



## M Commands

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# show mac-list

```
show mac-list { [ <mac_list_name> [ { seq <seq_no> | { <mac_addr> [ <mac_mask> } ] } ] } [ __readonly__
TABLE_mac_list <name> <seq> <action> <rule> ]
```

## Syntax Description

|                      |                                 |
|----------------------|---------------------------------|
| show                 | Show running system information |
| mac-list             | Show mac-lists                  |
| <i>mac_list_name</i> | (Optional) Name of mac list     |
| seq                  | (Optional) Sequence number      |
| <i>seq_no</i>        | (Optional) Sequence number      |
| <i>mac_addr</i>      | (Optional) MAC address          |
| <i>mac_mask</i>      | (Optional) MAC mask             |
| <i>__readonly__</i>  | (Optional)                      |
| TABLE_mac_list       | (Optional)                      |
| <i>name</i>          | (Optional)                      |
| <i>seq</i>           | (Optional)                      |
| <i>action</i>        | (Optional)                      |
| <i>rule</i>          | (Optional)                      |

## Command Mode

- /exec

## show mac address-table

```
show mac address-table <module> [ count ] [ static | dynamic | secure ] [ { [ address1 <mac-addr> | switch-id
<swid> [ sub-switch-id <sswid> ] } | vlan1 <id> | [ vdc1 <vdc> | <e-vdc> ] | fe1 <feid> ] + } | { [ address
<mac-addr> | interface <interface-name> | vlan <id> | [ vdc <vdc> | <e-vdc> ] | fe <feid> ] + } ] [ hex ] [
__readonly__ <entrycount> <l2entry> <header> <pi_e> <age> <rm> <ifname> <sec> <ntfy> <type> ]
```

### Syntax Description

|                       |                                    |
|-----------------------|------------------------------------|
| show                  | show                               |
| mac                   | MAC configuration commands         |
| address-table         | MAC Address Table                  |
| <i>module</i>         | Module Number                      |
| count                 | (Optional) Number of entries       |
| static                | (Optional) Display Static Entries  |
| dynamic               | (Optional) Display Dynamic Entries |
| secure                | (Optional) Display Secure Entries  |
| address               | (Optional) address                 |
| address1              | (Optional) address                 |
| <i>mac-addr</i>       | (Optional) MAC Address             |
| switch-id             | (Optional) Remote Switch ID        |
| <i>swid</i>           | (Optional) Switch ID               |
| sub-switch-id         | (Optional) Remote Sub Switch ID    |
| <i>sswid</i>          | (Optional) Sub Switch ID           |
| interface             | (Optional) Interface               |
| <i>interface-name</i> | (Optional) Interface name          |
| vlan                  | (Optional) VLAN                    |
| vlan1                 | (Optional) VLAN                    |
| <i>id</i>             | (Optional) VLAN ID                 |
| vdc                   | (Optional) VDC ID or Name          |
| vdc1                  | (Optional) VDC ID or Name          |
| <i>vdc</i>            | (Optional) VDC ID                  |

|                     |  |
|---------------------|--|
| <i>e-vdc</i>        | (Optional) Select VDC ID that match VDC Name         |
| <i>fe</i>           | (Optional) Forwarding Engine Instance ID(Zero based) |
| <i>fel</i>          | (Optional) Forwarding Engine Instance ID(Zero based) |
| <i>feid</i>         | (Optional) FE ID value                               |
| <i>hex</i>          | (Optional) display swid/sswid/lid in hex             |
| <i>__readonly__</i> | (Optional)   |
| <i>header</i>       | (Optional) Header                                    |
| <i>pi_e</i>         | (Optional) Primary Interface of EARL                 |
| <i>age</i>          | (Optional) Last seen age in seconds                  |
| <i>rm</i>           | (Optional) RM  |
| <i>ifname</i>       | (Optional) interface name as string                  |
| <i>sec</i>          | (Optional) secure                                    |
| <i>ntfy</i>         | (Optional) notify                                    |
| <i>entrycount</i>   | (Optional) Number of L2 entries                      |
| <i>l2entry</i>      | (Optional) L2 Entry String                           |
| <i>type</i>         | (Optional) MAC type - Static or Dynamic              |

