description**
virtual-circuit ethernet delete	admin	delete ethernet virtual circuit
vc <vc>		virtual circuit name

Command	**Access**	**Description**
virtual-circuit ethernet set	admin	set virtual circuit attributes
vc <vc>		virtual circuit name
{vlan <VLAN>}		provider VLAN
[l2-transform <VC Transform Profile>]		L2 transform profile
[statistics <on | off>]		Statistics control for Virtual Circuit

Command	**Access**	**Description**
virtual-circuit ethernet set	admin	set port-based ethernet virtual circuit attributes
port <port>		port list
{vlan-ethertype <8100 | 9100 | 88A8>}		port VLAN Ethertype
{vlan-ethertype-policy <all | vlan-tpid>}		port VLAN Ethertype policy

Command	**Access**	**Description**
virtual-circuit ethernet show	limited	show ethernet virtual circuit
vc <vc>		virtual circuit name
{statistics}		virtual circuit statistics

Command	**Access**	**Description**
virtual-circuit ethernet show	limited	show all ethernet virtual circuits
{statistics}		virtual circuit statistics

Command	**Access**	**Description**

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virtual-circuit ethernet unset	admin	unset virtual circuit attributes
vc <vc>		virtual circuit name
{l2-transform}		L2 transform profile
{statistics}		Statistics control for Virtual Circuit

Command	Access	Description
virtual-circuit clear	admin	clear statistics for all virtual circuits
{statistics}		virtual circuit statistics

Command	Access	Description
virtual-circuit clear	admin	clear virtual circuit
vc <vc>		virtual circuit name
{statistics}		virtual circuit statistics

Command	Access	Description
virtual-circuit rename	admin	rename virtual circuit
vc <vc>		virtual circuit name
{name <Name (no ,) String>}		new virtual circuit name

Command	Access	Description
virtual-circuit show	limited	show all virtual circuit info

Command	Access	Description
virtual-circuit show	limited	show virtual circuit
vc <vc>		virtual circuit name
{statistics}		virtual circuit statistics

virtual-link-loss-indication

Virtual Link Loss Indication (VLLI)

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Command	Access	Description
virtual-link-loss-indication debug enable	admin	VLLI debug print on

Command	Access	Description
virtual-link-loss-indication debug disable	admin	VLLI debug print off

Command	Access	Description
virtual-link-loss-indication add	admin	add instance to an instance group
instance-group <instance-group>		virtual-link-loss-indication instance
{mode <source | destination>}		set Mode
{cfm-instance <CFM Service Name>}		set cfm type
{port-instance <Port list>}		source port list
{vc-instance <MPLS Ethernet/VLAN Virtual Circuit Name>}		vc list
{action-group <VLLI action>}		set action group name

Command	Access	Description
virtual-link-loss-indication add	admin	add action to an action group
action-group <action-group>		virtual-link-loss-indication action group
{type <fault | recovery>}		set type
{action <port-shut | port-unshut | ccm-stop | ccm-resume | mac-flush | vc-mac-withdraw | pw-status-fault | pw-status-clear>}		application action name
{precedence <NUMBER: 1-8>}		precedence

Command	Access	Description
virtual-link-loss-indication create	admin	create a Vlli group
instance-group <instance-group>		virtual-link-loss-indication instance group name
[direction <unidirectional | bidirectional>]		set direction
[trigger <all | any>]		set trigger condition

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Command	Access	Description
virtual-link-loss-indication create	admin	create a Vlli group
{action-group <Name (no ,) String>}		virtual-link-loss-indication action group name

Command	Access	Description
virtual-link-loss-indication delete	admin	delete a Vlli group
instance-group <instance-group>		virtual-link-loss-indication instance group name

Command	Access	Description
virtual-link-loss-indication delete	admin	delete a Vlli group
action-group <action-group>		virtual-link-loss-indication action group name

Command	Access	Description
virtual-link-loss-indication disable	admin	Disable virtual-link-loss-indication

Command	Access	Description
virtual-link-loss-indication disable	admin	Disable virtual-link-loss-indication
instance-group <instance-group>		virtual-link-loss-indication instance group name

Command	Access	Description
virtual-link-loss-indication enable	admin	Enable virtual-link-loss-indication

Command	Access	Description
virtual-link-loss-indication enable	admin	Enable virtual-link-loss-indication
instance-group <instance-group>		virtual-link-loss-indication instance group name

