



# 39XX/51XX Service Delivery and Aggregation Switches

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## Command Reference

SAOS 6.12

*What's Inside...*

CLI Fundamentals

Commands

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# Publication history

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## May 2014

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## About this document

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This document describes the operating system commands and syntax for SAOS 6.12 of the Service Aware Operating System (SAOS).

These commands support the 3902, 3911, 3916, 3920, 3930, 3931, 3940, 3960, 5140, and 5150 Service Delivery and Service Aggregation Switches.

### New in this release

For information about what is new in SAOS 6.12, see 39XX/51XX SAOS 6.12 Release Notes (009-3240-013).

### Documents in the 39XX/51XX documentation suite

For descriptions of documents in the 39XX/51XX Service Delivery and Aggregation Switches documentation suite, see 39XX/51XX Service Delivery and Aggregation Switches Product Fundamentals (009-3240-006).

# 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 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 the 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.

## 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 lists the following:

```
>aggregation          interface             rmon
ais                   ip                   rstp
arp                   isis                 snmp
benchmark             ospf                 software
blade                 lldp                 ssh-server
broadcast-containment log                   syslog
bfd                   rsvp-te              system
cfm                   ldp                  tacacs
chassis               mpls                 telnet-server
clear                 gmpls                traffic-profiling
cli                   mstp                 traffic-services
command-log           multicast-services   tunnel
configuration         ndp                  twamp
device-archive        ntp-client           user
dhcp                  pbt                  virtual-circuit
dns-client            port                  virtual-link-loss-indication
dot1x                 private-forwarding-groups virtual-switch
eoam                  radius                vlan
file                  resource-manager
flow                  ring-protection
```

## 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 (e.g. multicast, per, radius etc.) or a basic object (e.g. module, VLAN, port, etc.). 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 <subobject> subdivides a feature. For example, multicast has many sub-features in it such as umf, epf, channel-stream, etc.

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
- 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
- subobject = 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 `vlan` commands, you can enter:

```
> vl
```

and the prompt will then change to:

```
(vlan)>
```

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
```

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>
snmpsoftwaressh-server  syslog  system
```

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 showstatic unset
```

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
flushflush arp cache for all interfaces
for check if the ip address is in use
set set arp options
unsetunset 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 [“cli” on page 3-54](#).

## 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.

## 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 1 summarizes command syntax symbols.

**Table 1**  
**Command Syntax Symbols**

Symbol	Description
< >	Encloses a variable or literal value that must be specified. Some examples include: <pre>server &lt;IpAddress&gt; priority &lt;NUMBER: 1-7&gt; dns &lt;on off&gt; description &lt;String[31]&gt;</pre> 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: <pre>cfm mip create {vlan &lt;VlanId&gt;} {port &lt;PortNameList&gt;} [level &lt;NUMBER: 0-7&gt;]</pre> 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: <pre>dhcp client options set subnet &lt;on off&gt;</pre> either on or off must be specified, for example: <pre>dhcp client options set subnet on</pre>
[ ]	Encloses an optional value or a list of optional arguments. One or more values or arguments can be specified. For example, in the syntax: <pre>arp show [interface &lt;Interface&gt;]</pre> you can enter a value for interface <Interface> or not. For example: <pre>arp show</pre>

## 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."

For example, the vlan command could be used as follows:

```
> vlan add vlan 400 port 2,4
```

Or each command could be entered individually:

```
> vlan add vlan 400 port 2
> vlan add vlan 400 port 4
```

## Specifying IP Addresses

In most cases, the CLI accepts either IPv4 or IPv6 format. For command where only one or the other is accepted, the CLI returns an error if the incorrect IP address format is entered.

IPv4 address is string in dotted decimal format 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.

```
<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 an 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>
```

IPv4 Example: 123.23.10.23/255.255.255.0

IPv6 Example: 2001:DB8::/255.255.255.255

Juniper Format:

```
<IPADDRESS>/<subnet-bitmask>
```

IPv4 Example: 123.23.10.23/24

IPv6 Example: 2001:DB8::/32

It also accepts IP address alone, in which case it automatically configures a mask of 255.255.255.255 (/32).

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

## Entering Names

When entering names or description 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

## Duration string for time input

Duration input to timers is specified with a granularity of one second. Specific timers limit their ranges as required, and some may span a period of years.

You can specify mixed common units of time ranging from seconds to years. If no units are specified then seconds are assumed.

The following letters are used to represent units of time:

- y – years
- M – months
- w – weeks
- d – days
- h – hours
- m – minutes
- s – seconds

For example, 10m6s represents 10 minutes and 6 seconds.

**Note 1:** No attempt is made to account for the variation (in seconds) of years or months. Average values in seconds are used. For instance, one month is considered 30 days. So if you specify 12 months, then the total time will not exactly match a setting of one year.

**Note 2:** No range checking is performed and values such as "70m90s" or "30s71m" are accepted, and they have the same effect as the canonical form of "1h11m30s". Where timer values are output, the canonical form is always used.

### Specifying Common Objects and Attributes

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

<DirName> = <String[127]>

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

## 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 can be 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.

### List of hidden commands

The following commands are hidden in this release:

```
bfd session create session tunnel
cfm delay cancel-mac service
cfm delay cancel-mac service port
cfm delay cancel-mac service 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 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 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
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 show service verbose
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
<1|2|3|4|5|6|7|3.33ms|10ms|100ms|1sec|10sec|1mi...>
cfm service set service lmm-interval
<1|2|3|4|5|6|7|3.33ms|10ms|100ms|1sec|10sec|1mi...>
chassis show attributes
cli search keyword hidden-only
cli search keyword include-hidden
cli search keyword interactive-mode-only
cli search keyword interactive-only
cli show hidden-only
cli show include-hidden
cli show interactive-mode-only
cli show interactive-only
dot1x auth show stats
dot1x supp show stats
flow access-control create(DEPRECATED) port
flow access-control create(DEPRECATED) port forward-unlearned
<off|on>
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)
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 delete te-profile
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
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
routing-domain delete routing-domain
routing-domain show routing-domain
isis instance create isis-instance routing-domain
ospf instance create ospf-instance routing-domain
ospf interface set ip-interface authentication-type password-
secret(DEPRECATED)
pbt set debug-mode <on|off>
port monitor active
port monitor delay
port monitor scale <tera|giga|mega|kilo|none>
radius show stats
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 <absolute|delta>
rmon alarm add startup-alarm <falling|rising|both>
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) <none|log|snmp-trap|log-and-
snmptrap>
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 <enable|disable>
rmon set(DEPRECATED) file(DEPRECATED) default-tftp-server
rmon set(DEPRECATED) file(DEPRECATED) default-ftp-server
rmon set(DEPRECATED) file(DEPRECATED) default-server
rmon set(DEPRECATED) file(DEPRECATED) default-sftp-server
rmon set(DEPRECATED) file(DEPRECATED) sftp-server
rmon set(DEPRECATED) file(DEPRECATED) tftp-server
rmon set(DEPRECATED) file(DEPRECATED) ftp-server
rmon set(DEPRECATED) file(DEPRECATED) sftp-server login-id
rmon set(DEPRECATED) file(DEPRECATED) ftp-server login-id
rmon set(DEPRECATED) file(DEPRECATED) login-id sftp-server
password
rmon set(DEPRECATED) file(DEPRECATED) login-id ftp-server
password
rmon set(DEPRECATED) file(DEPRECATED) login-id sftp-server secret
rmon set(DEPRECATED) file(DEPRECATED) login-id ftp-server secret
rmon set(DEPRECATED) history auto-configure <enable|disable>
rmon set(DEPRECATED) history interval
rmon set(DEPRECATED) history num-buckets
rmon set(DEPRECATED) history owner
rmon set(DEPRECATED) history file-logging <on|off>
rmon set(DEPRECATED) history stats
<basicError|basicRx|basicTx|errorAll|rxAll|txAll|standard>
rmon history add hist-index data-source
rmon history add data-source
rmon history add file-logging <on|off>
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 <enable|disable>
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 unset(DEPRECATED) file name
rmon unset(DEPRECATED) file remote-file-dir
rmon unset(DEPRECATED) file server
rmon unset(DEPRECATED) file sftp-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 <on|off>
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
<absolute|delta>
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
snmp add(DEPRECATED) community ip
snmp add(DEPRECATED) community permission <read-only|read-write>
snmp add(DEPRECATED) trap-server community
snmp create target subnet-mask
snmp remove(DEPRECATED) community ip
snmp remove(DEPRECATED) trap-server community
snmp set community(DEPRECATED) ip
snmp set community(DEPRECATED) permission <read-only|read-write>
snmp show communities(DEPRECATED)
snmp show trap-server(DEPRECATED)
software report-sequence upgrade user
```