**Command Mode**

- /exec

## show mac address-table

```
show mac address-table [ static | dynamic | secure ] [ local ] [ { [ address1 <mac-addr> | { switch-id <swid>
[ sub-switch-id <sswid> ] } | vlan1 <id> ] + } | { [ address <mac-addr> | interface <interface-name> | vlan
<id> ] + } | { [ address2 <mac-addr> | interface1 <interface-name> | vni <vni-id> | peer-ip <peer-ipv4> ] + }
] [ __readonly__ <header> TABLE_mac_address
<disp_mac_addr><disp_type><disp_vlan><disp_is_static><disp_age><disp_is_secure><disp_is_ntfy><disp_port>
]
```

### Syntax Description

|                       |   |
|-----------------------|---|
| show                  | show  |
| mac                   | MAC configuration commands  |
| address-table         | MAC Address Table   |
| static                | (Optional) Display Static Entries   |
| dynamic               | (Optional) Display Dynamic Entries  |
| secure                | (Optional) Display Secure Entries   |
| local                 | (Optional) Display MAC Entries Learned Locally and Not on the Overlay/VXLAN |
| address               | (Optional) address  |
| address1              | (Optional) address  |
| address2              | (Optional) address  |
| <i>mac-addr</i>       | (Optional) MAC Address  |
| switch-id             | (Optional) Remote Switch ID   |
| <i>swid</i>           | (Optional) Switch ID  |
| sub-switch-id         | (Optional) Remote Sub Switch ID   |
| <i>sswid</i>          | (Optional) Sub Switch ID  |
| interface             | (Optional) Interface  |
| interface1            | (Optional) Interface  |
| <i>interface-name</i> | (Optional) Interface name   |
| vlan                  | (Optional) VLAN   |
| vlan1                 | (Optional) VLAN   |
| <i>id</i>             | (Optional) VLAN ID  |
| vni                   | (Optional) VXLAN Network Identifier   |

|                     |                                     |
|---------------------|-------------------------------------|
| <i>vni-id</i>       | (Optional) VXLAN Network Identifier |
| <i>peer-ip</i>      | (Optional) VXLAN Peer IP Address    |
| <i>peer-ipv4</i>    | (Optional) VXLAN Peer IP Address    |
| <i>__readonly__</i> | (Optional)                          |
| <i>header</i>       | (Optional) Header                   |
| TABLE_mac_address   | (Optional) Mac address table        |

**Command Mode**

- /exec



# show mac address-table aging-time

```
show mac address-table aging-time [ __readonly__ <age_str> <age> ]
```

## Syntax Description

|                |                            |
|----------------|----------------------------|
| show           | show                       |
| mac            | MAC configuration commands |
| address-table  | MAC Address Table          |
| aging-time     | Configured/default age     |
| __readonly__   | (Optional)                 |
| <i>age_str</i> | (Optional) Age info        |
| <i>age</i>     | (Optional) Age time        |

## Command Mode

- /exec

## show mac address-table count

```
show mac address-table count [ static | dynamic ] [ local ] [ { [ interface <interface-name> | { switch-id <swid>
[ sub-switch-id <sswid> ] } | vlan <id> ] + } | { [ interface1 <interface-name> | vni <vni-id> | peer-ip
<peer-ipv4> ] + } ] [ __readonly__ TABLE-macaddtblcount <id-out> <count_str> <total_cnt> <dyn_cnt>
<static_cnt> <secure_cnt> <otv_cnt> ]
```