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Command	Access	Description
virtual-link-loss-indication remove	admin	remove instance from an instance group
instance-group <instance-group>		virtual-link-loss-indication instance
{cfm-instance <CFM Service Name>}		set cfm type
{port-instance <Port list>}		source port list
{vc-instance <MPLS Ethernet/VLAN Virtual Circuit Name>}		vc list

Command	Access	Description
virtual-link-loss-indication remove	admin	remove action from an action group
action-group <action-group>		virtual-link-loss-indication action group
{type <fault | recovery>}		set type
{action <port-shut | port-unshut | ccm-stop | ccm-resume | mac-flush | vc-mac-withdraw | pw-status-fault | pw-status-clear>}		application action name

Command	Access	Description
virtual-link-loss-indication set	admin	set instance attributes
instance-group <instance-group>		virtual-link-loss-indication instance
[direction <unidirectional | bidirectional>]		set direction
[trigger <all | any>]		set trigger condition
{cfm-instance <CFM Service Name>}		set cfm type
{port-instance <Port list>}		source port list
{vc-instance <MPLS Ethernet/VLAN Virtual Circuit Name>}		vc list
{action-group <VLLI action>}		set action group

Command	Access	Description
virtual-link-loss-indication show	limited	show virtual-link-loss-indication information

Command	Access	Description
virtual-link-loss-indication show	limited	show virtual-link-loss-indication information

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Command	Access	Description
virtual-link-loss-indication show	limited	show virtual-link-loss-indication information
instance-group <instance-group>		instance to display

Command	Access	Description
virtual-link-loss-indication show	limited	show virtual-link-loss-indication information
action-group <action-group>		action to display

Command	Access	Description
virtual-link-loss-indication unset	admin	unset instance attributes
instance-group <instance-group>		virtual-link-loss-indication instance
{cfm-instance <CFM Service Name>}		set cfm type
{port-instance <Port list>}		source port list
{vc-instance <MPLS Ethernet/VLAN Virtual Circuit Name>}		vc list

virtual-switch

virtual switch

Command	Access	Description
virtual-switch cross-connect create	admin	create cross connect
xc <xc>		cross connect name
{tdm-vc <TDM VC Name>}		tdm vc name
{eth-vc <Virtual Circuit Name>}		ethernet vc name
{mpls-vc <MPLS TDM Virtual Circuit Name>}		mpls vc name

Command	Access	Description
virtual-switch cross-connect delete	admin	delete cross connect attributes
xc <xc>		cross connect name

Command	Access	Description

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virtual-switch cross-connect enable	admin	enable cross connect
xc <xc>		cross connect name

Command	**Access**	**Description**
virtual-switch cross-connect disable	admin	disable cross connect
xc <xc>		cross connect name

Command	**Access**	**Description**
virtual-switch cross-connect show	limited	show all cross connects

Command	**Access**	**Description**
virtual-switch cross-connect show	limited	show cross connect
xc <xc>		cross connect name

Command	**Access**	**Description**
virtual-switch ethernet queuing set	admin	set virtual switch egress queue group
vs <vs>		virtual switch name
[queue-group <Egress Queue Group>]		attached queue group
[queue-map <RCOS Queue Map>]		RCOS to queue map

Command	**Access**	**Description**
virtual-switch ethernet queuing unset	admin	unset virtual switch egress queue group
vs <vs>		virtual switch name
[queue-group]		attached queue group
[queue-map]		RCOS to queue map

Command	**Access**	**Description**
virtual-switch ethernet attach	admin	attach members to an MPLS capable virtual switch
mpls-vc <mpls-vc>		list of MPLS virtual circuits

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vs <vs>		virtual switch name

Command	Access	Description
virtual-switch ethernet attach	admin	attach sub-ports on a virtual switch
sub-port <sub-port>		sub-port name
{vs <Virtual Switch Ethernet Name>}		virtual switch name

Command	Access	Description
virtual-switch ethernet clear	admin	clear statistics of all subscriber members of a virtual switch
vs <vs>		virtual switch name
{statistics}		subscriber members statistics

Command	Access	Description
virtual-switch ethernet clear	admin	clear statistics of a subscriber member of a virtual switch
port <port>		subscriber port
vs <vs>		virtual switch name
{statistics}		subscriber members statistics
{vlan <VLAN ID List>}		VLAN ID List, 1 to 4094