```
software upgrade user
system ftp set mode <tftp|ftp|sftp>
system ftp set connection-timeout
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 shell session unset time-zone
system shell set more <on|off>
system shell set more-lines
system shell unset more
system shell unset more-lines
system show load-query(DEPRECATED)
tacacs set retries(DEPRECATED)
```

# Commands

The following table provides the commands, access and description.

Command	Access	Description
<b>aggregation</b>		
<b>aggregation lacpmib set</b>	admin	set aggregation group attributes
agg <agg>		aggregation port
{admin-key <NUMBER: 0-4095>}		set administrator key
{system-priority <NUMBER: 0-65535>}		set system priority
<b>aggregation lacpmib set</b>	admin	set physical port attributes
port <port>		physical port
{actor-admin-key <NUMBER: 0-4095>}		set actor administrator key
{actor-admin-state <NUMBER: 0-255>}		set actor administrator state: bit0_act bit1_timeout bit2_agg
{actor-port-priority <NUMBER: 0-65535>}		set actor port priority
{actor-system-priority <NUMBER: 0-65535>}		set actor system priority
{partner-admin-key <NUMBER: 0-4095>}		set partner administrator key
{partner-admin-state <NUMBER: 0-255>}		set partner administrator state: bit0_act bit1_timeout bit2_agg
{partner-port-priority <NUMBER: 0-65535>}		set partner port priority
{partner-system-id <MAC address: XX:XX:XX:XX:XX:XX>}		set partner system ID (MAC)
{partner-system-priority <NUMBER: 0-65535>}		set partner system priority
<b>aggregation add</b>	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
<b>aggregation create</b>	admin	create an aggregation group
{agg <String[31]>}		aggregation port name
<b>aggregation clear</b>	admin	clear agg statistics

Command	Access	Description
{statistics}		agg statistics
<b>aggregation clear</b>	admin	clear statistics
agg <agg>		aggregation port
{statistics}		Agg statistics
<b>aggregation clear</b>	admin	clear statistics
port <port>		physical port
{statistics}		port LACP statistics
<b>aggregation delete</b>	admin	delete an aggregation group
agg <agg>		aggregation port name
<b>aggregation disable</b>	admin	disable aggregation
<b>aggregation enable</b>	admin	enable aggregation (default)
<b>aggregation remove</b>	admin	remove ports from an aggregation group
agg <agg>		aggregation port
{port <Physical port list>}		ports to remove from the aggregation
<b>aggregation set</b>	admin	set aggregation attributes
{flood-hash <String>}		hashing mode for non known unicast frames
{marker-timeout <NUMBER: 0-1000>}		set marker timeout, default: 50(ms)
<b>aggregation set</b>	admin	set aggregation group attributes
agg <agg>		aggregation port
{admin-key <NUMBER: 2049-4095>}		MC-LAG redundancy group admin-key
{hash <String>}		hashing mode for known unicast frames
{icl <Inter Chassis Link Name>}		Inter-chassis link used by MC-LAG
{mode <String>}		aggregation mode
[multi-chassis]		Convert a LAG to a MC-LAG
{protection-mode <String>}		aggregation protection mode
{revert-delay <MILLISECONDS: 0-720000>}		set revert-delay
{revert-protection <String>}		set revert-protection
[system-mac <MAC address: XX:XX:XX:XX:XX:XX>]		MC-LAG redundancy group MAC
{system-priority <NUMBER: 0-65535>}		set system priority
<b>aggregation set</b>	admin	set physical port aggregation attributes

Command	Access	Description
port <port>		physical port list
{agg-mode <String>}		set aggregation mode
<b>aggregation switchover</b>		
	admin	forced switchover from MC-LAG active node to inactive node
agg <agg>		MC-LAG port
<b>aggregation show</b>		
	limited	show aggregation
<b>aggregation show</b>		
	limited	show aggregation group information
agg <agg>		aggregation port to show
{info}		show aggregation info
{mode}		show aggregation mode
<b>aggregation show</b>		
	limited	show physical port aggregation information
port <port>		physical ports to show aggregation
{agg-mode}		show aggregation mode
{info}		show aggregation info
<b>aggregation show</b>		
	limited	show aggregation state
{member}		show aggregation member info
{multi-chassis}		show MC-LAG info
{state}		show aggregation state
<b>aggregation unset</b>		
	admin	unset aggregation attributes
{flood-hash}		hashing mode for non known unicast frames
{marker-timeout}		marker timeout
<b>aggregation unset</b>		
	admin	unset aggregation/MC-LAG attributes
agg <agg>		aggregation port
{hash}		hashing mode
{icl}		Inter-chassis link used by MC-LAG
{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
<b>ais</b>		

Command	Access	Description
<b>ais profile create</b>	admin	create an AIS profile
profile <profile>		AIS profile name
[ais-rdi <String>]		ais-rdi set, default: enabled
[refresh-timer <SECONDS: 1-20>]		refresh timer for AIS LDI messages, default: 10
<b>ais profile delete</b>	admin	delete an AIS profile
profile <profile>		AIS profile name
<b>ais profile set</b>	admin	set AIS profile parameters
profile <profile>		AIS profile name
[ais-rdi <String>]		ais-rdi set, default: enabled
[refresh-timer <SECONDS: 1-20>]		refresh timer for AIS LDI messages, default: 10
<b>ais profile show</b>	limited	show AIS profile configuration
<b>ais profile show</b>	limited	show a AIS profile
profile <profile>		AIS profile name
<b>ais profile unset</b>	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
<b>ais statistics show</b>	limited	show ais statistics
<b>ais statistics show</b>	limited	show AIS statistics
{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
<b>ais statistics clear</b>	admin	clear AIS
<b>ais disable</b>	admin	disable AIS globally

Command	Access	Description
<b>ais enable</b>	admin	enable AIS globally
<b>ais show</b>	limited	show AIS global configuration
<b>ais show</b>	hidden	show AIS
<b>arp</b>		
<b>arp static add</b>	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
<b>arp static remove</b>	admin	remove existing entry
{destination <IP address>}		destination host IP Address
{ip-interface <Interface Name>}		destination reachable via IP Interface
<b>arp static remove-all</b>	admin	remove all static ARP entries
<b>arp static show</b>	limited	display static ARP entries
<b>arp delete</b>	admin	delete ARP entry
ip <ip>		IPv4 address
<b>arp flush</b>	admin	flush ARP cache for all interfaces
<b>arp flush</b>	admin	flush ARP cache for specified interface
intf <intf>		IP interface to flush
<b>arp for</b>	limited	check if the IP address is in use
ip <ip>		IPv4 address
{interface <String>}		interface to check
<b>arp set</b>	admin	set ARP cache options
{cachetime <SECONDS: 60-3600>}		cache timeout in seconds, default: 60 seconds
<b>arp show</b>	limited	show ARP information

Command	Access	Description
<b>arp show</b> intf <intf>	limited	show ARP information for interface interface to display
<b>arp unset</b> {cachetime}	admin	unset ARP options cache timeout set to default 300 seconds
<b>benchmark</b>		
<b>benchmark reflector clear</b> {statistics}	admin	clear reflector benchmark statistics clear benchmark statistics
<b>benchmark reflector disable</b>	admin	disable benchmark reflector globally
<b>benchmark reflector enable</b>	admin	enable benchmark reflector globally
<b>benchmark reflector set</b> {vid <NUMBER: 0-4095>} {vendor-type <String>}	admin	set benchmark reflector attributes VLAN ID, default: blank select the generator vendor, default: ciena
<b>benchmark reflector unset</b> {vid} {vendor-type}	admin	unset benchmark reflector attributes VLAN ID to blank vendor-type to ciena
<b>benchmark reflector show</b>	limited	display reflector information
<b>benchmark reflector show</b> statistics <statistics> {active}	limited	show port information show statistics only show active statistics
<b>benchmark reflector show</b> throughput <throughput>	limited	show port information show throughput statistics
<b>benchmark generator disable</b>	admin	disable benchmark generator globally
<b>benchmark generator enable</b>	admin	enable benchmark generator globally
<b>benchmark generator show</b>	limited	display generator information

Command	Access	Description
<b>benchmark profile configuration set</b>	admin	set benchmark generator profile attributes
name <name>		profile to configure
[interval <String>]	admin	interval time, default: Completion
[duration <String>]	admin	duration time, default: Once
[bandwidth <NUMBER: 1-10000>]	admin	maximum bandwidth of test traffic in Mbps, default: 1000
[vid-validation <String>]	admin	turn on or off C-VID validation for test packets returning to the generator
[frame-size-list <NUMBER>]	admin	list of packet sizes to be used for tests, default: 64, 128, 256, 512, 1024, 1280, 1518, 9216
[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
[sampling-interval <NUMBER: 1-600>]	admin	number of tenths of a second in between samples for the latency and PDV tests, default: 1
[frameloss-start-bw <String>]	admin	bandwidth the frameloss test is to use as a starting point
<b>benchmark profile configuration add</b>	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
<b>benchmark profile configuration remove</b>	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
<b>benchmark profile configuration unset</b>	admin	unset benchmark generator profile attributes
name <name>		profile to configure
[interval]	admin	interval time, default: Completion
[duration]	admin	duration time, default: Once
[bandwidth]	admin	maximum bandwidth of test traffic in Mbps, default: 1000
[frame-size-list]	admin	list of packet sizes to be used for tests, default 64, 128, 256, 512, 1024, 1280, 1518, 9216

Command	Access	Description
[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
[sampling-interval]	admin	number of tenths of a second in between samples for the latency and PDV tests, default: 1
[frameloss-start-bw]	admin	bandwidth the frameloss test is to use as a starting point
<b>benchmark profile traffic set</b>		
	admin	request benchmark generator 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
<b>benchmark profile traffic unset</b>		
	admin	unset benchmark generator 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
<b>benchmark profile payload set</b>		
	admin	set benchmark generator profile payload attributes
name <name>		profile to configure
[dst-mac <MAC address: XX:XX:XX:XX:XX:XX>]		destination MAC address
[vlan-encap-type <String>]		VLAN encapsulation type - default untagged
[vid <NUMBER: 0-4095>]		customer VLAN ID value
[pcp <NUMBER: 0-7>]		customer priority code point (PCP) value
[cfi <NUMBER: 0-1>]		customer canonical format indicator (CFI) value
[tpid <String>]		customer tag protocol identifier (TPID) value, default 0x8100

Command	Access	Description
[pdu-type <String>]		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
<b>benchmark profile payload unset</b>		
	admin	unset benchmark generator profile payload attributes
name <name>		profile to configure
[dst-mac]		destination MAC address
[vlan-encap-type]		VLAN encapsulation type - default untagged
[vid]		customer VLAN ID value
[pcp]		customer priority code point (PCP) value
[cfi]		customer canonical format indicator (CFI) value
[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
<b>benchmark profile create</b>		
	admin	create benchmark generator profile
{name <String[15]>}		user-defined name for new profile
<b>benchmark profile clone</b>		
	admin	clone benchmark generator profile
name <name>		name of existing profile to clone
{to <String[15]>}		user-defined name for new profile
<b>benchmark profile delete</b>		
	admin	delete benchmark generator profile
name <name>		profile to delete
<b>benchmark profile disable</b>		
	admin	disable benchmark generator profile
name <name>		profile to disable
<b>benchmark profile enable</b>		
	admin	enable benchmark generator profile
name <name>		profile to enable
<b>benchmark profile start</b>		
	admin	start benchmark generator profile

Command	Access	Description
name <name>		profile to start
[dst-mac <MAC address: XX:XX:XX:XX:XX:XX>]		destination MAC address
[vid <NUMBER: 1-4095>]		customer VLAN ID
<b>benchmark profile stop</b>		
name <name>	admin	stop benchmark generator profile
		profile to stop
<b>benchmark profile trigger</b>		
	admin	trigger a connectivity test for the selected benchmark profile to the targeted reflector node
name <name>		profile to test
{connectivity-test}		trigger a connectivity test on the selected profile
[dst-mac <MAC address: XX:XX:XX:XX:XX:XX>]		destination MAC address
[vid <NUMBER: 1-4095>]		customer VLAN ID
<b>benchmark profile show</b>		
	limited	display generator profile information
<b>benchmark profile show</b>		
	limited	display generator profile information
name <name>		Show profile information
{frameloss}		only show frameloss test results
{latency}		only show latency test results
{pdv}		only show pdv test results
{statistics}		show profile statistics and test results
{throughput}		only show throughput test results
<b>benchmark profile clear</b>		
	admin	clear generator profile
name <name>		clear profile configuration information
{statistics}		clear profile statistics
<b>benchmark disable</b>		
	admin	disable benchmark globally
<b>benchmark enable</b>		
	admin	enable benchmark globally
<b>benchmark set</b>		
	admin	set benchmark attributes
{port <Port>}		benchmark port, default: none
{role <String>}		select generator or reflector role, default: reflector
{mode <String>}		set service mode, default: in-service

Command	Access	Description
<b><i>benchmark show</i></b>	limited	show benchmark information
<b><i>benchmark unset</i></b>		
	admin	unset benchmark attributes
{port}		unset the benchmark port, default: none
{role}		unset the generator or reflector role, default: reflector
{mode}		unset the service mode, default: in-service
<b>blade</b>		
<b><i>blade show</i></b>		
	limited	show blade information
[attributes]	limited	show board attributes
[capabilities]	limited	show blade capabilities
[information]	limited	show blade information
[state]	limited	show blade state
<b>broadcast-containment</b>		
<b><i>broadcast-containment disable</i></b>		
	admin	disable broadcast containment globally
<b><i>broadcast-containment enable</i></b>		
	admin	enable broadcast containment globally
<b><i>broadcast-containment add</i></b>		
	admin	add members to a defined filter
filter <filter>		filter name
{port <Port list>}		ports to add to the filter
<b><i>broadcast-containment create</i></b>		
	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
{containment-classification <String List>}		traffic classes covered by the filter
<b><i>broadcast-containment delete</i></b>		
	admin	delete a broadcast containment filter
filter <filter>		filter name
<b><i>broadcast-containment remove</i></b>		
	admin	remove members from a defined filter
filter <filter>		filter name
{port <Port list>}		ports to remove from the filter

Command	Access	Description
<b><i>broadcast-containment set</i></b>	admin	set broadcast containment filter attributes
filter <filter>		filter name
[kpbs <NUMBER: 0-10000000>]		kilobits per-second to allow
[name <String>]		rename filter
{containment-classification <String List>}		traffic classes covered by the filter
<b><i>broadcast-containment set</i></b>	admin	set broadcast containment configuration
{resource-mode <String>}		resource usage mode
{ignore-raps-msgs <String>}		Ignore R-APS messages when filtering PDUs
<b><i>broadcast-containment show</i></b>	limited	show global broadcast-containment filter information
<b><i>broadcast-containment show</i></b>	limited	show detailed broadcast-containment filter information
filter <filter>		broadcast-containment filter to show
<b><i>broadcast-containment show</i></b>	limited	show port filter membership
port <port>		port list
<b><i>broadcast-containment show</i></b>	limited	show vlan filter membership
vlan <vlan>		vlan list
<b><i>broadcast-containment show</i></b>	limited	show virtual-switch filter membership
vs <vs>		virtual-switch
<b><i>broadcast-containment show</i></b>	limited	show filter summary
<b>bfd</b>		
<b><i>bfd profile create</i></b>	admin	create a BFD profile
profile <profile>		BFD profile name
[receive-interval <String>]		receive interval for BFD packets, default: 100
[role <String>]		role, default: active
[lsp-gachtype <String>]		LSP G-ACh type, default: 22
[transmit-interval <String>]		transmit interval for BFD packets, default: 100
<b><i>bfd profile delete</i></b>	admin	delete a BFD profile
profile <profile>		BFD profile name

Command	Access	Description
<b><i>bfd profile set</i></b>	admin	set BFD profile parameters
profile <profile>		BFD profile name
[receive-interval <String>]		receive interval for BFD packets, default: 100
[role <String>]		role, default: active
[Lsp-gachtype <String>]		Lsp gachtype, default: 22
[transmit-interval <String>]		transmit interval for BFD packets, default: 100
<b><i>bfd profile show</i></b>	limited	show BFD profile configuration
<b><i>bfd profile show</i></b>	limited	show a BFD profile
profile <profile>		BFD profile name
<b><i>bfd profile unset</i></b>	admin	unset BFD profile parameters
profile <profile>		BFD profile name
[receive-interval]		receive interval for BFD packets, default: 100
[role]		role, default: active
[Lsp-gachtype]		Lsp gachtype, default: 22
[transmit-interval]		transmit interval for BFD packets, default: 100
<b><i>bfd session clear</i></b>	admin	clear BFD session statistics
session <session>		BFD session name
{statistics}		total statistics
<b><i>bfd session create</i></b>	admin	create a BFD session
session <session>		BFD session name
{neighbor <IP address>}		next hop IP address
{profile <MPLS BFD Profile>}		BFD profile to be used for this session
<b><i>bfd session delete</i></b>	admin	delete a BFD session
session <session>		BFD session name
<b><i>bfd session disable</i></b>	admin	disable a BFD session (trigger)
session <session>		BFD session name
<b><i>bfd session enable</i></b>	admin	enable a BFD session (trigger)
session <session>		BFD session name
<b><i>bfd session set</i></b>	admin	set BFD Session parameters
session <session>		BFD session name
{profile <MPLS BFD Profile>}		profile

Command	Access	Description
<b><i>bfd session show</i></b>	limited	show a BFD session
<b><i>bfd session show</i></b>	limited	show a BFD session
{all-ip}		list all IP BFD sessions
{all-lsp}		list all LSP 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
<b><i>bfd session show</i></b>	limited	show a BFD session
session <session>		BFD session name
{statistics}		total statistics
<b><i>bfd session unset</i></b>	admin	unset BFD session parameters to default
session <session>		BFD session name
{profile}		profile
<b><i>bfd disable</i></b>	admin	disable BFD globally
<b><i>bfd enable</i></b>	admin	enable BFD globally
<b><i>bfd show</i></b>	limited	show BFD global configuration
<b>cfm</b>		
<b><i>cfm delay clear</i></b>	admin	clear delay-measurement statistics
{statistics}		Clears the total delay statistics globally, across services and meps.
<b><i>cfm delay clear</i></b>	admin	clear delay-measurement statistics
service <service>		cfm service name

Command	Access	Description
{port <Port>}		port
{vlan <VLAN>}		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.
<b>cfm delay cancel</b>		
<b>cfm delay cancel</b>	admin	cancel DMM to a Remote MEP
service <service>		service name
{port <Port>}		port
{vlan <VLAN>}		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
<b>cfm delay delete</b>		
<b>cfm delay delete</b>	admin	delete all delay measurement sessions
<b>cfm delay delete</b>		
<b>cfm delay delete</b>	admin	delete delay measurement session
service <service>		cfm service
{port <Port>}		port
{vlan <VLAN>}		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
<b>cfm delay send</b>		
<b>cfm delay send</b>	admin	Initiate a DMM session from the local-mep to the remote-mep.
service <service>		cfm service name
{port <Port>}		port
{vlan <VLAN>}		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

Command	Access	Description
		test iteration should run
{dmm-interval <String>}		DMM transmission interval index or time, default: 100ms
{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
[accelerate]		Hardware assisted DMM session
<b>cfm delay show</b>		
	limited	show DMM 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
<b>cfm delay show</b>		
	limited	show service DMM 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
{priority <NUMBER: 0-7>}		DMM message priority
{test-id <NUMBER: 0-4294967295>}		Test ID
{history}		history
<b>cfm delay-responder create</b>		
	admin	create DMM responder
service <service>		service name
{port <Port>}		port

Command	Access	Description
{vlan <VLAN>}		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
<b>cfm delay-responder clear</b>		
	admin	clear DMM responder
service <service>		service name
{port <Port>}		port
{vlan <VLAN>}		VLAN
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep
[mepid <NUMBER: 1-8191>]		Mepid of the remote-mep
<b>cfm delay-responder delete</b>		
	admin	delete DMM responder
service <service>		service name
{port <Port>}		port
{vlan <VLAN>}		VLAN
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep
[mepid <NUMBER: 1-8191>]		Mepid of the remote-mep
<b>cfm delay-responder show</b>		
	admin	show all delay responder sessions
<b>cfm delay-responder show</b>		
	admin	show DMM responder
service <service>		service name
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep
<b>cfm frame-loss clear</b>		
	admin	clear loss-measurement statistics
{statistics}		Clears the total frame-loss statistics globally, across services and meps.
<b>cfm frame-loss clear</b>		
	admin	clear loss-measurement statistics
service <service>		cfm service name
{port <Port>}		port
{vlan <VLAN>}		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.
<b>cfm frame-loss cancel</b>		
	admin	cancel LMM to a Remote MEP
service <service>		service name

Command	Access	Description
{port <Port>}		port
{vlan <VLAN>}		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
<b>cfm frame-loss delete</b>	admin	delete all frame loss sessions
<b>cfm frame-loss delete</b>	admin	delete frame loss session
service <service>		cfm service
{port <Port>}		port
{vlan <VLAN>}		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
<b>cfm frame-loss send</b>	admin	Initiate a LMM session from the local-mep to the remote-mep.
service <service>		cfm service name
{port <Port>}		port
{vlan <VLAN>}		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 LMMs to transmit, default: 100
{duration <SECONDS: 1-65535>}		Duration is the amount of time in seconds the test iteration should run
{lmm-interval <String>}		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: 2000-1000>}		LMM timeout(ms), default: 5000ms
{fln-threshold <NUMBER: 0-2147483647>}		Frame Loss Near threshold

Command	Access	Description
{ff-threshold <NUMBER: 0-2147483647>}		Frame Loss Far threshold
{seq-threshold <NUMBER: 0-65535>}		Bad Sequence Number error threshold
{data-priority <String>}		data-traffic priority (0-7, or all), default: 7
[accelerate]		Hardware assisted Imm session
<b>cfm frame-loss show</b>		
	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
<b>cfm frame-loss show</b>		
	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
<b>cfm frame-loss-responder create</b>		
	admin	create LMM responder
service <service>		service name
{port <Port>}		port
{vlan <VLAN>}		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 Imm-responder session
{data-priority <String>}		Data-traffic priority (0-7, or all), default:7
<b>cfm frame-loss-responder clear</b>		
	admin	clear LMM responder
service <service>		service name
{port <Port>}		port
{vlan <VLAN>}		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
<b>cfm frame-loss-responder delete</b>	admin	delete LMM responder
service <service>		service name
{port <Port>}		port
{vlan <VLAN>}		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
<b>cfm frame-loss-responder show</b>	admin	show all frame loss responder sessions
<b>cfm frame-loss-responder show</b>	admin	show LMM responder
service <service>		service name
{local-mepid <NUMBER: 1-8191>}		Mepid of the local-mep
<b>cfm synthetic-loss clear</b>	admin	clear synthetic loss-measurement statistics
{statistics}		Clears the total synthetic-loss statistics globally, across services and meps.
<b>cfm synthetic-loss clear</b>	admin	clear synthetic loss-measurement statistics
service <service>		cfm service
{port <Port>}		port
{vlan <VLAN>}		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.
<b>cfm synthetic-loss cancel</b>	admin	cancel SLM to a Remote MEP
service <service>		service name
{port <Port>}		port
{vlan <VLAN>}		VLAN
{local-mepid <NUMBER: 1-8191>}		local MEPID
{mepid <NUMBER: 1-8191>}		remote MEPID
{test-id <NUMBER: 1-4294967295>}		Test ID
<b>cfm synthetic-loss delete</b>	admin	delete all synthetic loss-measurement sessions

Command	Access	Description
<b>cfm synthetic-loss delete</b>	admin	delete synthetic loss-measurement session
service <service>		cfm service
{port <Port>}		port
{vlan <VLAN>}		VLAN
{local-mepid <NUMBER: 1-8191>}		local MEPID
{mepid <NUMBER: 1-8191>}		remote MEPID
{test-id <NUMBER: 1-4294967295>}		Test ID
<b>cfm synthetic-loss send</b>	admin	send SLM to a Remote MEP
service <service>		service name
{port <Port>}		port
{vlan <VLAN>}		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 <String>}		SLM transmission interval index or time, default: 100ms
{priority <NUMBER: 0-7>}		SLM 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 SLM test has to iterate, default: 1, Continuous test: 0
{timeout <MILLISECONDS: 2000-1000>}		SLM timeout(ms), default: 5000ms
{frame-size <NUMBER: 65-1400>}		Base CFM Frame size
{fln-threshold <NUMBER: 0-65535>}		Frame Loss Near threshold
{flf-threshold <NUMBER: 0-65535>}		Frame Loss Far threshold
<b>cfm synthetic-loss show</b>	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
<b>cfm synthetic-loss show</b>	limited	show service SLM session
service <service>		service name
[order-by-mepid]	limited	Order results by MEPID

Command	Access	Description
[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
<b>cfm linktrace clear</b>		
	admin	clear linktrace information
{statistics}		statistics table
<b>cfm linktrace clear</b>		
	admin	clear linktrace information
service <service>		cfm service
{port <Port>}		port
{mepid <NUMBER: 1-8191>}		MEPID
{statistics}		statistics
{vlan <VLAN>}		VLAN
<b>cfm linktrace send</b>		
	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>}		vlan
<b>cfm linktrace send-mac</b>		
	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
{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>}		VLAN
<b>cfm linktrace show</b>		
	limited	show LTRs
[order-by-mepid]	limited	Order results by MEPID
[exclude-evpl]	limited	Exclude EVPL interfaces

Command	Access	Description
<b>cfm linktrace show</b>	limited	show LTRs for last LTM
service <service>		service name
{port <Port>}		port
{mepid <NUMBER: 1-8191>}		MEPID
{vlan <VLAN>}		VLAN
<b>cfm loopback clear</b>	admin	clear loopback statistics
{statistics}		statistics
<b>cfm loopback clear</b>	admin	clear loopback statistics
service <service>		cfm service
{port <Port>}		port
{mepid <NUMBER: 1-8191>}		MEPID
{statistics}		statistics
{vlan <VLAN>}		VLAN
<b>cfm loopback send</b>	admin	send LBM to a Remote MEP
service <service>		service name
{port <Port>}		port
{vlan <VLAN>}		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 <NUMBER: 10-60000>}		LBM interval(ms), default: 100
{timeout <NUMBER: 2000-10000>}		LBM timeout(ms), default: 5000
<b>cfm loopback send-mac</b>	admin	send LBM to a MAC
service <service>		service name
{port <Port>}		port
{vlan <VLAN>}		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 <NUMBER: 10-60000>}		LBM interval(ms), default: 100
{timeout <NUMBER: 2000-10000>}		LBM timeout(ms), default: 5000

Command	Access	Description
<b>cfm loopback show</b>	limited	show LBM statistics
[order-by-mepid]	limited	Order results by MEPID
[exclude-evpl]	limited	Exclude EVPL interfaces
<b>cfm loopback show</b>	limited	show service LBM statistics
service <service>		service name
[order-by-mepid]	limited	Order results by MEPID
[exclude-evpl]	limited	Exclude EVPL interfaces
<b>cfm md create</b>	admin	create a Maintenance Domain
md <md>		Maintenance Domain administrative name
{level <NUMBER: 0-7>}		Maintenance Domain level
{md-name-format <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
<b>cfm md delete</b>	admin	delete Maintenance Domain attributes
md <md>		Maintenance Domain
<b>cfm md set</b>	admin	set Maintenance Domain attributes
level <level>		Maintenance Domain level
{name <String[43]>}		Maintenance Domain administrative name
{md-name-format <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
<b>cfm md set</b>	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 <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
<b>cfm md show</b>	limited	show Maintenance Domain information
level <level>		Maintenance Domain level
{services}		show service information
<b>cfm md show</b>	limited	show Maintenance Domain information
md <md>		Maintenance Domain
{services}		show service information
<b>cfm md show</b>	limited	show all Maintenance Domains
<b>cfm mep clear</b>	admin	clear stats
{statistics}		statistics
<b>cfm mep clear</b>	admin	clear stats
service <service>		service name
{port <Port>}		port
{vlan <VLAN>}		VLAN
{mepid <NUMBER: 1-8191>}		MEPID
{statistics}		statistics
<b>cfm mep create</b>	admin	create a MEP
service <service>		service name
port <port>		service port
{vlan <VLAN>}		VLAN
{type <String>}		MEP type
{mepid <NUMBER: 1-8191>}		MEPID
<b>cfm mep delete</b>	admin	delete a MEP
service <service>		service name
{port <Port>}		port
{vlan <VLAN>}		VLAN
{mepid <NUMBER: 1-8191>}		MEPID
<b>cfm mep disable</b>	admin	disable a MEP
service <service>		service name
{port <Port>}		port
{vlan <VLAN>}		VLAN
{mepid <NUMBER: 1-8191>}		MEPID
<b>cfm mep enable</b>	admin	enable a MEP
service <service>		service name

Command	Access	Description
{port <Port>}		port
{vlan <VLAN>}		VLAN
{mepid <NUMBER: 1-8191>}		MEPID
<b>cfm mep set</b>		
	admin	set MEP attributes
service <service>		service name
{port <Port>}		port
{vlan <VLAN>}		VLAN
{local-mepid <NUMBER: 1-8191>}		local MEPID
{block-opposite-fault-threshold <NUMBER>}		Frame threshold for generating fault, default: 0
{block-opposite-fault-time <NUMBER: 1-3600>}		Frame sampling time in minutes, default: 5
{ccm-comment <String[32]>}		CCM Comment
{ccm-priority <NUMBER: 0-7>}		CCM message priority, default: 3
{ccm-state <String>}		CCM Tx state, default: on
{lrm-priority <NUMBER: 0-7>}		LTM message priority, default: 3
{mepid <NUMBER: 1-8191>}		MEPID
{tag-mode <String>}		Additional VLAN tag mode
{tag-vid <NUMBER: 0-4095>}		Additional VLAN tag vid
{tag-priority <NUMBER: 0-7>}		Additional VLAN tag priority
{type <String>}		MEP type, default: down
<b>cfm mep unset</b>		
	admin	unset MEP attributes
service <service>		service name
{port <Port>}		port
{vlan <VLAN>}		VLAN
{local-mepid <NUMBER>}		MEPID
{ccm-comment}		CCM Comment
<b>cfm mep show</b>		
	limited	show MEPs
[order-by-mepid]	limited	Order results by MEPID
[exclude-evpl]	limited	Exclude EVPL interfaces
<b>cfm mep show</b>		
	limited	show MEP information
service <service>		service name
{port <Port>}		port
{vlan <VLAN>}		vlan
{mepid <NUMBER: 1-8191>}		MEPID
{agent}		retrieve from agent

Command	Access	Description
<b>cfm mip clear</b>	admin	clear MIP
service <service>		service name
port <port>		service port
{statistics}		statistics
<b>cfm mip create</b>	admin	create MIP
vlan <vlan>		VLAN or list of VLANs including VID 0
port <port>		port
{level <NUMBER: 0-7>}		MD level
<b>cfm mip create</b>	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
<b>cfm mip delete</b>	admin	delete a MIP
vlan <vlan>		VLAN or list of VLANs including VID 0
port <port>		port
{level <NUMBER: 0-7>}		MD level
<b>cfm mip delete</b>	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
<b>cfm mip show</b>	limited	show MIPs
{order-by-interface}	limited	Order results by interface
<b>cfm mip show</b>	limited	show MIP information
vlan <vlan>		VLAN or list of VLANs including VID 0
port <port>		port
{level <NUMBER: 0-7>}		MD level
<b>cfm mip show</b>	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
<b>cfm mip-ccm-db disable</b>	admin	disable MIP CCM database learning
<b>cfm mip-ccm-db enable</b>	admin	enable MIP CCM database learning
<b>cfm mip-ccm-db show</b>	limited	show all MIP CCM database records
<b>cfm mip-ccm-db show</b> vlan <vlan>	limited	show MIP CCM database records for a service network VLAN
<b>cfm remote-mep clear</b> {statistics}	admin	clear Remote MEP statistics statistics
<b>cfm remote-mep clear</b> service <service> mepid <mepid> {statistics}	admin	clear Remote MEP statistics service name Remote MEP MEPID statistics
<b>cfm remote-mep create</b> service <service> mepid <mepid>	admin	create Remote MEP service name Remote MEP MEPID
<b>cfm remote-mep delete</b>	admin	delete Remote MEP
<b>cfm remote-mep delete</b> service <service> mepid <mepid>	admin	delete Remote MEP service name Remote MEP MEPID
<b>cfm remote-mep disable</b> service <service> mepid <mepid>	admin	disable Remote MEP service name Remote MEP MEPID
<b>cfm remote-mep enable</b> service <service> mepid <mepid>	admin	enable Remote MEP service name Remote MEP MEPID
<b>cfm remote-mep set</b> service <service> mepid <mepid> {hold-state <String>} {mac <MAC address:}	admin	set Remote MEP attributes service name Remote MEP MEPID hold after enabled until stable MAC address

Command	Access	Description
XX:XX:XX:XX:XX:XX>		
<b>cfm remote-mep show</b>	limited	show Remote MEPs
{y1731}		Y.1731 Information
<b>cfm remote-mep show</b>	limited	show Remote MEP information
service <service>		service name
mepid <mepid>		Remote MEP MEPID
<b>cfm remote-mep unset</b>	admin	Unset
service <service>		service name
mepid <mepid>		Remote MEP MEPID
{mac}		MAC address
<b>cfm service clear</b>	admin	clear Remote MEP statistics
{statistics}		statistics
<b>cfm service clear</b>	admin	Clear statistics of all CFM services
service <service>		service name
{statistics}		statistics
<b>cfm service create</b>	admin	create CFM service
static-backup-pbt <static-backup-pbt>		PBB-TE tunnel service
[accelerate]		Hardware assisted service
[level <NUMBER: 0-7>]		MD level
{ma-name-format <String>}		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>}		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>]		initialize next-mepid
<b>cfm service create</b>	admin	create CFM service
static-pbt <static-pbt>		PBB-TE tunnel service
[accelerate]		Hardware assisted service
[level <NUMBER: 0-7>]		MD level
{ma-name-format <String>}		Short MA Name Format

Command	Access	Description
{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>}		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>]		initialize next-mepid
<b>cfm service create</b>		
	admin	create CFM service
vlan <vlan>		VLAN(s) service
[accelerate]		Hardware assisted service
{default-mep-type <String>}		Default type for MEPs
[level <NUMBER: 0-7>]		MD level
{ma-name-format <String>}		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>}		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>]		initialize next-mepid
<b>cfm service create</b>		
	admin	create CFM service
vs <vs>		virtual switch service
[accelerate]		Hardware assisted service
{default-mep-type <String>}		Default type for MEPs
[level <NUMBER: 0-7>]		MD level
{ma-name-format <String>}		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>}		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>]		initialize next-mepid

Command	Access	Description
<b>cfm service delete</b>	admin	delete a CFM service
service <service>		service name
<b>cfm service disable</b>	admin	disable a CFM service
service <service>		service name
<b>cfm service enable</b>	admin	enable a CFM service
service <service>		service name
<b>cfm service set</b>	admin	set a CFM Service attributes
service <service>		service name
{accelerate}		Hardware assisted CFM
{alarm-priority <NUMBER: 1-5>}		service fault alarm priority, default: 3
{alarm-time <NUMBER: 0-36000>}		service fault alarm time in milliseconds, default: 1000
{ccm-interval <String>}		CCM transmission interval index or time, default: 1sec
{ccm-loss-bucket-size <NUMBER: 1-60>}		CCM loss bucket size in minutes, default: 15
{ccm-loss-num <NUMBER: 1-255>}		CCM loss number, default: 3
{ccm-loss-stats <String>}		CCM Loss Statistics per Remote MEP, default: disable
{level <NUMBER: 0-7>}		MD level, default: 3
{ma-name-format <String>}		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>}		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 <NUMBER: 10-36000>}		service fault reset time
{remote-mep-aging-time <NUMBER: 0-3600000>}		remote mep hold time, default: 0 (disabled)
{remote-mep-discovery <String>}		automatically discover remote MEPs
{sender-id-type <String>}		Sender ID TLV type
<b>cfm service unset</b>	admin	unset CFM service
service <service>		service name

Command	Access	Description
{accelerate}		HW assisted CFM
<b>cfm service show</b>	limited	show CFM services
<b>cfm service show</b>	limited	show CFM service information
service <service>		service name
{mep}		show service MEPs
{remote-mep}		show service Remote MEPs
{statistics}		Global CFM Statistics
<b>cfm stack show</b>	limited	show stacks on all ports in all service networks
{order-by-interface}	limited	Order results by interface
<b>cfm stack show</b>	limited	show stacks on all ports in a service network
vlan <vlan>		VLAN
{order-by-interface}	limited	Order results by interface
<b>cfm clear</b>	admin	clear CFM statistics
{statistics}		statistics
<b>cfm disable</b>	admin	disable CFM globally
<b>cfm enable</b>	admin	enable CFM globally
<b>cfm set</b>	admin	set CFM attributes
{dot1ad-strict <String>}		Strict 802.1ad compliance, default: on
{ethertype <NUMBER: 2048-65535>}		ethernet type, default: 35074 (0x8902)
{l2-loop-detect <String>}		L2 Loop Detection, default: off
{dmm-default-count <NUMBER: 2-65535>}		default DMM count, default: 100
{dmm-default-interval <String>}		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 <String>}		default LMM interval(ms), default: 100ms
{lmm-default-timeout <MILLISECONDS: 2000-10000>}		default LMM timeout(ms), default: 5000ms
{lhm-default-count <NUMBER: 1-3000>}		default LBM count, default: 1
{lhm-default-interval <NUMBER: 10-60000>}		default LBM interval(ms), default: 100ms

Command	Access	Description
{lbn-default-timeout <NUMBER: 2000-10000>}		default LBN timeout(ms), default: 5000ms
{slm-default-count <NUMBER: 2-65535>}		default SLM count, default: 100
{slm-default-interval <String>}		default SLM interval(ms), default: 100ms
{slm-default-timeout <MILLISECONDS: 2000-10000>}		default SLM timeout(ms), default: 5000ms
{mip-level-enforcement <String>}		MIP MD Level enforcement, default: on
{rmep-hold-time <NUMBER: 10-300000>}		remote MEP hold time, default: 10000
{vs-automatic-meps <String>}		Automatic UNI Up MEP creation, default: on
{y1731ethertype <NUMBER: 2048-65535>}		y.1731 ethernet type, default: 35074 (0x8902)
<b>cfm unset</b>		
	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
{lbn-default-count}		default LBN count, default: 1
{lbn-default-interval}		default LBN interval(ms), default: 100ms
{lbn-default-timeout}		default LBN 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)
<b>cfm show</b>		
	limited	show CFM information
{port}		CFM port capabilities
{statistics}		Global CFM Statistics
<b>chassis</b>		
<b>chassis door-alarm disable</b>		
	admin	disable door monitoring

Command	Access	Description
{door <String>}		inner or outer door
<b>chassis door-alarm enable</b>	admin	enable door monitoring
{door <String>}		inner or outer door
<b>chassis door-alarm set</b>	admin	configure door alarm dampening settings
{door <String>}		door to configure
[flap-count <NUMBER: 3-30>]		number of events to trigger dampening
[flap-detect <String>]		turns door alarm dampening on or off
[flap-detect-time <SECONDS: 3-60>]		door event detect window in seconds
[flap-hold-time <SECONDS: 60-3600>]		door event hold time in seconds
<b>chassis door-alarm show</b>	limited	show door alarm information
<b>chassis post clear</b>	admin	clear POST errors
<b>chassis post disable</b>	admin	disable POST
<b>chassis post enable</b>	admin	enable POST
<b>chassis post show</b>	limited	show POST status
<b>chassis force-reset</b>	admin	force reset the device
<b>chassis reboot</b>	limited	reboot this device
[cancel]	admin	cancel scheduled reboot
[show]	limited	show scheduled reboot
[cold-start]	admin	Start the system fresh, including POST as well as resetting all the HW components
[now]	admin	reboot immediately
<b>chassis reboot</b>	admin	reboot this device
delay <delay>		delay to reboot (N[yMwdhms]...)
[nopost]	admin	suppress POST on reboot
<b>chassis reboot</b>	admin	reboot this device
nopost <nopost>		disable POST at reboot
[now]	admin	reboot immediately
<b>chassis reboot</b>	admin	reboot this device
time <time>		time/date to reboot yyyy-mm-dd.hh:mm:ss or

Command	Access	Description
		yy-mm-dd or mm-dd '.' hh:mm:ss or hh:mm
[nopost]	admin	suppress POST on reboot
<b>chassis set</b>		
	admin	set chassis attributes
[temperature-high-threshold <NUMBER>]	limited	set chassis high temperature threshold
[temperature-low-threshold <NUMBER>]	limited	set chassis low temperature threshold
[dying-gasp <String>]	limited	set chassis dying gasp
[oam-services-port-role <String>]	limited	set role of oam-services-port (port 20)
<b>chassis show</b>		
	limited	show chassis information
[capabilities]	limited	show chassis capabilities
[device-id]	limited	show chassis device ID
[door]	limited	show chassis door information
[dying-gasp]	limited	show chassis dying-gasp status
[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
<b>clear</b>		
<b>cli</b>		
<b>cli search</b>		
	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
<b>cli show</b>		
	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
<b>command-log</b>		

Command	Access	Description
<b>command-log disable</b>	super	disable command logging
<b>command-log enable</b>	super	enable command logging
<b>command-log repeat</b>	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
<b>command-log show</b>	limited	show command log
{containing <String[128]>}		containing string
{destination}		log storage destination
{exit-status <NUMBER: 0-4294967295>}		entries with given 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 into the command log (N[yMwdhms]...)
{mine}		my entries
{on-terminal <String[32]>}		on connection
{privilege <String>}	super	user access level
{recent}		entries into the history log within the last hour
{sequence-id <NUMBER>}		specified ID(s) only
{since-activated}		from system start or failover
{status}		command log configuration state
{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)
{user <String[32]>}		containing string
{verbose}		full report
{yesterday}		yesterday's entries in the command log
<b>configuration</b>		

<b>Command</b>	<b>Access</b>	<b>Description</b>
<b><i>configuration augment</i></b>	admin	augment current configuration with a 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
[login-id <String[32]>]		FTP/SFTP username
[password <Password String>]		enter the password in clear text
[secret <String[256]>]		set the password using a pre-encrypted string