### Syntax Description

|                       |   |
|-----------------------|---|
| show                  | show  |
| mac                   | MAC configuration commands  |
| address-table         | MAC Address Table   |
| count                 | Number of MAC entries   |
| static                | (Optional) Display Static Entries   |
| dynamic               | (Optional) Display Dynamic Entries  |
| local                 | (Optional) Display MAC Entries Learned Locally and Not on the Overlay/VXLAN |
| vlan                  | (Optional) VLAN   |
| <i>id</i>             | (Optional) VLAN ID  |
| interface             | (Optional) Interface  |
| interface1            | (Optional) Interface  |
| <i>interface-name</i> | (Optional) Interface name   |
| switch-id             | (Optional) Remote Switch ID   |
| <i>swid</i>           | (Optional) Switch ID  |
| sub-switch-id         | (Optional) Remote Sub Switch ID   |
| <i>sswid</i>          | (Optional) Sub Switch ID  |
| vni                   | (Optional) VXLAN Network Identifier   |
| <i>vni-id</i>         | (Optional) VXLAN Network Identifier   |
| peer-ip               | (Optional) VXLAN Peer IP Address  |
| <i>peer-ipv4</i>      | (Optional) VXLAN Peer IP Address  |
| <i>__readonly__</i>   | (Optional)  |
| TABLE-macaddtblcount  | (Optional) MAC Address Dynamic Count Table                                  |
| <i>id-out</i>         | (Optional) MAC Address Table VLAN ID  |

|                   |                          |
|-------------------|--------------------------|
| <i>count_str</i>  | (Optional) Count info    |
| <i>total_cnt</i>  | (Optional) Total count   |
| <i>dyn_cnt</i>    | (Optional) Dynamic count |
| <i>static_cnt</i> | (Optional) Static count  |
| <i>secure_cnt</i> | (Optional) Secure count  |
| <i>otv_cnt</i>    | (Optional) OTV count     |

**Command Mode**

- /exec

## show mac address-table learning-mode

```
show mac address-table learning-mode [ vlan <id> ] [ __readonly__ <learning_mode_str> <vlan_id>
<mode_str> ]
```

### Syntax Description

|                          |                            |
|--------------------------|----------------------------|
| show                     | show                       |
| mac                      | MAC configuration commands |
| address-table            | MAC Address Table          |
| learning-mode            | Learning Mode              |
| vlan                     | (Optional) VLAN            |
| <i>id</i>                | (Optional) VLAN ID         |
| <i>__readonly__</i>      | (Optional)                 |
| <i>learning_mode_str</i> | (Optional) Learning Mode   |
| <i>vlan_id</i>           | (Optional) VLAN ID         |
| <i>mode_str</i>          | (Optional) Mode            |

### Command Mode

- /exec

# show mac address-table loop-detect

show mac address-table loop-detect

## Syntax Description

|               |                                       |
|---------------|---------------------------------------|
| show          | show                                  |
| mac           | MAC                                   |
| address-table | MAC Address Table                     |
| loop-detect   | Display Action for Mac Loop Detection |

## Command Mode

- /exec

# show mac address-table multicast

```
show mac address-table multicast [ vlan <vlan> ] [ __readonly__ { TABLE_vlan <vlan-id> <mac-addr>
<type> <age> <oifs> } ]
```

## Syntax Description

|                     |                                 |
|---------------------|---------------------------------|
| show                | Show running system information |
| mac                 | MAC configuration commands      |
| address-table       | MAC Address Table               |
| multicast           | Multicast MAC Table entries     |
| vlan                | (Optional) VLAN/BD              |
| <i>vlan</i>         | (Optional) VLAN/BD              |
| <i>__readonly__</i> | (Optional)                      |
| TABLE_vlan          | (Optional)                      |
| <i>vlan-id</i>      | (Optional)                      |
| <i>mac-addr</i>     | (Optional)                      |
| <i>type</i>         | (Optional)                      |
| <i>age</i>          | (Optional)                      |
| <i>oifs</i>         | (Optional)                      |

## Command Mode

- /exec

## show mac address-table notification mac-move

```
show mac address-table notification mac-move [ __readonly__ TABLE_mac_notif <disp_mm_status>
<disp_mm_triggers> <disp_macs_added> <disp_macs_moved> <disp_macs_removed> ]
```

### Syntax Description

|                          |   |
|--------------------------|---|
| show                     | show  |
| mac                      | MAC   |
| address-table            | MAC Address Table                                       |
| notification             | Display Notification Information                        |
| mac-move                 | Mac Move Notification                                   |
| <i>__readonly__</i>      | (Optional) Read Only                                    |
| <i>TABLE_mac_notif</i>   | (Optional) Mac address notification table               |
| <i>disp_mm_status</i>    | (Optional) Mac Move Status                              |
| <i>disp_mm_triggers</i>  | (Optional) # of triggers                                |
| <i>disp_macs_added</i>   | (Optional) Number of MACs added since system bring up   |
| <i>disp_macs_removed</i> | (Optional) Number of MACs removed since system bring up |
| <i>disp_macs_moved</i>   | (Optional) Number of MACs moved since system bring up   |