Command	Access	Description
virtual-switch ethernet detach	admin	detach members from an MPLS capable virtual switch
mpls-vc <mpls-vc>		list of attached MPLS virtual circuits

Command	Access	Description
virtual-switch ethernet detach	admin	detach sub-ports on a virtual switch
sub-port <sub-port>		sub-port name
{vs <Virtual Switch Ethernet Name>}		virtual switch name

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Command	Access	Description
virtual-switch ethernet add	admin	add subscriber members to virtual switch
vs <vs>		virtual switch name
[egress-l2-transform <L2 Transform>]		\nL2-transform is applied on the bundle (all CVIDs + untagged data)\n\nGENERAL SYNTAX:\npop\npush-[Etype].[vid]\nstamp-[Etype].[vid]\nno-op\n\nEXAMPLES:\npop\npush-8100.1000\nstamp-8100.100\nstamp-*.100\nno-op\n\nLIMITATIONS:\nOnly TPID=0x8100 is allowed in egress stamp operations.\nAll three TPIDs(8100,9100,88A8) can be used in egress push operation.\n
{encap-cos-policy <dot1dpri-inherit | fixed | ip-prec-inherit | phbg-inherit | port-inherit | vs-inherit>}		encapsulation CoS policy
{encap-fixed-dot1dpri <NUMBER: 0-7>}		encapsulation fixed dot1dpri
{include-untagged-statistics <on | off>}		include statistics of untagged/priority tagged frames along with subscriber member's statistics. Applicable for Tx statistics only
[ingress-l2-transform <L2 Transform>]		\nL2-transform is applied on the bundle (all CVIDs + untagged data)\n\nGENERAL SYNTAX:\npop\npush-[Etype].[vid]\nstamp-[Etype].[vid]\nno-op\n\nEXAMPLES:\npop\npush-8100.1000\nstamp-8100.100\nstamp-*.100\nno-op\n\nLIMITATIONS:\nOnly TPID=0x8100 is allowed in ingress push/ stamp operations.\n
{ip-interface <Interface Name>}		IP interface name
[pcp <NUMBER: 0-7>]		The egress C-VID priority (pcp) value on packets egressing the vs-member IP interface - Default: 0
{port <Port list>}		subscriber port list
[statistics <on | off>]		Statistics control for Virtual Switch Member
[translate-tag <VLAN list including VID 0>]		subscriber VLAN translate stamp value or range
{tdm-vc <TDM VC Name>}		tdm vc name
[vlan <VLAN ID List>]		VLAN ID List, 1 to 4094
{vlan <VLAN ID List>}		VLAN ID List, 1 to 4094
[vtag-stack <VLAN ID String in outer[:inner] format>]		OuterTag:InnerTag

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[vlan-untagged-data]		Add Untagged Virtual-switch
[vlan-range-type <strict | group>]		subscriber VLAN range type

Command	**Access**	**Description**
virtual-switch ethernet create	admin	create ethernet virtual switch
vs <vs>		virtual switch name
{mode <default | vpws | vpls>}		capability of virtual-switch
{decap-cos-policy <fixed | leave | tunnel-inherit | vc-inherit>}		decapsulation CoS policy
{description <String[128]>}		Set VS description
{decap-fixed-dot1dpri <NUMBER: 0-7>}		decapsulation fixed dot1dpri
{encap-cos-policy <dot1dpri-inherit | fixed | ip-prec-inherit | phbg-inherit>}		encapsulation CoS policy
{encap-fixed-dot1dpri <NUMBER: 0-7>}		encapsulation fixed dot1dpri
{reserved-vlan <NUMBER: 1-4094>}		reserved VLAN
{subscriber-dot1dpri-policy <leave | provider-inherit>}		subscriber dot1d marking behavior
{vc <Virtual Circuit Name>}		ethernet virtual circuit
{ingress-acl <ACL Profile>}		The ACL profile to be applied on the ingress direction of this VS

Command	**Access**	**Description**
virtual-switch ethernet delete	admin	delete ethernet virtual switch
vs <vs>		virtual switch name