<b><i>configuration install</i></b>	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
[login-id <String[32]>]		FTP/SFTP username
[password <Password String>]		enter the password in clear text
[secret <String[256]>]		set the password using a pre-encrypted string
<b><i>configuration list</i></b>	limited	list all configuration files
<b><i>configuration reset-to-factory-defaults</i></b>	admin	reset to factory defaults
<b><i>configuration reset-to-user-config</i></b>	admin	reset configuration to user defaults
filename <filename>		configuration file name
<b><i>configuration save</i></b>	admin	save configuration
<b><i>configuration save</i></b>	admin	save configuration
filename <filename>		configuration file name
<b><i>configuration search</i></b>	limited	search configuration file

Command	Access	Description
[file <String>]	limited	filename (no path)
[lines <NUMBER: 0-40>]	limited	search window size
{string <String>}	limited	search string
<b>configuration set</b>		
[default-save-filename <String>]	admin	filename
[default-load-filename <String>]	admin	filename
<b>configuration show</b>		
[line-numbered]	limited	show configuration
[differences-from-saved]	limited	with line numbers
[brief]	limited	changes since last saved
		without commented lines
<b>device-archive</b>		
<b>device-archive save</b>		
	limited	save device archive
<b>device-archive show</b>		
	limited	show device archive
<b>dhcp</b>		
<b>dhcp client lease renew</b>		
	admin	renew DHCP lease
<b>dhcp client options set</b>		
{boot-file <String>}		set dhcp options
{dns <String>}		set boot file DHCP option (67)
{host-name <String>}		set DNS DHCP option (6)
{domain-name <String>}		set host name DHCP option (12)
{lease-time <String>}		set domain name DHCP option (15)
{log-server <String>}		set lease time option (51)
{ntp <String>}		set log server DHCP option (7)
{router <String>}		set NTP DHCP option (42)
{subnet <String>}		set router DHCP option (3)
{tftp-server <String>}		set subnet DHCP option (1)
{time-offset <String>}		set TFTP server DHCP option (66)
		set time offset DHCP option (2)
<b>dhcp client options show</b>		
	limited	show DHCP client option state

Command	Access	Description
<b>dhcp client disable</b>	admin	disable DHCP
<b>dhcp client enable</b>	admin	enable DHCP
<b>dhcp client set</b>	admin	set DHCP client attributes
{interface <String>}		interface on which to run DHCP
{discovery-interval <SECONDS: 1-60>}		DHCP discovery interval
<b>dhcp client show</b>	limited	show DHCP client configuration
{config}		show configuration from enabled DHCP options
{options}		show DHCP client options state
{state}		show DHCP client state
<b>dhcp l2-relay-agent clear</b>	admin	clear statistics for L2 relay agent
{global-statistics}		clear L2 relay agent global statistics
<b>dhcp l2-relay-agent clear</b>	admin	clear statistics for L2 relay agent
vlan <vlan>		L2 relay agent VLAN list
{statistics}		statistics table
<b>dhcp l2-relay-agent create</b>	admin	create L2 relay agent
{vlan <VLAN list>}		VLAN list for new L2 relay agents
<b>dhcp l2-relay-agent delete</b>	admin	delete L2 relay agent
{vlan <Dhcp L2 Relay list>}		L2 relay agent VLAN list
<b>dhcp l2-relay-agent disable</b>	admin	disable L2 relay agent
{vlan <Dhcp L2 Relay list>}		L2 relay agent VLAN list
<b>dhcp l2-relay-agent enable</b>	admin	enable L2 relay agent
{vlan <Dhcp L2 Relay list>}		L2 relay agent VLAN list
<b>dhcp l2-relay-agent set</b>	admin	set attributes
{circuit-id-type <String>}		the Circuit ID type
{remote-id-type <String>}		the Remote ID type
<b>dhcp l2-relay-agent unset</b>	admin	unset attributes
{circuit-id-type}		the Circuit ID type
{remote-id-type}		the Remote ID type

Command	Access	Description
<b><i>dhcp l2-relay-agent set</i></b>	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 <String>}		trust level
{cid-string <String[64]>}		circuit ID string
{rid-string <String[64]>}		remote ID string
<b><i>dhcp l2-relay-agent unset</i></b>	admin	unset VLAN/port attributes
vlan <vlan>		L2 relay agent VLAN list to unset attributes on
port <port>		ports to unset attributes on
{trust-mode}		trust level
{cid-string}		Circuit ID string
{rid-string}		Remote ID string
<b><i>dhcp l2-relay-agent show</i></b>	limited	show settings for L2 relay agent
<b><i>dhcp l2-relay-agent show</i></b>	limited	show settings for L2 relay agent
vlan <vlan>		L2 relay agent VLAN list
{statistics}		statistics for L2 relay agent
<b><i>dhcp show</i></b>	limited	show DHCP config
<b>dhcpv6</b>		
<b><i>dhcpv6 client lease renew</i></b>	admin	renew DHCPv6 lease
<b><i>dhcpv6 client options set</i></b>	admin	set DHCPv6 option state
{bootfile-url <String>}		set boot file URL DHCPv6 option (60)
{dns-servers <String>}		set DNS servers DHCPv6 option (23)
{domain-list <String>}		set domain list DHCPv6 option (24)
{ntp-servers <String>}		set NTP servers DHCPv6 option (56)
{posix-timezone <String>}		set POSIX timezone DHCPv6 option (41)
{tzdb-timezone <String>}		set TZDB timezone DHCPv6 option (42)
<b><i>dhcpv6 client options show</i></b>	limited	show DHCPv6 option state
<b><i>dhcpv6 client options unset</i></b>	admin	set DHCPv6 option state to default
{bootfile-url}		set boot file URL DHCPv6 option (60) back to default (on)

Command	Access	Description
{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)
<b>dhcpv6 client rapid-commit disable</b>	admin	disable DHCPv6 rapid commit
<b>dhcpv6 client rapid-commit enable</b>	admin	enable DHCPv6 rapid commit
<b>dhcpv6 client rapid-commit show</b>	limited	show DHCPv6 rapid commit state
<b>dhcpv6 client clear</b>	admin	clear DHCPv6 statistics
{statistics}		clear DHCPv6 statistics
<b>dhcpv6 client disable</b>	admin	disable DHCPv6
<b>dhcpv6 client enable</b>	admin	enable DHCPv6
<b>dhcpv6 client set</b>	admin	set DHCPv6 attributes
{interface <String>}		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]...)
<b>dhcpv6 client show</b>	limited	show DHCPv6
{options}		DHCPv6 client option information
{state}		DHCPv6 client state
{statistics}		DHCPv6 client statistics
<b>dhcpv6 client unset</b>	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
<b>dhcpv6 ldra clear</b>	admin	clear statistics for LDRA
{global-statistics}		Clear LDRA global statistics
<b>dhcpv6 ldra clear</b>	admin	clear statistics for LDRA
vlan <vlan>		LDRA VLAN list
{statistics}		statistics table
<b>dhcpv6 ldra create</b>	admin	create LDRA
{vlan <VLAN list>}		VLAN list for new LDRAs
<b>dhcpv6 ldra delete</b>	admin	delete LDRA
{vlan <Dhcp Ldra list>}		LDRA VLAN list
<b>dhcpv6 ldra disable</b>	admin	disable LDRA
{vlan <Dhcp Ldra list>}		LDRA VLAN list
<b>dhcpv6 ldra enable</b>	admin	enable LDRA
{vlan <Dhcp Ldra list>}		LDRA VLAN list
<b>dhcpv6 ldra set</b>	admin	set attributes
{interface-id-type <String>}		the Interface ID type
{remote-id-type <String>}		the Remote ID type
{remote-id-option <String>}		include remote-id-option (37)
{remote-id-enterprise-number <NUMBER: 1-4294967295>}		IANA number for option 37. Broadband Forum: 3561, Ciena: 1271
<b>dhcpv6 ldra unset</b>	admin	unset attributes
{interface-id-type}		the Interface ID type
{remote-id-type}		the Remote ID type
{remote-id-option}		include remote-id-option (37)
{remote-id-enterprise-number}		IANA number for option 37. Broadband Forum: 3561, Ciena: 1271
<b>dhcpv6 ldra set</b>	admin	set VLAN/port attributes
vlan <vlan>		LDRA VLAN list to set attributes on
port <port>		ports to set attributes on
{trust-mode <String>}		trust level
{intid-string <String[64]>}		interface ID string
{rid-string <String[64]>}		remote ID string
<b>dhcpv6 ldra unset</b>	admin	unset VLAN/port attributes

Command	Access	Description
vlan <vlan>		LDRA VLAN list to unset attributes on
port <port>		ports to unset attributes on
{trust-mode}		trust level
{intid-string}		interface ID string
{rid-string}		remote ID string
<b>dhcpv6 ldra show</b>		
	limited	show settings for LDRA
<b>dhcpv6 ldra show</b>		
	limited	show settings for LDRA
vlan <vlan>		LDRA VLAN list to show
{statistics}		statistics for LDRA
<b>dhcpv6 show</b>		
	limited	show DHCPv6 config
<b>dns-client</b>		
<b>dns-client add</b>		
	admin	add DNS server
server <server>		DNS server IP address
<b>dns-client disable</b>		
	admin	disable DNS client
<b>dns-client disable</b>		
	admin	disable DNS server
server <server>		IP address of DNS server to disable
<b>dns-client enable</b>		
	admin	enable DNS server
server <server>		IP address of DNS server to enable
<b>dns-client enable</b>		
	admin	enable DNS client
<b>dns-client remove</b>		
	admin	remove DNS server
server <server>		DNS server IP address
<b>dns-client resolve</b>		
	limited	resolve host name or IP address
ip <ip>		host name or IP address
<b>dns-client set</b>		
	admin	set DNS client attributes
domain-name <domain-name>		DNS domain name
<b>dns-client set</b>		
	admin	set relative priority DNS server

Command	Access	Description
server <server>		DNS server IP address
{priority <NUMBER: 1-3>}		relative priority of DNS server
<b>dns-client show</b>		
	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
<b>dns-client unset</b>		
	admin	unset DNS client attributes
{domain-name}		DNS domain name
<b>dot1x</b>		
<b>dot1x auth clear</b>		
	admin	clear port authenticator statistics
port <port>		port(s) to clear
{statistics}		statistics table
<b>dot1x auth clear</b>		
	admin	clear all port authenticator statistics
{statistics}		statistics table
<b>dot1x auth disable</b>		
	admin	dot1x authentication disable
port <port>		ports to disable
<b>dot1x auth enable</b>		
	admin	dot1x authentication enable
port <port>		ports to enable
<b>dot1x auth pae-port-reauth</b>		
	admin	re-authenticate the port
port <port>		port(s) to reauthenticate
<b>dot1x auth set</b>		
	admin	set dot1x authentication port attributes
port <port>		list of ports
{eapol-version <NUMBER: 1-2>}		set the EAPOL version
{max-reauth-req <NUMBER: 1-10>}		set the max authentication request
{mode <String>}		set the port control to either auto/forceauth/forceunauth, default: auto
{reauthentication <String>}		enable reauthentication
{quiet-period <NUMBER: 1-65535>}		set the quiet period, default: 60
{reauth-period <NUMBER: 1-65535>}		set the reauthentication period

Command	Access	Description
{server-timeout <NUMBER: 1-180>}		set the server timeout, default: 30
{supp-timeout <NUMBER: 1-180>}		set the supplicant timeout
<b>dot1x auth show</b>		
	limited	Show Authenticator Port Configuration
{statistics}		show authenticator statistics
<b>dot1x auth show</b>		
	admin	show authenticator information per port
port <port>		port to show
<b>dot1x auth unset</b>		
	admin	unset dot1x authentication port attributes
port <port>		list of ports
{eapol-version}		unset the EAPOL version
{max-reauth-req}		unset the max authentication request
{mode}		unset the port contro
{reauthentication}		unset reauthentication
{quiet-period}		unset the quiet period
{reauth-period}		unset the reauthentication period
{server-timeout}		unset the server timeout
{supp-timeout}		unset the supplicant timeout
<b>dot1x supp clear</b>		
	admin	clear port supplicant statistics
port <port>		port(s) to clear
{statistics}		statistics table
<b>dot1x supp clear</b>		
	admin	clear all port supplicant statistics
{statistics}		statistics table
<b>dot1x supp disable</b>		
	admin	dot1x supplicant disable
port <port>		ports to disable
<b>dot1x supp enable</b>		
	admin	dot1x supplicant enable
port <port>		ports to enable
<b>dot1x supp set</b>		
	admin	set dot1x supplicant port attributes
port <port>		list of ports
{authentication-period <NUMBER: 1-65535>}		set the authentication period, default: 30
{eapol-version <NUMBER: 1-2>}		set the EAPOL version
{held-period <NUMBER: 1-65535>}		set the held period, default: 60
[password <Password String>]		password
[secret <String[256]>]		secret password

Command	Access	Description
{max-start <NUMBER: 1-65535>}		set the maximum retries, default: 3
{start-period <NUMBER: 1-65535>}		set the start period, default: 30
[username <String[32]>]		username
<b>dot1x supp show</b>		
	limited	show supplicant port configuration
{statistics}		show supplicant statistics
<b>dot1x supp show</b>		
	limited	show supplicant information per port
port <port>		show supplicant information per port
<b>dot1x supp unset</b>		
	admin	unset supplicant port attributes
port <port>		port(s) to unset
{username}		unset port username
{password}		unset port password
<b>dot1x disable</b>		
	admin	disable dot1x globally
<b>dot1x enable</b>		
	admin	enable dot1x globally
<b>dot1x pae-port-initialize</b>		
	admin	initialize the port
port <port>		port(s) to initialize
<b>dot1x show</b>		
	limited	show dot1x global information
<b>egress-port-restriction</b>		
<b>egress-port-restriction assign</b>		
	admin	assign the vlan/port to an EPR group
vlan <vlan>		VLAN object
port <port>		port object
{group <String>}		EPR group for VLAN/port
<b>egress-port-restriction disable</b>		
	admin	disable EPR
vlan <vlan>		VLAN list
<b>egress-port-restriction enable</b>		
	admin	enable EPR
vlan <vlan>		VLAN list
<b>egress-port-restriction set</b>		
	admin	set the group access rules
vlan <vlan>		VLAN object

Command	Access	Description
{a-access <String>}		access rules for group A
{b-access <String>}		access rules for group B
<b>egress-port-restriction show</b>		
	limited	show EPR information
<b>egress-port-restriction show</b>		
	limited	show EPR VLAN information
vlan <vlan>		VLAN list
<b>eoam</b>		
<b>eoam loopback ignore</b>		
	admin	ignore remote loopback command
port <port>		ports to enable
<b>eoam loopback process</b>		
	admin	process remote loopback
port <port>		ports to enable
<b>eoam loopback show</b>		
	limited	show loopback statistics
<b>eoam loopback show</b>		
	limited	show loopback statistics
port <port>		port to show
<b>eoam loopback start</b>		
	admin	start loopback
port <port>		ports to start loopback
<b>eoam loopback stop</b>		
	admin	stop loopback
port <port>		ports to stop loopback
<b>eoam clear</b>		
	admin	clear all OAM statistics
{statistics}		statistics table
<b>eoam disable</b>		
	admin	disable OAM globally
<b>eoam disable</b>		
	admin	disable OAM per port
port <port>		list of ports
<b>eoam enable</b>		
	admin	enable OAM globally
<b>eoam enable</b>		
	admin	enable OAM per port
port <port>		list of ports

Command	Access	Description
<b>eoam set</b>	admin	set OAM port attributes
port <port>		list of ports
{critical-event <String>}		set critical event
{dying-gasp <String>}		set dying gasp
{errd-frame-ev-notify <String>}		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 <String>}		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 <String>}		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 <String>}		set OAM mode to active/passive
{pdu-timer <MILLISECONDS: 100-1000>}		PDU timer in milliseconds
<b>eoam show</b>	limited	show OAM statistics
<b>eoam show</b>	limited	show OAM link events
{link-events}		show OAM link event configuration
{errd-events-statistics}		show link events statistics
<b>eoam show</b>	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
<b>file</b>		
cat [filename]	limited	list file to terminal
cd [dirname]	limited	change directory

Command	Access	Description
chmod [filename]	limited	change access mode of file
cp [src] [dst]	admin	copy file within local file system
ls [-acil] [[dirname]]	limited	list files
mkdir [dirname]	admin	create directory
mv [source] [destination]	admin	move file
ping [options] [host or IPv4 address]	limited	ping using IPv4
ping6 [options] [host or IPv6 address]	limited	ping using IPv6
ps [-wb] [[process]]	limited	Display all processes
pwd NULL	limited	Display current directory
rm [-f] [filename]	admin	remove files
rmdir [-f] [dirname]	admin	remove directory
rmtree [path]	admin	remove directory tree
telnet [options] host or IP address	limited	Telnet to IP address or host name
tget <host> <remote-file> <local-file>	admin	tget SERVER REMOTE-FILE LOCAL-FILE
tput <host> <remote-file> <local-file>	limited	tput SERVER REMOTE-FILE LOCAL-FILE
traceroute [options] [host or IPv4 address]	limited	traceroute hostname or IPv4 Address
traceroute6 [options] [host or IPv6 address]	limited	traceroute hostname or IPv6 Address
vols [volume]	limited	volume information
xget [REMOTE-FILE] [LOCAL-FILE]	admin	xget
xput [REMOTE-FILE] [LOCAL-FILE]	limited	xput
<b>flow</b>		
<b>flow access-control clear</b>		
{statistics}	admin	clear all access control statistics
		clear learned MAC high-water mark statistics
<b>flow access-control clear</b>		
port <port>	admin	clear port access control statistics
{statistics}		port(s) to clear statistics
		clear learned MAC high-water mark statistics
<b>flow access-control set</b>		
port <port>	admin	set access-control attributes
{forward-unlearned <String>}		port(s) to set access control attributes
{max-dynamic-macs <NUMBER>}		forward unlearned frames
		maximum dynamic MACs allowed
<b>flow access-control show</b>		
	limited	show all access control information
<b>flow access-control show</b>		
	limited	show access control information

Command	Access	Description
{active}		show access control information of only active instances
{all}		show all access control information
{all-ports}		show all port access control information
<b>flow access-control show</b>	limited	show port access control information
port <port>		port(s) to show access control information
<b>flow aging disable</b>	admin	disable aging
<b>flow aging enable</b>	admin	enable aging
<b>flow aging set</b>	admin	set aging time
{time <NUMBER: 10-10000000>}		MAC table aging time
<b>flow aging show</b>	limited	show aging time/status
<b>flow bw-calculation-mode set</b>	admin	set bandwidth calculation mode
{mode <String>}		bandwidth calculation mode
<b>flow bw-calculation-mode show</b>	limited	show bandwidth calculation mode
<b>flow learning disable</b>	admin	disable MAC learning
vlan <vlan>		VLAN(s) to disable learning
<b>flow learning disable</b>	admin	disable MAC learning
vs <vs>		virtual switch to disable learning
<b>flow learning enable</b>	admin	enable MAC learning
vlan <vlan>		VLAN(s) to enable learning
<b>flow learning enable</b>	admin	enable MAC learning
vs <vs>		virtual switch to enable learning
<b>flow learning show</b>	limited	show MAC learning
<b>flow learning show</b>	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

Command	Access	Description
		disabled
{all-vlans}		show learning status of all VLANS
{all-vs}		show learning status of all virtual switches
<b>flow learning show</b>	limited	show learning status
vlan <vlan>		VLAN(s) to show learning status
<b>flow learning show</b>	limited	show learning status
vs <vs>		virtual switch to show learning status
<b>flow cpu-rate-limit clear</b>	admin	clear statistics for physical port(s)
port <port>		physical port list
{statistics}		statistics table
<b>flow cpu-rate-limit disable</b>	admin	Disable Rate-Limit PPS controls
<b>flow cpu-rate-limit disable</b>	admin	Disable Rate-Limit PPS controls
port <port>		physical port list
<b>flow cpu-rate-limit enable</b>	admin	Enable Rate-Limit PPS controls
<b>flow cpu-rate-limit enable</b>	admin	Enable Rate-Limit PPS controls on port(s)
port <port>		physical port list
<b>flow cpu-rate-limit set</b>	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: 0-1000>}		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,

Command	Access	Description
		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
{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
<b>flow cpu-rate-limit show</b>		
	limited	show CPU Rate-Limit PPS status
<b>flow cpu-rate-limit show</b>		
	limited	show CPU Rate-Limit PPS configuration
port <port>		physical port list
{statistics}		display PPS statistics
<b>flow cpu-rate-limit unset</b>		
	admin	reset CPU PPS rate limit thresholds 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
{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

Command	Access	Description
{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
<b>flow mac-addr find</b>		
	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
<b>flow mac-addr flush</b>		
	admin	flush MAC addresses for one or more ports
port <port>		ports to flush
<b>flow mac-addr flush</b>		
	admin	flush MAC addresses for virtual circuit
mpls-vc <mpls-vc>		virtual circuit to flush
<b>flow mac-addr flush</b>		
	admin	flush MAC addresses for one or more vlans
vlan <vlan>		VLANs to flush
<b>flow mac-addr flush</b>		
	admin	flush MAC addresses virtual switch
vs <vs>		virtual switch to flush
<b>flow mac-addr flush</b>		
	admin	flush MAC addresses for one or more sub-ports
sub-port <sub-port>		sub-ports to flush
<b>flow mac-addr show</b>		
	limited	show dynamic and static MAC addresses
<b>flow mac-addr show</b>		
	limited	show dynamic and static MAC addresses
vlan <vlan>		VLAN list
[mac <MAC address: XX:XX:XX:XX:XX:XX>]		MAC address

Command	Access	Description
[table-count]		show table count only
<b>flow mac-addr show</b>	limited	show dynamic and static MAC addresses
mac <mac>		MAC address
<b>flow mac-addr show</b>	limited	show dynamic and static MAC addresses
port <port>		PORT number
<b>flow mac-addr show</b>	admin	show dynamic and static MAC addresses
sub-port <sub-port>		sub-port
<b>flow show aging</b>	limited	show all aging entries
<b>flow show access-control</b>	limited	show all access control entries
<b>flow show learning</b>	limited	show all learning entries
<b>flow show mac-addr</b>	limited	show all MAC entries (dynamic and static)
<b>flow static-mac add</b>	admin	add a static MAC entry
{mac <MAC address: XX:XX:XX:XX:XX:XX>}		static MAC address
{port <Port>}		port
{vlan <VLAN>}		VLAN
<b>flow static-mac remove</b>	admin	delete a static MAC entry
{mac <MAC address: XX:XX:XX:XX:XX:XX>}		static MAC address
{vlan <VLAN>}		VLAN
<b>flow static-mac show</b>	admin	show static MAC information
[mac <MAC address: XX:XX:XX:XX:XX:XX>]		static MAC address
[vlan <VLAN>]		VLAN
<b>icl</b>		
<b>icl clear</b>	admin	clear all Inter-chassis link statistics
{statistics}		Inter-chassis link statistics

Command	Access	Description
<b>icl clear</b>	admin	clear Inter-chassis link statistics
link <link>		Inter-chassis link
{statistics}		Inter-chassis link statistics
<b>icl create</b>	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 <NUMBER: 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
<b>icl delete</b>	admin	delete Inter-chassis link
link <link>		Inter-chassis link
<b>icl disable</b>	admin	disable Inter-chassis link
link <link>		Inter-chassis link
<b>icl enable</b>	admin	enable Inter-chassis link
link <link>		Inter-chassis link
<b>icl set</b>	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 <NUMBER: 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
<b>icl show</b>	admin	show all Inter-chassis links
<b>icl show</b>	admin	show Inter-chassis link information
link <link>		Inter-chassis link

Command	Access	Description
<b><i>icl unset</i></b>	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
<b>interface</b>		
<b><i>interface local disable</i></b>	admin	disable interface
<b><i>interface local enable</i></b>	admin	enable interface
<b><i>interface local set</i></b>	admin	set IPv4 attributes of an interface
{ip <IP address in CIDR notation>}		set IPv4 address of interface
{gateway <IPv4 address>}		default IPv4 gateway
<b><i>interface local add</i></b>	admin	add IPv6 address(es) to interface
ip <ip>		add IPv6 address(es) of interface
<b><i>interface local remove</i></b>	admin	remove IPv6 address attributes of an interface
ip <ip>		remove IPv6 address of interface
<b><i>interface local show</i></b>	limited	show interface information
<b><i>interface ip-acl add</i></b>	admin	add entry to access control list
[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
<b><i>interface ip-acl clear</i></b>	admin	clear IP-ACL statistics
{statistics}		statistics table
<b><i>interface ip-acl disable</i></b>	admin	disable IP access control list
<b><i>interface ip-acl enable</i></b>	admin	enable IP access control list

Command	Access	Description
<b><i>interface ip-acl import</i></b>	admin	import existing interfaces to access control list
<b><i>interface ip-acl remove</i></b>	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
<b><i>interface ip-acl set</i></b>	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
[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
<b><i>interface ip-acl show</i></b>	limited	show IP access control list
<b><i>interface ip-interface show</i></b>	limited	show IP interface table
<b><i>interface ip-interface add</i></b>	admin	add IPv6 address to interface
ip-interface <ip-interface>		Interface name
{ip <IP address in CIDR notation>}		interface address
<b><i>interface ip-interface remove</i></b>	admin	remove IPv6 address from interface
ip-interface <ip-interface>		Interface name
{ip <IP address in CIDR notation>}		interface address
<b><i>interface remote add</i></b>	admin	add IPv6 address to interface
ip <ip>		add IPv6 address of interface
<b><i>interface remote disable</i></b>	admin	disable interface
<b><i>interface remote enable</i></b>	admin	enable interface
<b><i>interface remote remove</i></b>	admin	remove IPv6 address from interface
ip <ip>		remove IPv6 address of interface
<b><i>interface remote set</i></b>	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

Command	Access	Description
{gateway <IP address>}		default IPv4 gateway
{vlan <VLAN>}		management VLAN
{vs <Virtual Switch Name>}		management virtual switch
<b>interface remote show</b>	limited	show interface information
<b>interface route add</b>	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
<b>interface route remove</b>	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
<b>interface route show</b>	limited	show interface routes
<b>interface serial-console disable</b>	admin	disable serial-console port login access
<b>interface serial-console enable</b>	admin	enable serial-console port login access
<b>interface serial-console show</b>	limited	show serial-console port information
<b>interface add</b>	admin	add IPv6 gateway attributes of an interface
gateway <gateway>		add IPv6 gateway
{interface <remote   local>}		add IPv6 gateway to a management interface
<b>interface create</b>	admin	create interface
ip-interface <ip-interface>		interface name
{ip <IP address in CIDR notation>}		interface IPv4 address
{auto-ipv6}		use auto-generated IPv6 address
[vlan <VLAN>]		interface VLAN
[mtu <BYTES>]		interface MTU in bytes, default: 1500
[mac <MAC address: XX:XX:XX:XX:XX:XX>]		MAC address
[ip-forwarding <String>]		interface IP forwarding, default: off

Command	Access	Description
[service-mac <String>]		service name associated with the MAC address. Alternate way of specifying the MAC address
<b>interface create</b>	admin	create interface
loopback <loopback>		loopback interface name
{ip <IP address>}		Interface IP address
<b>interface delete</b>	admin	delete interface
ip-interface <ip-interface>		Interface name
<b>interface disable</b>	admin	disable interface
ip-interface <ip-interface>		interface name
<b>interface enable</b>	admin	enable interface
ip-interface <ip-interface>		Interface name
<b>interface remove</b>	admin	remove IPv6 gateway
gateway <gateway>		remove IPv6 gateway
{interface <String>}		remove IPv6 gateway to a management interface
<b>interface set</b>	admin	set global IP interface attributes
{gateway <IPv4 address>}		IPv4 gateway
{ip-forwarding <String>}		IP forwarding
{resolver-timeout <NUMBER: 10-255>}		Keep-alive timeout (seconds)
{default-dscp <NUMBER: 0-63>}		Default DSCP value for IP traffic (0..63)
<b>interface set</b>	admin	set IP interface
ip-interface <ip-interface>		Interface Name
{ip <IP address in CIDR notation>}		interface IP address
[ip-forwarding <String>]		interface IP forwarding
[mtu <NUMBER: 1500-9216>]		interface MTU, default: 1500
<b>interface show</b>	limited	show interface information
{gateway}		show configured gateway settings
{resolver}		show resolver host entries
{local}		Local Interface configuration
{remote}		Remote interface configuration
<b>interface show</b>	admin	show interface

Command	Access	Description
ip-interface <ip-interface>		Interface Name
<b>ip</b>		
<b>ip fib I3-switching disable</b>	admin	Set static routes disable (default: enabled)
<b>ip fib I3-switching enable</b>	admin	Set static routes enable (default: enabled)
<b>ip fib I3-switching show</b>	limited	Show I3-switching information
<b>ip fib log show</b>	limited	display logged FIB events
<b>ip fib interfaces show</b>	limited	display interfaces
<b>ip fib interfaceIpAddresses show</b>	admin	display local IP addresses
[details]		show details for each entry
[summary]		summary option selected (default)
<b>ip fib staticResolutions show</b>	admin	display objects
<b>ip fib show</b>	limited	display FIB content
[default]		default route, if any configured
[destination <IP address in CIDR notation>]		destination route IP address/mask
<b>ip fib debug</b>	super	FIB event log control
[events <String>]		Destination Route IP address (default: off)
<b>ip fib flush</b>	admin	flush all FIB entries
<b>ip fib trace</b>	super	trace component execution
{module <String>}		select which module to set
{level <String>}		select tracing level
<b>ip aib log show</b>	limited	display logged AIB events
<b>ip aib show</b>	limited	Display AIB Content
<b>ip aib debug</b>	super	AIB Event log control

Command	Access	Description
{events <String>}		Turn on/off control
<b>ip aib flush</b>	admin	flush all AIB entries
<b>ip aib register</b>	super	test for registration of adjacency
{nexthop <IP address>}		nexthop IP address
{is-static}		is nexthop IP static (default: dynamic)
<b>ip aib unregister</b>	super	test for deregistration of adjacency
{nexthop <IP address>}		nexthop IP address
<b>ip route add</b>	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
<b>ip route remove</b>	admin	remove route from routing table
{destination <IP address in CIDR notation>}		IP address
{gateway <IP address>}		gateway address
<b>ip route show</b>	limited	show routing table
<b>routing-domain</b>		
<b>isis</b>		
<b>isis instance create</b>	admin	create ISIS instance
isis-instance <isis-instance>		ISIS instance name
[logical-id <NUMBER>]		Creation index used in configuration
{area <ISIS Area>}		Area ID - variable length in Hex (AFI.xxxx.xxxx.....)
{level <String>}		routing level
<b>isis instance delete</b>	admin	delete ISIS instance
isis-instance <isis-instance>		ISIS instance name
<b>isis instance clear</b>	admin	Clear ISIS instance statistics

Command	Access	Description
isis-instance <isis-instance>		ISIS instance name
{statistics}		Clear statistics
<b>isis instance enable</b>		
	admin	enable ISIS instance
isis-instance <isis-instance>		ISIS instance name
<b>isis instance disable</b>		
	admin	disable ISIS instance
isis-instance <isis-instance>		ISIS instance name
<b>isis instance add</b>		
	admin	add an area
isis-instance <isis-instance>		ISIS instance name
{area <ISIS Area>}		Area ID - variable length in Hex (xx.xxxx.xxxx.....)
<b>isis instance remove</b>		
	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.....)
<b>isis instance show</b>		
	limited	Show ISIS instance protocol details
isis-instance <isis-instance>		ISIS instance details
[attached-interfaces]		ISIS instance with its attachments
[database]		Protocol Database details
[hostname]		Known Hostnames of IS Neighbors
[is-neighbors <String>]		IS Neighbors
[neighbors <String>]		IP address of Neighbors
[statistics]		Protocol Statistics
<b>isis area-authentication set</b>		
	admin	configure authentication information
isis-instance <isis-instance>		ISIS instance name
{authentication-type <String>}		Type of authentication
{password <Password String>}		Enter password
{secret <String[62]>}		Encoded Password
send-only <String>		send without validation
snp-authenticate <String>		CSNP and PSNP PDU validation
<b>isis area-authentication unset</b>		
	admin	revert to defaults/unconfigure authentication
isis-instance <isis-instance>		isis instance name
{authentication-type}		No authentication (unconfigure)
{snp-authenticate}		CSNP,PSNP PDU validation

Command	Access	Description
{send-only}		send without Validation
<b>isis area-authentication show</b>		
	limited	show authentication details of a system instance
isis-instance <isis-instance>		isis instance name
<b>isis interface-authentication set</b>		
	admin	configuring authentication information
ip-interface <ip-interface>		IP interface name
{authentication-type <String>}		Type of authentication
{password <Password String>}		Enter Password
{secret <String[62]>}		Encoded Password
[send-only <String>]		send without validation
{level <String>}		routing level
<b>isis interface-authentication unset</b>		
	admin	revert to defaults/unconfigure authentication
ip-interface <ip-interface>		IP interface name
{level <String>}		routing level
{authentication-type}		No authentication (unconfigure)
{send-only}		send without validation
<b>isis interface-authentication show</b>		
	limited	show summary of circuit authentications
<b>isis interface-authentication show</b>		
	limited	show details of a circuit authentication
ip-interface <ip-interface>		IP interface name
<b>isis lsp set</b>		
	admin	Configure LSP parameters
isis-instance <isis-instance>		ISIS instance name
{max-lifetime <NUMBER: 350-65235>}		Maximum Lifetime of an LSP (default: 1200 secs)
{refresh-interval <NUMBER: 1-65235>}		LSP Refresh Interval (default: 900 secs)
<b>isis lsp unset</b>		
	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)
<b>isis spf-calculations set</b>		
	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: 5000

Command	Access	Description
[threshold-restart-limit <NUMBER: 1-100>]		Maximum number of restarts before an in-progress computation run is completed, default: -1
[threshold-update-restart <NUMBER: 1-100>]		Minimum number of changes before the restart of an in-progress computation, default: -1
[threshold-update-start <NUMBER: 1-100>]		Minimum number of changes before the start of computation, default: 10
<b>isis spf-calculations unset</b>		
	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 before the restart of an in-progress computation, default: -1
[threshold-update-start]		Minimum number of changes before the start of computation, default: 10
<b>isis interface attach</b>		
	admin	attach an IP interface to ISIS instance
ip-interface <ip-interface>		ip interface name
{isis-instance <ISIS Instance>}		ISIS instance name
{level <String>}		routing level
<b>isis interface detach</b>		
	admin	detach an IP interface from the ISIS instance
ip-interface <ip-interface>		ip interface name
<b>isis interface enable</b>		
	admin	enable ISIS on the ip interface
ip-interface <ip-interface>		IP interface name
<b>isis interface disable</b>		
	admin	disable ISIS on the ip interface
ip-interface <ip-interface>		IP interface name
<b>isis interface set</b>		
	admin	configure ISIS on the IP interface
ip-interface <ip-interface>		ip interface name
{padded-hello <String>}		Padded Hello configuration, default: Yes
<b>isis interface unset</b>		
	admin	Revert ISIS configuration to the default values on the IP interface

Command	Access	Description
ip-interface <ip-interface>		ip interface name
{padded-hello}		Revert padded hello to the default, default: Yes
<b>isis interface-level set</b>		
	admin	per Level configuration on the IP interface
ip-interface <ip-interface>		ip interface name
{level <String>}		ISIS Level selection
[csnp-interval <NUMBER: 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-timer <NUMBER: 1-600>]		Hello Timer (secs), default: 10
[lsp-interval <NUMBER: 50-65535>]		LSP generation (/throttle) interval (msecs), default: 50
[priority <NUMBER: 0-127>]		Priority of the node on the interface, default: 64
[wide-metric <NUMBER: 1-16777215>]		Cost of the link, default: 128
<b>isis interface-level unset</b>		
	admin	Revert per Level configuration on the IP interface
ip-interface <ip-interface>		ip interface name
{level <String>}		ISIS Level selection
[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
[hello-timer]		Default Hello Timer 10(secs), default: 10
[lsp-interval]		Default LSP generation interval 30(msecs), default: 50
[priority]		Default Priority (64) of the node on the interface, default: 64
[wide-metric]		Default Cost of the link (TBD), default: 128
<b>ospf</b>		
<b>ospf instance create</b>		
	admin	create OSPF instance
ospf-instance <ospf-instance>		OSPF instance name
<b>ospf instance delete</b>		
	admin	delete OSPF instance
ospf-instance <ospf-instance>		OSPF instance name
<b>ospf instance clear</b>		
	admin	clear OSPF instance

Command	Access	Description
ospf-instance <ospf-instance>		OSPF instance name
{statistics}		statistics
<b>ospf instance enable</b>		
ospf-instance <ospf-instance>	admin	enable OSPF instance
<b>ospf instance disable</b>		
ospf-instance <ospf-instance>	admin	disable OSPF instance
<b>ospf instance set</b>		
ospf-instance <ospf-instance>	admin	set OSPF attribute
{rfc-1583-compatible <String>}		rfc 1583 compatible
{router-id <IP address>}		router id
{spf-delay-interval <MILLISECONDS: 0-4294967295>}		SPF delay interval in msec default(5000)
<b>ospf instance unset</b>		
ospf-instance <ospf-instance>	admin	unset OSPF configuration
{router-id}		OSPF router ID
<b>ospf instance show</b>		
ospf-instance <ospf-instance>	limited	show OSPF instance protocol details
[statistics]		instance details
		protocol statistics
<b>ospf interface attach</b>		
ip-interface <ip-interface>	admin	attach an ip interface to OSPF instance
{area <IP address>}		ip interface name
{ospf-instance <OSPF Instance>}		Ospf area
		OSPF instance name
<b>ospf interface detach</b>		
ip-interface <ip-interface>	admin	detach an ip interface from the OSPF instance
		ip interface name
<b>ospf interface enable</b>		
ip-interface <ip-interface>	admin	enable OSPF on the ip interface
		ip interface name
<b>ospf interface disable</b>		
ip-interface <ip-interface>	admin	disable OSPF on the ip interface
		ip interface name
<b>ospf interface set</b>		
ip-interface <ip-interface>	admin	set interface attribute
		ip interface name

Command	Access	Description
{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
{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: 0-65535>}		cost the interface
{authentication-type <String>}		authentication type
{password <Password String>}		authentication password (1..8 characters)
{secret <String[62]>}		encoded password
<b>ospf interface unset</b>		
	admin	unset interface attribute
ip-interface <ip-interface>		ip interface name
{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
<b>ospf interface show</b>		
	limited	show
{detail}	limited	details OSPF interface information
<b>ospf interface show</b>		
	limited	show
ip-interface <ip-interface>		interface name
{statistics}	limited	OSPF interface statistics
<b>ospf interface clear</b>		
	limited	show
ip-interface <ip-interface>		interface name
{statistics}	limited	ospf interface statistics

Command	Access	Description
<b>ospf area create</b>	admin	create area
area-ip <area-ip>		area IP address
ospf-instance <ospf-instance>		OSPF instance name
{type <String>}		type of area
<b>ospf area delete</b>	admin	delete area
area-ip <area-ip>		area IP address
ospf-instance <ospf-instance>		OSPF instance name
<b>ospf area set</b>	admin	set area attribute
area-ip <area-ip>		area IP address
ospf-instance <ospf-instance>		OSPF instance name
{summary <String>}		summary LSA
{type <String>}		type of area
<b>ospf area show</b>	limited	show OSPF area
ospf-instance <ospf-instance>		OSPF instance name
{area-ip <IP address>}		Area IP address
{statistics}		statistics
<b>ospf neighbor show</b>	limited	enable
ospf-instance <ospf-instance>		OSPF instance name
{neighbor-ip <IP address>}		neighbor IP
[detail]	limited	details OSPF neighbor information
<b>ospf database show</b>	limited	show
ospf-instance <ospf-instance>		OSPF instance name
{router}	limited	displays OSPF router lsa
{network}	limited	displays OSPF network 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 self originate lsa
<b>Ildp</b>		
<b>lldp tlvtx set</b>	admin	set per port TLV Tx parameters
port <port>		port list
{mgmt-addr-local <String>}		transmit Local Management Address, default:

Command	Access	Description
		on
{mgmt-addr-local-ipv6 <String>}		transmit Local Management Address, default: on
{mgmt-addr-remote <String>}		transmit Remote Management Address, default: on
{mgmt-addr-remote-ipv6 <String>}		transmit Remote Management Address, default: on
{port-descr <String>}		transmit port description, default: on
{system-cap <String>}		transmit system capabilities, default: on
{system-descr <String>}		transmit system description, default: on
{system-name <String>}		transmit system name, default: on
<b>lldp tlvtx show</b>	limited	show LLDP TLV Tx configuration
<b>lldp tlvtx show</b>	limited	show LLDP TLV Tx per port configuration
port <port>		physical port to show
<b>lldp tlvtx-dot1 set</b>	admin	set port 802.1 TLV Tx parameters
port <port>		port list
{port-vlan-id <String>}		xdot1 port VLAN ID, default: on
{protocol-id-dot1x <String>}		xdot1 protocol ID xdot1x, default: on
{protocol-id-lacp <String>}		xdot1 protocol ID LACP, default: on
{protocol-id-oam <String>}		xdot1 protocol ID OAM, default: on
{protocol-id-stp <String>}		xdot1 protocol ID STP, default: on
<b>lldp tlvtx-dot1 show</b>	limited	show 802.1 TLV Tx configuration
<b>lldp tlvtx-dot1 show</b>	limited	show per port 802.1 TLV Tx configuration
port <port>		physical port to show
<b>lldp tlvtx-dot3 set</b>	admin	set per port 802.3 TLV Tx parameters
port <port>		port list
{link-agg <String>}		link aggregation status, default: on
{mac-phy-config <String>}		MAC/PHY configuration, default: on
{max-frame-size <String>}		maximum frame size, default: on
{power-via-mdi <String>}		power via MDI status, default: on
<b>lldp tlvtx-dot3 show</b>	limited	show 802.3 TLV Tx configuration
<b>lldp tlvtx-dot3 show</b>	limited	show per port 802.3 TLV Tx configuration
port <port>		physical port to show

Command	Access	Description
<b>lldp clear</b>	admin	clear statistics
{statistics}		clear LLDP statistics
<b>lldp clear</b>	admin	clear statistics
port <port>		physical port
{statistics}		clear LLDP port statistics
<b>lldp disable</b>	admin	disable LLDP
<b>lldp enable</b>	admin	enable LLDP
<b>lldp set</b>	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
<b>lldp set</b>	admin	set LLDP port attributes
port <port>		physical port to set attributes for
{mode <String>}		tx/rx mode of the port, default: tx-rx
{notification <String>}		configure standard lldpRemTablesChange SNMP notification, default: off
<b>lldp show</b>	limited	show LLDP
<b>lldp show</b>	limited	show LLDP
{configuration}		show LLDP configuration
{neighbors}		show LLDP neighbors
{statistics}		show LLDP statistics
<b>lldp show</b>	limited	show LLDP
port <port>		physical port to show
{configuration}		show LLDP port configuration
{statistics}		show LLDP port statistics

Command	Access	Description
<b>log</b>		
<b>log flash add</b>	admin	add parameters to flash log-filter
filter <filter>		log-filter object
[all-mgrs]		ALL logging categories
[arp-mgr <String List>]		list of ARP logging categories
[blade-mgr <String List>]		list of blade logging categories