### Command Mode

- /exec

## show mac vdc

```
show mac vdc <vdc_id> [ __readonly__ <vdc_id> <mac_address> ]
```

### Syntax Description

|                     |   |
|---------------------|---|
| show                | show  |
| mac                 | show management port mac address of the given vdc |
| vdc                 | show management port mac address of this vdc id   |
| <i>vdc_id</i>       | please enter vdc id                               |
| <i>__readonly__</i> | (Optional)  |
| <i>vdc_id</i>       | (Optional)  |
| <i>mac_address</i>  | (Optional)  |

### Command Mode

- /exec



# show macsec mka

```
show macsec mka [ summary ] [ __readonly__ { TABLE_mka_summary <ifname> <status> <cipher>
<keyserver> <policy> <keychain> } ]
```

## Syntax Description

|                                |   |
|--------------------------------|---|
| <code>show</code>              | Show running system information                   |
| <code>macsec</code>            | Show MACSEC information                           |
| <code>mka</code>               | Show MKA information                              |
| <code>summary</code>           | (Optional) Show MKA summary information           |
| <code>__readonly__</code>      | (Optional)  |
| <code>TABLE_mka_summary</code> | (Optional)  |
| <code>ifname</code>            | (Optional) Interface                              |
| <code>status</code>            | (Optional) MACSEC Session status                  |
| <code>cipher</code>            | (Optional) Operational MACSEC Cipher-suite        |
| <code>keyserver</code>         | (Optional) Is this acting as interface key-server |
| <code>policy</code>            | (Optional) MACSEC Policy applied to interface     |
| <code>keychain</code>          | (Optional) Keychain associated with interface     |

## Command Mode

- /exec

# show macsec mka session

```
show macsec mka session [ interface <ifname> ] [ details ] [ __readonly__ [ TABLE_mka_session <ifname>
<sci> <peers> <status> <keyserver> ] [ <sessions> <active_sessions> <pending_sessions> ] [
TABLE_mka_session_details <ifname> <status> <sci> <ssci> <port_id> <ckn> <mi> <mn> <policy>
<ks_prio> <keyserver> <cipher> <cipher_operational> <window> <conf_offset> <conf_offset_operational>
<sak_status> <sak_an> <sak_ki> <sak_kn> <last_sak_rekey_time> ] ]
```

## Syntax Description

|                           |  |
|---------------------------|--|
| show                      | Show running system information          |
| macsec                    | Show MACSEC information                  |
| mka                       | Show MKA information                     |
| session                   | Show MKA session information             |
| interface                 | (Optional) Specify interface             |
| <i>ifname</i>             | (Optional) Interface list                |
| details                   | (Optional) Show MKA detailed information |
| <i>__readonly__</i>       | (Optional)                               |
| TABLE_mka_session         | (Optional)                               |
| <i>ifname</i>             | (Optional) Interface                     |
| <i>sci</i>                | (Optional) Interface local TxSCI         |
| <i>peers</i>              | (Optional) Number of Peers               |
| <i>status</i>             | (Optional) Macsec status of Interface    |
| <i>keyserver</i>          | (Optional) Interface keyserver           |
| TABLE_mka_session_details | (Optional)                               |
| <i>ifname</i>             | (Optional) Interface                     |
| <i>status</i>             | (Optional) Session Status                |
| <i>sci</i>                | (Optional) Interface local TxSCI         |
| <i>ssci</i>               | (Optional) Interface local TxSSCI        |
| <i>port_id</i>            | (Optional) MKA Port Identifier           |
| <i>ckn</i>                | (Optional) CAK Name                      |
| <i>mi</i>                 | (Optional) Member Identifier             |
| <i>mn</i>                 | (Optional) Message Number                |