Command	**Access**	**Description**
virtual-switch ethernet remove	admin	remove subscriber members from virtual switch
vs <vs>		virtual switch name
{port <Port list>}		subscriber port list
{ip-interface <Interface Name>}		IP interface name
[vlan <VLAN ID List>]		VLAN ID List, 1 to 4094
[vtag-stack <VLAN ID String in outer[:inner] format>]		OuterVlan:InnerVlan
[vlan-untagged-data]		remove untagged virtual-switch member
{tdm-vc <TDM VC Name>}		tdm vc

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Command	Access	Description
virtual-switch ethernet set	admin	set ethernet virtual switch
vs <vs>		virtual switch name
{decap-cos-policy <fixed | leave | tunnel-inherit | vc-inherit>}		decapsulation CoS policy
{decap-fixed-dot1dpri <NUMBER: 0-7>}		decapsulation fixed dot1dpri
{description <String[128]>}		Set VS description
{encap-cos-policy <dot1dpri-inherit | fixed | ip-prec-inherit | phbg-inherit>}		encapsulation CoS policy
{encap-fixed-dot1dpri <NUMBER: 0-7>}		encapsulation fixed dot1dpri
{subscriber-dot1dpri-policy <leave | provider-inherit>}		subscriber dot1d marking behavior
{reserved-vlan <NUMBER: 1-4094>}		reserved VLAN
{vc <Virtual Circuit Name>}		ethernet virtual circuit
{ingress-acl <ACL Profile>}		The ACL profile to be applied on the ingress direction of this VS

Command	Access	Description
virtual-switch ethernet set	admin	set vs subscriber member attribute
port <port>		subscriber port
vs <vs>		virtual switch name
[egress-l2-transform <L2 Transform>]		\nL2-transform is applied on the bundle (all CVIDs + untagged data)\n\nGENERAL SYNTAX:\npop\npush-[Etype].[vid]\nstamp-[Etype].[vid]\nno-op\n\nEXAMPLES:\npop\npush-8100.1000\nstamp-8100.100\nstamp-*.100\nno-op\n\nLIMITATIONS:\nOnly TPID=0x8100 is allowed in egress stamp operations.\nAll three TPIDs(8100,9100,88A8) can be used in egress push operation.\n
{encap-cos-policy <dot1dpri-inherit | fixed | ip-prec-inherit | phbg-inherit | port-inherit | vs-inherit>}		encapsulation CoS policy
{encap-fixed-dot1dpri <NUMBER: 0-7>}		encapsulation fixed dot1dpri
[include-untagged-statistics <on | off>]		include statistics of untagged/priority tagged frames along with subscriber member's statistics. Applicable for Tx statistics only

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[ingress-l2-transform <L2 Transform>]		\nL2-transform is applied on the bundle (all CVIDs + untagged data)\n\nGENERAL SYNTAX:\npop\npush-[Etype].[vid]\nstamp-[Etype].[vid]\nno-op\n\nEXAMPLES:\npop\npush-8100.1000\nstamp-8100.100\nstamp-*.100\nno-op\n\nLIMITATIONS:\nOnly TPID=0x8100 is allowed in ingress push/stamp operations.\n
[rx-statistics-profile <Traffic Profiling Standard Name>]		standard-traffic-profile that will be used for Rx and Accepted Rx statistics of a subscriber member
[statistics <on | off>]		Statistics control for Virtual Switch Member
{translate-tag <VLAN list including VID 0>}		subscriber VLAN translate stamp value or range
{vlan <VLAN ID List>}		VLAN ID List, 1 to 4094
{vtag-stack <VLAN ID String in outer[:inner] format>}		OuterVlan:InnerVlan
{vlan-untagged-data}		Untagged VS member

Command	**Access**	**Description**
virtual-switch ethernet show	limited	show all ethernet virtual switches

Command	**Access**	**Description**
virtual-switch ethernet show	limited	show ethernet virtual switch
vs <vs>		virtual switch object
[active]		only show active statistics or throughput
[scale <giga | kilo | mega | none | tera>]		scale used to show throughput
[statistics]		subscriber members statistics
[throughput]		subscriber members throughput

Command	**Access**	**Description**
virtual-switch ethernet show	limited	show ethernet virtual switch
port <port>		subscriber port
vs <vs>		virtual switch name
[active]		only show active statisticsi or throughput
[scale <giga | kilo | mega | none | tera>]		scale used to show throughput

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[statistics]		subscriber members statistics
[throughput]		subscriber members throughput
[vlan <VLAN ID List>]		VLAN ID List, 1 to 4094
[vtag-stack <VLAN ID String in outer[:inner] format>]		OuterVlan:InnerVlan