[bcast-containment-mgr <String List>]		list of broadcast containment 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
[lACP-mgr <String List>]		list of LACP logging categories
[lldp-mgr <String List>]		list of LLDP logging categories
[mstp-mgr <String List>]		list of MSTP 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
[pfg-mgr <String List>]		list of PFG logging categories
[port <Port list>]		port list to remove from RAM log-filter
[port-mgr <String List>]		list of port logging categories
[radius-mgr <String List>]		list of RADIUS logging categories
[raps-mgr <String List>]		list of ring protection logging categories
[rstp-mgr <String List>]		list of RSTP logging categories
[security-mgr <String List>]		list of security logging categories
[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
[sub-port-mgr <String List>]		list of sub-port logging categories
[sync-mgr <String List>]		list of SYNC logging categories

Command	Access	Description
[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
<b>log flash add</b>		
	admin	add flash packet-filter
pkt-filter <pkt-filter>		packet-filter object
{icl-pkt <String>}		ICL packet type
{igmp-pkt <String>}		IGMP packet types
{ip-pkt <String>}		IP packet types
{lcp-pkt <String>}		LACP packet types
{lldp-pkt <String>}		LLDP packet types
{mstp-pkt <String>}		MSTP packet types
{port <Port list>}		port list to add to flash packet filter
{rstp-pkt <String>}		RSTP packet types
<b>log flash clear</b>		
	admin	clear the flash log
<b>log flash create</b>		
	admin	create flash log-filter
filter <filter>		log-filter object
{all-mgrs}		ALL logging categories
{arp-mgr <String List>}		list of ARP logging categories
{blade-mgr <String List>}		list of blade logging categories
{bcast-containment-mgr <String List>}		list of broadcast containment 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

Command	Access	Description
{lACP-mgr <String List>}		list of LACP logging categories
{lldp-mgr <String List>}		list of LLDP logging categories
{max-severity <String>}		maximum message severity
{min-severity <String>}		minimum message severity
{mstp-mgr <String List>}		list of MSTP logging categories
{ntpc-mgr <String List>}		list of NTP logging categories
{ntwrk-mgr <String List>}		list of network logging categories
{oam-mgr <String List>}		list of OAM logging categories
[pfg-mgr <String List>]		list of PFG logging categories
{port <Port list>}		port list to add to flash log-filter
{port-mgr <String List>}		list of port logging categories
{radius-mgr <String List>}		list of RADIUS logging categories
[raps-mgr <String List>]		list of ring protection logging categories
{rstp-mgr <String List>}		list of RSTP logging categories
{security-mgr <String List>}		list of security logging categories
{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
[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
<b>log flash create</b>	admin	create flash packet-filter
pkt-filter <pkt-filter>		packet-filter object
{icl-pkt <String>}		ICL packet type
{igmp-pkt <String>}		IGMP packet types
{ip-pkt <String>}		IP packet types
{lACP-pkt <String>}		LACP packet types
{lldp-pkt <String>}		LLDP packet types
{mstp-pkt <String>}		MSTP packet types
{pkt-decode <String>}		packet decode feature
{port <Port list>}		port list to add to flash packet-filter
{rstp-pkt <String>}		RSTP packet types

Command	Access	Description
<b>log flash delete</b>	admin	delete flash log-filter
filter <filter>		log filter object
<b>log flash delete</b>	admin	delete flash packet-filter
pkt-filter <pkt-filter>		packet filter object
<b>log flash disable</b>	admin	global disabling of logging to flash
<b>log flash disable</b>	admin	disable flash log-filter
filter <filter>		log filter object
<b>log flash disable</b>	admin	disable flash packet-filter
pkt-filter <pkt-filter>		packet filter object
<b>log flash enable</b>	admin	global enable of logging to flash
<b>log flash enable</b>	admin	enable flash log-filter
filter <filter>		log filter object
<b>log flash enable</b>	admin	enable flash packet-filter
pkt-filter <pkt-filter>		packet filter object
<b>log flash remove</b>	admin	remove parameters from flash log-filter
filter <filter>		log filter object
[all-mgrs]		ALL logging categories
[arp-mgr <String List>]		list of ARP logging categories
[blade-mgr <String List>]		list of blade logging categories
[bcast-containment-mgr <String List>]		list of broadcast containment 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

Command	Access	Description
[lACP-mgr <String List>]		list of LACP logging categories
[lldp-mgr <String List>]		list of LLDP logging categories
[mstp-mgr <String List>]		list of MSTP 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
[pfg-mgr <String List>]		list of PFG logging categories
[port <Port list>]		port list to remove from a RAM log-filter
[port-mgr <String List>]		list of port logging categories
[radius-mgr <String List>]		list of RADIUS logging categories
[raps-mgr <String List>]		list of ring protection logging categories
[rstp-mgr <String List>]		list of RSTP logging categories
[security-mgr <String List>]		list of security logging categories
[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
[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
<b>log flash remove</b>		
	admin	remove parameters from flash packet-filter
pkt-filter <pkt-filter>		packet filter object
{icl-pkt <String>}		ICL packet type
[igmp-pkt <String>]		IGMP packet types
[ip-pkt <String>]		IP packet types
[lACP-pkt <String>]		LACP packet types
[lldp-pkt <String>]		LLDP packet types
[mstp-pkt <String>]		MSTP packet types
[port <Port list>]		port list to remove from flash packet-filter
[rstp-pkt <String>]		RSTP packet types
<b>log flash set</b>		
	admin	set parameters of flash log-filter
filter <filter>		log filter object
[max-severity <String>]		maximum message severity

Command	Access	Description
[min-severity <String>]		minimum message severity
<b>log flash set</b>	admin	set parameters of flash packet-filter
pkt-filter <pkt-filter>		packet filter object
[pkt-decode <String>]		packet decode feature
<b>log flash show</b>	limited	show flash log-filter configuration
filter <filter>		log filter object
<b>log flash show</b>	limited	show flash packet-filter configuration
pkt-filter <pkt-filter>		packet filter object
<b>log flash show</b>	limited	show flash filter summaries
{log-summary}		show summary of log filters
{pkt-summary}		show summary of packet filters
{severity-mapping}		show event/syslog severity map
{system-events}		show system events
<b>log flash view</b>	limited	display the flash log
{tail <NUMBER: 1-100>}		display last x lines
{keyword <String[16]>}		display last lines that contain keyword
<b>log ram add</b>	admin	add parameters to ram log-filter
filter <filter>		log filter object
[all-mgrs]		ALL logging categories
[arp-mgr <String List>]		list of ARP logging categories
[blade-mgr <String List>]		list of blade logging categories
[bcast-containment-mgr <String List>]		list of broadcast containment 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

Command	Access	Description
[lACP-mgr <String List>]		list of LACP logging categories
[lldp-mgr <String List>]		list of LLDP logging categories
[mstp-mgr <String List>]		list of MSTP 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
[pfg-mgr <String List>]		list of PFG logging categories
[port <Port list>]		port list to remove from RAM log-filter
[port-mgr <String List>]		list of port logging categories
[radius-mgr <String List>]		list of RADIUS logging categories
[raps-mgr <String List>]		list of ring protection logging categories
[rstp-mgr <String List>]		list of RSTP logging categories
[security-mgr <String List>]		list of security logging categories
[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
[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
<b>log ram add</b>		
	admin	add parameters to RAM packet-filter
pkt-filter <pkt-filter>		packet filter object
{icl-pkt <String>}		ICL packet type
[igmp-pkt <String>]		IGMP packet types
[ip-pkt <String>]		IP packet types
[lACP-pkt <String>]		LACP packet types
[lldp-pkt <String>]		LLDP packet types
[mstp-pkt <String>]		MSTP packet types
{port <Port list>}		port list to add to RAM packet-filter
[rstp-pkt <String>]		RSTP packet types
<b>log ram clear</b>		
	admin	clear the RAM log
<b>log ram create</b>		
	admin	create RAM log-filter

Command	Access	Description
filter <filter>		log filter object
{all-mgrs}		ALL logging categories
{arp-mgr <String List>}		list of ARP logging categories
{blade-mgr <String List>}		list of blade logging categories
{bcast-containment-mgr <String List>}		list of broadcast containment 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
{lACP-mgr <String List>}		list of LACP logging categories
{lldp-mgr <String List>}		list of LLDP logging categories
{max-severity <String>}		maximum message severity
{min-severity <String>}		minimum message severity
{mstp-mgr <String List>}		list of MSTP logging categories
{ntp-mgr <String List>}		list of NTP logging categories
{ntwrk-mgr <String List>}		list of network logging categories
{oam-mgr <String List>}		list of OAM logging categories
{pfg-mgr <String List>}		list of PFG logging categories
{port <Port list>}		port list to add to flash log-filter
{port-mgr <String List>}		list of port logging categories
[radius-mgr <String List>]		list of RADIUS logging categories
[raps-mgr <String List>]		list of ring protection logging categories
{rstp-mgr <String List>}		list of RSTP logging categories
{security-mgr <String List>}		list of security logging categories
{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
[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

Command	Access	Description
[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
<b>log ram create</b>		
	admin	create ram packet-filter
pkt-filter <pkt-filter>		packet filter object
{icl-pkt <String>}		ICL packet type
{igmp-pkt <String>}		IGMP packet types
{ip-pkt <String>}		IP packet types
{lcp-pkt <String>}		LACP packet types
{lldp-pkt <String>}		LLDP packet types
{mstp-pkt <String>}		MSTP packet types
{pkt-decode <String>}		packet decode feature
{port <Port list>}		port list to add to RAM packet-filter
{rstp-pkt <String>}		RSTP packet types
<b>log ram delete</b>		
	admin	delete RAM log-filter
filter <filter>		log filter object
<b>log ram delete</b>		
	admin	delete RAM packet-filter
pkt-filter <pkt-filter>		packet filter object
<b>log ram disable</b>		
	admin	global disabling of logging to RAM
<b>log ram disable</b>		
	admin	disable RAM log-filter
filter <filter>		log filter object
<b>log ram disable</b>		
	admin	disable RAM pkt-filter
pkt-filter <pkt-filter>		pkt filter object
<b>log ram enable</b>		
	admin	global enable of logging to RAM
<b>log ram enable</b>		
	admin	enable RAM log-filter
filter <filter>		log filter object
<b>log ram enable</b>		
	admin	enable RAM packet-filter
pkt-filter <pkt-filter>		packet filter object
<b>log ram remove</b>		
	admin	remove parameters from RAM log-filter

Command	Access	Description
filter <filter>		log filter object
[all-mgrs]		ALL logging categories
[arp-mgr <String List>]		list of ARP logging categories
[blade-mgr <String List>]		list of blade logging categories
[bcast-containment-mgr <String List>]		list of broadcast containment 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
[lACP-mgr <String List>]		list of LACP logging categories
[lldp-mgr <String List>]		list of LLDP logging categories
[mstp-mgr <String List>]		list of MSTP 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
[pfg-mgr <String List>]		list of PFG logging categories
[port <Port list>]		port list to remove from RAM log-filter
[port-mgr <String List>]		list of port logging categories
[radius-mgr <String List>]		list of RADIUS logging categories
[raps-mgr <String List>]		list of ring protection logging categories
[rstp-mgr <String List>]		list of RSTP logging categories
[security-mgr <String List>]		list of security logging categories
[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
[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

Command	Access	Description
[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
<b>log ram remove</b>		
	admin	remove parameters from RAM packet-filter
pkt-filter <pkt-filter>		packet filter object
{icl-pkt <String>}		ICL packet type
[igmp-pkt <String>]		IGMP packet types
[ip-pkt <String>]		IP packet types
[lACP-pkt <String>]		LACP packet types
[lldp-pkt <String>]		LLDP packet types
[mstp-pkt <String>]		MSTP packet types
{port <Port list>}		port list to remove from RAM packet-filter
[rstp-pkt <String>]		RSTP packet types
<b>log ram set</b>		
	admin	set parameters of RAM log-filter
filter <filter>		log-filter object
[max-severity <String>]		maximum message severity
[min-severity <String>]		minimum message severity
<b>log ram set</b>		
	admin	set parameters of RAM packet-filter
pkt-filter <pkt-filter>		packet filter object
[pkt-decode <String>]		packet decode feature
<b>log ram set</b>		
	admin	control RAM buffer broadcast (wall)
{global-notify <String>}		enable wall
<b>log ram show</b>		
	limited	show RAM log-filter
filter <filter>		log filter object
<b>log ram show</b>		
	limited	show RAM packet-filter
pkt-filter <pkt-filter>		packet filter object
<b>log ram show</b>		
	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
<b>log ram trace</b>		
	limited	activate the RAM trace buffer display
{all}		show entire trace buffer

Command	Access	Description
<b>log send</b>	super	send debug log msg
[msg <String[127]>]		log debug message
[severity <String>]		severity of debug log message
<b>log reset-to-factory-defaults</b>	admin	debug menu
<b>rsvp-te</b>		
<b>rsvp-te authentication set</b>	admin	set authentication
{ip <IP address>}		neighbor IP address
{authentication-type <String>}		authentication type
{password <Password String>}		authentication message digest
{message-digest-secret <String[62]>}		encoded message digest password
<b>rsvp-te authentication unset</b>	admin	unset authentication
{ip <IP address>}		neighbor IP address
<b>rsvp-te authentication show</b>	limited	show
<b>rsvp-te interface show</b>	limited	show RSVP-TE interfaces
<b>rsvp-te path create</b>	admin	create
rsvp-path <rsvp-path>		create RSVP-TE path
[logical-id <NUMBER>]		Creation index used in config
<b>rsvp-te path delete</b>	admin	delete
rsvp-path <rsvp-path>		RSVP-TE path name
<b>rsvp-te path show</b>	limited	show
rsvp-path <rsvp-path>		RSVP-TE path name
<b>rsvp-te path show</b>	limited	show
<b>rsvp-te path set</b>	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 <String>]	admin	hop type

Command	Access	Description
<b>rsvp-te path unset</b>	admin	unset
rsvp-path <rsvp-path>		RSVP-TE path name
{index <NUMBER>}	admin	position of node in the RSVP-TE path list
<b>rsvp-te disable</b>	admin	disable RSVP-TE on the interface
ip-interface <ip-interface>		Interface Name
<b>rsvp-te enable</b>	admin	enable RSVP-TE on the interface
ip-interface <ip-interface>		Interface Name
<b>rsvp-te disable</b>	admin	disable RSVP-TE globally
<b>rsvp-te enable</b>	admin	enable RSVP-TE globally
<b>rsvp-te set</b>	admin	set RSVP-TE interface property
ip-interface <ip-interface>		Interface Name
[advertised-label <String>]	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 <String>}		authentication type
{password <Password String>}		authentication message digest
{message-digest-secret <String[62]>}		encoded message digest password
<b>rsvp-te unset</b>	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
<b>rsvp-te set</b>	admin	set RSVP-TE global parameters
[retry-interval <NUMBER: 3-65>]	admin	specifies the retry interval in seconds for tunnels
[retry-infinite <String>]	admin	enables infinite retries for RSVP-TE tunnels
<b>rsvp-te unset</b>	admin	unset RSVP-TE global parameters
[retry-interval]	admin	RSVP-TE retry interval
[retry-infinite]	admin	RSVP-TE infinite retries for tunnels

Command	Access	Description
<b>rsvp-te show</b>	limited	show RSVP-TE protocol
[counters]	limited	RSVP-TE protocol counters
<b>rsvp-te clear</b>	admin	Clear RSVP-TE counters
{counters}	admin	RSVP-TE counters
<b>ldp</b>		
<b>ldp authentication set</b>	admin	Configure Peer Node authentication
{peer <IP address>}		Peer Node Ip Address
{authentication-type <String>}		authentication type
{password <Password String>}		Enter password (8..31 characters)
{secret <String[62]>}		Encoded Password
<b>ldp authentication unset</b>	admin	Unconfigure Peer Node authentication
{peer <IP address>}		Peer Node Ip Address
<b>ldp authentication show</b>	limited	Display LDP Authentication configuration
<b>ldp session-history statistics show</b>	limited	show ldp statistics
{peer <IP address>}		LDP Peer IP
<b>ldp session-history statistics clear</b>	admin	Clear LDP session statistics
{peer <IP address>}		LDP Peer IP
<b>ldp session-history disable</b>	admin	Disable LDP session history and statistics
<b>ldp session-history enable</b>	admin	Enable LDP session history and statistics
<b>ldp session-history show</b>	limited	show ldp
[active]		Show active LDP sessions
[expired]		Show expired LDP session
[init]		Show LDP sessions being established
<b>ldp interface show</b>	limited	show LDP interfaces
<b>ldp enable</b>	admin	enable LDP protocol instance globally

Command	Access	Description
<b><i>ldp disable</i></b>	admin	disable LDP protocol instance globally
<b><i>ldp set</i></b>	admin	set LDP attributes
{hello-hold-time <NUMBER: 1-65535>}		LDP hello hold time (sec)
{keep-alive-hold-time <NUMBER: 1-65535>}		LDP keep alive timer (sec)
<b><i>ldp unset</i></b>	admin	unset LDP attributes
{hello-hold-time}		LDP hello hold time
{keep-alive-hold-time}		LDP keep alive timer
<b><i>ldp show</i></b>	limited	show LDP
[adjacency]		show LDP adjacency
[session]		show LDP session
[timers]		show LDP session timers
[status]		show LDP protocol status
<b><i>ldp clear</i></b>	admin	Clear LDP counters
<b>mpls</b>		
<b><i>mpls static-tunnel-label-range set</i></b>	admin	set the static tunnel label range
{min-label <NUMBER: 16-1044479>}		minimum label
{max-label <NUMBER: 16-1044479>}		maximum label
<b><i>mpls static-tunnel-label-range unset</i></b>	admin	unset the static tunnel label range
[min-label]		minimum label
[max-label]		maximum label
<b><i>mpls static-tunnel-label-range show</i></b>	limited	show the static tunnel label range
<b><i>mpls static-vc-label-range set</i></b>	admin	set the static Pseudowire label range
{min-label <NUMBER: 16-1044479>}		minimum label
{max-label <NUMBER: 16-1044479>}		maximum label
<b><i>mpls static-vc-label-range unset</i></b>	admin	unset the static Pseudowire label range
[min-label]		minimum label
[max-label]		maximum label

Command	Access	Description
<b><i>mpls static-vc-label-range show</i></b>	limited	show the static Pseudowire label range
<b><i>mpls dynamic-label-range set</i></b>	admin	set the dynamic label range
{min-label <NUMBER: 18-1044479>}		minimum label
{max-label <NUMBER: 8-1044479>}		maximum label
<b><i>mpls dynamic-label-range unset</i></b>	admin	unset the static Pseudowire label range
[min-label]		minimum label
[max-label]		maximum label
<b><i>mpls dynamic-label-range show</i></b>	limited	show the dynamic label range
<b><i>mpls tunnel-bandwidth-profile create</i></b>	admin	create tunnel bandwidth profile
bandwidth-profile <bandwidth-profile>		tunnel bandwidth profile name
{logical-id <NUMBER>}		profile index
{bandwidth <Kbps>}		bandwidth (Kbps)
[burst <BYTES>]		burst size (Bytes)
<b><i>mpls tunnel-bandwidth-profile set</i></b>	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
<b><i>mpls tunnel-bandwidth-profile unset</i></b>	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
<b><i>mpls tunnel-bandwidth-profile delete</i></b>	admin	delete tunnel bandwidth profile

Command	Access	Description
bandwidth-profile <bandwidth-profile>		tunnel bandwidth profile name
<b>mpls tunnel-bandwidth-profile show</b>	limited	show all tunnel bandwidth profiles
<b>mpls tunnel-bandwidth-profile show</b> bandwidth-profile <bandwidth-profile>	limited	show specific tunnel bandwidth profile tunnel bandwidth profile name
<b>mpls tunnel-frr-profile create</b>	admin	create tunnel FRR profile
frr-profile <frr-profile>		tunnel FRR profile name
[logical-id <NUMBER>]		profile index
[setup-priority <NUMBER: 0-7>]		frr tunnel setup priority
[hold-priority <NUMBER: 0-7>]		frr tunnel hold priority
[hop-limit <NUMBER: 0-255>]		frr tunnel hop-limit
[bandwidth <NUMBER: 1000-1000000>]		bandwidth (Kbps/s)
[bw-protection <String>]	admin	Bandwidth protection of Frr tunnel
[node-protection <String>]	admin	Node protection of Frr tunnel
[protection-method <String>]	admin	Bandwidth protection of Frr tunnel
[colour-group-include-any <NUMBER: 0-31>]		tunnel colour-group-include-any
[colour-group-include-all <NUMBER: 0-31>]		tunnel colour-group-include-any
[colour-group-exclude-any <NUMBER: 0-31>]		tunnel colour-group-include-any
<b>mpls tunnel-frr-profile set</b>	admin	Set tunnel FRR profile parameters
frr-profile <frr-profile>		tunnel FRR profile name
[setup-priority <NUMBER: 0-7>]		frr tunnel setup priority
[hold-priority <NUMBER: 0-7>]		frr tunnel hold priority
[hop-limit <NUMBER: 0-255>]		frr tunnel hop-limit
[bandwidth <NUMBER: 1000-1000000>]		bandwidth (Kbps/s)
[bw-protection <String>]	admin	Bandwidth protection of Frr tunnel
[node-protection <String>]	admin	Node protection of Frr tunnel
[protection-method <String>]	admin	Bandwidth protection of Frr tunnel
[colour-group-include-any <NUMBER: 0-31>]		tunnel colour-group-include-any
[colour-group-include-all <NUMBER: 0-31>]		tunnel colour-group-include-any
[colour-group-exclude-any <NUMBER: 0-31>]		tunnel colour-group-include-any
<b>mpls tunnel-frr-profile unset</b>	admin	Unset tunnel FRR profile parameters
frr-profile <frr-profile>		tunnel FRR profile name

Command	Access	Description
[setup-priority]		frr tunnel setup priority
[hold-priority]		frr tunnel hold priority
[hop-limit]		frr tunnel hop-limit
[bandwidth]		bandwidth (Kbps/s)
[bw-protection]	admin	Bandwidth protection of Frr tunnel
[node-protection]	admin	Node protection of Frr tunnel
[protection-method]	admin	Bandwidth protection of Frr tunnel
[colour-group-include-any]		tunnel colour-group-include-any
[colour-group-include-all]		tunnel colour-group-include-any
[colour-group-exclude-any]		tunnel colour-group-include-any
<b><i>mpls tunnel-frr-profile delete</i></b>		
admin		delete tunnel FRR profile
frr-profile <frr-profile>		tunnel FRR profile name
<b><i>mpls tunnel-frr-profile show</i></b>		
limited		show all tunnel FRR profiles
<b><i>mpls tunnel-frr-profile show</i></b>		
limited		show specific tunnel FRR profile
frr-profile <frr-profile>		tunnel FRR profile name
<b><i>mpls tunnel-cos-profile create</i></b>		
admin		create MPLS Tunnel COS profile
cos-profile <cos-profile>		Tunnel COS profile name
{logical-id <NUMBER>}		profile index
[frame-cos-map <RCOS to FCOS Map>]		Select frame-cos-map
[frame-cos-policy <String>]		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 <String>]		resolved cos policy
[resolved-cos-fixed <NUMBER: 0-7>]		fixed resolved CoS value
<b><i>mpls tunnel-cos-profile set</i></b>		
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 <String>]		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 <String>]		resolved cos policy
[resolved-cos-fixed <NUMBER: 0-7>]		fixed resolved CoS value
<b><i>mpls tunnel-cos-profile unset</i></b>		
admin		unset MPLS Tunnel COS profile

Command	Access	Description
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
<b>mpls tunnel-cos-profile delete</b>		
cos-profile <cos-profile>	admin	Delete MPLS Tunnel COS profile
<b>mpls tunnel-cos-profile show</b>		
cos-profile <cos-profile>	limited	show all Tunnel COS profiles
<b>mpls tunnel-cos-profile show</b>		
cos-profile <cos-profile>	limited	show selected Tunnel COS profile
<b>mpls debug output set</b>		
{type <String>}	admin	set
		direction
<b>mpls debug output unset</b>		
{type}	admin	set
		type
<b>mpls debug output show</b>		
	admin	show
<b>mpls debug tables show</b>		
{dc-memory-usage}	admin	set
		type
{dcRsvpTbl}		type
{inSegTbl}		type
{outSegTbl}		type
{tunlGrpTbl}		type
{xcSegTbl}		type
{i3EmTbl}		type
{lfibTbl}		type
<b>mpls debug tunnel set</b>		
{platform <String>}	admin	set
		platform
<b>mpls tunnel create</b>		
rsvp-ingress <rsvp-ingress>	admin	create MPLS TE-Tunnel
		RSVP-TE tunnel name
[logical-id <NUMBER>]		Creation index used in config
{dest-ip <IP address>}		tunnel destination IP address

Command	Access	Description
[setup-priority <NUMBER: 0-7>]		tunnel setup priority
[hold-priority <NUMBER: 0-7>]		tunnel hold priority
[bandwidth-profile <MPLS Tunnel Bandwidth Profile>]		tunnel bandwidth profile
[record-route <String>]	admin	record route
[frr-signalling <String>]	admin	frr signalling
[frr-profile <MPLS Tunnel FRR Profile>]		tunnel FRR profile name
[explicit-tunnel-path <MPLS Rsvp Path>]		Tunnel explicit path name
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <String>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tunnel fixed ttl
[backup-tunnel <MPLS ingress primary tunnel>]		list of primary tunnels
[reversion-hold-time <NUMBER: 0-3600>]		reversion hold time in seconds
[tunnel-reversion <String>]		tunnel reversion behavior
<b><i>mpls tunnel set</i></b>		
<b><i>mpls tunnel set</i></b>	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
[bandwidth-profile <MPLS Tunnel Bandwidth Profile>]		tunnel bandwidth profile
[record-route <String>]	admin	record route
[explicit-tunnel-path <MPLS Rsvp Path>]		Tunnel explicit path name
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <String>}		TTL policy
[frr-signalling <String>]	admin	frr signalling
[frr-profile <MPLS Tunnel FRR Profile>]		tunnel FRR profile name
[fixed-ttl <NUMBER: 1-255>]		tunnel fixed ttl
[reversion-hold-time <NUMBER: 0-3600>]		reversion hold time in seconds
[tunnel-reversion <String>]		tunnel reversion behavior
<b><i>mpls tunnel unset</i></b>		
<b><i>mpls tunnel unset</i></b>	admin	unset MPLS TE-Tunnel
rsvp-ingress <rsvp-ingress>		dynamic ingress tunnel name
[setup-priority]		tunnel setup priority
[hold-priority]		tunnel hold priority
[bandwidth-profile]		tunnel bandwidth profile
[record-route]	admin	record route
[explicit-tunnel-path]		Tunnel explicit path name
[cos-profile]		Default Tunnel COS profile
[frr-signalling]	admin	Default frr signalling

Command	Access	Description
[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
<b><i>mpls tunnel disable</i></b>		
	admin	disable MPLS TE-Tunnel
rsvp-ingress <rsvp-ingress>		dynamic ingress tunnel name
<b><i>mpls tunnel enable</i></b>		
	admin	enable MPLS TE-Tunnel
rsvp-ingress <rsvp-ingress>		dynamic ingress tunnel name
<b><i>mpls tunnel delete</i></b>		
	admin	delete MPLS TE-Tunnel
rsvp-ingress <rsvp-ingress>		dynamic ingress tunnel name
<b><i>mpls tunnel switchover</i></b>		
	admin	Switchover MPLS TE-Tunnel
rsvp-ingress <rsvp-ingress>		dynamic ingress tunnel name
<b><i>mpls tunnel create</i></b>		
	admin	create static ingress TE-Tunnel
static-ingress <static-ingress>		static ingress tunnel name
[logical-id <NUMBER>]		Creation index used in config
{dest-ip <IP address>}		tunnel destination IP address
{next-hop-ip <IP address>}		tunnel next hop IP address
{out-label <NUMBER: 16-104479>}		tunnel encap label
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <String>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tunnel fixed TTL
[recovery-nhop-disjoint <String>]		Recovery path next-hop disjointness requirement (default = Link)
[backup-tunnel <MPLS ingress primary tunnel>]		list of primary tunnels
[reversion-hold-time <SECONDS: 0-3600>]		reversion hold time in seconds
[tunnel-reversion <String>]		tunnel reversion behavior
<b><i>mpls tunnel set</i></b>		
	admin	set static ingress TE-Tunnel
static-ingress <static-ingress>		static ingress tunnel name
[out-label <NUMBER: 16-104479>]		tunnel encap label
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <String>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tunnel fixed ttl

Command	Access	Description
[recovery-nhop-disjoint <String>]		Recovery path next-hop disjointness requirement (default = Link)
[reversion-hold-time <NUMBER: 0-3600>]		reversion hold time in seconds
[tunnel-reversion <String>]		tunnel reversion behavior
<b><i>mpls tunnel unset</i></b>		
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
<b><i>mpls tunnel disable</i></b>		
admin		disable static ingress TE-Tunnel
static-ingress <static-ingress>		static ingress tunnel name
<b><i>mpls tunnel enable</i></b>		
admin		enable static ingress TE-Tunnel
static-ingress <static-ingress>		static ingress tunnel name
<b><i>mpls tunnel delete</i></b>		
admin		delete static ingress TE-Tunnel
static-ingress <static-ingress>		static ingress tunnel name
<b><i>mpls tunnel switchover</i></b>		
admin		Switchover static ingress TE-Tunnel
static-ingress <static-ingress>		static ingress tunnel name
<b><i>mpls tunnel create</i></b>		
admin		create static decap TE-Tunnel
static-egress <static-egress>		static egress tunnel name
[logical-id <NUMBER>]		Creation index used in config
{src-ip <IP address>}		tunnel source IP address
{in-label <NUMBER: 16-104479>}		tunnel decap label
<b><i>mpls tunnel set</i></b>		
admin		set static egress TE-Tunnel
static-egress <static-egress>		static egress tunnel name
[in-label <NUMBER: 16-104479>]		tunnel decap label
<b><i>mpls tunnel unset</i></b>		
admin		unset static egress TE-Tunnel
static-egress <static-egress>		static egress tunnel name
<b><i>mpls tunnel delete</i></b>		
admin		delete static egress TE-Tunnel

Command	Access	Description
static-egress <static-egress>		static egress tunnel name
<b><i>mpls tunnel create</i></b>		
static-transit <static-transit>	admin	create transit TE-Tunnel
[logical-id <NUMBER>]		Creation index used in config
{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: 16-104479>}		tunnel in label
{out-label <NUMBER: 16-104479>}		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 <String>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		fixed TTL value
<b><i>mpls tunnel delete</i></b>		
static-transit <static-transit>	admin	delete static transit TE-Tunnel
<b><i>mpls tunnel disable</i></b>		
static-transit <static-transit>	admin	disable static transit TE-Tunnel
<b><i>mpls tunnel enable</i></b>		
static-transit <static-transit>	admin	enable static transit TE-Tunnel
<b><i>mpls tunnel set</i></b>		
static-transit <static-transit>	admin	set static transit TE-Tunnel
[in-label <NUMBER: 16-104479>]		tunnel in label
[out-label <NUMBER: 16-104479>]		tunnel out label
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <String>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		fixed TTL value
<b><i>mpls tunnel unset</i></b>		
static-transit <static-transit>	admin	unset static transit TE-Tunnel
[cos-profile]		Default Tunnel COS profile
[ttl-policy]		TTL policy
[fixed-ttl]		tunnel fixed ttl
<b><i>mpls tunnel create</i></b>		
frr-bypass-lsp <frr-bypass-lsp>	admin	create FRR bypass TE-LSP
		FRR bypass LSP name

Command	Access	Description
{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
<b>mpls tunnel delete</b>		
admin		delete FRR bypass TE-LSP
frr-bypass-lsp <frr-bypass-lsp>		FRR bypass LSP name
<b>mpls tunnel disable</b>		
admin		disable FRR bypass TE-LSP
frr-bypass-lsp <frr-bypass-lsp>		FRR bypass LSP name
<b>mpls tunnel enable</b>		
admin		enable FRR bypass TE-LSP
frr-bypass-lsp <frr-bypass-lsp>		FRR bypass LSP name
<b>mpls tunnel show</b>		
limited		show all TE-Tunnels
<b>mpls tunnel show</b>		
limited		show all TE-Tunnels
matching-lsp <matching-lsp>		all TE tunnels
{persist <String>}		Tunnel's persistence
{type <String>}		Local node's role
[state <String>]		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: 16-104479>]		tunnel in-label
[out-label <NUMBER: 16-104479>]		tunnel out-label
[recovery <String>]		tunnel's recovery type
[role <String>]		tunnel's current role
[cos-profile <MPLS Tunnel COS Profile>]		Select Tunnel CoS profile name
<b>mpls tunnel show</b>		
limited		show static ingress TE-Tunnel
static-ingress <static-ingress>		static ingress tunnel name
<b>mpls tunnel show</b>		
limited		show dynamic ingress TE-Tunnel
rsvp-ingress <rsvp-ingress>		dynamic ingress tunnel name
<b>mpls tunnel show</b>		
limited		show static egress TE-Tunnels
static-egress <static-egress>		static egress tunnel name

Command	Access	Description
<b><i>mpls tunnel show</i></b> static-transit <static-transit>	limited	show static transit TE-Tunnels static transit tunnel name
<b><i>mpls tunnel show</i></b> rsvp-transit <rsvp-transit>	limited	show dynamic transit TE-Tunnel dynamic transit tunnel name
<b><i>mpls tunnel show</i></b> frr-bypass-lsp <frr-bypass-lsp>	admin	show FRR bypass TE-LSPs FRR bypass LSP
<b><i>mpls tunnel show</i></b> resource <resource> {summary}	limited	show TE-Tunnel summary counts TE-Tunnel summary counts Tunnel maximum, configured and operational count summary
{counter}		Tunnel platform provisioning statistics
<b><i>mpls tunnel create</i></b> bidir-ingress-assoc <bidir-ingress-assoc> [logical-id <NUMBER>] {forward-tunnel <MPLS ingress tunnel>} {reverse-static-tunnel <MPLS egress tunnel>} {reverse-dyntun-name <String>} [bfd-monitor <String>] [bfd-profile <MPLS BFD Profile>]	admin	create bi-directional ingress associated TE- Tunnel bi-directional ingress associated TE-Tunnel name Creation index used in config forward tunnel static reverse tunnel dynamic reverse tunnel name BFD based fault monitoring BFD profile to be used for this session
<b><i>mpls tunnel set</i></b> bidir-ingress-assoc <bidir-ingress-assoc> [reverse-dyntun-name <String>] [bfd-monitor <String>] [bfd-profile <MPLS BFD Profile>]	admin	set bi-directional ingress associated TE- Tunnel bi-directional ingress TE-Tunnel name dynamic reverse tunnel name BFD based fault monitoring BFD profile to be used for this session
<b><i>mpls tunnel unset</i></b> bidir-ingress-assoc <bidir-ingress-assoc> [bfd-monitor] [bfd-profile]	admin	unset bi-directional ingress associated TE- Tunnel bi-directional ingress TE-Tunnel name BFD based fault monitoring BFD profile to be used for monitoring
<b><i>mpls tunnel delete</i></b>	admin	delete bi-directional ingress associated TE-

Command	Access	Description
		Tunnel
bidir-ingress-assoc <bidir-ingress-assoc>		bi-directional ingress TE-Tunnel name
<b><i>mpls tunnel disable</i></b>	admin	disable bi-directional ingress associated TE-Tunnel
bidir-ingress-assoc <bidir-ingress-assoc>		bi-directional ingress TE-Tunnel name
<b><i>mpls tunnel enable</i></b>	admin	enable bi-directional ingress associated TE-Tunnel
bidir-ingress-assoc <bidir-ingress-assoc>		bi-directional ingress TE-Tunnel name
<b><i>mpls tunnel switchover</i></b>	admin	switchover bi-directional ingress associated TE-Tunnel
bidir-ingress-assoc <bidir-ingress-assoc>		bi-directional ingress TE-Tunnel name
<b><i>mpls tunnel show</i></b>	limited	show bi-directional ingress associated TE-Tunnels
matching-assoc <matching-assoc>		Bi-directional associated TE-Tunnels
[state <String>]		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: 16-104479>]		Forward tunnel out-label
[in-label <NUMBER: 16-104479>]		Reverse tunnel in-label
[recovery <String>]		Associated tunnel's recovery type
[role <String>]		Associated tunnel's current role
<b><i>mpls tunnel show</i></b>	limited	show bi-directional ingress associated TE-Tunnel
bidir-ingress-assoc <bidir-ingress-assoc>		bi-directional associated TE-Tunnel name
<b><i>mpls l2-vpn pw-vccv-profile create</i></b>	admin	create MPLS Pseudowire VCCV profile
vccv-profile <vccv-profile>		Pseudowire VCCV profile name
{logical-id <NUMBER>}		profile index
[cc-ttl-exp <String>]		Set TTL-expiry VCCV control channel (CC Type-3) operation
[cc-ciena-oob <String>]		Set CIENA proprietary out-of-band VCCV control channel (CC Type-4) operation
<b><i>mpls l2-vpn pw-vccv-profile set</i></b>	admin	set MPLS pseudowire VCCV profile
vccv-profile <vccv-profile>		Pseudowire VCCV profile name
[cc-ttl-exp <String>]		Set TTL-expiry VCCV control channel (CC

Command	Access	Description
		Type-3) operation
[cc-ciena-oob <String>]		Set CIENA proprietary out-of-band VCCV control channel (CC Type-4) operation
<b>mpls l2-vpn pw-vccv-profile unset</b>	admin	unset MPLS pseudowire VCCV profile
vccv-profile <vccv-profile>		Pseudowire VCCV profile name
[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
<b>mpls l2-vpn pw-vccv-profile delete</b>	admin	Delete MPLS pseudowire VCCV profile
vccv-profile <vccv-profile>		Pseudowire VCCV profile name
<b>mpls l2-vpn pw-vccv-profile show</b>	limited	show all Pseudowire VCCV profiles
<b>mpls l2-vpn pw-vccv-profile show</b>	admin	show selected Pseudowire VCCV profile
vccv-profile <vccv-profile>		Pseudowire VCCV profile name
<b>mpls l2-vpn pw-cos-profile create</b>	admin	create MPLS Pseudowire COS profile
cos-profile <cos-profile>		Pseudowire COS profile name
{logical-id <NUMBER>}		profile index
[frame-cos-map <RCOS to FCOS Map>]		Select frame-cos-map
[frame-cos-policy <String>]		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 <String>]		resolved cos policy
[resolved-cos-fixed <NUMBER: 0-7>]		fixed resolved CoS value
<b>mpls l2-vpn pw-cos-profile set</b>	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 <String>]		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 <String>]		resolved cos policy
[resolved-cos-fixed <NUMBER: 0-7>]		fixed resolved CoS value
<b>mpls l2-vpn pw-cos-profile unset</b>	admin	unset MPLS pseudowire COS profile

Command	Access	Description
cos-profile <cos-profile>		Pseudowire 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
<b><i>mpls l2-vpn pw-cos-profile delete</i></b>		
admin		Delete MPLS pseudowire COS profile
cos-profile <cos-profile>		Pseudowire COS profile name
<b><i>mpls l2-vpn pw-cos-profile show</i></b>		
limited		show all Pseudowire COS profiles
<b><i>mpls l2-vpn pw-cos-profile show</i></b>		
limited		show selected Pseudowire COS profile
cos-profile <cos-profile>		Pseudowire COS profile name
<b><i>mpls l2-vpn protection create</i></b>		
admin		create LDP signaled virtual circuit
dynamic-vc <dynamic-vc>		VC name
{secondary-pw-id <NUMBER: 1-2147483647>}		Secondary VPN ID
{primary-vc-name <Virtual Circuit Dynamic MPLS Name>}		primary vc name
{peer <IP address>}		Destination IP address
{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
{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
<b><i>mpls l2-vpn protection switchover</i></b>		
admin		switch to protection pseudowire
dynamic-vc <dynamic-vc>		VC name
<b><i>mpls l2-vpn protection show</i></b>		
limited		show all ethernet virtual circuits
<b><i>mpls l2-vpn protection create</i></b>		
admin		create static protection virtual circuit
static-vc <static-vc>		VC name
{secondary-pw-id <NUMBER: 1-		Secondary VPN ID

Command	Access	Description
2147483647>} {primary-vc-name <Virtual Circuit Static MPLS Name>} {peer <IP address>} {in-label <NUMBER: 16-1044479>} {out-label <NUMBER: 16-1044479>} {te-tunnel <MPLS ingress primary tunnel>} {tp-tunnel-ingr-corout <MPLS ingress primary tp corout tunnel>} {tp-tunnel-egrs-corout-static <MPLS static egress primary tp-tunnel>} {tp-tunnel-egrs-corout-dynamic <String>} {te-tunnel-assoc <MPLS assoc te-tunnel>} {tp-tunnel-assoc <MPLS assoc tp-tunnel>} [refresh-status-interval <NUMBER: 0-65535>]		primary vc name Destination IP address Set MPLS decap label Set MPLS encap label Select ingress transport primary TE-Tunnel Select ingress transport co-routed primary TP-Tunnel Select static egress transport co-routed primary TP-Tunnel dynmaic egress transport co-routed TP-Tunnel name Select ingress transport associated primary TE-Tunnel Select ingress transport associated primary TP-Tunnel Set refresh timer interval
<b>mpls l2-vpn protection switchover</b> static-vc <static-vc>	admin	switch to protection pseudowire VC name
<b>mpls l2-vpn create</b> static-vc <static-vc> {pw-id <NUMBER: 1-2147483647>} {peer <IP address>} {in-label <NUMBER: 16-1044479>} {out-label <NUMBER: 16-1044479>} {te-tunnel <MPLS ingress primary tunnel>} {tp-tunnel-ingr-corout <MPLS ingress primary tp corout tunnel>} {tp-tunnel-egrs-corout-static <MPLS static egress primary tp-tunnel>} {te-tunnel-assoc <MPLS assoc te-tunnel>} {tp-tunnel-assoc <MPLS assoc tp-tunnel>} [pw-type <String>] [tdm-profile <TDM Profile Name>] [pw-mode <String>]	admin	create static MPLS virtual circuit Set static virtual-circuit name Set VPN ID Set Destination IP address Set MPLS decap label Set MPLS encap label Select ingress transport primary TE-Tunnel Select ingress transport co-routed primary TP-Tunnel Select static egress transport co-routed primary TP-Tunnel Select ingress transport associated primary TE-Tunnel Select ingress transport associated primary TP-Tunnel Select pseudowire type Select TDM profile Select pseudowire mode

Command	Access	Description
[mtu <BYTES>]		Set MTU (bytes)
[service-delimiter-vid <NUMBER: 1-4094>]		Set Service Delimiter VID
[service-delimiter-tpid <String>]		service delimiter vlan TPID
[refresh-status-interval <NUMBER: 0-65535>]		Set refresh timer interval
[pw-vccv-profile <MPLS Pseudowire VCCV Profile>]		Pseudowire VCCV profile name
[pw-cos-profile <MPLS Pseudowire CoS Profile>]		Pseudowire CoS profile name
<b>mpls l2-vpn set</b>		
	admin	Static virtual circuit parameters
static-vc <static-vc>		update static virtual-circuit parameters
[pw-mode <String>]		Select pseudowire mode
[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
[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 <NUMBER: 0-65535>]		Set refresh timer interval
[service-delimiter-vid <NUMBER: 1-4094>]		Set Service Delimiter VID
[service-delimiter-tpid <String>]		service delimiter vlan TPID
[tdm-profile <TDM Profile Name>]		Select TDM profile
[pw-vccv-profile <MPLS Pseudowire VCCV Profile>]		Pseudowire VCCV profile name
[pw-cos-profile <MPLS Pseudowire CoS Profile>]		Pseudowire COS profile name
<b>mpls l2-vpn unset</b>		
	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
[service-delimiter-vid]		Set Service Delimiter VID
[service-delimiter-tpid]		service delimiter vlan TPID

Command	Access	Description
[pw-vccv-profile]		Pseudowire VCCV profile name
[pw-cos-profile]		Pseudowire CoS profile name
<b>mpls l2-vpn create</b>		
	admin	create LDP signaled virtual circuit
dynamic-vc <dynamic-vc>		Set dynamic virtual-circuit name
{pw-id <NUMBER: 1-2147483647>}		Set VPN ID
{peer <IP address>}		Set Destination IP address
{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
{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 <String>]		Select pseudowire type
[mtu <BYTES>]		Set MTU (bytes)
[status-tlv <String>]		Set status tlv
[service-delimiter-vid <NUMBER: 1-4094>]		Set Service Delimiter VID
[service-delimiter-tpid <String>]		service delimiter vlan TPID
[pw-mode <String>]		Select pseudowire mode
[pw-vccv-profile <MPLS Pseudowire VCCV Profile>]		Pseudowire VCCV profile name
[pw-cos-profile <MPLS Pseudowire CoS Profile>]		Pseudowire CoS profile name
<b>mpls l2-vpn set</b>		
	admin	LDP signaled virtual circuit parameters
dynamic-vc <dynamic-vc>		Modify dynamic virtual-circuit attributes