|                                |   |
|--------------------------------|---|
| <i>policy</i>                  | (Optional) MACSEC Policy                      |
| <i>ks_prio</i>                 | (Optional) Key-server Priority                |
| <i>keyserver</i>               | (Optional) Key-server                         |
| <i>cipher</i>                  | (Optional) MKA Cipher Suite                   |
| <i>cipher_operational</i>      | (Optional) MKA Cipher Suite Operational       |
| <i>window</i>                  | (Optional) Replay Window Size                 |
| <i>conf_offset</i>             | (Optional) Confidentiality Offset             |
| <i>conf_offset_operational</i> | (Optional) Confidentiality Offset Operational |
| <i>sak_status</i>              | (Optional) SAK Status                         |
| <i>sak_an</i>                  | (Optional) SAK AN                             |
| <i>sak_ki</i>                  | (Optional) SAK KI                             |
| <i>sak_kn</i>                  | (Optional) SAK KN                             |
| <i>last_sak_rekey_time</i>     | (Optional) Last SAK rekey                     |
| <i>sessions</i>                | (Optional) Total number of Sessions           |
| <i>active_sessions</i>         | (Optional) Count of Active Sessions           |
| <i>pending_sessions</i>        | (Optional) Count of Pending Sessions          |

**Command Mode**

- /exec



|   |  |
|---|--|
| statistics                              | Show MKA statistics                                  |
| interface                               | (Optional) Specify interface                         |
| <i>ifname</i>                           | (Optional) Interface list                            |
| <i>__readonly__</i>                     | (Optional)   |
| TABLE_mka_intf_stats                    | (Optional) MKA Interface statistics                  |
| TABLE_ca_stats                          | (Optional) CA Statistics                             |
| <i>ca_stat_ckn</i>                      | (Optional) CA Statistics CKN                         |
| <i>ca_stat_pairwise_cak_rekey</i>       | (Optional) CA Statistics Pairwise CAK Rekey          |
| <i>sa_stat_sak_generated</i>            | (Optional) SA Statistics SAK generated               |
| <i>sa_stat_sak_rekey</i>                | (Optional) SA Statistics SAK rekey                   |
| <i>sa_stat_sak_received</i>             | (Optional) SA Statistics SAK received                |
| <i>sa_stat_sak_response_rx</i>          | (Optional) SA Statistics SAK response received       |
| <i>mkpdu_stat_mkpdu_tx</i>              | (Optional) MKPDU Statistics MKPDU Tx                 |
| <i>mkpdu_stat_mkpdu_tx_distsak</i>      | (Optional) MKPDU Statistics MKPDU Tx distributed SAK |
| <i>mkpdu_stat_mkpdu_rx</i>              | (Optional) MKPDU Statistics MKPDU Rx                 |
| <i>mkpdu_stat_mkpdu_rx_distsak</i>      | (Optional) MKPDU Statistics MKPDU Rx distributed SAK |
| TABLE_idb_stats                         | (Optional) IDB Statistics                            |
| <i>ca_stat_pairwise_cak_rekey</i>       | (Optional) CA Statistics pairwise CAK rekey          |
| <i>sa_stat_sak_generated</i>            | (Optional) SA Statistics SAK generated               |
| <i>sa_stat_sak_rekey</i>                | (Optional) SA Statistics SAK rekey                   |
| <i>sa_stat_sak_received</i>             | (Optional) SA Statistics SAK received                |
| <i>sa_stat_sak_response_rx</i>          | (Optional) SA Statistics SAK response received       |
| <i>mkpdu_stat_mkpdu_tx</i>              | (Optional) MKPDU Statistics MKPDU Tx                 |
| <i>mkpdu_stat_mkpdu_tx_distsak</i>      | (Optional) MKPDU Statistics MKPDU Tx distributed SAK |
| <i>mkpdu_stat_mkpdu_rx</i>              | (Optional) MKPDU Statistics MKPDU Rx                 |
| <i>mkpdu_stat_mkpdu_rx_distsak</i>      | (Optional) MKPDU Statistics MKPDU Rx distributed SAK |
| <i>idb_stat_mkpdu_tx_success</i>        | (Optional) IDB Statistics MKPDU Tx success           |
| <i>idb_stat_mkpdu_tx_fail</i>           | (Optional) IDB Statistics MKPDU Tx fail              |
| <i>idb_stat_mkpdu_tx_pkt_build_fail</i> | (Optional) IDB Statistics MKPDU Tx packet build fail |