Command	Access	Description
virtual-switch ethernet unset	admin	unset ethernet virtual switch attributes
vs <vs>		virtual switch name
{description}		unset VS description
{reserved-vlan}		reserved VLAN
{vc}		ethernet virtual circuit
{ingress-acl}		Unset the ACL profile applied on the ingress direction of this VS

Command	Access	Description
virtual-switch ethernet unset	admin	unset vs subscriber member attributes
port <port>		subscriber port
vs <vs>		virtual switch name
{include-untagged-statistics}		include statistics of untagged/priority tagged frames along with subscriber member's statistics. Applicable for Tx statistics only
{rx-statistics-profile}		standard-traffic-profile that will be used for Rx and Accepted Rx statistics of a subscriber member
{statistics}		subscriber members statistics
{translate-tag}		subscriber VLAN translate tag
{vtag-stack <VLAN ID String in outer[:inner] format>}		OuterVlan:InnerVlan
{vlan <VLAN ID List>}		VLAN ID List, 1 to 4094
{vlan-untagged-data}		Untagged VS member

Command	Access	Description
virtual-switch add	admin	add reserved VLANs
{reserved-vlan <VLAN ID List>}		VLAN list

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Command	Access	Description
virtual-switch clear	admin	clear statistics for all virtual switches
{statistics}		virtual switch statistics

Command	Access	Description
virtual-switch clear	admin	clear virtual switch
vs <vs>		VS name
{statistics}		virtual switch statistics

Command	Access	Description
virtual-switch remove	admin	remove reserved VLANs
{reserved-vlan <VLAN ID List>}		VLAN list

Command	Access	Description
virtual-switch rename	admin	rename virtual switch
vs <vs>		virtual switch name
{name <Name (no ,) String>}		virtual switch name

Command	Access	Description
virtual-switch show	limited	show all virtual switch info

Command	Access	Description
virtual-switch show	limited	show virtual switch
vs <vs>		virtual switch object
{statistics}		subscriber port statistics

vlan

Virtual Local Area Network (VLAN)

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Command	Access	Description
vlan translate add	admin	add translation entry to port interface
port <port>		port(s) to add VLAN translation
{vid <VLAN ID String in outer[:inner] format>}		Frame ingress-egress VLAN ID in outer[:inner] format
[to-vid <VLAN ID String in outer[:inner] format>]		Assign/stamp vids in outer[:inner] format, outer has to be the same as vlan domain
{vlan <NUMBER: 1-4095>}		Assign/stamp to this internal VLAN

Command	Access	Description
vlan translate remove	admin	remove translation entry
port <port>		port(s) to remove VLAN translation
{vid <VLAN ID String in outer[:inner] format>}		Frame ingress-egress outer[:inner] VLAN IDs

Command	Access	Description
vlan translate show	limited	show translation entries for port(s)
port <port>		port(s) to show VLAN translation

Command	Access	Description
vlan translate show	limited	show all translation entries

Command	Access	Description
vlan queuing set	admin	set vlan egress queue group
vlan <vlan>		VLAN for which setting traffic services attribute
[queue-group <Egress Queue Group>]		attached queue group
[queue-map <RCOS Queue Map>]		RCOS to queue map

Command	Access	Description
vlan queuing unset	admin	unset vlan egress queue group
vlan <vlan>		VLAN for which setting traffic services attribute
[queue-group]		attached queue group

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[queue-map]		RCOS to queue map

Command	**Access**	**Description**
vlan add	admin	a ports to one or more vlans
vlan <vlan>		VLAN list to add ports
{port <Port list>}		list of ports to add to VLAN

Command	**Access**	**Description**
vlan create	admin	create a VLAN
vlan <vlan>		VLAN ID
[name <Name (no , leading digit) String>]		name of VLAN
[ingress-acl <ACL Profile>]		The ACL profile to be applied on the ingress direction of this VLAN

Command	**Access**	**Description**
vlan delete	admin	delete VLANs
vlan <vlan>		list of VLANs to delete

Command	**Access**	**Description**
vlan disable	admin	disable inner-tpid feature
{inner-tpid}		inner-tpid feature

Command	**Access**	**Description**
vlan enable	admin	enable inner-tpid feature
{inner-tpid}		inner-tpid feature