[pw-mode <String>]		Select pseudowire mode
[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
[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

Command	Access	Description
[service-delimiter-vid <NUMBER: 1-4094>]		Set Service Delimiter VID
[service-delimiter-tpid <String>]		service delimiter vlan TPID
[pw-vccv-profile <MPLS Pseudowire VCCV Profile>]		Pseudowire VCCV profile name
[pw-cos-profile <MPLS Pseudowire CoS Profile>]		Pseudowire CoS profile name
<b><i>mpls l2-vpn unset</i></b>		
	admin	LDP signaled Pseudowire parameters
dynamic-vc <dynamic-vc>		set dynamic-vc
{pw-mode}		PW mode
{customer}		customer name
[service-delimiter-vid]		Set Service Delimiter VID
[service-delimiter-tpid]		service delimiter vlan TPID
[pw-vccv-profile]		Pseudowire VCCV profile name
[pw-cos-profile]		Pseudowire CoS profile name
<b><i>mpls l2-vpn delete</i></b>		
	admin	delete vc
vc <vc>		delete vc
<b><i>mpls l2-vpn enable</i></b>		
	admin	enable pseudowire
vc <vc>		VC name
<b><i>mpls l2-vpn disable</i></b>		
	admin	disable pseudowire
vc <vc>		VC name
<b><i>mpls l2-vpn show</i></b>		
	limited	show all ethernet virtual circuits
<b><i>mpls l2-vpn show</i></b>		
	limited	show all matched ethernet virtual circuits
matching-vc <matching-vc>		all matching VCs
{persist <String>}		VC's persistence
[state <String>]		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 <String>]		VC's recovery type
[role <String>]		VC's current role
[te-tunnel <MPLS ingress primary tunnel>]		Select ingress transport primary TE-Tunnel
[tp-tunnel-ingr-corout <MPLS ingress		Select ingress transport co-routed primary

Command	Access	Description
primary tp corout tunnel>]		TP-Tunnel
[tp-tunnel-egrs-corout-static <MPLS static egress primary tp-tunnel>]		Select static egress transport co-routed primary TP-Tunnel
[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 <String>]		Select pseudowire type
[pw-mode <String>]		Select pseudowire mode
[mtu <BYTES>]		Select MTU (bytes)
[service-delimiter-vid <NUMBER: 1-4094>]		Select Service Delimiter VID
[service-delimiter-tpid <String>]		Select Service delimiter VLAN TPID
[status-tlv <String>]		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
<b>mpls l2-vpn show</b>		
	limited	show PW
vc <vc>		VC name
<b>mpls l2-vpn show</b>		
	limited	show pseudowires by customer name
customer <customer>		Customer name
<b>mpls l2-vpn show</b>		
	limited	show VC nexthops
vc-nexthops <vc-nexthops>		VC nexthops
<b>mpls l2-vpn show</b>		
	limited	show VC VIFs
vc-vifs <vc-vifs>		VC VIFs
<b>mpls l2-vpn show</b>		
	limited	show L2-VPN VC resource counts
resource <resource>		VC resource counts
{summary}		VC maximum, configured and operational count summary
{counter}		VC platform provisioning statistics
<b>mpls gmpls create</b>		
	admin	create gmpls TP-Tunnel
rsvp-ingress-unidir <rsvp-ingress-unidir>		gmpls ingress tp-tunnel name
[logical-id <NUMBER>]		Creation index used in config
{dest-ip <IP address>}		tp-tunnel destination IP address

Command	Access	Description
[setup-priority <NUMBER: 0-7>]		tp-tunnel setup priority
[hold-priority <NUMBER: 0-7>]		tp-tunnel hold priority
[bandwidth-profile <MPLS Tunnel Bandwidth Profile>]		tunnel bandwidth profile
[record-route <String>]	admin	record route
[explicit-tunnel-path <MPLS Rsvp Path>]		Tunnel explicit path name
[backup-tunnel <MPLS ingress tp-unidir-tunnel>]		Select uni-directional primary tp-tunnel
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <String>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tp-tunnel fixed ttl
[reversion-hold-time <NUMBER: 0-3600>]		reversion hold time in seconds
[tunnel-reversion <String>]		tunnel reversion behavior
<b>mpls gmpls set</b>	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
[bandwidth-profile <MPLS Tunnel Bandwidth Profile>]		tunnel bandwidth profile
[record-route <String>]	admin	record route
[explicit-tunnel-path <MPLS Rsvp Path>]		Tunnel explicit path name
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <String>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tp-tunnel fixed ttl
[reversion-hold-time <NUMBER: 0-3600>]		reversion hold time in seconds
[tunnel-reversion <String>]		tunnel reversion behavior
<b>mpls gmpls unset</b>	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
[bandwidth-profile]		tunnel bandwidth profile
[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

Command	Access	Description
<b><i>mpls gmpls switchover</i></b>	admin	switchover gmpls TP-Tunnel
rsvp-ingress-unidir <rsvp-ingress-unidir>		gmpls ingress tp-tunnel name
<b><i>mpls gmpls delete</i></b>	admin	delete gmpls TP-Tunnel
rsvp-ingress-unidir <rsvp-ingress-unidir>		gmpls ingress tp-tunnel name
<b><i>mpls gmpls disable</i></b>	admin	disable gmpls TP-Tunnel
rsvp-ingress-unidir <rsvp-ingress-unidir>		gmpls ingress tp-tunnel name
<b><i>mpls gmpls enable</i></b>	admin	enable gmpls TP-Tunnel
rsvp-ingress-unidir <rsvp-ingress-unidir>		gmpls ingress tp-tunnel name
<b><i>mpls gmpls delete</i></b>	admin	delete dynamic transit uni-directional TP-Tunnel
rsvp-transit-unidir <rsvp-transit-unidir>		transit tp-tunnel name
[gracefully]		graceful deletion
<b><i>mpls gmpls disable</i></b>	admin	disable dynamic transit uni-directional TP-Tunnel
rsvp-transit-unidir <rsvp-transit-unidir>		transit tp-tunnel name
<b><i>mpls gmpls enable</i></b>	admin	enable dynamic transit uni-directional TP-Tunnel
rsvp-transit-unidir <rsvp-transit-unidir>		transit tp-tunnel name
<b><i>mpls gmpls delete</i></b>	admin	delete dynamic egress uni-directional TP-Tunnel
rsvp-egress-unidir <rsvp-egress-unidir>		egress tp-tunnel name
[gracefully]		graceful deletion
<b><i>mpls gmpls disable</i></b>	admin	disable dynamic egress uni-directional TP-Tunnel
rsvp-egress-unidir <rsvp-egress-unidir>		egress tp-tunnel name
<b><i>mpls gmpls enable</i></b>	admin	enable dynamic egress uni-directional TP-Tunnel
rsvp-egress-unidir <rsvp-egress-unidir>		egress tp-tunnel name
<b><i>mpls gmpls create</i></b>	admin	create static ingress co-routed TP-Tunnel
static-ingress-corout <static-ingress-corout>		static ingress co-routed tp-tunnel name
[logical-id <NUMBER>]		Creation index used in config

Command	Access	Description
[src-tunnel-id <NUMBER: 1-8192>]		Ingress tp-tunnel source Tunnel-ID
[forward-lsp-id <NUMBER: 1-8192>]		Ingress tp-tunnel forward LSP-ID
[dest-tunnel-id <NUMBER: 1-8192>]		Ingress tp-tunnel destination Tunnel-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
{reverse-in-label <NUMBER: 16-1044479>}		reverse decap tp-tunnel incoming label
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <String>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tp-tunnel fixed TTL
[recovery-nhop-disjoint <String>]		Recovery path next-hop disjointness requirement (default = Link)
[backup-tunnel <MPLS ingress primary tp corout tunnel>]		list of primary tp-tunnels
[reversion-hold-time <NUMBER: 0-3600>]		reversion hold time in seconds
[tunnel-reversion <String>]		tunnel reversion behavior
[bfd-monitor <String>]		BFD based fault monitoring
[bfd-profile <MPLS BFD Profile>]		BFD profile to be used for this session
[ais-monitor <String>]		AIS based fault monitoring
[ais-profile <AIS Profile List>]		AIS profile to be used for this session
<b>mpls gmpls set</b>	admin	set static ingress co-routed TP-Tunnel
static-ingress-corout <static-ingress-corout>		static ingress tp-tunnel name
[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 <String>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tunnel fixed ttl
[recovery-nhop-disjoint <String>]		Recovery path next-hop disjointness requirement (default = Link)
[reversion-hold-time <NUMBER: 0-3600>]		reversion hold time in seconds
[tunnel-reversion <String>]		tunnel reversion behavior
[bfd-monitor <String>]		BFD based fault monitoring
[bfd-profile <MPLS BFD Profile>]		BFD profile to be used for this session
[ais-monitor <String>]		AIS based fault monitoring
[ais-profile <AIS Profile List>]		AIS profile to be used for this session

Command	Access	Description
<b><i>mpls gmpls unset</i></b>	admin	unset static ingress co-routed TP-Tunnel
static-ingress-corout <static-ingress-corout>		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
[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
<b><i>mpls gmpls switchover</i></b>	admin	switchover static ingress co-routed TP-Tunnel
static-ingress-corout <static-ingress-corout>		static ingress tp-tunnel name
<b><i>mpls gmpls delete</i></b>	admin	delete static ingress co-routed TP-Tunnel
static-ingress-corout <static-ingress-corout>		static ingress tp-tunnel name
<b><i>mpls gmpls disable</i></b>	admin	disable static ingress co-routed TP-Tunnel
static-ingress-corout <static-ingress-corout>		static ingress tp-tunnel name
<b><i>mpls gmpls enable</i></b>	admin	enable static ingress co-routed TP-Tunnel
static-ingress-corout <static-ingress-corout>		static ingress tp-tunnel name
<b><i>mpls gmpls create</i></b>	admin	create static egress co-routed TP-Tunnel
static-egress-corout <static-egress-corout>		static egress co-routed tp-tunnel name
[logical-id <NUMBER>]		Creation index used in configuration
[src-tunnel-id <NUMBER: 1-8192>]		Egress tp-tunnel source Tunnel-ID
[forward-lsp-id <NUMBER: 1-8192>]		Egress tp-tunnel forward LSP-ID
[dest-tunnel-id <NUMBER: 1-8192>]		Egress tp-tunnel destination Tunnel-ID
{src-ip <IP address>}		tp-tunnel source IP address
{prev-hop-ip <IP address>}		tp-tunnel previous hop IP address
{forward-in-label <NUMBER: 16-1044479>}		forward decap tp-tunnel incoming label

Command	Access	Description
{reverse-out-label <NUMBER: 16-1044479>}		reverse encaps tp-tunnel outgoing label
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <String>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tp-tunnel fixed TTL
[reversion-hold-time <NUMBER: 0-3600>]		reversion hold time in seconds
[tunnel-reversion <String>]		tunnel reversion behavior
[recovery-phop-disjoint <String>]		Recovery path prev-hop disjointness requirement (default = Link)
[backup-tunnel <MPLS static egress primary tp-tunnel>]		list of primary tp-tunnels
[bfd-monitor <String>]		BFD based fault monitoring
[bfd-profile <MPLS BFD Profile>]		BFD profile to be used for this session
[ais-monitor <String>]		AIS based fault monitoring
[ais-profile <AIS Profile List>]		AIS profile to be used for this session
<b><i>mpls gmpls set</i></b>		
	admin	set static egress co-routed TP-Tunnel
static-egress-corout <static-egress-corout>		static egress tp-tunnel name
[forward-in-label <NUMBER: 16-1044479>]		forward decap tp-tunnel incoming label
[reverse-out-label <NUMBER: 16-1044479>]		reverse encaps tp-tunnel outgoing label
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <String>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tp-tunnel fixed TTL
[reversion-hold-time <NUMBER: 0-3600>]		reversion hold time in seconds
[tunnel-reversion <String>]		tunnel reversion behavior
[recovery-phop-disjoint <String>]		Recovery path prev-hop disjointness requirement (default = Link)
[bfd-monitor <String>]		BFD based fault monitoring
[bfd-profile <MPLS BFD Profile>]		BFD profile to be used for this session
[ais-monitor <String>]		AIS based fault monitoring
[ais-profile <AIS Profile List>]		AIS profile to be used for this session
<b><i>mpls gmpls unset</i></b>		
	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
{ttl-policy}		TTL policy
[fixed-ttl]		tunnel fixed ttl
[reversion-hold-time]		reversion hold time in seconds

Command	Access	Description
[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
<b><i>mpls gmpls switchover</i></b>		
static-egress-corout <static-egress-corout>	admin	switchover static egress co-routed TP-Tunnel static egress tp-tunnel name
<b><i>mpls gmpls delete</i></b>		
static-egress-corout <static-egress-corout>	admin	delete static egress co-routed TP-Tunnel static egress tp-tunnel name
<b><i>mpls gmpls disable</i></b>		
static-egress-corout <static-egress-corout>	admin	disable static egress co-routed TP-Tunnel static egress tp-tunnel name
<b><i>mpls gmpls enable</i></b>		
static-egress-corout <static-egress-corout>	admin	enable static egress co-routed TP-Tunnel static egress tp-tunnel name
<b><i>mpls gmpls create</i></b>		
static-transit-corout <static-transit-corout>	admin	create static transit co-routed TP-Tunnel static transit co-routed tp-tunnel name
[logical-id <NUMBER>]		Creation index used in config
[src-tunnel-id <NUMBER: 1-8192>]		Transit tp-tunnel source Tunnel-ID
[forward-lsp-id <NUMBER: 1-8192>]		Transit tp-tunnel forward LSP-ID
[dest-tunnel-id <NUMBER: 1-8192>]		Transit tp-tunnel destination Tunnel-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
{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

Command	Access	Description
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <String>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tp-tunnel fixed TTL
[ais-monitor <String>]		AIS based fault monitoring
[ais-profile <AIS Profile List>]		AIS profile to be used for this session
<b><i>mpls gmpls set</i></b>		
<b><i>mpls gmpls set</i></b>	admin	set static transit co-routed TP-Tunnel
static-transit-corout <static-transit-corout>		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
[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 <String>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tp-tunnel fixed TTL
[ais-monitor <String>]		AIS based fault monitoring
[ais-profile <AIS Profile List>]		AIS profile to be used for this session
<b><i>mpls gmpls unset</i></b>		
<b><i>mpls gmpls unset</i></b>	admin	unset static transit co-routed TP-Tunnel
static-transit-corout <static-transit-corout>		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
<b><i>mpls gmpls delete</i></b>		
<b><i>mpls gmpls delete</i></b>	admin	delete static transit co-routed TP-Tunnel
static-transit-corout <static-transit-corout>		static transit tp-tunnel name
<b><i>mpls gmpls disable</i></b>		
<b><i>mpls gmpls disable</i></b>	admin	disable static transit co-routed TP-Tunnel
static-transit-corout <static-transit-corout>		static transit tp-tunnel name
<b><i>mpls gmpls enable</i></b>		
<b><i>mpls gmpls enable</i></b>	admin	enable static transit co-routed TP-Tunnel
static-transit-corout <static-transit-corout>		static transit tp-tunnel name
<b><i>mpls gmpls create</i></b>		
<b><i>mpls gmpls create</i></b>	admin	create static ingress uni-directional TP-Tunnel
static-ingress-unidir <static-ingress-		static ingress unidirectional tp-tunnel name

Command	Access	Description
unidir>		
[logical-id <NUMBER>]		Creation index used in config
[src-tunnel-id <NUMBER: 1-8192>]		Ingress tp-tunnel source Tunnel-ID
[forward-lsp-id <NUMBER: 1-8192>]		Ingress tp-tunnel forward LSP-ID
[dest-tunnel-id <NUMBER: 1-8192>]		Ingress tp-tunnel destination Tunnel-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 <String>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tp-tunnel fixed TTL
[reversion-hold-time <NUMBER: 0-3600>]		reversion hold time in seconds
[tunnel-reversion <String>]		tunnel reversion behavior
[recovery-nhop-disjoint <String>]		Recovery path next-hop disjointness requirement (default = Link)
[backup-tunnel <MPLS ingress tp-unidir-tunnel>]		list of primary tp-unidir-tunnels
<b><i>mpls gmpls set</i></b>		
	admin	set static ingress uni-directional TP-Tunnel
static-ingress-unidir <static-ingress-unidir>		static ingress tp-tunnel name
[forward-out-label <NUMBER: 16-1044479>]		forward encap tp-tunnel out-label
[cos-profile <MPLS Tunnel COS Profile>]		Tunnel COS profile name
{ttl-policy <String>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tunnel fixed ttl
[reversion-hold-time <NUMBER: 0-3600>]		reversion hold time in seconds
[tunnel-reversion <String>]		tunnel reversion behavior
[recovery-nhop-disjoint <String>]		Recovery path next-hop disjointness requirement (default = Link)
<b><i>mpls gmpls unset</i></b>		
	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
<b><i>mpls gmpls switchover</i></b>	admin	switchover static ingress uni-directional TP-Tunnel
static-ingress-unidir <static-ingress-unidir>		static ingress tp-tunnel name
<b><i>mpls gmpls delete</i></b>	admin	delete static ingress uni-directional TP-Tunnel
static-ingress-unidir <static-ingress-unidir>		static ingress tp-tunnel name
<b><i>mpls gmpls disable</i></b>	admin	disable static ingress uni-directional TP-Tunnel
static-ingress-unidir <static-ingress-unidir>		static ingress tp-tunnel name
<b><i>mpls gmpls enable</i></b>	admin	enable static ingress uni-directional TP-Tunnel
static-ingress-unidir <static-ingress-unidir>		static ingress tp-tunnel name
<b><i>mpls gmpls create</i></b>	admin	create static egress uni-directional TP-Tunnel
static-egress-unidir <static-egress-unidir>		static egress unidirectional tp-tunnel name
[logical-id <NUMBER>]		Creation index used in config
[src-tunnel-id <NUMBER: 1-8192>]		Egress tp-tunnel source Tunnel-ID
[forward-lsp-id <NUMBER: 1-8192>]		Egress tp-tunnel forward LSP-ID
[dest-tunnel-id <NUMBER: 1-8192>]		Egress tp-tunnel destination Tunnel-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
<b><i>mpls gmpls set</i></b>	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
<b><i>mpls gmpls unset</i></b>	admin	unset static egress uni-directional TP-Tunnel
static-egress-unidir <static-egress-unidir>		static egress tp-tunnel name
[prev-hop-ip]		Tunnel previous hop IP address used for AIS monitoring

Command	Access	Description
<b><i>mpls gmpls delete</i></b>	admin	delete static egress uni-directional TP-Tunnel
static-egress-unidir <static-egress-unidir>		static egress tp-tunnel name
<b><i>mpls gmpls disable</i></b>	admin	disable static egress uni-directional TP-Tunnel
static-egress-unidir <static-egress-unidir>		static egress tp-tunnel name
<b><i>mpls gmpls enable</i></b>	admin	enable static egress uni-directional TP-Tunnel
static-egress-unidir <static-egress-unidir>		static egress tp-tunnel name
<b><i>mpls gmpls create</i></b>	admin	create static transit uni-directional TP-Tunnel
static-transit-unidir <static-transit-unidir>		static transit unidirectional tp-tunnel name
[logical-id <NUMBER>]		Creation index used in config
[src-tunnel-id <NUMBER: 1-8192>]		Transit tp-tunnel source Tunnel-ID
[forward-lsp-id <NUMBER: 1-8192>]		Transit tp-tunnel forward LSP-ID
[dest-tunnel-id <NUMBER: 1-8192>]		Transit tp-tunnel destination Tunnel-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 <String>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tp-tunnel fixed TTL
[prev-hop-ip <IP address>]		tunnel prev hop IP address
[ais-monitor <String>]		AIS based fault monitoring
[ais-profile <AIS Profile List>]		AIS profile to be used for this session
<b><i>mpls gmpls set</i></b>	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 <String>}		TTL policy
[fixed-ttl <NUMBER: 1-255>]		tp-tunnel fixed TTL
[prev-hop-ip <IP address>]		tunnel prev hop IP address

Command	Access	Description
[ais-monitor <String>]		AIS based fault monitoring
[ais-profile <AIS Profile List>]		AIS profile to be used for this session
<b><i>mpls gmpls unset</i></b>		
	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
[prev-hop-ip]		tunnel prev hop IP address
[ais-monitor]		AIS based fault monitoring
[ais-profile]		AIS profile to be used for monitoring
<b><i>mpls gmpls delete</i></b>		
	admin	delete static transit uni-directional TP-Tunnel
static-transit-unidir <static-transit-unidir>		static transit tp-tunnel name
<b><i>mpls gmpls disable</i></b>		
	admin	disable static transit uni-directional TP-Tunnel
static-transit-unidir <static-transit-unidir>		static transit tp-tunnel name
<b><i>mpls gmpls enable</i></b>		
	admin	enable static transit uni-directional TP-Tunnel
static-transit-unidir <static-transit-unidir>		static transit tp-tunnel name
<b><i>mpls gmpls show</i></b>		
	limited	show gmpls Tp-Tunnels
<b><i>mpls gmpls show</i></b>		
	limited	show gmpls Tp-Tunnel
matching-lsp <matching-lsp>		any Tp-Tunnel Lsp
{persist <String>}		Local node's role
{type <String>}		Local node's role
[path-type <String>]		tunnel's path layout
[state <String>]		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
[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

Command	Access	Description
[recovery <String>]		tunnel's recovery type
[role <String>]		tunnel's current role
[cos-profile <MPLS Tunnel COS Profile>]		Select Tunnel CoS profile name
<b>mpls gmpls show</b>	limited	show static ingress TP-Corout-Tunnels
static-ingress-corout <static-ingress-corout>		static ingress tp-corout-tunnel name
<b>mpls gmpls show</b>	limited	show static ingress TP-Unidir-Tunnels
static-ingress-unidir <static-ingress-unidir>		static ingress tp-unidir-tunnel name
<b>mpls gmpls show</b>	limited	show dynamic ingress TP-Unidir-Tunnels
rsvp-ingress-unidir <rsvp-ingress-unidir>		dynamic ingress tp-unidir-tunnel name
<b>mpls gmpls show</b>	limited	show static egress TP-Corout-Tunnels
static-egress-corout <static-egress-corout>		static egress tp-corout-tunnel name
<b>mpls gmpls show</b>	limited	show static egress TP-Unidir-Tunnels
static-egress-unidir <static-egress-unidir>		static egress tp-unidir-tunnel name
<b>mpls gmpls show</b>	admin	show static transit TP-Corout-Tunnels
static-transit-corout <static-transit-corout>		static transit tp-corout-tunnel name
<b>mpls gmpls show</b>	admin	show static transit TP-Unidir-Tunnels
static-transit-unidir <static-transit-unidir>		static transit tp-unidir-tunnel name
<b>mpls gmpls show</b>	limited	show dynamic transit TP-Unidir-Tunnels
rsvp-transit-unidir <rsvp-transit-unidir>		dynamic transit tp-unidir-tunnel name
<b>mpls gmpls show</b>	limited	show gmpls Tp-Tunnel summary counts
resource <resource>		Tp-Tunnel summary counts
{summary}		Tunnel maximum, configured and operational count summary
{counter}		Tunnel platform provisioning statistics
<b>mpls gmpls create</b>	admin	create static ingress associated TP-Tunnel
static-ingress-assoc <static-ingress-assoc>		static ingress associated tp-tunnel name
[logical-id <NUMBER>]		Creation index used in config

Command	Access	Description
{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 <String>]		BFD based fault monitoring
[bfd-profile <MPLS BFD Profile>]		BFD profile to be used for this session
[ais-monitor <String>]		AIS based fault monitoring
[ais-profile <AIS Profile List>]		AIS profile to be used for this session
<b><i>mpls gmpls set</i></b>		
<b><i>mpls gmpls set</i></b>	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 <String>]		BFD based fault monitoring
[bfd-profile <MPLS BFD Profile>]		BFD profile to be used for this session
[ais-monitor <String>]		AIS based fault monitoring
[ais-profile <AIS Profile List>]		AIS profile to be used for this session
<b><i>mpls gmpls unset</i></b>		
<b><i>mpls gmpls unset</i></b>	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
<b><i>mpls gmpls delete</i></b>		
<b><i>mpls gmpls delete</i></b>	admin	delete static ingress associated TP-Tunnel
static-ingress-assoc <static-ingress- assoc>		static ingress tp-tunnel name
<b><i>mpls gmpls disable</i></b>		
<b><i>mpls gmpls disable</i></b>	admin	disable static ingress associated TP-Tunnel
static-ingress-assoc <static-ingress- assoc>		static ingress tp-tunnel name
<b><i>mpls gmpls enable</i></b>		
<b><i>mpls gmpls enable</i></b>	admin	enable static ingress associated TP-Tunnel
static-ingress-assoc <static-ingress- assoc>		static ingress tp-tunnel name
<b><i>mpls gmpls switchover</i></b>		
<b><i>mpls gmpls switchover</i></b>	admin	switchover static ingress associated TP-Tunnel
static-ingress-assoc <static-ingress- assoc>		static ingress tp-tunnel name

Command	Access	Description
assoc>		
<b><i>mpls gmpls create</i></b>		
admin		create static transit associated TP-Tunnel
static-transit-assoc <static-transit-assoc>		static transit tp-tunnel name
[logical-id <NUMBER>]		Creation index used in config
{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 <String>]		protection switching behavior
[bfd-monitor <String>]		BFD based fault monitoring
[bfd-profile <MPLS BFD Profile>]		BFD profile to be used for this session
<b><i>mpls gmpls set</i></b>		
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 <String>]		protection switching behavior
[bfd-monitor <String>]		BFD based fault monitoring
[bfd-profile <MPLS BFD Profile>]		BFD profile to be used for this session
<b><i>mpls gmpls unset</i></b>		
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
<b><i>mpls gmpls delete</i></b>		
admin		delete static transit associated TP-Tunnel
static-transit-assoc <static-transit-assoc>		static transit tp-tunnel name

Command	Access	Description
<b><i>mpls gmpls disable</i></b>	admin	disable static transit associated TP-Tunnel
static-transit-assoc <static-transit-assoc>		static transit tp-tunnel name
<b><i>mpls gmpls enable</i></b>	admin	enable static transit associated TP-Tunnel
static-transit-assoc <static-transit-assoc>		static transit tp-tunnel name
<b><i>mpls gmpls show</i></b>	limited	show bi-directional ingress associated TP-Tunnels
matching-assoc <matching-assoc>		Bi-directional associated TP-Tunnels
[state <String>]		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 <String>]		Associated TP-tunnel's recovery type
[role <String>]		Associated TP-Tunnel's current role
<b><i>mpls gmpls show</i></b>	limited	show bi-directional ingress associated TP-Tunnel
static-ingress-assoc <static-ingress-assoc>		ingress associated tp-tunnel name
<b><i>mpls traceroute</i></b>	limited	traceroute ingress MPLS-TE tunnel
tunnel <tunnel>		ingress TE-tunnel name
[timeout <NUMBER: 500-10000>]		timeout in milliseconds
[ttl <NUMBER: 1-30>]		time-to-live
<b><i>mpls traceroute</i></b>	limited	traceroute ingress MPLS-TP Bi-directional tunnel
tp-tunnel-ingress-corout <tp-tunnel-ingress-corout>		ingress Bi-directional TP-tunnel name
[timeout <NUMBER: 500-10000>]		timeout in milliseconds
[ttl <NUMBER: 1-30>]		time-to-live
[reply-mode <String>]		Different types of reply mode. DEFAULT: LSP
[encap <String>]		Different types of encapsulation
<b><i>mpls traceroute</i></b>	limited	traceroute ingress MPLS-TP Uni-directional tunnel
tp-tunnel-ingress-unidir <tp-tunnel-ingress-unidir>		ingress Uni-directional TP-tunnel name

Command	Access	Description
[timeout <NUMBER: 500-10000>]		timeout in milliseconds
[ttl <NUMBER: 1-30>]		time-to-live
<b><i>mpls traceroute</i></b>		
	limited	traceroute egress MPLS-TP Bi-directional tunnel
tp-tunnel-egress-corout <tp-tunnel-egress-corout>		egress Bi-directional TP-tunnel name
[timeout <NUMBER: 500-10000>]		timeout in milliseconds
[ttl <NUMBER: 1-30>]		time-to-live
[reply-mode <String>]		Different types of reply mode. DEFAULT: LSP
[encap <String>]		Different types of encapsulation
<b><i>mpls traceroute</i></b>		
	limited	traceroute MPLS-TE Bi-directional associated tunnel
assoc-lsp <assoc-lsp>		ingress bi-directional associated TE-Tunnel name
[timeout <NUMBER: 500-10000>]		timeout in milliseconds
[ttl <NUMBER: 1-30>]		time-to-live
<b><i>mpls traceroute</i></b>		
	limited	traceroute MPLS-TP Bi-directional associated tunnel
assoc-tp-lsp <assoc-tp-lsp>		ingress bi-directional associated TP-Tunnel name
[timeout <NUMBER: 500-10000>]		timeout in milliseconds
[ttl <NUMBER: 1-30>]		time-to-live
<b><i>mpls ping</i></b>		
	limited	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 <NUMBER: 500-10000>]		timeout in milliseconds. DEFAULT: 1000 ms
[ttl <NUMBER: 1-255>]		time-to-live. DEFAULT: 255
<b><i>mpls ping</i></b>		
	limited	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 <NUMBER: 500-10000>]		timeout in milliseconds. DEFAULT: 1000 ms
[ttl <NUMBER: 1-255>]		time-to-live. DEFAULT: 255

Command	Access	Description
[reply-mode <String>]		Different types of reply mode. DEFAULT: LSP
[encap <String>]		Different types of encapsulation. DEFAULT: IP/UDP Encap
<b><i>mpls ping</i></b>		
<b><i>mpls ping</i></b>	limited	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 <NUMBER: 500-10000>]		timeout in milliseconds. DEFAULT: 1000 ms
[ttl <NUMBER: 1-255>]		time-to-live. DEFAULT: 255
<b><i>mpls ping</i></b>		
<b><i>mpls ping</i></b>	limited	ping egress MPLS-TP Bi-directional tunnel
tp-tunnel-egress-corout <tp-tunnel-egress-corout>		egress 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 <NUMBER: 500-10000>]		timeout in milliseconds. DEFAULT: 1000 ms
[ttl <NUMBER: 1-255>]		time-to-live. DEFAULT: 255
[reply-mode <String>]		Different types of reply mode. DEFAULT: LSP
[encap <String>]		Different types of encapsulation. DEFAULT: IP/UDP Encap
<b><i>mpls ping</i></b>		
<b><i>mpls ping</i></b>	limited	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 <NUMBER: 500-10000>]		timeout in milliseconds. DEFAULT: 1000 ms
[ttl <NUMBER: 1-255>]		time-to-live. DEFAULT: 255
[reply-mode <String>]		Different types of reply mode. DEFAULT: LSP
<b><i>mpls ping</i></b>		
<b><i>mpls ping</i></b>	limited	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

Command	Access	Description
[timeout <NUMBER: 500-10000>]		timeout in milliseconds. DEFAULT: 1000 ms
[ttl <NUMBER: 1-255>]		time-to-live. DEFAULT: 255
[reply-mode <String>]		Different types of reply mode. DEFAULT: LSP
<b><i>mpls ping</i></b>		
	limited	ping MPLS virtual-circuit
vc <vc>		mpls pseudowire name
[count <NUMBER: 1-100>]		number of packets to send. DEFAULT: 5
[packet-size <BYTES>]		packet size. DEFAULT: 114 bytes
[timeout <NUMBER: 500-10000>]		timeout in milliseconds. DEFAULT: 1000 ms
[fec-128-len <String>]		Uses 16 bytes for FEC 128 Length. DEFAULT: 14 bytes
[reply-mode <String>]		Different types of reply mode. DEFAULT: no-op if VC is created over TE tunnels. For TP tunnels, LSP
<b>mstp</b>		
<b><i>mstp clear</i></b>		
	admin	clear MSTP port statistics
port <port>		port list
{statistics}		statistics
<b><i>mstp clear</i></b>		
	admin	clear MSTP statistics on all ports
{statistics}		statistics
<b><i>mstp create</i></b>		
	admin	create a Multiple Spanning Tree Instance (MSTI)
{msti <NUMBER: 1-64>}		MSTI
[bridge-priority <NUMBER: 0-15>]		MSTP bridge priority
<b><i>mstp delete</i></b>		
	admin	delete an MSTI
msti <msti>		MSTI identifier
<b><i>mstp disable</i></b>		
	admin	disable MSTP globally
<b><i>mstp disable</i></b>		
	admin	disable MSTP on specified ports
{port <Port list>}		port list
<b><i>mstp disable</i></b>		
	admin	disable an MSTI
msti <msti>		MSTI identifier

Command	Access	Description
<b>mstp enable</b>	admin	enable MSTP globally
<b>mstp enable</b>	admin	enable MSTP on specified ports
{port <Port list>}		port list
<b>mstp enable</b>	admin	enable an MSTI
msti <msti>		MSTI identifier
<b>mstp set</b>	admin	set MSTP attributes
{forward-delay <NUMBER: 4-30>}		set bridge MSTP forward delay timer
{hello-time <NUMBER: 1-10>}		set bridge MSTP hello time
{loopback-blocking <String>}		set bridge MSTP loopback port blocking
{max-age <NUMBER: 6-40>}		set bridge MSTP maximum age time
{max-hops <NUMBER: 6-40>}		set bridge MSTP maximum hops
{mode <String>}		set bridge MSTP mode
{path-cost-def <String>}		set bridge MSTP path-cost default
{tx-hold-count <NUMBER: 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 <String>}		turn on or off PVST notifications
<b>mstp unset</b>	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
<b>mstp set</b>	admin	set MSTP Common and Internal Spanning Tree (CIST) attributes
cist <cist>		CIST identifier
{bridge-priority <NUMBER: 0-15>}		set CIST bridge-priority (lowest priority designates the root bridge)
<b>mstp unset</b>	admin	unset MSTP CIST attributes
cist <cist>		CIST identifier
{bridge-priority}		unset CIST bridge-priority

Command	Access	Description
<b>mstp set</b>	admin	set MSTP MSTI attributes
msti <msti>		MSTI identifier
{bridge-priority <NUMBER: 0-15>}		set MSTI bridge-priority
<b>mstp unset</b>	admin	unset MSTP MSTI attributes
msti <msti>		MSTI identifier
{bridge-priority}		unset MSTI bridge-priority
<b>mstp set</b>	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
<b>mstp set</b>	admin	set MSTP port attributes
port <port>		port list
{dynamic-ext-path-cost <String>}		turn dynamic external port cost on/off
{edge-port <String>}		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 <String>}		set point-to-point MAC mode
{auto-edge <String>}		turn auto edge on/off
{restricted-role <String>}		turn restricted role on/off
{restricted-tcn <String>}		turn restricted TCN on/off
<b>mstp unset</b>	admin	unset MSTP port attributes
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
<b>mstp set</b>	admin	set port CIST attributes
cist-port <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 <String>}		turn dynamic internal port cost on/off
{port <Port list>}		port list
<b>mstp unset</b>	admin	unset port CIST attributes

Command	Access	Description
cist-port <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
<b>mstp set</b>		
<b>mstp set</b>	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 <String>}		turn dynamic internal port cost on/off
{port <Port list>}		port list
<b>mstp unset</b>		
<b>mstp unset</b>	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
{dynamic-int-path-cost}		turn dynamic internal port cost on/off
{port <Port list>}		port list
<b>mstp show</b>		
<b>mstp show</b>	limited	show MSTP
{bridge}		show bridge
{cist}		show CIST
{statistics}		show statistics
<b>mstp show</b>		
<b>mstp show</b>	limited	show MSTP port
port <port>		port list
{statistics}		show port statistics
{state-machine}		show port state machine
<b>mstp show</b>		
<b>mstp show</b>	limited	show MSTI port
msti <msti>		MSTI identifier
<b>mstp show</b>		
<b>mstp show</b>	limited	show MST configuration ID
mst-cfg-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

Command	Access	Description
<b>multicast-services</b>		
<hr/>		
<b>multicast-services channel-stream add</b>	admin	add channel-stream group
vlan <vlan>		VLAN to add group for
{group-address <IP multicast address range>}		multicast IP group address(s)
<hr/>		
<b>multicast-services channel-stream remove</b>	admin	remove channel-stream group
vlan <vlan>		VLAN to remove group from
{group-address <IP multicast address range>}		multicast IP group address
<hr/>		
<b>multicast-services channel-stream exclude</b>	admin	exclude port from channel-stream
vlan <vlan>		VLAN to add group for
{port <Port list>}		port
<hr/>		
<b>multicast-services channel-stream include</b>	admin	include port with channel-stream
vlan <vlan>		VLAN to add group for
{port <Port list>}		port
<hr/>		
<b>multicast-services igmp-snooping disable</b>	admin	disable snooping services
<hr/>		
<b>multicast-services igmp-snooping disable</b>	admin	disable snooping services on a VLAN
vlan <vlan>		VLAN(s) on which to disable igmp-snooping
<hr/>		
<b>multicast-services igmp-snooping enable</b>	admin	enable snooping services on a switch
<hr/>		
<b>multicast-services igmp-snooping enable</b>	admin	enable snooping services on a switch
vlan <vlan>		VLAN(s) on which to enable igmp-snooping
<hr/>		
<b>multicast-services igmp-snooping reset</b>	admin	reset IGMP to default value
vlan <vlan>		VLAN(s) on which to act
{default-router-port}		default router port

Command	Access	Description
{router-address-range}		router address range
<b>multicast-services igmp-snooping set</b>	admin	set multicast attributes for a VLAN access
vlan <vlan>		VLAN(s) to configure
{active-linger-timeout <SECONDS: 0-300>}		seconds
{compatibility-mode <String>}		protocol compatibility mode
{default-router-port <Port>}		set default router port
{fork <String>}		fork igmp frames
{last-member-query-interval <DECISECONDS>}		deciseconds
{leave-mode <String>}		how to handle leave message
{linger-timeout <SECONDS: 10-300>}		seconds
{min-response-time <DECISECONDS>}		deciseconds
{server-topology <String>}		centralized or distributed
{priority <NUMBER: 0-7>}		layer-2 packet priority (0-7)
{query-delay <DECISECONDS>}		deciseconds
{query-engine <String>}		query engine
{query-interval <SECONDS: 10-999999>}		seconds
{query-ip-source-addr <IP address>}		query IP source address
{query-response-interval <DECISECONDS>}		deciseconds
{rapid-recovery-mode <String>}		rapid query mode
{robustness <NUMBER: 1-2>}		robustness
{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: 10-999999>}		seconds
<b>multicast-services server-port add</b>	admin	add port to server port group
vlan <vlan>		VLANs on which to add server port
[port <Port list>]		port
<b>multicast-services server-port remove</b>	admin	remove port from server port group
vlan <vlan>		VLANs from which to remove server port
[port <Port list>]		port
<b>multicast-services show brief</b>	limited	brief summary of multicast configuration and status
<b>multicast-services show configuration</b>	limited	show all configuration settings
{vlan <VLAN list>}		VLAN(s)

Command	Access	Description
<b><i>multicast-services show everything</i></b>	limited	all configuration and status
{vlan <VLAN list>}		VLAN(s)
<b><i>multicast-services show group-status</i></b>	limited	show group status
{vlan <VLAN list>}		VLAN(s)
{group-address <IP multicast address range>}		group address(s)
<b><i>multicast-services show groups</i></b>	limited	show all active multicast groups
{vlan <VLAN list>}		VLAN(s)
{port <Port list>}		port list
<b><i>multicast-services show status</i></b>	limited	show all configuration settings
{vlan <VLAN list>}		VLAN(s)
<b><i>multicast-services umf drop</i></b>	admin	drop unresolved multicast
vlan <vlan>		VLAN(s) to enable unresolved multicast filtering on
<b><i>multicast-services umf flood</i></b>	admin	flood unresolved multicast
vlan <vlan>		VLAN(s) to disable unresolved multicast filtering on
<b><i>multicast-services clear</i></b>	admin	clear multicast statistics
{statistics}		clear all multicast statistics
<b><i>multicast-services clear</i></b>	admin	clear multicast statistics
vlan <vlan>		VLAN(s) to select
{statistics}		clear multicast VLAN statistics
<b><i>multicast-services create</i></b>	admin	start multicast services
{vlan <VLAN list>}		VLANs on which to start multicast services
<b><i>multicast-services delete</i></b>	admin	delete all configuration for a VLAN
{vlan <VLAN list>}		VLANs on which to delete multicast configuration
<b><i>multicast-services disable</i></b>	admin	disable multicast services
<b><i>multicast-services disable</i></b>	admin	disable multicast services

Command	Access	Description
{vlan <VLAN list>}	admin	VLANs on which to disable multicast services
<b>multicast-services enable</b>	admin	enable multicast services
<b>multicast-services enable</b>	admin	enable multicast services
{vlan <VLAN list>}	admin	VLANs on which to enable multicast services
<b>ndp</b>		
<b>ndp delete</b>	admin	delete NDP entry
ip <ip>		IPv6 address
<b>ndp flush</b>	admin	flush NDP cache for all management interfaces
<b>ndp flush</b>	admin	flush NDP cache for specified interface
{interface <String>}		interface to flush
<b>ndp flush</b>	admin	flush NDP cache for a specified interface
ip-interface <ip-interface>		Interface name
<b>ndp set</b>	admin	set NDP options
{cachetime <SECONDS: 60-3600>}		cache timeout in seconds
<b>ndp unset</b>	admin	unset NDP options
{cachetime}		set cache timeout back to default
<b>ndp show</b>	limited	show NDP information
<b>ndp show</b>	limited	show NDP information for interface
{interface <String>}		interface to display
<b>ndp show</b>	limited	show NDP information for a specified interface
ip-interface <ip-interface>		Interface name
<b>ntp-client</b>		

Command	Access	Description
<b>ntp-client md5-auth add</b>	admin	add NTP MD5 key
key-id <key-id>		NTP MD5 key object
{md5 <MD5 auth key>}		MD5 auth key
<b>ntp-client md5-auth disable</b>	admin	disable NTP MD5 authentication
<b>ntp-client md5-auth enable</b>	admin	enable NTP MD5 authentication
<b>ntp-client md5-auth import</b>	admin	import NTP MD5 keys from a file
{filename <String>}		MD5 auth key filename
<b>ntp-client md5-auth remove</b>	admin	remove NTP MD5 key
key-id <key-id>		NTP MD5 key object
<b>ntp-client md5-auth secret</b>	admin	add an NTP MD5 key using a pre-encrypted string
key-id <key-id>		NTP MD5 key object
{md5 <Encrypted MD5 auth key>}		MD5 encrypted auth key
<b>ntp-client md5-auth show</b>	limited	show NTP MD5 authentication summary
<b>ntp-client add</b>	admin	add NTP server
server <server>		NTP server IP address
{key-id <NUMBER>}		MD5 auth key ID
<b>ntp-client add</b>	admin	add NTP multicast server IP
multicast-server <multicast-server>		NTP multicast server IP address
<b>ntp-client clear</b>	admin	clear the NTP drift value
{drift}	admin	clear the NTP drift value
<b>ntp-client disable</b>	admin	disable NTP protocol
<b>ntp-client disable</b>	admin	disable NTP server
server <server>		NTP server address
<b>ntp-client enable</b>	admin	enable NTP protocol
<b>ntp-client enable</b>	admin	enable NTP server
server <server>		NTP server address

Command	Access	Description
<b><i>ntp-client remove</i></b>	admin	remove NTP server
server <server>		NTP server IP address
<b><i>ntp-client remove</i></b>	admin	remove NTP multicast server IP
multicast-server <multicast-server>		NTP multicast server IP address
<b><i>ntp-client set</i></b>	admin	set NTP client attributes
{mode <String>}		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 <String>}		turn on or off NTP sync lost notifications
<b><i>ntp-client set</i></b>	admin	NTP client set server
server <server>		NTP server IP address
{key-id <NUMBER>}		MD5 auth key ID
<b><i>ntp-client show</i></b>	limited	show NTP information
{oper}		shows operational NTP servers in priority order
{state}		shows NTP client state configuration
{keys}		shows NTP MD5 configuration
<b><i>ntp-client show</i></b>	limited	show NTP information
server <server>		NTP server IP address
<b>pbt</b>		
<b><i>pbt remote-bridge create</i></b>	admin	create a remote bridge entry
bridge-name <bridge-name>		bridge name
{bridge-mac <MAC address: XX:XX:XX:XX:XX:XX>}		MAC address xx:xx:xx:xx:xx:xx for the node
<b><i>pbt remote-bridge delete</i></b>	admin	delete a remote bridge entry
bridge-name <bridge-name>		bridge name
<b><i>pbt remote-bridge show</i></b>	limited	show all remote bridge entries

Command	Access	Description
<b><i>pbt remote-bridge show</i></b>	limited	show a remote bridge entry
bridge-name <bridge-name>		bridge name
<b><i>pbt remote-bridge set</i></b>	admin	set a remote bridge attribute
bridge-name <bridge-name>		bridge name
{bridge-mac <MAC address: XX:XX:XX:XX:XX:XX>}		MAC address xx:xx:xx:xx:xx:xx for the node
<b><i>pbt release</i></b>	admin	release reserved BVIDs
{bvid <VLAN ID List>}		VLAN list
<b><i>pbt reserve</i></b>	admin	reserve BVIDs
{bvid <VLAN ID List>}		VLAN list
<b><i>pbt set</i></b>	admin	set PBB-TE attributes
{bridge-mac <MAC address: XX:XX:XX:XX:XX:XX>}		the MAC address for the device used for PBB-TE
{reversion-hold-time <MILLISECONDS: 0-4294967295>}		reversion hold time in milliseconds
{service-tag-ethertype <NUMBER: 1-65535>}		the ethertype for the I-tag
{stag-tpid <String>}		Q-in-Q TPID value
{transit-tunnel-ethertype-remark <String>}		remark B-tag ether-type for frames in transit
{tunnel-reversion <String>}		reversion behavior from backup to primary
{tunnel-tag-ethertype <NUMBER: 1-65535>}		B-tag ether type. Valid values are 0x8100, 0x9100 and 0x88a8
{mode <String>}		set PBB-TE mode
<b><i>pbt show</i></b>	limited	show PBB-TE info
<b>pm</b>		
<b><i>pm clear</i></b>	admin	clear PM statistics
pm-instance <pm-instance>		PM instance name