|   |   |
|---|---|
| <i>idb_stat_mkpdu_no_tx_on_intf_down</i>                            | (Optional) IDB Statistics MKPDU no Tx on interface down                           |
| <i>idb_stat_mkpdu_no_rx_on_intf_down</i>                            | (Optional) IDB Statistics MKPDU no Rx on interface down                           |
| <i>idb_stat_mkpdu_rx_ca_notfound</i>                                | (Optional) IDB Statistics MKPDU Rx CA not found                                   |
| <i>idb_stat_mkpdu_rx_error</i>                                      | (Optional) IDB Statistics MKPDU Rx error  |
| <i>idb_stat_mkpdu_rx_success</i>                                    | (Optional) IDB Statistics MKPDU Rx success  |
| <i>idb_stat_mkpdu_failure_rx_integrity_check_error</i>              | (Optional) IDB Statistics - MKPDU failure - Rx integrity check error              |
| <i>idb_stat_mkpdu_failure_invalid_peer_mn_error</i>                 | (Optional) IDB Statistics - MKPDU failure - invalid peer MN error                 |
| <i>idb_stat_mkpdu_failure_nonrecent_peerlist_mn_error</i>           | (Optional) IDB Statistics - MKPDU failure - non recent peerlist MN error          |
| <i>idb_stat_mkpdu_failure_sakuse_kn_mismatch_error</i>              | (Optional) IDB Statistics - MKPDU failure - SAKuse KN mismatch error              |
| <i>idb_stat_mkpdu_failure_sakuse_rx_not_set_error</i>               | (Optional) IDB Statistics - MKPDU failure - SAKuse Rx not set error               |
| <i>idb_stat_mkpdu_failure_sakuse_key_mi_mismatch_error</i>          | (Optional) IDB Statistics - MKPDU failure - SAKuse key MI mismatch error          |
| <i>idb_stat_mkpdu_failure_sakuse_an_not_in_use_error</i>            | (Optional) IDB Statistics - MKPDU failure - SAKuse AN not in use error            |
| <i>idb_stat_mkpdu_failure_sakuse_ks_rx_tx_not_set_error</i>         | (Optional) IDB Statistics - MKPDU failure - SAKuse KS Rx Tx not set error         |
| <i>idb_stat_mkpdu_failure_sakuse_eapol_ethertype_mismatch_error</i> | (Optional) IDB Statistics - MKPDU failure - SAKuse EAPOL ethertype mismatch error |
| <i>idb_stat_sak_failure_sak_generate_error</i>                      | (Optional) IDB Statistics - SAK failure - SAK generate error                      |
| <i>idb_stat_sak_failure_hash_generate_error</i>                     | (Optional) IDB Statistics - SAK failure - Hash generate error                     |
| <i>idb_stat_sak_failure_sak_encryption_error</i>                    | (Optional) IDB Statistics - SAK failure - SAK encryption error                    |
| <i>idb_stat_sak_failure_sak_decryption_error</i>                    | (Optional) IDB Statistics - SAK failure - SAK decryption error                    |
| <i>idb_stat_sak_failure_ick_derivation_error</i>                    | (Optional) IDB Statistics - SAK failure - ICK derivation error                    |
| <i>idb_stat_sak_failure_kek_derivation_error</i>                    | (Optional) IDB Statistics - SAK failure - KEK derivation error                    |
| <i>idb_stat_sak_failure_invalid_macsec_capability_error</i>         | (Optional) IDB Statistics - SAK failure - invalid MACsec capability error         |
| <i>idb_stat_macsec_failure_rx_sa_create_error</i>                   | (Optional) IDB Statistics - SAK failure - Rx SA create error                      |
| <i>idb_stat_macsec_failure_tx_sa_create_error</i>                   | (Optional) IDB Statistics - SAK failure - Tx SA create error                      |
| TABLE_mka_gbl_stats   | (Optional) MKA Global Statistics  |
| <i>session_secured</i>  | (Optional) Session secured  |