Command	**Access**	**Description**
vlan remove	admin	remove ports from VLAN
vlan <vlan>		VLAN to remove ports from
{port <Port list>}		ports to remove from VLAN

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Command	Access	Description
vlan rename	admin	rename VLAN
vlan <vlan>		VLAN to rename
{name <Name (no , leading digit) String>}		new VLAN name

Command	Access	Description
vlan set	admin	set global attributes of VLAN
{inner-tpid <8100 | 9100 | 88A8>}		Modify global inner-TPID

Command	Access	Description
vlan set	admin	set attributes of a VLAN
vlan <vlan>		VLAN
{egress-tpid <8100 | 9100 | 88A8>}		VLAN egress TPID Ethertype
{translation-vlan <VLAN>}		translation VLAN
{statistics <enable | disable>}		statistics table
{ingress-acl <ACL Profile>}		The ACL profile to be applied on the ingress direction of this VLAN

Command	Access	Description
vlan show	limited	show global VLAN information

Command	Access	Description
vlan show	admin	show VLAN attributes for a port
port <port>		show VLAN membership for port

Command	Access	Description
vlan show	admin	show VLAN attributes for a VLAN
vlan <vlan>		show VLAN memberships for VLANs
{statistics}		statistics table

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Command	Access	Description
vlan show	limited	show common attributes of VLAN
{inner-tpid}		show VLAN inner-TPID info
{statistics}		statistics table

Command	Access	Description
vlan unset	admin	unset global attributes of VLAN
{inner-tpid}		Reset global inner-TPID to default 0x8100

Command	Access	Description
vlan unset	admin	unset attributes of a VLAN
vlan <vlan>		VLAN
{translation-vlan}		translation VLAN
{ingress-acl}		Unset the ACL profile applied on the ingress direction of this VLAN

Command	Access	Description
vlan clear	admin	clear VLAN statistics
vlan <vlan>		VLAN to clear
{statistics}		statistics table

Command	Access	Description
vlan clear	admin	clear VLAN statistics
{statistics}		statistics table

Command	Access	Description
vlan create	admin	create a VLAN cross-connect
xc <xc>		create a cross-connect with outer[:inner] tags
{port-a <Port>}		port on one side
{port-b <Port>}		port on the other side

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Command	Access	Description
vlan delete	admin	delete VLAN cross-connect
xc <xc>		delete a cross-connect object with outer[:inner] tags

Command	Access	Description
vlan show	limited	show all cross-connect entries
xc <xc>		show cross-connect objects with optional outer[:inner] tags

capture

Capture parameters

Command	Access	Description
capture create	super	Create Egress Capture profile
egress-profile <egress-profile>		Capture profile name
{duration <SECONDS: 0-1800>}		Capture duration in seconds, allowed in multiple of 10, default: 0 (Capture All Packets)
{file <String[128]>}		File name/path for capture
{file-size <KBYTES>}		Capture file size in KB, default: 1024
{max-num-files <NUMBER: 1-2>}		Capture maximum number of files, default: 1
{num-of-pkts <NUMBER: 0-4294967295>}		Total number of packets to capture, default: 0 (Capture All Packets)
{overwrite <yes | no>}		File Overwrite functionality, default: yes
{pkt-len <BYTES>}		Packet length to capture in bytes, default: 64

Command	Access	Description
capture create	super	Create Ingress Capture profile
ingress-profile <ingress-profile>		Capture profile name
{duration <SECONDS: 0-1800>}		Capture duration in seconds, allowed in multiple of 10, default: 0 (Capture All Packets)
{file <String[128]>}		File name/path for capture
{file-size <KBYTES>}		Capture file size in KB, default: 1024
{max-num-files <NUMBER: 1-2>}		Capture maximum number of files, default: 1

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{num-of-pkts <NUMBER: 0-4294967295>}		Total number of packets to capture, default: 0 (Capture All Packets)
{overwrite <yes | no>}		File Overwrite functionality, default: yes
{pkt-len <BYTES>}		Packet length to capture in bytes, default: 64
{file-export <yes>}		Enable export of PCAP file to configured server once capture is completed, default: no

Command	Access	Description
capture create	super	Create capture files
{pcap-file <String[128]>}		Capture file name which needs to be converted to PCAP file.
{input-file-type <text | raw>}		Input capture file type.
{raw-to-text <String[128]>}		Raw format capture file name which needs to be converted to Text format capture file.
{remove-input-file <yes | no>}		Option to remove input capture file after successful conversion.