[history]		clear performance monitor history
<b><i>pm create</i></b>	admin	create a PM instance
tdm-port <tdm-port>		TDM port name
pm-instance <pm-instance>		PM instance name

Command	Access	Description
[alignment <String>]		bin time alignment, default: local-clock
[bin-count <NUMBER: 0-96>]		number of history bins, default: 32
[bin-duration <String>]		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 <String>]		PM instance type, default: on-demand
{profile-type <String>}		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
<b>pm create</b>		
	admin	create a PM instance
tdm-vc <tdm-vc>		TDM virtual-circuit name
pm-instance <pm-instance>		PM instance name
[alignment <String>]		bin time alignment, default: local-clock
[bin-count <NUMBER: 0-96>]		number of history bins, default: 32
[bin-duration <String>]		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 <String>]		PM instance type, default: on-demand
{profile-type <String>}		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
<b>pm delete</b>		
	admin	delete a PM instance
pm-instance <pm-instance>		PM instance name
<b>pm disable</b>		
	admin	disable PM globally
<b>pm disable</b>		
	admin	disable a PM instance
pm-instance <pm-instance>		PM instance name
<b>pm enable</b>		
	admin	enable PM globally
<b>pm enable</b>		
	admin	enable a PM instance
pm-instance <pm-instance>		PM instance name

Command	Access	Description
<b>pm monitor</b>	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
[display <String>]		statistics output screen control, default: clear
[scale <String>]		scale used to show statistics, default: none
{statistics}		statistics
{throughput}		throughput since last call
{total-statistics}		total statistics
<b>pm set</b>		
	admin	set global PM attributes
[persistence-interval <SECONDS: 60-86400>]		set interval (seconds) for saving history bins, default: 900
<b>pm show</b>		
	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
<b>pm show</b>		
	limited	show a PM instance
pm-instance <pm-instance>		PM instance name list
[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 <String>]		statistics output screen control, default: scroll
{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 <String>]		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 statistics range
{to-time <time: hh:mm:ss or hh:mm>}		end time for the statistics range
{total-statistics}		total statistics
<b>pm unset</b>		
	admin	unset global PM attributes
{persistence-interval}		set the persistence interval back to default

Command	Access	Description
		(900 seconds)
<b>port</b>		
<b>port state-mirror-group add</b>	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
<b>port state-mirror-group create</b>	admin	create port state mirror group
group <group>		port state mirror group
<b>port state-mirror-group delete</b>	admin	delete port state mirror group
group <group>		port state mirror group
<b>port state-mirror-group remove</b>	admin	remove ports from state mirror group
group <group>		port state mirror group
{port <Port list>}		port member
<b>port state-mirror-group rename</b>	admin	rename port state mirror group
group <group>		port state mirror group
{name <String[15]>}		new name
<b>port state-mirror-group set</b>	admin	set port state mirror group attributes
group <group>		port state mirror group
[type <String>]		set mirroring type one way or two
[name <String[15]>]		new name
<b>port state-mirror-group show</b>	limited	show port state mirror groups
<b>port state-mirror-group show</b>	limited	show port state mirror group
group <group>		port state mirror group
<b>port xcvr show</b>	limited	show transceiver information
<b>port xcvr show</b>	limited	show port transceiver information
port <port>		port to show
{state}		show transceiver state
{vendor}		show transceiver vendor data

Command	Access	Description
{diagnostics}		show transceiver diagnostic data
{tunability}		show transceiver tunable data
<b>port xcvr show</b>		
	limited	show all supported transceivers
[supported]		show all supported transceivers
<b>port xcvr debug</b>		
	limited	show port transceiver debug information
<b>port xcvr set</b>		
	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
<b>port xcvr unset</b>		
	admin	unset transceiver information
port <port>		port(s) to unset
{frequency}		unset transceiver frequency
{wavelength}		unset transceiver wavelength
{channel}		unset transceiver channel number
<b>port tdm e1 set</b>		
	admin	set e1 attributes
port <port>		e1 port list
[clock-mode <String>]		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
[framing <String>]		framing type
[line-code <String>]		line coding type
[loopback-mode <String>]		loopback mode
<b>port tdm e1 unset</b>		
	admin	unset e1 attributes
port <port>		e1 port list
[clock-mode]		clock mode
[framing]		framing type
[line-code]		line coding type
[loopback-mode]		loopback mode
[master-clock-src-port]		TDM port used as the master clock source when clock mode is configured to recovered
<b>port tdm t1 set</b>		
	admin	set t1 attributes

Command	Access	Description
port <port>		t1 port list
[framing <String>]		framing type
[line-code <String>]		line coding type
[line-build-out <String>]		short haul line build out length
[clock-mode <String>]		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
[loopback-mode <String>]		loopback mode
<b>port tdm t1 unset</b>		
	admin	set t1 attributes
port <port>		t1 port list
[clock-mode]		clock mode
[framing]		framing type
[line-build-out]		short haul line build out length
[line-code]		line coding type
[loopback-mode]		loopback mode
[master-clock-src-port]		TDM port used as the master clock source when clock mode is set to recovered
<b>port tdm disable</b>		
	admin	disable TDM ports
port <port>		TDM port list
<b>port tdm enable</b>		
	admin	enable TDM ports
port <port>		TDM port list
<b>port tdm set</b>		
	admin	set TDM port global parameters
{mode <String>}		select e1 or t1 mode
<b>port tdm show</b>		
	admin	show TDM port attributes
port <port>		TDM port list
[statistics]		total statistics
<b>port tdm show</b>		
	admin	show TDM port attributes
<b>port clear</b>		
	admin	clear port statistics
port <port>		port(s) to clear
{statistics}		statistics table
<b>port clear</b>		
	admin	clear all port statistics

Command	Access	Description
{statistics}		statistics table
<b>port disable</b>	admin	disable port
port <port>		port(s) to disable
<b>port enable</b>	admin	enable port
port <port>		port(s) to enable
<b>port monitor</b>	limited	clear screen repeat show
<b>port monitor</b>	limited	clear screen repeat show
statistics <statistics>		port(s) to show
[active]		only show active statistics
[delay <NUMBER: 1-86400>]		time between samples in seconds
[count <NUMBER: 0-4294967295>]		number of times to repeat the command
[scale <String>]		scale used to show statistics
<b>port monitor</b>	limited	clear screen repeat show
total-statistics <total-statistics>		total port(s) to show
[active]		only show active statistics
[delay <NUMBER: 1-86400>]		time between samples in seconds
[count <NUMBER: 0-4294967295>]		number of times to repeat the command
[scale <String>]		scale used to show statistics
<b>port monitor</b>	limited	clear screen repeat show
throughput <throughput>		port(s) to show
[active]		only show active statistics
[delay <NUMBER: 1-86400>]		time between samples in seconds
[count <NUMBER: 0-4294967295>]		number of times to repeat the command
[scale <String>]		scale used to show statistics
<b>port monitor</b>	limited	clear screen repeat show
port <port>		port(s) to show
[active]		only show active statistics
[delay <NUMBER: 1-86400>]		time between samples in seconds
[scale <String>]		scale used to show statistics
[statistics]		show port statistics
[total-statistics]		show port statistics
[throughput]		show port throughput
[type <String>]		type of stats to show to show throughput

Command	Access	Description
<b>port set</b>	admin	set port attributes
port <port>		port(s) to set
{acceptable-frame-type <String>}		Set acceptable frame types mode
{advertised-flow-control <String>}		Set advertised value for flow control
{advertised-speed <String>}		Set advertised value for speed
{advertised-duplex <String>}		Set advertised value for duplex
{auto-neg <String>}		Set auto-negotiation
{duplex <String>}		Set duplex
{description <String[128]>}		Set port description
{egress-frame-cos-policy <String>}		Set egress frame CoS policy
{egress-untag-vlan <VLAN>}		Set VLAN for egressing untagged frames
{egress-mirror <Port>}		Set egress port mirroring
{fixed-rcos <NUMBER: 0-7>}		Set fixed resolved CoS
{fixed-rcolor <String>}		Set fixed resolved Color
{flow-ctrl <String>}		Set flow control
{frame-cos-map <RCOS to FCOS Map>}		egress RCOS->FCOS Map to use
{inter-packet-gap-size <12 8>}	admin	Set the number of bytes that forms the size of the inter-packet gap
{ingress-cos-policy <String>}		ingress CoS policy
{ingress-fixed-dot1dpri <NUMBER: 0-7>}		Set ingress fixed 802.1D value
{ingress-mirror <Port>}		Set ingress port mirroring
{link-flap-detect <String>}		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 <NUMBER: 1-600>}		Set the link flap detection window in seconds, default: 10
{link-flap-hold-time <NUMBER: 0-600>}		Set the link flap port re-enable time in seconds, default: 300
{ingress-to-egress-qmap <RCOS Queue Map>}		Set ingress to egress queue map
{max-frame-size <NUMBER: 1522-9216>}		Set the maximum frame size
{mirror-encap <String>}		Set port mirroring encapsulation
{mirror-encap-tpid <String>}		Set port mirroring encapsulation TPID
{mirror-encap-vid <NUMBER: 1-4094>}		Set port mirroring encapsulation VID
{mirror-port <String>}		Set port mirroring state
{mode <String>}		Set physical interface connector mode
{loopback <String>}		Set physical loopback state
{mac-swap <String>}		Set MAC SA/DA swap state
{mac-swap-vlan <VLAN>}		Set MAC SA/DA swap state to only one VLAN
{pvid <VLAN>}		Set PVID

Command	Access	Description
{resolved-cos-policy <String>}		Set resolved CoS policy
{resolved-cos-map <FCOS to RCOS Map>}		Set FCOS->RCOS Map to use
{resolved-cos-remark-l2 <String>}		Set L2 Remark based on L3
{speed <String>}		Set speed
{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 <VLAN>}		Push/pop specified VLAN ID for untagged data frames
{vlan-ingress-filter <String>}		Set VLAN ingress filter
{vs-ingress-filter <String>}		Set virtual switch ingress filter
{vs-ingress-filter-strict <String>}		Set strict ingress filter enforcement
{vs-l2-transform <String>}		Set L2 transform action for virtual switch subscribers
<b>port show</b>		
	limited	show port information
[capabilities]		show port capabilities
[ethernet-config]		show ethernet configuration
[network-config]		show network configuration
[status]		show port status
<b>port show</b>		
	limited	show port information
statistics <statistics>		statistics for all ports
[active]		only show active statistics
[delay <NUMBER: 1-86400>]		time between samples in seconds
[count <NUMBER: 0-4294967295>]		number of repetitions for throughput
[scale <String>]		scale used to show statistics
<b>port show</b>		
	limited	show port information
total-statistics <total-statistics>		total statistics for all ports
[active]		only show active statistics
[delay <NUMBER: 1-86400>]		time between samples in seconds
[count <NUMBER: 0-4294967295>]		number of repetitions for throughput
[scale <String>]		scale used to show statistics
<b>port show</b>		
	limited	show port information
throughput <throughput>		port(s) to show
[active]		only show active statistics
[delay <NUMBER: 1-86400>]		time between samples in seconds
[count <NUMBER: 0-4294967295>]		number of repetitions for throughput

Command	Access	Description
[scale <String>]		scale used to show statistics
<b>port show</b>	limited	show port information
<b>port show</b>	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 <NUMBER: 1-86400>]		time between samples in seconds
[statistics]		show port statistics
[total-statistics]		show total port statistics
[throughput]		show port throughput
[scale <String>]		scale used to show statistics
[vlan]		show port vlan membership
[type <String>]		type of stats to show to show throughput
<b>port unset</b>	admin	unset port attributes
port <port>		port(s) to set
{inter-packet-gap-size}		Unset size of inter-packet gap
{description}		unset port description
{egress-mirror}		unset egress port mirroring
{ingress-mirror}		unset ingress port mirroring
{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
<b>private-forwarding-groups</b>		
<b>private-forwarding-groups port-forwarding egress-profile add</b>	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
<b><i>private-forwarding-groups port-forwarding egress-profile create</i></b>	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
<b><i>private-forwarding-groups port-forwarding egress-profile delete</i></b>	admin	delete egress profile
profile <profile>		egress profile to delete
<b><i>private-forwarding-groups port-forwarding egress-profile remove</i></b>	admin	remove one or more ports from egress profile
profile <profile>		list of egress profiles
port <port>		list of ports
<b><i>private-forwarding-groups port-forwarding egress-profile set</i></b>	admin	change allowed flood traffic types for egress profile
profile <profile>		list of egress profiles
{flood-type <String List>}		allowed flood traffic types
<b><i>private-forwarding-groups port-forwarding egress-profile show</i></b>	admin	display specific egress profiles
profile <profile>		list of egress profiles
<b><i>private-forwarding-groups port-forwarding egress-profile show</i></b>	admin	display a list of egress profiles
<b><i>private-forwarding-groups port-forwarding egress-profile unset</i></b>	admin	reverts an egress profile attribute to the default value
profile <profile>		list of egress profiles
<b><i>private-forwarding-groups port-forwarding add</i></b>	admin	assign egress profile to ingress port
port <port>		port to be assigned with egress profile
profile <profile>		list of egress profiles
<b><i>private-forwarding-groups port-forwarding disable</i></b>	admin	disable port-based PFG globally
<b><i>private-forwarding-groups port-forwarding enable</i></b>	admin	enable port-based PFG globally

Command	Access	Description
<b><i>private-forwarding-groups port-forwarding remove</i></b>	admin	remove egress profile assignment from ingress port
port <port>		list of ports
profile <profile>		list of egress profiles
<b><i>private-forwarding-groups port-forwarding show</i></b>	admin	display all port-based PFG settings
<b><i>private-forwarding-groups port-forwarding show</i></b>	admin	display port-based PFG settings for port
port <port>		list of ports
<b><i>private-forwarding-groups set</i></b>	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
<b><i>private-forwarding-groups set</i></b>	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
<b><i>private-forwarding-groups disable</i></b>	admin	disable PFG for the specified VLAN
vlan <vlan>		VLAN(s) to disable PFG on
<b><i>private-forwarding-groups disable</i></b>	admin	disable PFG for the specified VS
vs <vs>		VS to disable PFG on
<b><i>private-forwarding-groups disable</i></b>	admin	disable PFG for the specified PFG policy
policy <policy>		PFG policy to disable
<b><i>private-forwarding-groups disable</i></b>	admin	disable PFG globally
<b><i>private-forwarding-groups enable</i></b>	admin	enable PFG for the specified VLAN
vlan <vlan>		VLAN(s) to enable PFG on
<b><i>private-forwarding-groups enable</i></b>	admin	enable PFG for the specified VS

Command	Access	Description
vs <vs>		VS to enable PFG on
<b>private-forwarding-groups enable</b>	admin	enable PFG for the specified policy
policy <policy>		PFG policy to enabled
<b>private-forwarding-groups enable</b>	admin	enable PFG globally
<b>private-forwarding-groups show</b>	limited	show global PFG configuration settings
<b>private-forwarding-groups show</b>	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
<b>attachment-circuit</b>		
<b>attachment-circuit satop create</b>	admin	create a satop tdm attachment circuit
ac <ac>		satop tdm attachment circuit name
{port <TDM Port Name>}		tdm port
<b>attachment-circuit satop delete</b>	admin	delete a satop tdm attachment circuit
ac <ac>		satop tdm attachment circuit name
<b>attachment-circuit satop show</b>	limited	Show all satop tdm attachment circuits
<b>attachment-circuit satop show</b>	limited	Show a satop tdm attachment circuit
ac <ac>		satop tdm attachment circuit name
<b>attachment-circuit cesop create</b>	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
[master-clock-src <String>]		flag indicating that this circuit will be the master clock source in adaptive clock mode, default is off
<b>attachment-circuit cesop set</b>	admin	change the attributes of the cesop tdm attachment circuit

Command	Access	Description
ac <ac>		cesop tdm attachment circuit name
[master-clock-src <String>]		flag indicating that this circuit will be the master clock source in adaptive clock mod, default is off
<b>attachment-circuit cesop unset</b>		
	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
<b>attachment-circuit cesop delete</b>		
	admin	delete a cesop tdm attachment circuit
ac <ac>		cesop tdm attachment circuit name
<b>attachment-circuit cesop show</b>		
	limited	Show all cesop tdm attachment circuits
<b>attachment-circuit cesop show</b>		
	limited	Show a cesop tdm attachment circuit
ac <ac>		cesop tdm attachment circuit name
<b>attachment-circuit cesop add</b>		
	admin	add channel(s) to cesop tdm attachment circuit
ac <ac>		cesop tdm attachment circuit name
{channel <TDM timeslot values and ranges>}		list of channels to add
<b>attachment-circuit cesop remove</b>		
	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
<b>attachment-circuit show</b>		
	limited	show all attachment-circuits currently configured
<b>radius</b>		
<b>radius user-login add</b>		
	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
<b>radius user-login clear</b>	admin	clear RADIUS user login statistics
{statistics}		clear RADIUS user login statistics
<b>radius user-login clear</b>	admin	clear RADIUS user login statistics
server <server>		RADIUS server IP address or host name
{statistics}		clear RADIUS user login statistics
<b>radius user-login disable</b>	admin	disable a RADIUS server
server <server>		RADIUS server IP address or host name
<b>radius user-login enable</b>	admin	enable a RADIUS server
server <server>		RADIUS server IP address or host name
<b>radius user-login remove</b>	admin	remove a RADIUS server
server <server>		RADIUS server IP address or host name
<b>radius user-login set</b>	admin	set RADIUS user login attributes
{key <Password String>}		set RADIUS key
{retries <NUMBER: 0-3>}		set RADIUS maximum retries
{search-method <String>}		set RADIUS search method
{secret <String[128]>}		set the RADIUS key using a pre-encrypted string
{timeout <SECONDS: 1-30>}		set RADIUS server response timeout in seconds
<b>radius user-login set</b>	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
<b>radius user-login unset</b>	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
<b>radius user-login unset</b>	admin	set RADIUS user login attributes back to defaults
{key}		clear the RADIUS key string
{config-reauth}		set RADIUS reauth to its default value
{retries}		set RADIUS retries to its default value

Command	Access	Description
{search-method}		set the RADIUS search method to its default value
{secret}		clear the RADIUS secret string
{timeout}		set the RADIUS timeout to its default value
<b>radius user-login show</b>		
	limited	show RADIUS user login information
{statistics}		show RADIUS user-login statistics
<b>radius user-login show</b>		
	limited	show RADIUS user login information
server <server>		RADIUS server IP address or host name
{statistics}		show RADIUS user-login statistics
<b>radius dot1x-auth add</b>		
	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
<b>radius dot1x-auth clear</b>		
	admin	clear RADIUS 802.1x authentication statistics
{statistics}		clear RADIUS 802.1x authentication statistics
<b>radius dot1x-auth clear</b>		
	admin	clear RADIUS 802.1x authentication statistics
server <server>		RADIUS server IP address or host name
{statistics}		clear RADIUS 802.1x authentication statistics
<b>radius dot1x-auth disable</b>		
	admin	disable a RADIUS server
server <server>		RADIUS server IP address or host name
<b>radius dot1x-auth enable</b>		
	admin	enable a RADIUS server
server <server>		RADIUS server IP address or host name
<b>radius dot1x-auth remove</b>		
	admin	remove a RADIUS server
server <server>		RADIUS server IP address or host name
<b>radius dot1x-auth set</b>		
	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 <String>}		set RADIUS search method
{secret <String[128]>}		set the RADIUS key using a pre-encrypted string

Command	Access	Description
{timeout <SECONDS: 1-30>}		set RADIUS server response timeout in seconds
{config-reauth <String>}		enable or disable RADIUS config reauthorization
<b>radius dot1x-auth set</b>		
	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
<b>radius dot1x-auth unset</b>		
	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
<b>radius dot1x-auth unset</b>		
	admin	set RADIUS 802.1x authentication attributes back to defaults
{greylist-timeout}		set RADIUS greylist timeout to its default value
{key}		clear the RADIUS key string
{retries}		set RADIUS retries to its default value
{search-method}		set the RADIUS search method to its default value
{secret}		clear the RADIUS secret string
{timeout}		set the RADIUS timeout to its default value
{config-reauth}		set RADIUS reauth to its default value
<b>radius dot1x-auth show</b>		
	limited	show RADIUS 802.1x authentication information
{statistics}		show RADIUS 802.1x authentication statistics
<b>radius dot1x-auth show</b>		
	limited	show RADIUS 802.1x authentication information
server <server>		RADIUS server IP address or host name
{statistics}		show 802.1x authentication statistics
<b>radius dot1x-acct add</b>		
	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
<b>radius dot1x-acct clear</b>	admin	clear RADIUS 802.1x accounting statistics
{statistics}		clear RADIUS 802.1x accounting statistics
<b>radius dot1x-acct clear</b>	admin	clear RADIUS 802.1x accounting statistics
server <server>		RADIUS server IP address or host name
{statistics}		clear RADIUS 802.1x accounting statistics
<b>radius dot1x-acct enable</b>	admin	enable RADIUS 802.1x accounting
<b>radius dot1x-acct disable</b>	admin	disable RADIUS 802.1x accounting
<b>radius dot1x-acct disable</b>	admin	disable a RADIUS server
server <server>		RADIUS server IP address or host name
<b>radius dot1x-acct enable</b>	admin	enable a RADIUS server
server <server>		RADIUS server IP address or host name
<b>radius dot1x-acct remove</b>	admin	remove a RADIUS server
server <server>		RADIUS server IP address or host name
<b>radius dot1x-acct set</b>	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 <String>}		set RADIUS search method
{secret <String[128]>}		set the RADIUS key using a pre-encrypted string
{timeout <SECONDS: 1-30>}		set RADIUS server response timeout in seconds
<b>radius dot1x-acct set</b>	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
<b>radius dot1x-acct unset</b>	admin	set RADIUS 802.1x accounting server attributes to defaults
server <server>		RADIUS server IP address or host name

Command	Access	Description
{udp-port}		set the RADIUS UDP port to its default value
<b>radius dot1x-acct unset</b>	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
{key}		clear the RADIUS key string
{retries}		set RADIUS retries to its default value
{search-method}		set the RADIUS search method to its default value
{secret}		clear the RADIUS secret string
{timeout}		set the RADIUS timeout to its default value
<b>radius dot1x-acct show</b>	limited	show RADIUS 802.1x accounting information
{statistics}		show RADIUS 802.1x accounting statistics
<b>radius dot1x-acct show</b>	limited	show RADIUS 802.1x accounting information
server <server>		RADIUS server IP address or host name
{statistics}		show RADIUS 802.1x accounting statistics
<b>radius disable</b>	admin	disable RADIUS functions
<b>radius enable</b>	admin	enable RADIUS functions
<b>radius show</b>	limited	show RADIUS information
{statistics}		show all RADIUS statistics
<b>resource-manager</b>		
<b>resource-manager pool set</b>	admin	set allocation
{resource <String>}		resource type
{feature <String>}		feature
{count <NUMBER>}		resource count
<b>resource-manager show</b>	limited	show
{active}		show active resource configuration
{candidate}		show candidate resource configuration
{feature <String>}		show additional feature resource information

Command	Access	Description
<i>resource-manager validate</i>	admin	validate
<b>ring-protection</b>		
<i>ring-protection logical-ring clear</i>	admin	clear command
ring <ring>		logical ring
[west-port]		west port
[east-port]		east port
<i>ring-protection logical-ring create</i>	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
[WTR <MINUTES>]		wait to restore time
<i>ring-protection logical-ring delete</i>	admin	delete logical ring
ring <ring>		logical ring
<i>ring-protection logical-ring force</i>	admin	force switch
ring <ring>		logical ring
[west-port]		west port
[east-port]		east port
<i>ring-protection logical-ring set</i>	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
<i>ring-protection logical-ring show</i>	limited	show all logical rings

Command	Access	Description
<b><i>ring-protection logical-ring show</i></b>	limited	show logical ring
ring <ring>		logical ring
<b><i>ring-protection logical-ring unset</i></b>	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
<b><i>ring-protection virtual-ring add</i></b>	admin	add member
ring <ring>		virtual ring name
{vid <VLAN list>}		list of VLANs
<b><i>ring-protection virtual-ring clear</i></b>	admin	clear statistics for all virtual rings
{statistics}		virtual ring statistics
<b><i>ring-protection virtual-ring clear</i></b>	admin	clear virtual ring
ring <ring>		virtual ring
{statistics}		virtual ring statistics
<b><i>ring-protection virtual-ring create</i></b>	admin	create virtual ring
virtual-ring-name <virtual-ring-name>		virtual ring
{logical-ring <Logical ring name>}		logical ring
{raps-vid <NUMBER: 0-65535>}		RAPS VID
[mel <NUMBER: 0-7>]		maintenance entity group level, default: 0
[sub-ring <String>]		sub-ring
<b><i>ring-protection virtual-ring delete</i></b>	admin	delete virtual ring
ring <ring>		virtual ring
<b><i>ring-protection virtual-ring remove</i></b>	admin	remove member
ring <ring>		virtual ring name
{vid <VLAN list>}		list of VLANs
<b><i>ring-protection virtual-ring set</i></b>	admin	set virtual ring attributes
ring <ring>		virtual ring
[flush-propagate <String>]		flush propagation

Command	Access	Description
[mel <NUMBER: 0-7>]		maintenance entity group level, default: 0
[revertive <String>]		revertive
[west-port-rpl <String>]		RPL
[east-port-rpl <String>]		RPL
<b>ring-protection virtual-ring show</b>		
<b>ring-protection virtual-ring show</b>	limited	show all virtual rings
<b>ring-protection virtual-ring show</b>	limited	show virtual ring
ring <ring>		virtual ring
<b>ring-protection virtual-ring unset</b>		
<b>ring-protection virtual-ring unset</b>	admin	unset virtual ring attributes
ring <ring>		virtual ring name
[flush-propagate]		flush propagation
[mel]		maintenance entity group level
[revertive]		revertive
[west-port-rpl]		RPL
[east-port-rpl]		RPL
<b>ring-protection disable</b>		
<b>ring-protection disable</b>	admin	disable ring protection switching
<b>ring-protection enable</b>		
<b>ring-protection enable</b>	admin	enable ring protection switching
<b>ring-protection show</b>		
<b>ring-protection show</b>	limited	show global configuration
<b>rmon</b>		
<b>rmon alarm add</b>		
<b>rmon alarm add</b>	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: 0-999999999>}		falling alarm threshold
{interval <SECONDS: 1-3600>}		interval to be used for sending alarms
[owner <String[127]>]		name of the owner
{rising-event-index <NUMBER: 0-65535>}		rising event index
{rising-threshold <NUMBER: 0-999999999>}		rising alarm threshold
{sample-type <String>}		type of sample
{startup-alarm <String>}		startup alarm

Command	Access	Description
<b><i>rmon alarm set</i></b>	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: 0-999999999>]		falling alarm threshold
[interval <SECONDS: 1-3600>]		interval to be used for sending alarms
[owner <String[127]>]		name of the owner
[rising-event-index <NUMBER: 0-65535>]		rising event index
[rising-threshold <NUMBER: 0-999999999>]		rising alarm threshold
[sample-type <String>]		type of sample
[startup-alarm <String>]		startup alarm
<b><i>rmon alarm remove</i></b>	admin	remove alarm table entry
{alarm-index <NUMBER: 1-65535>}		index in the alarm table
<b><i>rmon alarm unset</i></b>	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
<b><i>rmon alarm show</i></b>	limited	show rmon alarm
<b><i>rmon event add</i></b>	admin	set RMON event attributes
event-index <event-index>		index in the history table
[community <String[127]>]		event community name to use
[owner <String[127]>]		name of the owner
{description <String[127]>}		description of the event
{type <String>}		type of event
<b><i>rmon event set</i></b>	admin	set RMON event attributes
event-index <event-index>		index in the history table
[community <String[127]>]		event community name to use
[owner <String[127]>]		name of the owner
[description <String[127]>]		description of the event
[type <String>]		type of event

Command	Access	Description
<b><i>rmon event remove</i></b>	admin	remove event table entry
{event-index <NUMBER: 1-65535>}		index in the event table
<b><i>rmon event unset</i></b>	admin	set RMON event attributes
event-index <event-index>		index in the history table
[community]		event community name to use
[owner]		name of the owner
[description]		description of the event
[type]		type of event
<b><i>rmon event show</i></b>	limited	show rmon event
<b><i>rmon history auto-configure enable</i></b>	admin	enable RMON history auto-configure
<b><i>rmon history auto-configure disable</i></b>	admin	disable RMON history auto-configure
<b><i>rmon history auto-configure set</i></b>	admin	set global rmon history settings
[interval <SECONDS: 1-65535>]		interval used for monitoring
[num-buckets <NUMBER: 1-65535>]		number of buckets to use
[owner <String[127]>]		name of the owner
[file-logging <String>]		save history in a file
[statistics <String List>]		which per port statistics to place in the file
<b><i>rmon history auto-configure show</i></b>	limited	show rmon history
<b><i>rmon history auto-configure unset</i></b>	admin	unset global rmon history settings
[interval]		interval used for monitoring
[num-buckets]		number of buckets to use
[owner]		name of the owner
[file-logging]		save history in a file
[statistics]		which per port statistics to place in the file
<b><i>rmon history add</i></b>	admin	set RMON history attributes
hist-index <hist-index>		index in the history table
[file-logging <String>]		save history in a file
{port <Port>}		the port to monitor
[interval <SECONDS: 1-3600>]		interval used for monitoring
[num-buckets <NUMBER: 1-65535>]		number of buckets to use
[owner <String[127]>]		name of the owner

Command	Access	Description
<b><i>rmon history set</i></b>	admin	set RMON history attributes
hist-index <hist-index>		index in the history table
[file-logging <String>]		save history in a file
{port <Port>}		the port to monitor
[interval <SECONDS: 1-3600>]		interval used for monitoring
[num-buckets <NUMBER: 1-65535>]		number of buckets to use
[owner <String[127]>]		name of the owner
<b><i>rmon history unset</i></b>	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
<b><i>rmon history remove</i></b>	admin	remove history table entry
{hist-index <NUMBER: 1-65535>}		index in the history table
<b><i>rmon history show</i></b>	limited	show rmon history
<b><i>rmon statistics add</i></b>	admin	set ether statistics entry
<b><i>rmon statistics add</i></b>	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
<b><i>rmon statistics remove</i></b>	admin	remove ethernet statistics entry
{stat-index <NUMBER: 1-65535>}		index in the ethernet statistics table
<b><i>rmon statistics show</i></b>	limited	show RMON statistics
<b><i>rmon transfer enable</i></b>	admin	enable RMON file logging
<b><i>rmon transfer disable</i></b>	admin	disable RMON file logging
<b><i>rmon transfer push</i></b>	admin	push all local RMON files to the remote server
<b><i>rmon transfer set</i></b>	admin	set RMON file settings
[name <String[16]>]		name of RMON file

Command	Access	Description
[interval <SECONDS: 3600-65535>]		interval used for monitoring
[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
[login-id <String[32]>]		FTP/SFTP username
[password <Password String>]		enter the password in clear text
[secret <String[256]>]		set the password using a pre-encrypted string
<b>rmon transfer show</b>		
	admin	show RMON destination config
<b>rmon transfer unset</b>		
	super	file
[name]		name of RMON file
[interval]		interval used for monitoring
[num-files]		interval used for monitoring
[remote-file-dir]		remote file directory
{tftp-server}		unset TFTP server
{ftp-server}		unset FTP server
{sftp-server}		unset SFTP server
[server]		server
<b>rmon usr-history set control</b>		
	admin	change an user history control
[buckets <NUMBER: 1-65535>]		number of buckets to use
[file-logging <String>]		save history in a file
{index <NUMBER: 1-65535>}		index in the user history control table
[interval <NUMBER: 1-65535>]		interval used for monitoring
[owner <String[127]>]		name of the owner
<b>rmon usr-history add</b>		
	admin	add usr-history table entries
[buckets <NUMBER: 1-65545>]		number of buckets to use
[file-logging <String>]		save history in a file
[interval <SECONDS: 1-65545>]		interval used for monitoring
[owner <String[127]>]		name of the owner
{control-index <NUMBER: 1-1200>}		index of history control table to associate with
<b>rmon usr-history add</b>		
	admin	add user history table entries

Command	Access	Description
usr-index <usr-index>		index in the user history object table
control-index <control-index>		index of history control table to associate with
[object <String[127]>]		OID name
[sample-type <String>]		absolute or delta for sample
<b>rmon usr-history remove</b>		
	admin	remove control table entry
[control-index <NUMBER: 1-1200>]		index of history control table to associate with
[usr-index <NUMBER: 1-65545>]		index in the user history object table
<b>rmon usr-history set</b>		
	admin	add user history table entries
control-index <control-index>		index of history control table to associate with
[buckets <NUMBER: 1-65545>]		number of buckets to use
[file-logging <String>]		save history in a file
[interval <SECONDS: 1-65545>]		interval used for monitoring
[owner <String[127]>]		name of the owner
<b>rmon usr-history show</b>		
	limited	show RMON user history
<b>rmon usr-history unset</b>		
	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
<b>rmon show</b>		
	limited	show RMON configuration
alarm-index <alarm-index>		alarm table object
<b>rmon show</b>		
	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
{usr-history}		shows RMON user history tables
{transfer}		shows file persistence data
<b>rstp</b>		

Command	Access	Description
<b><i>rstp timer-default reset</i></b>	admin	reset timer default values
<b><i>rstp assign</i></b>	admin	assign a port to a spanning tree domain
rstpd <rstpd>		RSTP domain name
{port <Port list>}		port list
<b><i>rstp create</i></b>	admin	create an RSTP domain
{rstpd <String[15]>}		RSTP domain name
[domain-id <NUMBER: 1-255>]		RSTP domain identifier
<b><i>rstp delete</i></b>	admin	delete an RSTP domain
rstpd <rstpd>		RSTP domain name
<b><i>rstp disable</i></b>	admin	disable RSTP globally
<b><i>rstp disable</i></b>	admin	disable RSTP on ports
{port <Port list>}		port list
<b><i>rstp enable</i></b>	admin	enable RSTP globally
<b><i>rstp enable</i></b>	admin	enable RSTP on ports
{port <Port list>}		port list
<b><i>rstp set</i></b>	admin	set RSTP attributes
{forward-delay <NUMBER: 4-30>}		set bridge RSTP forward delay timer
{hello-time <NUMBER: 1-10>}		set bridge RSTP hello time
{loopback-blocking <String>}		set bridge RSTP loopback port blocking
{max-age <NUMBER: 6-40>}		set bridge RSTP max-age
{mode <String>}		set bridge RSTP mode
{path-cost-def <String>}		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 <String>}		set RSTP standards compliance level
{enhancement-resend-agree <String>}		set RSTP resend agree bpdu
{pvst-notification <String>}		turn on or off PVST notifications
<b><i>rstp set</i></b>	admin	set RSTP port attributes
port <port>		port list
{dynamic-path-cost <String>}		turn dynamic port cost on/off
{edge-port <String>}		turn port edge port state on/off
{legacy-tx <String>}		turn on/off using 802.1W compliant RSTP

Command	Access	Description
		BPDU transmit in non-8021W compliance modes
{migration-check}		turn port migration check on/off
{path-cost <NUMBER: 1-4000000004>}		set port RSTP path cost
{point-point-mac <String>}		set point-to-point MAC mode
{priority <NUMBER: 0-15>}		set port RSTP priority
<b>rstp set</b>		
<b>rstp set</b>	admin	set RSTP domain attributes
rstpd <rstpd>		RSTP domain name
{compliance <String>}		set RSTP standards compliance level
{priority <NUMBER: 0-15>}		set domain RSTP priority
<b>rstp show</b>		
<b>rstp show</b>	limited	show RSTP
<b>rstp show</b>		
<b>rstp show</b>	limited	show RSTP bridge
{bridge}		bridge
<b>rstp show</b>		
<b>rstp show</b>	limited	show RSTP port
port <port>		port list
<b>rstp show</b>		
<b>rstp show</b>	limited	show RSTP domain
rstpd <rstpd>		RSTP domain name
<b>snmp</b>		
<b>snmp port-traps disable</b>		
<b>snmp port-traps disable</b>	admin	disable traps on the port
port <port>		port number
<b>snmp port-traps enable</b>		
<b>snmp port-traps enable</b>	admin	enable traps on the port
port <port>		port number
<b>snmp reliable-trap clear</b>		
<b>snmp reliable-trap clear</b>	admin	clear statistics
statistics <statistics>		manager IP address
{manager <IP address>}	limited	manager IP address
{udp-port <NUMBER: 0-65535>}		UDP trap port
<b>snmp reliable-trap disable</b>		
<b>snmp reliable-trap disable</b>	admin	disable reliable trap feature
<b>snmp reliable-trap enable</b>		
<b>snmp reliable-trap enable</b>	admin	enable reliable trap feature

Command	Access	Description
<b>snmp reliable-trap show</b>	limited	display statistics
statistics <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
<b>snmp security-to-group attach</b>	admin	attach SNMP user to security group
user <user>		SNMP user name
{sec-model <String>}		security model for the user
{group <String[32]>}		SNMP group name
<b>snmp security-to-group detach</b>	admin	detach SNMP user to security group
user <user>		SNMP user name
{sec-model <String>}		security model for the user
<b>snmp context-map attach</b>	admin	attach SNMP context to routing instance
context <context>		SNMP context name
{ospf-instance <OSPF Instance>}		ospf routing instance
{isis-instance <ISIS Instance>}		isis routing instance
<b>snmp context-map detach</b>	admin	detach SNMP user to security group
context <context>		SNMP context name
{ospf-instance <OSPF Instance>}		ospf routing instance
{isis-instance <ISIS Instance>}		isis routing instance
<b>snmp trap set</b>	admin	set SNMP trap
{l2sac-threshold-traps <String>}		l2 security access control trap
<b>snmp create</b>	admin	Create SNMP user
user <user>		SNMP user name
{auth-protocol <String>}		Authentication Protocol
[auth-password <Password String>]		authentication password
[priv-protocol <String>]		Privacy Protocol
[priv-password <Password String>]		privacy password
[auth-secret <String[40]>]	admin	set password using a pre-encrypted string
[priv-secret <String[40]>]	admin	set password using a pre-encrypted string
{engine-id <SNMP EngineID:XX:XX..(5-32 octets)Default:LocalSnmpEngineId>}		snmp engine ID

Command	Access	Description
<b>snmp create</b>	admin	Create SNMP view tree
viewtree <viewtree>		SNMP view tree name
{sub-tree <String[64]>}		sub tree mib OID
{type <String>}		tree type include or exclude
<b>snmp create</b>	admin	Create SNMP access entry
access-entry <access-entry>		SNMP access entry
{sec-model <String>}		Security model for access entry
{sec-level <String>}		Security level
{read-view <String[64]>}		read view name
[write-view <String[64]>]		write view name
[notify-view <String[64]>]		write view name
[context-prefix <String[64]>]		context name
<b>snmp create</b>	admin	Create SNMP context entry
context <context>		SNMP context entry
<b>snmp create</b>	admin	Create SNMP notify entry
notify <notify>		SNMP notify entry
{notify-tag <String[32]>}		notify view tag
{notify-type <String>}		notification type
<b>snmp create</b>	admin	Create SNMP target entry
target <target>		SNMP target entry
{addr <IP address in CIDR notation>}		target ip address
{param-name <String[32]>}		param name
[tag <String[32]>]		Transport Tag must be set to TrapTag for V1 Trap, (Default = TrapTag)
[udp-port <NUMBER: 0-65535>]		udp trap port
[transport-domain <String>]		transport domain
[retry-count <NUMBER: 0-255>]		number of retries
[retry-timeout <NUMBER, Measured in 0.01 seconds units>]		tryry-timeout
<b>snmp create</b>	admin	Create SNMP target params
target-param <target-param>		SNMP target params
{sec-name <String>}		security name
[sec-model <String>]		security model for target param
[sec-level <String>]		security level for target param
<b>snmp create</b>	admin	Create SNMP community mapping

Command	Access	Description
community-index <community-index>		SNMP community to sec-name mapping
{community <String[64]>}		Community name
{sec-name <String[32]>}		security name
[transport-tag <String[32]>]		Transport Tag
[context-name <String[32]>]		Context Name
<b>snmp delete</b>	admin	Delete SNMP user
user <user>		SNMP user name
{engine-id <SNMP EngineID:XX:XX..(5-32 octets)Default:LocalSnmpEngineId>}		snmp engine ID
<b>snmp delete</b>	admin	Delete SNMP view-tree
viewtree <viewtree>		SNMP view-tree
{sub-tree <String[64]>}		sub tree mib OID
<b>snmp delete</b>	admin	Delete SNMP notify entry
notify <notify>		SNMP notify entry
<b>snmp delete</b>	admin	Delete SNMP target entry
target <target>		SNMP target entry
<b>snmp delete</b>	admin	Delete SNMP target param
target-param <target-param>		SNMP target param
<b>snmp delete</b>	admin	Delete SNMP access entry
access-entry <access-entry>		SNMP access entry
{sec-model <String>}		security model for access group
{sec-level <String>}		Security level
[context-prefix <String[64]>]		context name
<b>snmp delete</b>	admin	Delete SNMP context entry
context <context>		SNMP context entry
<b>snmp delete</b>	admin	Delete SNMP community to sec-name map
community-index <community-index>		SNMP community map
<b>snmp disable</b>	admin	Disable SNMP agent
<b>snmp enable</b>	admin	Enable SNMP agent
<b>snmp set</b>	admin	set SNMP global attributes

Command	Access	Description
{contact <String[255]>}		system contact
{location <String[255]>}		system location