|  |   |
|--|---|
| <i>session_deleted</i>   | (Optional) Session deleted  |
| <i>session_keepalive_timeout</i>                                 | (Optional) Session keepalive timeout                                  |
| <i>ca_stat_pairwise_cak_rekey</i>                                | (Optional) CA Statistics pairwise CAK rekey                           |
| <i>sa_stat_sak_generated</i>                                     | (Optional) SA Statistics SAK generated                                |
| <i>sa_stat_sak_rekey</i>   | (Optional) SA Statistics SAK rekey                                    |
| <i>sa_stat_sak_received</i>                                      | (Optional) SA Statistics SAK received                                 |
| <i>sa_stat_sak_response_rx</i>                                   | (Optional) SA Statistics SAK response received                        |
| <i>mkpdu_stat_mkpdu_rx</i>                                       | (Optional) MKPDU Statistics MKPDU received                            |
| <i>mkpdu_stat_mkpdu_rx_distsak</i>                               | (Optional) MKPDU Statistics MKPDU received distributed SAK            |
| <i>mkpdu_stat_mkpdu_tx</i>                                       | (Optional) MKPDU Statistics MKPDU transmitted                         |
| <i>mkpdu_stat_mkpdu_tx_distsak</i>                               | (Optional) MKPDU Statistics MKPDU transmitted distributed SAK         |
| <i>mka_error_session_failure_bring_up_error</i>                  | (Optional) MKA Error - Session failure - Bring up error               |
| <i>mka_error_sak_failure_sak_generate_error</i>                  | (Optional) MKA Error - SAK failure - SAK generate error               |
| <i>mka_error_sak_failure_hash_generate_error</i>                 | (Optional) MKA Error - SAK failure - Hash generate error              |
| <i>mka_error_sak_failure_sak_encryption_error</i>                | (Optional) MKA Error - SAK failure - SAK encryption error             |
| <i>mka_error_sak_failure_sak_decryption_error</i>                | (Optional) MKA Error - SAK failure - SAK decryption error             |
| <i>mka_error_sak_failure_sak_cipher_mismatch_error</i>           | (Optional) MKA Error - SAK failure - SAK Cipher mismatch error        |
| <i>mka_error_ca_failure_ick_derivation_error</i>                 | (Optional) MKA Error - CA failure - ICK derivation error              |
| <i>mka_error_ca_failure_kek_derivation_error</i>                 | (Optional) MKA Error - CA failure - KEK derivation error              |
| <i>mka_error_ca_failure_invalid_macsec_capability_error</i>      | (Optional) MKA Error - CA failure - Invalid MACsec capability error   |
| <i>mka_error_macsec_failure_rx_sa_create_error</i>               | (Optional) MKA Error - MACsec failure - Rx SA create error            |
| <i>mka_error_macsec_failure_tx_sa_create_error</i>               | (Optional) MKA Error - MACsec failure - Tx SA create error            |
| <i>mka_error_mkpdu_failure_mkpdu_tx_error</i>                    | (Optional) MKA Error - MKPDU failure - MKPDU Tx error                 |
| <i>mka_error_mkpdu_failure_mkpdu_rx_integrity_check_error</i>    | (Optional) MKA Error - MKPDU failure - MKPDU Rx integrity check error |
| <i>mka_error_mkpdu_failure_mkpdu_invalid_peer_mn_error</i>       | (Optional) MKA Error - MKPDU failure - invalid peer MN error          |
| <i>mka_error_mkpdu_failure_mkpdu_nonrecent_peerlist_mn_error</i> | (Optional) MKA Error - MKPDU failure - non recent peerlist MN error   |
| <i>mka_error_mkpdu_failure_sakuse_kn_mismatch_error</i>          | (Optional) MKA Error - MKPDU failure - SAKuse KN mismatch error       |
| <i>mka_error_mkpdu_failure_sakuse_rx_not_set_error</i>           | (Optional) MKA Error - MKPDU failure - SAKuse Rx not set error        |