Command	Access	Description
capture delete	super	Delete Egress capture profile
egress-profile <egress-profile>		Egress Capture profile name

Command	Access	Description
capture delete	super	Delete Ingress capture profile
ingress-profile <ingress-profile>		Ingress Capture profile name

Command	Access	Description
capture disable	super	Disable capture functionality

Command	Access	Description
capture disable	super	Disable Egress capture profile
egress-profile <egress-profile>		Egress Capture profile name

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Command	Access	Description
capture disable	super	Disable Ingress capture profile
ingress-profile <ingress-profile>		Ingress Capture profile name

Command	Access	Description
capture enable	super	Enable capture functionality

Command	Access	Description
capture enable	super	Enable Egress capture profile
egress-profile <egress-profile>		Egress Capture profile name

Command	Access	Description
capture enable	super	Enable Ingress capture profile
ingress-profile <ingress-profile>		Ingress Capture profile name

Command	Access	Description
capture set	super	Modify Egress Capture profile
egress-profile <egress-profile>		Egress Capture profile name
{duration <SECONDS: 0-1800>}		Capture duration in seconds, allowed in multiple of 10, default: 0 (Capture All Packets)
{file <String[128]>}		File name/path for capture
{file-size <KBYTES>}		Capture file size in KB, default: 1024
{max-num-files <NUMBER: 1-2>}		Capture maximum number of files, default: 1
{num-of-pkts <NUMBER: 0-4294967295>}		Total number of packets to capture, default: 0 (Capture All Packets)
{overwrite <yes | no>}		File Overwrite functionality, default: yes
{pkt-len <BYTES>}		Packet length to capture in bytes, default: 64

Command	Access	Description
capture set	super	Modify Ingress Capture profile
ingress-profile <ingress-profile>		Ingress Capture profile name

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{duration <SECONDS: 0-1800>}		Capture duration in seconds, allowed in multiple of 10, default: 0 (Capture All Packets)
{file <String[128]>}		File name/path for capture
{file-size <KBYTES>}		Capture file size in KB, default: 1024
{max-num-files <NUMBER: 1-2>}		Capture maximum number of files, default: 1
{num-of-pkts <NUMBER: 0-4294967295>}		Total number of packets to capture , default: 0 (Capture All Packets)
{overwrite <yes | no>}		File Overwrite functionality, default: yes
{pkt-len <BYTES>}		Packet length to capture in bytes, default: 64

Command	**Access**	**Description**
capture set	super	Set capture for host originated packets.
{cpu-tx-packets <Ingress Capture Profile>}		Capture host originated frames.

Command	**Access**	**Description**
capture show	super	Display global capture information.

Command	**Access**	**Description**
capture show	super	Show Egress capture profile
egress-profile <egress-profile>		Egress Capture profile name

Command	**Access**	**Description**
capture show	super	Show Ingress capture profile
ingress-profile <ingress-profile>		Ingress Capture profile name

Command	**Access**	**Description**
capture unset	super	Unset Egress Capture profile
egress-profile <egress-profile>		egress Capture profile name
{duration}		Capture duration in seconds, allowed in multiple of 10, default: 0
{file-size}		Capture file size in KB, default: 1024
{max-num-files}		Capture maximum number of files, default: 1

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{num-of-pkts}		Total number of packets to capture, default: 0
{overwrite}		File Overwrite functionality, default: yes
{pkt-len}		Packet length to capture in bytes, default: 64

Command	**Access**	**Description**
capture unset	super	Unset Ingress Capture profile
ingress-profile <ingress-profile>		Ingress Capture profile name
{duration}		Capture duration in seconds, allowed in multiple of 10, default: 0
{file-size}		Capture file size in KB, default: 1024
{max-num-files}		Capture maximum number of files, default: 1
{num-of-pkts}		Total number of packets to capture, default: 0
{overwrite}		File Overwrite functionality, default: yes
{pkt-len}		Packet length to capture in bytes, default: 64

Command	**Access**	**Description**
capture unset	super	Unset capture for host originated packets.
{cpu-tx-packets}		Capture host originated frames.

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39XX/51XX Switches and Platforms

Command Reference

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CONTACT CIENA
For additional information, office locations, and phone numbers, please visit the Ciena web site at **www.ciena.com**