{std-link-up-down-trap <String>}		standard link up down trap
{enhancement-link-up-down-trap <String>}		enhanced link up down trap
{agg-port-link-up-down-trap <String>}		aggregation port link up down trap
{cfm-fault-trap <String>}		CFM fault trap
<b>snmp set</b>		
notify <notify>	admin	set SNMP notify entry
{notify-tag <String[32]>}		SNMP target entry
{notify-type <String>}		notify view tag
		notification type
<b>snmp show</b>		
{access-entry}	limited	show SNMP configuration
{context}	limited	Display all entries in the SNMP VACM access entry table
{context-map}	limited	Display all entries in snmp vacm context table
{community-map}	admin	Display all entries in snmp vacm context table
{notify}	admin	Displays configured communities mapping table
{port-traps}	limited	Display all entries in the SNMP notify table
{security-to-group}	limited	Displays global port traps status
{target}	limited	Display all entries in the SNMP security group table
{targetParams}	limited	Display all entries in the SNMP target table
{users}	limited	Display all entries in the SNMP target params table
{viewtree}	limited	Display all entries in the SNMP user table
		Display all entries in the SNMP view tree table
<b>software</b>		
<b>software license install</b>		
[file <String>]	admin	install premium feature license key
[server <IP address or host name>]		license file name and path
[license-key <String[14]>]		TFTP server
[module <NUMBER: 1-3>]		license key string
[default-server]		module number
[default-tftp-server]		use the default xFTP server
		use the default TFTP server

Command	Access	Description
[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
[login-id <String[32]>]		FTP/SFTP username
[password <Password String>]		enter the password in clear text
[secret <String[256]>]		set the password using a pre-encrypted string
<b>software license show</b>		
	limited	show software license configuration
<b>software license uninstall</b>		
	admin	uninstall premium feature license key
{feature-name <String>}		premium feature name
[module <NUMBER: 1-3>]		module number
<b>software report-sequence install</b>		
	admin	install software package
{package <String>}		software package path
[package-path <String>]		full path to the package directory
[server <IP address or host name>]		TFTP 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
[login-id <String[32]>]		FTP/SFTP username
[password <Password String>]		enter the password in clear text
[secret <String[256]>]		set the password using a pre-encrypted string
<b>software report-sequence run</b>		
	admin	download and run command file
{command-file <String>}		command file file name including path
[server <IP address or host name>]		TFTP 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
[login-id <String[32]>]		FTP/SFTP username

Command	Access	Description
[password <Password String>]		enter the password in clear text
[secret <String[256]>]		set the password using a pre-encrypted string
<b>software report-sequence upgrade</b>		
	admin	install and activate software package
{package <String>}		software package path
[package-path <String>]		full path to the package directory
[server <IP address or host name>]		FTP server
[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
[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
[login-id <String[32]>]		FTP/SFTP username
[password <Password String>]		enter the password in clear text
[secret <String[256]>]		set the password using a pre-encrypted string
<b>software install</b>		
	admin	install software package
{package <String>}		software package path
[package-path <String>]		full path to the package directory
[server <IP address or host name>]		TFTP 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
[login-id <String[32]>]		FTP/SFTP username
[password <Password String>]		enter the password in clear text
[secret <String[256]>]		set the password using a pre-encrypted string
<b>software reset</b>		
	admin	reset saved filenames
{last-config-file}		erase the filename only
{last-command-file}		erase the filename only
<b>software run</b>		
	admin	download and run command file

Command	Access	Description
{command-file <String>}		command file file name including path
[server <IP address or host name>]		TFTP 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
[login-id <String[32]>]		FTP/SFTP username
[password <Password String>]		enter the password in clear text
[secret <String[256]>]		set the password using a pre-encrypted string
<b>software show</b>		
	limited	show software configuration
<b>software upgrade</b>		
	admin	install and activate software package
{package <String>}		software package path
[package-path <String>]		full path to the package directory
[server <IP address or host name>]		FTP server
[ipv6-server <String>]		IPv6 xFTP server
[retries <String>]		Number of retries
[retry-interval <SECONDS: 1-300>]		Delay interval (in seconds) between retries, default: 15
[connection-timeout <SECONDS: 1-100>]		Duration (in seconds) before retry times out, default: 65
[cold-start]		Start the system fresh, including POST as well as resetting all the HW components
[service-disruption <String>]		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
[login-id <String[32]>]		FTP/SFTP username
[password <Password String>]		enter the password in clear text
[secret <String[256]>]		set the password using a pre-encrypted string
<b>software validate</b>		
	admin	validate software

Command	Access	Description
<b>software protect</b>	admin	protect software
<b>ssh-server</b>		
<b>ssh-server key generate</b>	admin	generate key
<b>ssh-server add</b>	admin	add an allowed SSH client IP address
client <client>		SSH client IP address
<b>ssh-server disable</b>	admin	disable ssh-server
<b>ssh-server enable</b>	admin	enable ssh-server
<b>ssh-server remove</b>	admin	remove an allowed client IP address
client <client>		SSH server address
<b>ssh-server set</b>	admin	set SSH attributes
{authentication-retries <NUMBER: 1-3>}		maximum retries, default: 3
{listener-port <NUMBER: 22-65535>}		port to listen for SSH connections, default: 22
<b>ssh-server show</b>	limited	show SSH information
<b>ssh-server unset</b>	admin	set SSH attributes back to default values
{authentication-retries}		maximum retries
{listener-port}		port to listen for SSH connections
<b>sub-port</b>		
<b>sub-port create</b>	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 <String>]		sub-port statistics
<b>sub-port delete</b>	admin	delete a sub-port interface
sub-port <sub-port>		sub-port name

Command	Access	Description
<b>sub-port clear</b>	admin	clear statistics on a sub-port interface
sub-port <sub-port>		sub-port name
{statistics}		statistics
<b>sub-port clear</b>	admin	clear statistics on all sub-port interfaces
{statistics}		statistics
<b>sub-port set</b>	admin	set sub-port attributes
sub-port <sub-port>		sub-port name
[statistics <String>]		statistics
<b>sub-port unset</b>	admin	set sub-port attributes back to the default values
sub-port <sub-port>		sub-port name
{statistics}		statistics
<b>sub-port show</b>	limited	display a summary of sub-port attributes
sub-port <sub-port>		sub-port name
[statistics]		statistics
<b>sub-port show</b>	limited	display a summary of all sub-port attributes on a parent port
[statistics]		statistics
[parent-port <Port>]		the parent port
<b>sync</b>		
<b>sync bits input create</b>	admin	create a BITS timing reference
ref <ref>		create a BITS input timing reference
{bits-interface <BITS interface>}		set BITS interface
{bits-mode <String>}		set BITS mode
{encoding <String>}		set BITS encoding
{e1-ssm-location <String>}		set BITS E1 SSM location
{forced-ql <Clock Quality level>}		set forced quality level
{format <String>}		set BITS format
{override-priority <NUMBER: 1-10>}		set override priority, 1 being highest
{priority <NUMBER: 1-10>}		set priority, 1 being highest
{ql-receive <String>}		quality level receiving configuration
<b>sync bits input delete</b>	admin	delete a BITS input timing reference

Command	Access	Description
ref <ref>		delete a BITS input timing reference
<b>sync bits input set</b>	admin	set attributes of a BITS input timing reference
ref <ref>		set attributes of a BITS input timing reference
{encoding <String>}		set BITS encoding
{e1-ssm-location <String>}		set BITS E1 SSM location
{forced-ql <Clock Quality level>}		set forced quality level
{override-priority <NUMBER: 1-10>}		set override priority, 1 being highest
{priority <NUMBER: 1-10>}		set priority, 1 being highest
{ql-receive <String>}		quality level receiving configuration
<b>sync bits input show</b>	limited	display all BITS input timing references
<b>sync bits input show</b>	limited	display details of a BITS input timing reference
ref <ref>		display details of a BITS input timing reference
<b>sync bits input unset</b>	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
{override-priority}		unset override priority
{priority}		unset priority
{ql-receive}		unset quality level receiving configuration
<b>sync bits output create</b>	admin	create a BITS output timing reference
ref <ref>		create a BITS output timing reference
{bits-interface <BITS interface>}		set BITS interface
{bits-mode <String>}		set BITS mode
{encoding <String>}		set BITS encoding
{e1-ssm-location <String>}		set BITS E1 SSM location
{format <String>}		set BITS format
{t1-line-build-out <String>}		set BITS T1 line build out (feet)
<b>sync bits output delete</b>	admin	delete a BITS output timing reference
ref <ref>		delete a BITS output timing reference

Command	Access	Description
<b>sync bits output set</b>	admin	set attributes of a BITS output timing reference
ref <ref>		set attributes of a BITS output timing reference
{encoding <String>}		set BITS encoding
{t1-line-build-out <String>}		set BITS T1 line build out (feet)
{e1-ssm-location <String>}		set BITS E1 SSM location
<b>sync bits output show</b>	limited	display all BITS output timing references
<b>sync bits output show</b>	limited	display details of a BITS output timing reference
ref <ref>		display details of a BITS output timing reference
<b>sync bits output unset</b>	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
<b>sync bits show</b>	limited	display BITS timing information
<b>sync frequency input show</b>	limited	display all frequency input references
<b>sync frequency output show</b>	limited	display all frequency output references
<b>sync frequency protection-group add</b>	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
<b>sync frequency protection-group clear</b>	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
<b>sync frequency protection-group create</b>	admin	create a frequency protection group

Command	Access	Description
group <group>		create a frequency protection group
{threshold-ql <Clock Quality level>}		set threshold quality level
<b>sync frequency protection-group delete</b>	admin	delete a frequency protection group
group <group>		delete a frequency protection group
<b>sync frequency protection-group remove</b>	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
<b>sync frequency protection-group set</b>	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
<b>sync frequency protection-group show</b>	limited	display details of frequency protection group reference
group <group>		display details of a frequency protection group
<b>sync frequency protection-group unset</b>	admin	unset attributes of a frequency protection group
group <group>		unset attributes of a frequency protection group
{forced-ref}		clear a force switch operation
<b>sync frequency show</b>	limited	display all frequency references
<b>sync gps input create</b>	admin	create a GPS timing reference
ref <ref>		create a GPS input timing reference
{clock-mode <String>}		set GPS clock mode
{forced-ql <Clock Quality level>}		set forced quality level
{frequency-clock <String>}		set GPS frequency clock
{gps-interface <GPS interface>}		set GPS interface
{override-priority <NUMBER: 1-10>}		set override priority, 1 being highest
{priority <NUMBER: 1-10>}		set priority, 1 being highest

Command	Access	Description
<b>sync gps input delete</b>	admin	delete a GPS input timing reference
ref <ref>		delete a GPS input timing reference
<b>sync gps input set</b>	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: 1-10>}		set override priority, 1 being highest
{priority <NUMBER: 1-10>}		set priority, 1 being highest
<b>sync gps input show</b>	limited	display all gps input timing references
<b>sync gps input show</b>	limited	display details of a GPS input timing reference
ref <ref>		display details of a GPS input timing reference
<b>sync gps input unset</b>	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
<b>sync gps output create</b>	admin	create a GPS timing reference
ref <ref>		create a GPS output timing reference
{clock-mode <String>}		set GPS clock mode
{frequency-clock <String>}		set GPS frequency clock
{gps-interface <GPS interface>}		set GPS interface
<b>sync gps output delete</b>	admin	delete a GPS output timing reference
ref <ref>		delete a GPS output timing reference
<b>sync gps output set</b>	admin	set attributes of GPS output timing
{1pps-pulse-width <MICROSECONDS>}		set GPS output 1pps pulse width (microseconds)
<b>sync gps output show</b>	limited	display all GPS output timing references
<b>sync gps output show</b>	limited	display details of a GPS output timing reference
ref <ref>		display details of a GPS output timing reference

Command	Access	Description
<b>sync gps output unset</b>	admin	unset attributes of GPS output timing
{1pps-pulse-width}		unset GPS output 1pps pulse width
<b>sync gps show</b>	limited	display GPS timing information
<b>sync phase input show</b>	limited	display all phase input references
<b>sync phase output show</b>	limited	display all phase output references
<b>sync phase protection-group add</b>	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
<b>sync phase protection-group clear</b>	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
<b>sync phase protection-group create</b>	admin	create a phase protection group
group <group>		create a phase protection-group
{threshold-ql <Clock Quality level>}		set threshold quality level
<b>sync phase protection-group delete</b>	admin	delete a phase protection group
group <group>		delete a phase protection group
<b>sync phase protection-group set</b>	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
<b>sync phase protection-group show</b>	limited	display details of phase protection-group reference
group <group>		display details of a phase protection group
<b>sync phase protection-group remove</b>	admin	remove a list of input references from a protection group
group <group>		remove a list of input references from a phase protection group

Command	Access	Description
{input-ref <List of configured phase input timing references>}		remove a list of input references from a phase protection group
<b>sync phase protection-group unset</b>	admin	unset attributes of a phase protection group
group <group>		unset attributes of a phase protection group
{forced-ref}		clear a force switch operation
<b>sync phase show</b>	limited	display all phase references
<b>sync ptp input clear</b>	admin	clear PTP master pdu-statistics
master <master>		clear PTP master pdu-statistics
{pdu-statistics}		clear PTP master pdu-statistics
<b>sync ptp input create</b>	admin	create a PTP input timing reference
ref <ref>		create a PTP input timing reference
{encap-type <String>}		set encapsulation type
{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: 1-10>}		set override priority, 1 being highest
{priority <NUMBER: 1-10>}		set priority, 1 being highest
{ql-receive <String>}		set quality level receiving configuration
<b>sync ptp input delete</b>	admin	delete a PTP input timing reference
ref <ref>		delete a PTP input timing reference
<b>sync ptp input set</b>	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 <String>}		set PTP input announce TX rate request (packets per second)
{delay-request-tx-rate <String>}		set PTP input delay request TX rate (packets per second)
{sync-tx-rate-request <String>}		set PTP input sync TX rate request (packets per second)
{unicast-request-duration <SECONDS: 60-1000>}		set PTP input unicast request duration (seconds)
<b>sync ptp input set</b>	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

Command	Access	Description
{forced-ql <Clock Quality level>}		set forced quality level
{override-priority <NUMBER: 1-10>}		set override priority, 1 being highest
{priority <NUMBER: 1-10>}		set priority, 1 being highest
{ql-receive <String>}		set quality level receiving configuration
<b>sync ptp input show</b>		
	limited	display all PTP input timing references
<b>sync ptp input show</b>		
	limited	display details of a PTP input timing reference
ref <ref>		display details of a PTP input timing reference
<b>sync ptp input show</b>		
	limited	display PTP master pdu-statistics
master <master>		display PTP master pdu-statistics
{pdu-statistics}		display PTP master pdu-statistics
<b>sync ptp input show</b>		
	limited	display PTP master list
{master-list}		display PTP master list
<b>sync ptp input unset</b>		
	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
<b>sync ptp input unset</b>		
	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
<b>sync ptp output clear</b>		
	admin	clear PTP client pdu-statistics
client <client>		clear PTP client pdu-statistics
{pdu-statistics}		clear PTP client pdu-statistics
<b>sync ptp output create</b>		
	admin	create a PTP output timing reference
ref <ref>		create a PTP output timing reference
{encap-type <String>}		set encapsulation type

Command	Access	Description
{ip-interface <Interface Name>}		IP interface name
<b>sync ptp output delete</b>	admin	delete a PTP output timing reference
ref <ref>		delete a PTP output timing reference
<b>sync ptp output set</b>	admin	set global attributes of PTP output timing
{max-slave-sessions <NUMBER: 0-16>}		set maximum number of clients the master will support
<b>sync ptp output show</b>	limited	display all PTP output timing references
<b>sync ptp output show</b>	limited	display details of a PTP output timing reference
ref <ref>		display details of a PTP output timing reference
<b>sync ptp output show</b>	limited	display PTP client pdu-statistics
client <client>		display PTP client pdu-statistics
{pdu-statistics}		display PTP client pdu-statistics
<b>sync ptp output show</b>	limited	display PTP client list
{client-list}		display PTP client list
<b>sync ptp output unset</b>	admin	unset global attributes of PTP output timing
{max-slave-sessions}		unset maximum number of clients the master will support
<b>sync ptp set</b>	admin	set global attributes of PTP timing
{address-mode <String>}		set PTP address mode
{clock-type <String>}		set PTP clock type
{domain-number <NUMBER: 4-23>}		set PTP domain number
{dscp <NUMBER: 0-63>}		set PTP DSCP
{profile-identifier <MAC address: XX:XX:XX:XX:XX:XX>}		set PTP profile identifier address
{profile-version <String>}		set PTP profile version
{protocol-version <String>}		set PTP protocol-version
{tag-priority <NUMBER: 0-7>}		set PTP tag priority
<b>sync ptp show</b>	limited	display PTP timing information
<b>sync ptp show</b>	limited	display PTP timing information

Command	Access	Description
{performance-statistics}		display PTP performance statistics
<b>sync ptp unset</b>	admin	unset global attributes of PTP timing
{address-mode}		unset PTP address mode
{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
{protocol-version}		unset PTP protocol version
{tag-priority}		unset PTP tag priority
<b>sync synce input create</b>	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: 1-10>}		set override priority, 1 being highest
{port <Physical port list>}		set physical port
{priority <NUMBER: 1-10>}		set priority, 1 being highest
{ql-receive <String>}		set quality level receiving configuration
<b>sync synce input delete</b>	admin	delete a SyncE input timing reference
ref <ref>		delete a SyncE input timing reference
<b>sync synce input set</b>	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: 1-10>}		set override priority, 1 being highest
{priority <NUMBER: 1-10>}		set priority, 1 being highest
{ql-receive <String>}		set quality level receiving configuration
<b>sync synce input show</b>	limited	display all SyncE input timing references
<b>sync synce input show</b>	limited	display details of a SyncE input timing reference
ref <ref>		display details of a SyncE input timing reference
<b>sync synce input unset</b>	admin	unset attributes of a SyncE input timing reference

Command	Access	Description
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
<b>sync sync output create</b>		
ref <ref>	admin	create a SyncE output timing reference
{port <Physical port list>}		set physical port
<b>sync sync output delete</b>		
ref <ref>	admin	delete a SyncE output timing reference
<b>sync sync output show</b>		
ref <ref>	limited	display all SyncE output timing references
<b>sync sync output show</b>		
ref <ref>	limited	display details of a SyncE output timing reference
ref <ref>		display details of a SyncE output timing reference
<b>sync sync clear</b>		
{statistics}	admin	clear SyncE timing information
		clear SyncE timing statistics
<b>sync sync show</b>		
	limited	display SyncE timing information
<b>sync sync show</b>		
{statistics}	limited	display SyncE timing information
		display SyncE timing statistics
<b>sync tdm input create</b>		
ref <ref>	admin	create a TDM input timing reference
{forced-ql <Clock Quality level>}		create a TDM input timing reference
{override-priority <NUMBER: 1-10>}		set forced quality level
{port <TDM Port Name>}		set override priority, 1 being highest
{priority <NUMBER: 1-10>}		set tdm port
		set priority, 1 being highest
<b>sync tdm input delete</b>		
ref <ref>	admin	delete a TDM input timing reference
ref <ref>		delete a TDM input timing reference
<b>sync tdm input set</b>		
ref <ref>	admin	set attributes of a TDM input timing reference
ref <ref>		set attributes of a TDM input timing reference

Command	Access	Description
{forced-ql <Clock Quality level>}		set forced quality level
{override-priority <NUMBER: 1-10>}		set override priority, 1 being highest
{priority <NUMBER: 1-10>}		set priority, 1 being highest
<b>sync tdm input show</b>	limited	display all TDM input timing references
<b>sync tdm input show</b>	limited	display details of a TDM input timing reference
ref <ref>		display details of a TDM input timing reference
<b>sync tdm input unset</b>	admin	unset attributes of a TDM input timing reference
ref <ref>		unset attributes of a TDM input timing reference
{override-priority}		unset override priority
{priority}		unset priority
<b>sync tdm show</b>	limited	display TDM timing information
<b>sync time-of-day input show</b>	limited	display all time-of-day input references
<b>sync time-of-day output show</b>	limited	display all time-of-day output references
<b>sync time-of-day protection-group add</b>	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
<b>sync time-of-day protection-group clear</b>	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
<b>sync time-of-day protection-group create</b>	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
<b>sync time-of-day protection-group delete</b>	admin	delete a time-of-day protection group
group <group>		delete a time-of-day protection group
<b>sync time-of-day protection-group remove</b>	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
<b>sync time-of-day protection-group set</b>	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
<b>sync time-of-day protection-group show</b>	limited	display details of time-of-day protection group reference
group <group>		display attributes of a time-of-day protection group
<b>sync time-of-day protection-group unset</b>	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
<b>sync time-of-day show</b>	limited	display all time-of-day references
<b>sync disable</b>	admin	globally disable sync feature
<b>sync enable</b>	admin	globally enable sync feature
<b>sync set</b>	admin	set global sync attributes
{holdover-interval <String>}		set holdover interval
{option-type <String>}		set option type
{reversion-mode <String>}		set reversion mode
{wait-to-restore <MINUTES>}		set wait-to-restore timeout (minutes)

Command	Access	Description
<b>sync show</b>	limited	display sync information
<b>sync show</b>		
<b>sync show</b>	limited	display sync information
{all}		display all configured timing references
{ql-hierarchy-table}		display the quality level hierarchy table
<b>sync unset</b>		
<b>sync unset</b>	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
<b>syslog</b>		
<b>syslog add</b>		
<b>syslog add</b>	admin	add syslog collector
collector <collector>		IP address of syslog collector
{custom-prefix <String[15]>}		syslog message prefix
{facility <NUMBER: 0-23>}		syslog facility
{max-severity <String>}		maximum severity of syslog messages to log
{min-severity <String>}		minimum severity of syslog messages to log
{severity <String List>}		syslog severity value that will be allowed to egress
{udp-port <NUMBER: 514-65535>}		UDP port of collector (default=514)
<b>syslog create</b>		
<b>syslog create</b>	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)
<b>syslog delete</b>		
<b>syslog delete</b>	admin	delete syslog collector
collector <collector>		IP address of syslog collector to remove
<b>syslog disable</b>		
<b>syslog disable</b>	admin	disable syslog globally
<b>syslog disable</b>		
<b>syslog disable</b>	admin	disable syslog collector
collector <collector>		IP address of syslog collector to disable

Command	Access	Description
<b>syslog enable</b>	admin	enable syslog globally
<b>syslog enable</b> collector <collector>	admin	enable syslog collector IP address of syslog collector to enable
<b>syslog remove</b> collector <collector> {severity <String List>}	admin	remove syslog collector IP address of syslog collector to remove syslog severity value that will be allowed to egress
<b>syslog send</b> [event <NUMBER>] [msg <String>] [severity <String>]	admin	send debug syslog msg syslog event id syslog debug message severity of debug syslog message
<b>syslog set</b> collector <collector> {custom-prefix <String[15]>} {facility <NUMBER: 0-23>} {max-severity <String>} {min-severity <String>} {udp-port <NUMBER: 514-65535>}	admin	set syslog collector attributes IP address of syslog collector to configure syslog message prefix syslog facility maximum severity of syslog messages to log minimum severity of syslog messages to log UDP port of collector (default=514)
<b>syslog show</b> {severity-mapping} {system-events}	limited	show syslog information show event/syslog severity map show system events
<b>syslog show</b> collector <collector>	limited	show syslog collector information IP address of syslog collector to show
<b>syslog unset</b> collector <collector> {custom-prefix}	admin	unset syslog collector attributes IP address of syslog collector to show unset syslog message prefix
<b>system</b>		
<b>system guardian disable</b>	admin	enable guardian
<b>system guardian enable</b>	admin	enable guardian

Command	Access	Description
<b>system guardian set</b>	admin	configure guardian
{limit-number-reboots <String>}		limit reboots before disabling guardian
<b>system guardian show</b>	limited	show guardian settings
<b>system server sftp disable</b>	admin	disable SFTP server
<b>system server sftp enable</b>	admin	enable SFTP server
<b>system server sftp show</b>	limited	show SFTP server
<b>system server ftp disable</b>	admin	disable FTP server
<b>system server ftp enable</b>	admin	enable FTP server
<b>system server ftp show</b>	limited	show FTP server
<b>system server tftp disable</b>	admin	disable TFTP server
<b>system server tftp enable</b>	admin	enable TFTP server
<b>system server tftp show</b>	limited	show TFTP server
<b>system server show</b>	limited	show server state(s)
<b>system ps show</b>	admin	displays information about system processes
[format <String>]		format of display
<b>system shell banner add</b>	admin	add to banner
<>		banner file
{line <String>}		text line
<b>system shell banner collect</b>	admin	create banner interactively
<>		banner file
<b>system shell banner create</b>	admin	create banner
<>		banner file
{line <String>}		first text line
<b>system shell banner delete</b>	admin	restore banner to default

Command	Access	Description
<>		banner file
<b>system shell banner edit</b>	admin	edit banner
<>		banner file
<b>system shell banner set</b>	admin	choose banner file
<>		banner
filename <filename>		filename
<b>system shell banner show</b>	admin	display banner
<>		banner file
<b>system shell banner unset</b>	admin	restore default banner
<>		banner
<b>system shell session set</b>	limited	set new value
{more <String>}	limited	Unix More on/off
{more-lines <NUMBER: 0-999>}	limited	set terminal height
{tab-more <String>}	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
<b>system shell session show</b>	limited	show shell session settings
<b>system shell session unset</b>	limited	restore default value
{more}	limited	Restore default value
{more-lines}	limited	Restore default value
{tab-more}	limited	Restore default value
<b>system shell reset</b>	admin	reset condition
{warning-banners}	admin	warning banner messages
<b>system shell set</b>	limited	set new value
{login-banner-file <String[63]>}	admin	login banner filename
{welcome-banner-file <String[63]>}	admin	welcome banner filename
{global-inactivity-timeout <NUMBER: 1-1500>}	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 <String>}	admin	When enabled, the inactivity timer will automatically shut down a shell if it becomes

Command	Access	Description
		inactive.
{global-login-timeout <NUMBER: 10-300>}	admin	if the shell login timeout is enabled, this setting provides the length (in seconds) of inactivity at a login prompt before the login attempt is terminated. This setting applies for telnet.
{global-login-timer <String>}	admin	When enabled, the login timer will automatically shut down a login attempt that becomes inactive.
{global-more <String>}	admin	global setting, unix more on/off
{global-more-lines <NUMBER: 0-999>}	admin	set global terminal height
<b>system shell unset</b>	limited	restore default value
{login-banner-file}	admin	no login banner
{welcome-banner-file}	admin	no welcome banner
{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
<b>system shell show</b>	limited	show shell settings
<b>system health show</b>	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 <String>}		show health items currently at certain state
<b>system xftp set</b>	admin	set an xFTP server and its attributes
ftp-server <ftp-server>		FTP server IP/Hostname/Credentials
[login-id <String[32]>]		ftp username
[password <Password String>]		password
[secret <String[256]>]		set the password using a pre-encrypted string
<b>system xftp set</b>	admin	set a TFTP server
tftp-server <tftp-server>		TFTP server IP/Hostname
<b>system xftp set</b>	admin	set an sftp server and its attributes
sftp-server <sftp-server>		SFTP server IP/Hostname/Credentials
[login-id <String[32]>]		sftp username
[password <Password String>]		password

Command	Access	Description
[secret <String[256]>]		set the password using a pre-encrypted string
<b>system xftp set</b>		
[mode <String>]	admin	set the global default xftp server mode
[connection-timeout <SECONDS: 1-100>]		xFTP mode
[retries <NUMBER: 1-10>]		Duration (in seconds) before retry times out
[retry-interval <SECONDS: 1-300>]		Maximum number of retries allowed
		Delay interval (in seconds) between retries
<b>system xftp unset</b>		
{tftp-server}	admin	unset an xftp server
{ftp-server}		unset tftp server
{ftp-server}		unset ftp server
{sftp-server}		unset sftp server
<b>system xftp getfile</b>		
{remote-filename <String[127]>}	admin	get a file from an xftp server
{local-filename <String[127]>}		remote file name
[default-server]		local file name
[default-tftp-server]		use the default xFTP server
[default-ftp-server]		use the default TFTP server
[default-sftp-server]		use the default FTP server
[tftp-server <IP address or host name>]		use the default SFTP server
[ftp-server <IP address or host name>]		TFTP server
[sftp-server <IP address or host name>]		FTP server
[login-id <String[32]>]		SFTP server
[password <Password String>]		FTP/SFTP username
[secret <String[256]>]		enter the password in clear text
		set the password using a pre-encrypted string
<b>system xftp putfile</b>		
{local-filename <String[127]>}	admin	put a file on an xftp server
{remote-filename <String[127]>}		local file name
[default-server]		remote file name
[default-tftp-server]		use the default xFTP server
[default-ftp-server]		use the default TFTP server
[default-sftp-server]		use the default FTP server
[tftp-server <IP address or host name>]		use the default SFTP server
[ftp-server <IP address or host name>]		TFTP server
[sftp-server <IP address or host name>]		FTP server
[login-id <String[32]>]		SFTP server
[password <Password String>]		FTP/SFTP username
[secret <String[256]>]		enter the password in clear text
		set the password using a pre-encrypted string

Command	Access	Description
<b>system xftp show</b>	limited	show xftp server configuration and state
<b>system set</b>	admin	set system attributes
{date <String>}		system date (yyyy-mm-dd or yy-mm-dd or mm-dd)
{host-name <String>}		system hostname
{time <String>}		system time hh:mm:ss or hh:mm
{time-offset <NUMBER: -43200-50400>}		system time-offset in seconds from UTC -- positive->east, negative->west
{timestamp <String>}		set log timestamp
[service-mode <String>]		system service mode
<b>system show</b>	limited	show system attributes
{date}		show system date (mm-dd-yyyy or mm-dd-yy)
{host-name}		show system host name
{memory-usage}		show system memory usage
{time}		show system time setting
{time-offset}		show system time offset settings
{uptime}		show system uptime
<b>system state-dump</b>	admin	dump system state to a file on tftp server
[file-name <String>]		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
[login-id <String[32]>]		FTP/SFTP username
[password <Password String>]		enter the password in clear text
[secret <String[256]>]		set the password using a pre-encrypted string
<b>system unset</b>	admin	set system attributes
{host-name}		unset system hostname
{time-offset}	admin	unset time offset.
{timestamp}	admin	unset log timestamp
<b>tacacs</b>		

Command	Access	Description
<b><i>tacacs accounting add</i></b>	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
<b><i>tacacs accounting clear</i></b>	admin	clear TACACS+ accounting statistics
server <server>		TACACS+ accounting server IP address or hostname
{statistics}		clear TACACS+ accounting statistics
<b><i>tacacs accounting disable</i></b>	admin	globally disable TACACS+ accounting
<b><i>tacacs accounting disable</i></b>	admin	disable TACACS+ accounting server
server <server>		TACACS+ accounting server IP address or hostname
<b><i>tacacs accounting enable</i></b>	admin	globally enable TACACS+ accounting
<b><i>tacacs accounting enable</i></b>	admin	enable TACACS+ accounting server
server <server>		TACACS+ accounting server IP address or hostname
<b><i>tacacs accounting remove</i></b>	admin	remove TACACS+ accounting server
server <server>		TACACS+ accounting server IP address or hostname
<b><i>tacacs accounting set</i></b>	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
<b><i>tacacs accounting set</i></b>	admin	set TACACS+ accounting attributes
{session <String>}		enable logging for login and logout
{command <String>}		enable logging for all commands
<b><i>tacacs accounting show</i></b>	limited	show TACACS+ accounting information
{statistics}		show TACACS+ accounting statistics
<b><i>tacacs accounting unset</i></b>	admin	unset TACACS+ accounting server attributes

Command	Access	Description
server <server>		TACACS+ accounting server IP address or hostname
{tcp-port}		set TCP port of TACACS+accounting server to default
<b><i>tacacs authentication add</i></b>		
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
<b><i>tacacs authentication clear</i></b>		
admin		clear TACACS+ authentication statistics
server <server>		TACACS+ authentication server IP address or hostname
{statistics}		clear TACACS+ authentication statistics
<b><i>tacacs authentication disable</i></b>		
admin		globally disable TACACS+ authentication
<b><i>tacacs authentication disable</i></b>		
admin		disable TACACS+ authentication server
server <server>		TACACS+ authentication server IP address or hostname
<b><i>tacacs authentication enable</i></b>		
admin		globally enable TACACS+ authentication
<b><i>tacacs authentication enable</i></b>		
admin		enable TACACS+ authentication server
server <server>		TACACS+ authentication server IP address or hostname
<b><i>tacacs authentication remove</i></b>		
admin		remove TACACS+ authentication server
server <server>		TACACS+ authentication server IP address or hostname
<b><i>tacacs authentication set</i></b>		
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
<b><i>tacacs authentication show</i></b>		
limited		show TACACS+ authentication information
{statistics}		show TACACS+ authentication statistics

Command	Access	Description
<b><i>tacacs authentication unset</i></b>	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
<b><i>tacacs authorization add</i></b>	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
<b><i>tacacs authorization clear</i></b>	admin	clear TACACS+ authorization statistics
server <server>		TACACS+ authorization server IP address or hostname
{statistics}		clear TACACS+ authorization statistics
<b><i>tacacs authorization disable</i></b>	admin	globally disable TACACS+ authorization
<b><i>tacacs authorization disable</i></b>	admin	disable TACACS+ authorization server
server <server>		TACACS+ authorization server IP address or hostname
<b><i>tacacs authorization enable</i></b>	admin	globally enable TACACS+ authorization
<b><i>tacacs authorization enable</i></b>	admin	enable TACACS+ authorization server
server <server>		TACACS+ authorization server IP address or hostname
<b><i>tacacs authorization remove</i></b>	admin	remove TACACS+ authorization server
server <server>		TACACS+ authorization server IP address or hostname
<b><i>tacacs authorization set</i></b>	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 server, default: 49

Command	Access	Description
<b><i>tacacs authorization show</i></b>	limited	show TACACS+ authorization information
{statistics}		show TACACS+ authorization statistics
<b><i>tacacs authorization unset</i></b>	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
<b><i>tacacs syslog disable</i></b>	admin	disable TACACS+ syslog messages
<b><i>tacacs syslog enable</i></b>	admin	enable TACACS+ syslog messages
<b><i>tacacs add</i></b>	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
<b><i>tacacs clear</i></b>	admin	clear TACACS+
server <server>		TACACS+ server IP address or hostname
{statistics}		clear TACACS+ statistics
<b><i>tacacs disable</i></b>	admin	disable TACACS+
<b><i>tacacs disable</i></b>	admin	disable TACACS+ server
server <server>		TACACS+ server IP address or hostname
<b><i>tacacs enable</i></b>	admin	enable TACACS+
<b><i>tacacs enable</i></b>	admin	enable TACACS+ server
server <server>		TACACS+ server IP address or hostname
<b><i>tacacs remove</i></b>	admin	remove TACACS+ server
server <server>		TACACS+ server IP address or hostname
<b><i>tacacs set</i></b>	admin	set TACACS+ attributes
{key <Password String>}		TACACS+ key
{keyminlen <NUMBER: 2-64>}		secret key minimum length
{secret <String[128]>}		set the TACACS+ key using a pre-encrypted string

Command	Access	Description
{timeout <SECONDS: 1-30>}		response time from TACACS+ server, default: 6 seconds
{privilegevladmin <NUMBER: 1-13>}		value for read-write privilege level, default: 2
{privilegevlrw <NUMBER: 2-14>}		value for read-write-create privilege level, default: 10
{privilegevldiag <NUMBER: 3-15>}		value for diagnostic privilege level, default: 15
{global-servers <String>}	admin	use global server
{search-method <String>}		set the search method for TACACS+ servers
<b>tacacs set</b>		
<b>tacacs set</b>	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
<b>tacacs show</b>		
<b>tacacs show</b>	limited	show TACACS+ information
{statistics}		show TACACS+ statistics
<b>tacacs unset</b>		
<b>tacacs unset</b>	admin	set TACACS+ server attributes back to default values
{key}		set TACACS+ key to default
{keyminlen}		set secret key minimum length to default
{secret}		set TACACS+ key to default
{timeout}		set response time from TACACS+ server to default
{privilegevladmin}		set value for read-write privilege level to default
{privilegevlrw}		set value for read-write-create privilege level to default
{privilegevldiag}		set value for diagnostic privilege level to default
{global-servers}		set global server use to default
{search-method}		set the search method for TACACS+ servers to default
<b>tacacs unset</b>		
<b>tacacs unset</b>	admin	unset TACACS+ server attributes
server <server>		TACACS+ server IP address or hostname
{tcp-port}		set TCP port of TACACS+ server to default
<b>telnet-server</b>		
<b>telnet-server disable</b>		
<b>telnet-server disable</b>	admin	disable telnet server

Command	Access	Description
<b>telnet-server enable</b>	admin	enable telnet server
<b>telnet-server set</b>	admin	set telnet server attributes
{max-limited-users <NUMBER: 0-9>}		maximum simultaneous limited user logins
{max-admin-users <NUMBER: 1-10>}		maximum simultaneous admin user logins
{max-super-users <NUMBER: 1-10>}		maximum simultaneous super user logins
<b>telnet-server show</b>	limited	show telnet server information
<b>traffic-profiling</b>		
<b>traffic-profiling standard-profile clear</b>	admin	clear statistics for all standard profiles
{statistics}		clear standard profile statistics table
<b>traffic-profiling standard-profile create</b>	admin	create a standard traffic profile
port <port>		port number
{profile <NUMBER: 1-4096>}		traffic profile number
{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 <String>}		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>}		VLAN-ID to monitor
{vs <Virtual Switch Ethernet Name>}		Virtual Switch as a classifier aka EVC matching frames
[statistics <String>]		Statistics control for Traffic Profiling
[untagged]		untagged frame classifier

Command	Access	Description
{parent <Traffic Profiling Standard Name>}		parent traffic profile number
{child-mode <String>}		remarking mode
{default-profile <String>}		whether this profile is default for set
{drop <String>}		whether this profile drops all traffic
{ingress-color-aware <String>}		set meter to be ingress color aware or not
{remark-color-policy <String>}		meter output color remarking policy
{remark-rcos-policy <String>}		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
<b>traffic-profiling standard-profile delete</b>		
admin		delete a standard traffic profile
port <port>		port number
profile <profile>		traffic profile
<b>traffic-profiling standard-profile set</b>		
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 <String>}		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>}		VLAN-ID to monitor
{vs <Virtual Switch Ethernet Name>}		Virtual Switch aka EVC matching frames
[statistics <String>]		Statistics control for Traffic Profiling
[untagged]		untagged frame classifier
{parent <Traffic Profiling Standard Name>}		parent traffic profile number

Command	Access	Description
{child-mode <String>}		profiling mode of child profiles
{drop <String>}		whether this profile drops all traffic
{ingress-color-aware <String>}		set meter to be ingress color aware or not
{remark-color-policy <String>}		meter output color remarking policy
{remark-rcos-policy <String>}		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
<b>traffic-profiling standard-profile show</b>		
statistics <statistics>	limited	show standard profiling table
[port <Port>]		show standard profiling statistics table
[traffic-profile <Traffic Profiling Standard Name>]		port number
<b>traffic-profiling standard-profile show</b>		
throughput <throughput>	limited	show standard profiling throughput table
{port <Port>}		show standard profiling throughput table
{traffic-profile <Traffic Profiling Standard Name>}		port number
<b>traffic-profiling standard-profile show</b>		
port <port>	limited	show standard traffic profile attributes
[traffic-profile <Traffic Profiling Standard Name>]		port number
<b>traffic-profiling standard-profile show</b>		
port <port>	limited	show standard traffic profile attributes
profile <profile>		show standard traffic profile attributes
{dot1dpri <NUMBER>}	admin	unset standard traffic profile attributes
{ip-prec <NUMBER>}		port number
{dscp <dscp values and ranges>}		traffic profile
{vlan}		.1D priority of matching frames
{untagged}		IP Precedence of matching frames
<b>traffic-profiling enable</b>		
port <port>	admin	DSCP value of matching frames
<b>traffic-profiling enable</b>		
port <port>	admin	VLAN to monitor
<b>traffic-profiling enable</b>		
port <port>		undo the untagged classifier
<b>traffic-profiling enable</b>		
port <port>	admin	enable traffic profiling
<b>traffic-profiling enable</b>		
port <port>		enable traffic profiling
<b>traffic-profiling enable</b>		
port <port>		port number

Command	Access	Description
<b>traffic-profiling disable</b>	admin	disable traffic profiling
<b>traffic-profiling disable</b>	admin	disable traffic profiling
port <port>		port number
<b>traffic-profiling set</b>	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
{meter-pool <Traffic Profiling Meter Pool Name>}		traffic-profiling meter-pool to assign this port to
{mode <String>}		remarking mode
{classifier-mode <String>}		narrow excludes dropped frames from meters, wide does not
{nonconform-standard-profile <Traffic Profiling Standard Name>}		standard profile to use for non-conforming traffic
<b>traffic-profiling set</b>	admin	set per-port traffic profiling attributes
{meter-provisioning <String>}		Set the metering's rate provisioning to eir or pir units
<b>traffic-profiling show</b>	limited	brief traffic profiling information for each port
{classifier-mode}		This displays each port's classification mode
{meter-pool}		meter-pool port mapping
<b>traffic-profiling show</b>	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
<b>traffic-services</b>		
<b>traffic-services queuing congestion-avoidance-profile create</b>	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 <String>]		green drop probability %
[yellow-threshold <NUMBER: 1-100>]		Lower Threshold % for yellow-drop-probability
[yellow-drop-probability <String>]		yellow-drop-probability %

Command	Access	Description
[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 <String>]		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 <String>]		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 <String>]		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 <String>]		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 <String>]		non-tcp-drop-probability %
[yellow-admit-limit <NUMBER: 1-100>]		yellow frames are limited to consuming this % of the queue
<b>traffic-services queuing congestion-avoidance-profile delete</b>		
admin		Delete a Congestion Avoidance Profile
profile <profile>		congestion avoidance profile
<b>traffic-services queuing congestion-avoidance-profile rename</b>		
admin		Set name for Congestion Avoidance Profile
profile <profile>		congestion avoidance profile
{name <String[15]>}		new name
<b>traffic-services queuing congestion-avoidance-profile set</b>		
admin		Set a Congestion Avoidance Profile Attribute
profile <profile>		congestion avoidance profile
{green-threshold <NUMBER: 1-100>}		Lower Threshold % for green-drop-probability
{green-drop-probability <String>}		green drop probability %
{yellow-threshold <NUMBER: 1-100>}		Lower Threshold % for yellow-drop-probability

Command	Access	Description
{yellow-drop-probability <String>}		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 <String>]		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 <String>]		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 <String>]		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 <String>]		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 <String>]		non-tcp-drop-probability %
[yellow-admit-limit <NUMBER: 1-100>]		yellow frames are limited to consuming this % of the queue
<b>traffic-services queuing congestion-avoidance-profile show</b>		
profile <profile>	limited	Show a Congestion Avoidance Profile
congestion avoidance profile		
<b>traffic-services queuing congestion-avoidance-profile show</b>		
	limited	Show all Congestion Avoidance Profiles
<b>traffic-services queuing queue-map create</b>		
rcos-map <rcos-map>	admin	Create an RCOS Mapping for a Queue
queue map		
<b>traffic-services queuing queue-map delete</b>		
rcos-map <rcos-map>	admin	Delete an RCOS Mapping for a Queue
queue map		

Command	Access	Description
<b><i>traffic-services queuing queue-map rename</i></b>	admin	Set name for RCOS to Queue Mapping
rcos-map <rcos-map>		queue map
{name <String[15]>}		new name
<b><i>traffic-services queuing queue-map set</i></b>	admin	Set an RCOS Mapping for a Queue
rcos-map <rcos-map>		queue map
{rcos <NUMBER>}		RCOS range value
{queue <NUMBER: 0-7>}		Queue value
<b><i>traffic-services queuing queue-map show</i></b>	limited	Show an RCOS based Queue Map
rcos-map <rcos-map>		queue map
<b><i>traffic-services queuing queue-map show</i></b>	limited	Show all Queue Maps
<b><i>traffic-services queuing egress-port-queue-group clear</i></b>	limited	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
<b><i>traffic-services queuing egress-port-queue-group clear</i></b>	limited	Clear all queue statistics for an Egress Port Queuing Instance
port <port>		egress queuing instance
{statistics}		statistics for port queue group
<b><i>traffic-services queuing egress-port-queue-group clear</i></b>	limited	Clear all egress statistics for all Egress Port Queuing Instances
{statistics}		statistics for all queue group instances
<b><i>traffic-services queuing egress-port-queue-group set</i></b>	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 <Kbps>}		Committed Information Rate in Kbps rounded up to nearest size supported by hardware for a Queue in the Queue Group

Command	Access	Description
{cbs <KBYTES>}		Committed Burst Size in KBytes rounded up to nearest size supported by hardware for a Queue in the Queue Group
{eir <Kbps>}		Excess Information Rate in Kbps rounded up to nearest size supported by hardware for a Queue in the Queue Group
{ebs <KBYTES>}		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
<b>traffic-services queuing egress-port-queue-group set</b>		
admin		Set an attribute in an Egress Port Queuing Instance
port <port>		egress queuing instance
{scheduler-algorithm <String>}		Scheduler Algorithm for all Queues in the Egress Queuing Instance
{shaper-rate <Kbps>}		Shaper rate in Kbps rounded up to nearest size supported by hardware for an Egress Queuing Group
{burst-size <KBYTES>}		Shaper burst size in KBytes rounded up to nearest size supported by hardware for an Egress Queuing Group
{wrr-scheduler-granularity <NUMBER: 50-1600>}		scheduling granularity when in WDRR mode
<b>traffic-services queuing egress-port-queue-group show</b>		
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
<b>traffic-services queuing egress-port-queue-group show</b>		
limited		Show Attributes or Stats in an Egress Port Queuing Instance
port <port>		egress queuing instance
{statistics}		statistics for port queue group
<b>traffic-services queuing egress-port-queue-group show</b>		
limited		Show all attributes or statistics for all Egress Port Queuing Instances
{statistics}		statistics for all queue group instances
<b>traffic-services queuing egress-port-queue-group unset</b>		
admin		Unset an attribute for a Queue in an Egress Port Queuing Instance

Command	Access	Description
queue <queue>		queue
port <port>		egress queuing instance
{congestion-avoidance-profile}		Congestion Avoidance Profile of a Queue in the Egress Queue Instance
<b>traffic-services cos-mapping resolved-cos-map create</b>		
admin		create ingress COS to RCOS priority map
cos-map <cos-map>		FCOS->RCOS map name
<b>traffic-services cos-mapping resolved-cos-map delete</b>		
admin		delete FCOS to RCOS mapl
cos-map <cos-map>		FCOS->RCOS map name
<b>traffic-services cos-mapping resolved-cos-map set</b>		
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 <String>]		resolved color
<b>traffic-services cos-mapping resolved-cos-map show</b>		
limited		show Ingress COS to RCOS maps
[detail]		provide long, detailed output
<b>traffic-services cos-mapping resolved-cos-map show</b>		
limited		show Ingress COS to RCOS maps
cos-map <cos-map>		FCOS->RCOS name
[detail]		provide long, detailed output
<b>traffic-services cos-mapping frame-cos-map create</b>		
admin		create egress RCOS to FCOS map
cos-map <cos-map>		RCOS->FCOS map name
<b>traffic-services cos-mapping frame-cos-map delete</b>		
admin		delete FCOS to RCOS mapl
cos-map <cos-map>		RCOS->FCOS map name
<b>traffic-services cos-mapping frame-cos-map set</b>		
admin		set RCOS to FCOS map entry

Command	Access	Description
cos-map <cos-map>		RCOS->FCOS name
{r-cos <NUMBER: 0-7>}		RCOS value to use
{r-color <String>}		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
<b>traffic-services cos-mapping frame-cos-map show</b>		
	limited	show RCOS to Egress Cos maps
<b>traffic-services cos-mapping frame-cos-map show</b>		
	limited	show RCOS to Egress Cos maps
cos-map <cos-map>		RCOS->FCOS name
<b>tunnel</b>		
<b>tunnel decap create</b>		
	admin	create static decap tunnel
static-lsp <static-lsp>		tunnel name
{label <NUMBER: 16-1048575>}		decap tunnel label
<b>tunnel decap create</b>		
	admin	create decap PBT tunnel
static-pbt <static-pbt>		tunnel name
{b-vid <NUMBER: 2-4094>}		decap b-vid
{port <Port>}		incoming port for tunnel
{src-bridge-name <PBT Bridge Name>}		the source bridge
<b>tunnel decap delete</b>		
	admin	delete static decap tunnel
lsp <lsp>		tunnel name
<b>tunnel decap delete</b>		
	admin	delete decap PBT tunnel
static-pbt <static-pbt>		tunnel name
<b>tunnel decap set</b>		
	admin	set static decap tunnel
static-lsp <static-lsp>		tunnel name
{label <NUMBER: 16-1048575>}		decap tunnel label
<b>tunnel decap set</b>		
	admin	set attribute for decap PBT tunnel
static-pbt <static-pbt>		tunnel name
{port <Port>}		incoming port for tunnel

Command	Access	Description
<b>tunnel decap show</b>	limited	show all decap tunnels
<b>tunnel decap show</b>	limited	show decap tunnel
lsp <lsp>		tunnel name
<b>tunnel decap show</b>	limited	show decap PBT tunnel
static-pbt <static-pbt>		tunnel name
<b>tunnel encap clear</b>	admin	clear tunnel
static-backup-pbt <static-backup-pbt>		tunnel name
{statistics}		tunnel statistics
<b>tunnel encap clear</b>	admin	clear tunnel
static-pbt <static-pbt>		tunnel name
{statistics}		tunnel statistics
<b>tunnel encap create</b>	admin	create encap primary PBT tunnel
static-pbt <static-pbt>		primary tunnel name
{b-vid <NUMBER: 2-4094>}		encap b-vid
{dest-bridge-name <PBT Bridge Name>}		the destination bridge
{encap-cos-policy <String>}		encapsulation CoS policy
{encap-fixed-pcp <NUMBER: 0-7>}		encapsulation fixed pcp
{port <Port>}		outgoing port for tunnel
{tunnel-sync <String>}		tunnel synchronization
<b>tunnel encap create</b>	admin	create encap backup PBT tunnel
static-backup-pbt <static-backup-pbt>		backup tunnel name
{b-vid <NUMBER: 2-4094>}		encap b-vid
{dest-bridge-name <PBT Bridge Name>}		the destination bridge
{encap-cos-policy <String>}		encapsulation CoS policy
{encap-fixed-pcp <NUMBER: 0-7>}		encapsulation fixed pcp
{port <Port>}		outgoing port for tunnel
<b>tunnel encap create</b>	admin	create static encap tunnel
static-lsp <static-lsp>		tunnel name
{encap-cos-policy <String>}		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 <String>}		TTL policy

Command	Access	Description
<b><i>tunnel encap delete</i></b>	admin	delete encap tunnel
lsp <lsp>		tunnel name
<b><i>tunnel encap delete</i></b>	admin	delete backup tunnel
backup-rsvp-lsp <backup-rsvp-lsp>		tunnel name
<b><i>tunnel encap delete</i></b>	admin	delete backup PBT tunnel
static-backup-pbt <static-backup-pbt>		tunnel name
<b><i>tunnel encap delete</i></b>	admin	delete primary PBT tunnel
static-pbt <static-pbt>		tunnel name
<b><i>tunnel encap disable</i></b>	admin	disable encap tunnel
lsp <lsp>		tunnel name
<b><i>tunnel encap disable</i></b>	admin	disable backup tunnel
backup-rsvp-lsp <backup-rsvp-lsp>		tunnel name
<b><i>tunnel encap disable</i></b>	admin	disable backup PBT tunnel
static-backup-pbt <static-backup-pbt>		tunnel name
<b><i>tunnel encap disable</i></b>	admin	disable primary PBT tunnel
static-pbt <static-pbt>		tunnel name
<b><i>tunnel encap enable</i></b>	admin	enable encap tunnel
lsp <lsp>		tunnel name
<b><i>tunnel encap enable</i></b>	admin	enable backup tunnel
backup-rsvp-lsp <backup-rsvp-lsp>		tunnel name
<b><i>tunnel encap enable</i></b>	admin	enable backup PBT tunnel
static-backup-pbt <static-backup-pbt>		tunnel name
<b><i>tunnel encap enable</i></b>	admin	enable primary PBT tunnel
static-pbt <static-pbt>		tunnel name
<b><i>tunnel encap set</i></b>	admin	set attributes for backup PBT tunnel
static-backup-pbt <static-backup-pbt>		backup tunnel name
{encap-cos-policy <String>}		encapsulation CoS policy
{encap-fixed-pcp <NUMBER: 0-7>}		encapsulation fixed pcp

Command	Access	Description
{port <Port>}		outgoing port for tunnel
<b>tunnel encap set</b>	admin	set attribute for primary PBT tunnel
static-pbt <static-pbt>		primary tunnel name
{encap-cos-policy <String>}		encapsulation CoS policy
{encap-fixed-pcp <NUMBER: 0-7>}		encapsulation fixed pcp
{port <Port>}		outgoing port for tunnel
{tunnel-sync <String>}		tunnel synchronization
<b>tunnel encap set</b>	admin	set static encap tunnel
static-lsp <static-lsp>		tunnel name
{encap-cos-policy <String>}		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 <String>}		TTL policy
<b>tunnel encap show</b>	limited	show all encap tunnels
<b>tunnel encap show</b>	limited	show encap tunnel
lsp <lsp>		tunnel name
<b>tunnel encap show</b>	limited	show backup tunnel
backup-rsvp-lsp <backup-rsvp-lsp>		backup tunnel name
<b>tunnel encap show</b>	limited	show backup PBT tunnel
static-backup-pbt <static-backup-pbt>		tunnel name
{statistics}		virtual circuit statistics
<b>tunnel encap show</b>	limited	show primary PBT tunnel
static-pbt <static-pbt>		tunnel name
{statistics}		virtual circuit statistics
<b>tunnel pair create</b>	admin	create a tunnel pair
tnl-pair <tnl-pair>		tunnel pair name
[encap-pbt <PBT Primary Tunnel Name>]		primary encap tunnel
[encap-backup-pbt <PBT Backup Tunnel Name>]		backup encap tunnel
{decap-pbt <PBT Decap Tunnel Name>}		decap tunnel
<b>tunnel pair delete</b>	admin	delete a tunnel pair

Command	Access	Description
tnl-pair <tnl-pair>		tunnel pair name
<b>tunnel pair show</b>	admin	show all tunnel pairs
<b>tunnel pair show</b> tnl-pair <tnl-pair>	admin	show the specified tunnel pair tunnel pair name
<b>tunnel rename</b> lsp <lsp> {name <String[15]>}	admin	rename tunnel tunnel name new tunnel name
<b>tunnel set</b> {fixed-ttl <NUMBER: 2-255>}	admin	set global attributes fixed TTL value
<b>tunnel show</b> {statistics}	limited	show all tunnel info tunnel statistics
<b>tunnel show</b> lsp <lsp>	limited	show tunnel tunnel name
<b>twamp</b>		
<b>twamp client session create</b> [commport <NUMBER: 256-65535> [cos-policy <String> [dot1dpri <NUMBER: 0-7> [dscp <NUMBER: 0-63> {host <IP address> [ip-prec <NUMBER: 0-7> {name <String[15]> [pkt-size <NUMBER: 64-1500> [repeat <String> [type <String> [packets <NUMBER: 272-1000000>	admin	create test session entry TWAMP target test port which attribute to use for CoS control TWAMP Session 802.1d Priority TWAMP CoS using DiffServ Code Point host to test TWAMP CoS using IP Precedence user-defined ID/name for session TWAMP test packet size continually repeat test cycle test type to run TWAMP test session packet count
<b>twamp client session delete</b> {name <TWAMP Session Name>	admin	delete session entry user-defined name for session
<b>twamp client session set</b>	admin	change test session entry

Command	Access	Description
[commport <NUMBER: 256-65535>]		TWAMP target test port
[cos-policy <String>]	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 Precedence
{name <TWAMP Session Name>}	admin	name of session to modify
[pkt-size <NUMBER: 64-1500>]		TWAMP test packet size
[repeat <String>]		continually repeat test cycle
[type <String>]	admin	test type to run
[packets <NUMBER: 272-1000000>]		TWAMP test session packet count
<b>twamp client clear</b>		
statistics <statistics>	admin	clear client session TWAMP statistics
[name <TWAMP Session Name>]		Statistics clear request
[all]	admin	name of session to affect
	admin	clear statistics for all defined sessions
<b>twamp client disable</b>		
	admin	disable TWAMP client globally
<b>twamp client enable</b>		
	admin	enable TWAMP client globally
<b>twamp client show</b>		
[host <IP address>]	limited	display client session info
[name <TWAMP Session Name>]	limited	host to test
	limited	session name to display
<b>twamp client show</b>		
statistics <statistics>	limited	display client session statistics
[host <IP address>]		Statistics display request
[mode <String>]	limited	host to test
[name <TWAMP Session Name>]	limited	attribute list display
[period <String>]	limited	user-defined ID/name for session
	limited	request performance monitoring statistics display
<b>twamp client test</b>		
host <host>	admin	start TWAMP test session against specified target
[stop]		test a specific host
	admin	stop current test cycle
<b>twamp client test</b>		
name <name>	admin	start TWAMP test session against specified target
		execute a named test

Command	Access	Description
[stop]	admin	stop current test cycle
<b>twamp client test</b>	admin	TWAMP test all defined targets
all <all>		test all targets
[stop]	admin	stop current test cycle
<b>twamp light disable</b>	admin	disable TWAMP light reflector control globally
<b>twamp light enable</b>	admin	enable TWAMP light reflector control globally
<b>twamp server session-deny add</b>	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
<b>twamp server session-deny remove</b>	admin	remove an entry from the session-deny list
ip <ip>		IP address of the interface to deny sessions for
<b>twamp server session-deny set</b>	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
<b>twamp server session-deny show</b>	limited	show list of entries currently configured in the session-deny list
<b>twamp server session-deny clear</b>	admin	clear the statistics for each entry currently configured in the session deny list
{statistics}		clear the statistics for each session deny entry
<b>twamp server clear</b>	admin	disable TWAMP server controls globally
{session <NUMBER: 1-30>}		clear active TWAMP server control session (and its child test sessions)
<b>twamp server disable</b>	admin	disable TWAMP server controls globally

Command	Access	Description
<i>twamp server enable</i>	admin	enable TWAMP server controls globally
<i>twamp server show</i>	limited	show TWAMP server information
<i>twamp disable</i>	admin	disable TWAMP globally
<i>twamp disable</i> port <port>	admin	disable TWAMP on port(s) physical port list
<i>twamp enable</i>	admin	enable TWAMP globally
<i>twamp enable</i> port <port>	admin	enable TWAMP on port(s) physical port list
<i>twamp set</i> [client-dscp <NUMBER: 0-63>] [client-hw-assist <String>] [server-dscp <NUMBER: 0-63>] [server-hw-assist <String>] [port <NUMBER: 256-65535>] [timeout <NUMBER: 60-86400>]	admin	set TWAMP attributes TWAMP Client TCP DiffServ Code Point use client hardware assist TWAMP Server TCP DiffServ Code Point use server hardware assist set TWAMP TCP/UDP port set TWAMP Server TCP session timeout (seconds)
<i>twamp show</i>	limited	show TWAMP information
<i>twamp unset</i> [port] [timeout]	admin	unset TWAMP attributes unset (restore default) TWAMP TCP/UDP port unset (restore default) TWAMP Server TCP session timeout
<b>user</b>		
<i>user auth clear</i> {priority <NUMBER: 1-3>}	super	clear authentication statistics authorization priority
<i>user auth show</i>	super	show authentication providers
<i>user auth set</i>	super	set authentication providers

Command	Access	Description
{priority <NUMBER: 1-3>}		authorization priority
{method <String>}		authorization method
[scope <String>]		authentication scope
<b>user create</b>		
	super	create a local user
<>		local user name
{access-level <String>}		user access level
[password <Password String>]		user password (plain text)
[secret <String[256]>]	super	set the password using a pre-encrypted string
<b>user delete</b>		
	super	delete a local user
<>		local user name to delete
<b>user relogin-as</b>		
	limited	re-login as a different user
<>		user name to become
<b>user set</b>		
	super	set local user attributes
<>		local user name to configure
{access-level <String>}		user access level
{nopassword}		no password
{password <Password String>}		user password (plain text)
[secret <String[256]>]	super	set the password using a pre-encrypted string
<b>user show</b>		
	limited	show user attributes
<b>user who</b>		
	limited	displays the current users who are logged in
<b>user whoami</b>		
	limited	display your username
<b>user write</b>		
	admin	send message to a user
[user <String[32]>]		whom to send to
{message <String>}		message to send
<b>user kill</b>		
	super	kill user login/shell
{pid <NUMBER>}		pid of login/shell process to kill
{all-but-me}		all users but myself
<b>virtual-circuit</b>		

Command	Access	Description
<b><i>virtual-circuit debug call-flow enable</i></b>	super	enable
<b><i>virtual-circuit debug call-flow disable</i></b>	super	disable
<b><i>virtual-circuit debug internal-trace enable</i></b>	super	enable
<b><i>virtual-circuit debug internal-trace disable</i></b>	super	disable
<b><i>virtual-circuit debug static-vc enable</i></b>	super	enable
<b><i>virtual-circuit debug static-vc disable</i></b>	super	disable
<b><i>virtual-circuit debug ldp-vc enable</i></b>	super	enable
<b><i>virtual-circuit debug ldp-vc disable</i></b>	super	disable
<b><i>virtual-circuit debug table enable</i></b>	super	enable
<b><i>virtual-circuit debug table disable</i></b>	super	disable
<b><i>virtual-circuit debug error enable</i></b>	super	enable
<b><i>virtual-circuit debug error disable</i></b>	super	disable
<b><i>virtual-circuit debug all enable</i></b>	super	enable
<b><i>virtual-circuit debug all disable</i></b>	super	disable
<b><i>virtual-circuit tdm create</i></b>	admin	create tdm profile
tdm-profile <tdm-profile>		tdm profile name
{pwType <String>}		pseudowire type
{payload-size <BYTES>}		payload size in bytes
<b><i>virtual-circuit tdm set</i></b>	admin	set tdm profile
tdm-profile <tdm-profile>		tdm profile name
[pwType <String>]		pseudowire type
[payload-size <BYTES>]		payload size in bytes
<b><i>virtual-circuit tdm delete</i></b>	admin	delete tdm profile

Command	Access	Description
tdm-profile <tdm-profile>		tdm profile name
<b>virtual-circuit tdm show</b>	limited	show tdm profile
tdm-profile <tdm-profile>		tdm profile name
<b>virtual-circuit tdm show</b>	limited	show all tdm profiles
<b>virtual-circuit tdm-mef8 create</b>	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
{peer-mac <MAC address: XX:XX:XX:XX:XX:XX>}		destination mac address
[pdv <NUMBER: 1000-32000>]		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
<b>virtual-circuit tdm-mef8 set</b>	admin	set tdm virtual circuit
vc <vc>		tdm virtual circuit name
[ac <Attachment Circuit Name>]		attachment circuit
[c-vid <NUMBER: 1-4094>]		Customer vlan
[c-pcp <NUMBER: 0-7>]		customer priority
[peer-mac <MAC address: XX:XX:XX:XX:XX:XX>]		destination mac address
[pdv <NUMBER: 1000-32000>]		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
<b>virtual-circuit tdm-mef8 unset</b>	admin	unset tdm virtual circuit
vc <vc>		tdm virtual circuit name
[c-pcp]		customer priority
{c-pcp}		customer priority
[c-vid]		Customer vlan
[pdv]		packet delay variation
<b>virtual-circuit tdm-mef8 delete</b>	admin	delete tdm virtual circuit
vc <vc>		tdm virtual circuit name

Command	Access	Description
<b>virtual-circuit tdm-mef8 show</b>	limited	show tdm virtual circuit
vc <vc>		tdm virtual circuit name
<b>virtual-circuit tdm-mef8 show</b>	limited	show all tdm virtual circuits
<b>virtual-circuit tdm-dry-martini create</b>	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
{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
<b>virtual-circuit tdm-dry-martini set</b>	admin	set tdm virtual circuit
vc <vc>		tdm virtual circuit name
[ac <Attachment Circuit Name>]		attachment circuit
[c-vid <NUMBER: 1-4094>]		Customer vlan
[c-pcp <NUMBER: 0-7>]		customer priority
[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
<b>virtual-circuit tdm-dry-martini unset</b>	admin	unset tdm virtual circuit
vc <vc>		tdm virtual circuit name
[c-pcp]		customer priority
{c-pcp}		customer priority
[c-vid]		Customer vlan
[pdv]		packet delay variation
<b>virtual-circuit tdm-dry-martini delete</b>	admin	delete tdm virtual circuit
vc <vc>		tdm virtual circuit name

Command	Access	Description
<b>virtual-circuit tdm-dry-martini show</b>	limited	show tdm virtual circuit
vc <vc>		tdm virtual circuit name
<b>virtual-circuit tdm-dry-martini show</b>	limited	show all tdm virtual circuits
<b>virtual-circuit tdm-mpls create</b>	admin	create tdm virtual circuit
vc <vc>		tdm virtual circuit name
{ac <Attachment Circuit Name>}		attachment circuit
[pdv <NUMBER: 1000-32000>]		packet delay variation
{tdm-profile <TDM Profile Name>}		tdm profile
<b>virtual-circuit tdm-mpls set</b>	admin	set tdm virtual circuit
vc <vc>		tdm virtual circuit name
[ac <Attachment Circuit Name>]		attachment circuit
[pdv <NUMBER: 1000-32000>]		packet delay variation
[tdm-profile <TDM Profile Name>]		tdm profile
<b>virtual-circuit tdm-mpls unset</b>	admin	unset tdm virtual circuit
vc <vc>		tdm virtual circuit name
[pdv]		packet delay variation
<b>virtual-circuit tdm-mpls delete</b>	admin	delete tdm virtual circuit
vc <vc>		tdm virtual circuit name
<b>virtual-circuit tdm-mpls show</b>	limited	show tdm virtual circuit
vc <vc>		tdm virtual circuit name
<b>virtual-circuit tdm-mpls show</b>	limited	show all tdm mpls virtual circuits
<b>virtual-circuit ethernet create</b>	admin	create ethernet virtual circuit
vc <vc>		virtual circuit name
{vlan <VLAN>}		provider VLAN
[statistics <String>]		Statistics control for Virtual Circuit
<b>virtual-circuit ethernet delete</b>	admin	delete ethernet virtual circuit
vc <vc>		virtual circuit name
<b>virtual-circuit ethernet set</b>	admin	set virtual circuit attributes
vc <vc>		virtual circuit name
{vlan <VLAN>}		provider VLAN

Command	Access	Description
[statistics <String>]		Statistics control for Virtual Circuit
<b>virtual-circuit ethernet set</b>	admin	set port-based ethernet virtual circuit attributes
port <port>		port list
{vlan-ethertype <String>}		port VLAN Ethertype
{vlan-ethertype-policy <String>}		port VLAN Ethertype policy
<b>virtual-circuit ethernet show</b>	limited	show ethernet virtual circuit
vc <vc>		virtual circuit name
{statistics}		virtual circuit statistics
<b>virtual-circuit ethernet show</b>	limited	show all ethernet virtual circuits
{statistics}		virtual circuit statistics
<b>virtual-circuit pbt create</b>	admin	create a PBB-TE virtual circuit
static-vc <static-vc>		PBT virtual circuit name
{egress-isid <NUMBER: 1-16777215>}		egress I-SID
{ingress-isid <NUMBER: 1-16777215>}		ingress I-SID
{mgmt-vc <String>}		cs to tunnel management traffic
{tunnel <PBT Primary Tunnel Name>}		encap PBB-TE tunnel name
{retain-stag <String>}		Retain Q-in-Q tag over PBB-TE encap/decap
{replace-ctag <String>}		Replace outer tag of customer frame
{s-tag <NUMBER: 1-4095>}		Q-in-Q tag value
{c-tag <NUMBER: 1-4095>}		Replacement tag value
<b>virtual-circuit pbt delete</b>	admin	delete the PBB-TE virtual circuit
static-vc <static-vc>		PBB-TE virtual circuit name
<b>virtual-circuit pbt set</b>	admin	set attributes for a PBB-TE virtual circuit
static-vc <static-vc>		PBB-TE virtual circuit name
[egress-isid <NUMBER: 1-16777215>]		egress I-SID
{egress-isid <NUMBER: 1-16777215>}		egress I-SID
[ingress-isid <NUMBER: 1-16777215>]		ingress I-SID
{ingress-isid <NUMBER: 1-16777215>}		ingress I-SID
{retain-stag <String>}		Retain Q-in-Q tag over PBB-TE encap/decap
{s-tag <NUMBER: 1-4095>}		Q-in-Q tag value
{replace-ctag <String>}		Replace outer tag of customer frame
{c-tag <NUMBER: 1-4095>}		Replacement tag value
{tunnel <PBT Primary Tunnel Name>}		encap PBB-TE tunnel name

Command	Access	Description
<b>virtual-circuit pbt show</b>	limited	show all PBB-TE virtual circuits
{statistics}		virtual circuit statistics
<b>virtual-circuit pbt show</b>	limited	show the PBB-TE virtual circuit
static-vc <static-vc>		PBB-TE virtual circuit name
{statistics}		virtual circuit statistics
{total-statistics}		total virtual circuit statistics
<b>virtual-circuit clear</b>	admin	clear statistics for all virtual circuits
{statistics}		virtual circuit statistics
<b>virtual-circuit clear</b>	admin	clear virtual circuit
vc <vc>		virtual circuit name
{statistics}		virtual circuit statistics
<b>virtual-circuit rename</b>	admin	rename virtual circuit
vc <vc>		virtual circuit name
{name <String[15]>}		new virtual circuit name
<b>virtual-circuit show</b>	limited	show all virtual circuit info
<b>virtual-circuit show</b>	limited	show virtual circuit
vc <vc>		virtual circuit name
{statistics}		virtual circuit statistics
<b>virtual-link-loss-indication</b>		
<b>virtual-link-loss-indication debug enable</b>	admin	VLLI debug print on
<b>virtual-link-loss-indication debug disable</b>	admin	VLLI debug print off
<b>virtual-link-loss-indication add</b>	admin	add instance to an instance group
instance-group <instance-group>		virtual-link-loss-indication instance
{mode <String>}		set Mode
{cfm-instance <CFM Service Name>}		set cfm type
{port-instance <Port list>}		source port list
{action-group <VLLI action>}		set action group name

Command	Access	Description
<b>virtual-link-loss-indication add</b>	admin	add action to an action group
action-group <action-group>		virtual-link-loss-indication action group
{type <String>}		set type
{action <String>}		application action name
{precedence <NUMBER: 1-8>}		precedence
<b>virtual-link-loss-indication create</b>	admin	create a Vlli group
instance-group <instance-group>		virtual-link-loss-indication instance group name
[direction <String>]		set direction
[trigger <String>]		set trigger condition
<b>virtual-link-loss-indication create</b>	admin	create a Vlli group
{action-group <String[15]>}		virtual-link-loss-indication action group name
<b>virtual-link-loss-indication delete</b>	admin	delete a Vlli group
instance-group <instance-group>		virtual-link-loss-indication instance group name
<b>virtual-link-loss-indication delete</b>	admin	delete a Vlli group
action-group <action-group>		virtual-link-loss-indication action group name
<b>virtual-link-loss-indication disable</b>	admin	Disable virtual-link-loss-indication
<b>virtual-link-loss-indication disable</b>	admin	Disable virtual-link-loss-indication
instance-group <instance-group>		virtual-link-loss-indication instance group name
<b>virtual-link-loss-indication enable</b>	admin	Enable virtual-link-loss-indication
<b>virtual-link-loss-indication enable</b>	admin	Enable virtual-link-loss-indication
instance-group <instance-group>		virtual-link-loss-indication instance group name
<b>virtual-link-loss-indication remove</b>	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
<b>virtual-link-loss-indication remove</b>	admin	remove action from an action group
action-group <action-group>		virtual-link-loss-indication action group

Command	Access	Description
{type <String>}		set type
{action <String>}		application action name
<b>virtual-link-loss-indication set</b>		
admin		set instance attributes
instance-group <instance-group>		virtual-link-loss-indication instance
[direction <String>]		set direction
[trigger <String>]		set trigger condition
{cfm-instance <CFM Service Name>}		set cfm type
{port-instance <Port list>}		source port list
{action-group <VLLI action>}		set action group
<b>virtual-link-loss-indication show</b>		
limited		show virtual-link-loss-indication information
<b>virtual-link-loss-indication show</b>		
limited		show virtual-link-loss-indication information
<b>virtual-link-loss-indication show</b>		
limited		show virtual-link-loss-indication information
instance-group <instance-group>		instance to display
<b>virtual-link-loss-indication show</b>		
limited		show virtual-link-loss-indication information
action-group <action-group>		action to display
<b>virtual-link-loss-indication unset</b>		
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
<b>virtual-switch</b>		
<b>virtual-switch l2-cft l2pt-mac set</b>		
admin		Set l2-cft MAC
mac-name <mac-name>		MAC name
{mac-addr <MAC address: XX:XX:XX:XX:XX:XX>}		MAC address
<b>virtual-switch l2-cft l2pt-mac unset</b>		
admin		Set l2-cft MAC to default GBPT MAC address
mac-name <mac-name>		MAC name
<b>virtual-switch l2-cft l2pt-mac show</b>		
limited		show l2pt mac
<b>virtual-switch l2-cft protocol add</b>		
admin		add protocol to l2-cft list

Command	Access	Description
vs <vs>		VS name
{ctrl-protocol <String>}		layer 2 control protocol
{disposition <String>}		protocol processing disposition
<b>virtual-switch l2-cft protocol remove</b>		
admin		remove protocol from l2-cft list
vs <vs>		VS name
{ctrl-protocol <String>}		layer 2 control protocol
<b>virtual-switch l2-cft protocol set</b>		
admin		set protocol in l2-cft list
vs <vs>		VS name
{ctrl-protocol <String>}		layer 2 control protocol
{disposition <String>}		protocol processing disposition
<b>virtual-switch l2-cft clear</b>		
admin		clear all control protocol tunneling statistics
{statistics}		statistics
<b>virtual-switch l2-cft disable</b>		
admin		disable l2-cft
vs <vs>		VS name
<b>virtual-switch l2-cft enable</b>		
admin		enable l2-cft
vs <vs>		VS name
<b>virtual-switch l2-cft set</b>		
admin		set l2-cft attributes
vs <vs>		VS name
{priority <NUMBER: 0-7>}		.1D priority for encapsulated frames
{tunnel-method <String>}		tunnel encapsulation method
<b>virtual-switch l2-cft set</b>		
admin		set l2-cft global attributes
{mode <String>}		l2-cft device mode list
<b>virtual-switch l2-cft show</b>		
limited		show l2-cft instance
vs <vs>		VS name
{statistics}		control protocol tunneling statistics per virtual-switch
<b>virtual-switch l2-cft show</b>		
limited		show enabled l2-cft instances
{statistics}		global control protocol tunneling statistics
<b>virtual-switch cross-connect create</b>		
admin		create cross connect
xc <xc>		cross connect name
{tdm-vc <TDM VC Name>}		tdm vc name

Command	Access	Description
{eth-vc <Virtual Circuit Name>}		ethernet vc name
{mpls-vc <MPLS TDM Virtual Circuit Name>}		mpls vc name
<b>virtual-switch cross-connect delete</b>	admin	delete cross connect attributes
XC <XC>		cross connect name
<b>virtual-switch cross-connect enable</b>	admin	enable cross connect
XC <XC>		cross connect name
<b>virtual-switch cross-connect disable</b>	admin	disable cross connect
XC <XC>		cross connect name
<b>virtual-switch cross-connect show</b>	limited	show all cross connects
<b>virtual-switch cross-connect show</b>	limited	show cross connect
XC <XC>		cross connect name
<b>virtual-switch cpu-if set</b>	admin	set cpu-if attributes
VS <VS>		VS name
{tag-vid <NUMBER: 1-4094>}		inner tag for PBB-TE mgmt frames
<b>virtual-switch cpu-if show</b>	limited	show cpu-if settings
<b>virtual-switch ethernet attach</b>	admin	attach members to an MPLS capable virtual switch
mpls-vc <mpls-vc>		list of MPLS virtual circuits
vs <vs>		virtual switch name
<b>virtual-switch ethernet attach</b>	admin	attach sub-ports on a virtual switch
sub-port <sub-port>		sub-port name
{vs <Virtual Switch Ethernet Name>}		virtual switch name
<b>virtual-switch ethernet detach</b>	admin	detach members from an MPLS capable virtual switch
mpls-vc <mpls-vc>		list of attached MPLS virtual circuits
<b>virtual-switch ethernet detach</b>	admin	detach sub-ports on a virtual switch
sub-port <sub-port>		sub-port name
{vs <Virtual Switch Ethernet Name>}		virtual switch name

Command	Access	Description
<b>virtual-switch ethernet add</b>	admin	add subscriber members to virtual switch
vs <vs>		virtual switch name
{encap-cos-policy <String>}		encapsulation CoS policy
{encap-fixed-dot1dpri <NUMBER: 0-7>}		encapsulation fixed dot1dpri
{port <Port list>}		subscriber port list
{ip-interface <Interface Name>}		IP interface name
[vlan <VLAN list>]		subscriber VLAN id
[statistics <String>]		Statistics control for Virtual Switch Member
[translate-tag <NUMBER: 0-4094>]		subscriber VLAN translate stamp
{service-vlan-tpid <String>}		service VLAN TPID value
<b>virtual-switch ethernet create</b>	admin	create ethernet virtual switch
vs <vs>		virtual switch name
{mode <String>}		capability of virtual-switch
{decap-cos-policy <String>}		decapsulation CoS policy
{description <String[128]>}		Set VS description
{decap-fixed-dot1dpri <NUMBER: 0-7>}		decapsulation fixed dot1dpri
{encap-cos-policy <String>}		encapsulation CoS policy
{encap-fixed-dot1dpri <NUMBER: 0-7>}		encapsulation fixed dot1dpri
{reserved-vlan <NUMBER: 1-4094>}		reserved VLAN
{subscriber-dot1dpri-policy <String>}		subscriber dot1d marking behavior
{vc <Virtual Circuit Name>}		ethernet virtual circuit
<b>virtual-switch ethernet delete</b>	admin	delete ethernet virtual switch
vs <vs>		virtual switch name
<b>virtual-switch ethernet remove</b>	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 list>]		subscriber VLAN list
<b>virtual-switch ethernet set</b>	admin	set ethernet virtual switch
vs <vs>		virtual switch name
{decap-cos-policy <String>}		decapsulation CoS policy
{decap-fixed-dot1dpri <NUMBER: 0-7>}		decapsulation fixed dot1dpri
{description <String[128]>}		Set VS description
{encap-cos-policy <String>}		encapsulation CoS policy
{encap-fixed-dot1dpri <NUMBER: 0-7>}		encapsulation fixed dot1dpri
{subscriber-dot1dpri-policy <String>}		subscriber dot1d marking behavior

Command	Access	Description
{vc <Virtual Circuit Name>}		ethernet virtual circuit
<b>virtual-switch ethernet set</b>	admin	set vs subscriber member attribute
port <port>		subscriber port
vs <vs>		virtual switch name
{vlan <VLAN list>}		subscriber VLAN id
{encap-cos-policy <String>}		encapsulation CoS policy
{encap-fixed-dot1dpri <NUMBER: 0-7>}		encapsulation fixed dot1dpri
[statistics <String>]		Statistics control for Virtual Switch Member
{translate-tag <NUMBER: 0-4094>}		subscriber VLAN translate stamp
{service-vlan-tpid <String>}		service VLAN TPID value
<b>virtual-switch ethernet show</b>	limited	show all ethernet virtual switches
<b>virtual-switch ethernet show</b>	limited	show ethernet virtual switch
vs <vs>		virtual switch object
{statistics}		subscriber port statistics
<b>virtual-switch ethernet unset</b>	admin	unset ethernet virtual switch attributes
vs <vs>		virtual switch name
{description}		unset VS description
{vc}		ethernet virtual circuit
<b>virtual-switch add</b>	admin	add reserved VLANs
{reserved-vlan <VLAN ID List>}		VLAN list
<b>virtual-switch clear</b>	admin	clear statistics for all virtual switches
{statistics}		virtual switch statistics
<b>virtual-switch clear</b>	admin	clear virtual switch
vs <vs>		VS name
{statistics}		virtual switch statistics
<b>virtual-switch remove</b>	admin	remove reserved VLANs
{reserved-vlan <VLAN ID List>}		VLAN list
<b>virtual-switch rename</b>	admin	rename virtual switch
vs <vs>		virtual switch name
{name <String[15]>}		virtual switch name
<b>virtual-switch show</b>	limited	show all virtual switch info

Command	Access	Description
<b><i>virtual-switch show</i></b>	limited	show virtual switch
vs <vs>		virtual switch object
{statistics}		subscriber port statistics
<b>vlan</b>		
<b><i>vlan translate add</i></b>	admin	add translation entry to port interface
port <port>		port(s) to add VLAN translation
{vid <NUMBER: 1-4094>}		Frame ingress-egress VLAN ID
{vlan <NUMBER: 1-4095>}		Assign/stamp to this internal VLAN
<b><i>vlan translate remove</i></b>	admin	remove translation entry
port <port>		port(s) to remove VLAN translation
{vid <NUMBER: 1-4094>}		Frame ingress-egress VLAN ID
<b><i>vlan translate show</i></b>	limited	show translation entries for port(s)
port <port>		port(s) to show VLAN translation
<b><i>vlan translate show</i></b>	limited	show all translation entries
<b><i>vlan add</i></b>	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
<b><i>vlan create</i></b>	admin	create a VLAN
vlan <vlan>		VLAN ID
[name <String[31]>]		name of VLAN
<b><i>vlan delete</i></b>	admin	delete VLANs
vlan <vlan>		list of VLANs to delete
<b><i>vlan remove</i></b>	admin	remove ports from VLAN
vlan <vlan>		VLAN to remove ports from
{port <Port list>}		ports to remove from VLAN
<b><i>vlan rename</i></b>	admin	rename VLAN
vlan <vlan>		VLAN to rename
{name <String[31]>}		new VLAN name

Command	Access	Description
<b><i>vlan set</i></b>	admin	set attributes of a VLAN
vlan <vlan>		VLAN
{egress-tpid <String>}		VLAN egress TPID Ethertype
{translation-vlan <VLAN>}		translation VLAN
{statistics <String>}		statistics table
<b><i>vlan show</i></b>	limited	show global VLAN information
<b><i>vlan show</i></b>	admin	show VLAN attributes for a port
port <port>		show VLAN membership for port
<b><i>vlan show</i></b>	admin	show VLAN attributes for a VLAN
vlan <vlan>		show VLAN memberships for VLANs
{statistics}		statistics table
<b><i>vlan show</i></b>	limited	show VLAN statistics
{statistics}		statistics table
<b><i>vlan unset</i></b>	admin	unset attributes of a VLAN
vlan <vlan>		VLAN
{translation-vlan}		translation VLAN
<b><i>vlan clear</i></b>	admin	clear VLAN statistics
vlan <vlan>		VLAN to clear
{statistics}		statistics table
<b><i>vlan clear</i></b>	admin	clear VLAN statistics
{statistics}		statistics table





# **39XX/51XX Service Delivery and Aggregation Switches**

## **Command Reference**

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