|   |  |
|---|--|
| <i>mka_err_mkpdu_fail_sakuse_key_mi_mismatch_err</i>  | (Optional) MKA Error - MKPDU failure - SAKuse key MI mismatch error  |
| <i>mka_err_mkpdu_fail_sakuse_an_not_in_use_err</i>    | (Optional) MKA Error - MKPDU failure - SAKuse AN not in use error    |
| <i>mka_err_mkpdu_fail_sakuse_ks_rx_tx_not_set_err</i> | (Optional) MKA Error - MKPDU failure - SAKuse KS Rx Tx not set error |
| <i>global_stats_mkpdu_rx_invalid_ckn</i>              | (Optional) Global Statistics MKPDU received invalid CKN              |
| <i>global_stats_mkpdu_tx_pkt_build_fail</i>           | (Optional) Global Statistics Transmit Pkt build fail                 |
| <i>ifname2</i>  | (Optional) MACSEC Interface Name                                     |

**Command Mode**

- /exec



# show macsec policy

```
show macsec policy [ <policy_name> ] [ __readonly__ { TABLE_macsec_policy <name> <cipher_suite>
<keyserver_priority> <window_size> <conf_offset> <security_policy> <sak-expiry-time> } ]
```

## Syntax Description

|                           |  |
|---------------------------|--|
| show                      | Show running system information        |
| macsec                    | Show MACSEC policy information         |
| policy                    | Show MACSEC policy information         |
| <i>policy_name</i>        | (Optional) Name of MACSEC Policy       |
| <i>__readonly__</i>       | (Optional)                             |
| TABLE_macsec_policy       | (Optional)                             |
| <i>name</i>               | (Optional) MACSEC Policy Name          |
| <i>cipher_suite</i>       | (Optional) Cipher Suite                |
| <i>keyserver_priority</i> | (Optional) KeyServer Priority          |
| <i>window_size</i>        | (Optional) Window Size                 |
| <i>conf_offset</i>        | (Optional) Confidentiality Offset      |
| <i>security_policy</i>    | (Optional) Security Policy             |
| <i>sak-expiry-time</i>    | (Optional) SAK expiry on time interval |

## Command Mode

- /exec

## show macsec secy statistics

```
show macsec secy statistics [ interface <ifname> ] [ __readonly__ TABLE_statistics <ifname2> [
<in_pkts_unicast_uncontrolled> ] [ <in_pkts_multicast_uncontrolled> ] [ <in_pkts_broadcast_uncontrolled>
] [ <in_rx_drop_pkts_uncontrolled> ] [ <in_rx_err_pkts_uncontrolled> ] [ <in_pkts_unicast_controlled> ] [
<in_pkts_multicast_controlled> ] [ <in_pkts_broadcast_controlled> ] [ <in_rx_drop_pkts_controlled> ] [
<in_rx_err_pkts_controlled> ] [ <in_octets_uncontrolled> ] [ <in_octets_controlled> ] [
<input_rate_uncontrolled_pps> ] [ <input_rate_uncontrolled_bps> ] [ <input_rate_controlled_pps> ] [
<input_rate_controlled_bps> ] [ <out_pkts_unicast_uncontrolled> ] [ <out_pkts_multicast_uncontrolled> ] [
<out_pkts_broadcast_uncontrolled> ] [ <out_rx_drop_pkts_uncontrolled> ] [ <out_rx_err_pkts_uncontrolled>
] [ <out_pkts_unicast_controlled> ] [ <out_pkts_multicast_controlled> ] [ <out_pkts_broadcast_controlled>
] [ <out_rx_drop_pkts_controlled> ] [ <out_rx_err_pkts_controlled> ] [ <out_octets_uncontrolled> ] [
<out_octets_controlled> ] [ <out_octets_common> ] [ <output_rate_uncontrolled_pps> ] [
<output_rate_uncontrolled_bps> ] [ <output_rate_controlled_pps> ] [ <output_rate_controlled_bps> ] [
<in_pkts_transform_error> ] [ <in_pkts_control> ] [ <in_pkts_untagged> ] [ <in_pkts_no_tag> ] [
<in_pkts_badtag> ] [ <in_pkts_no_sci> ] [ <in_pkts_unknown_sci> ] [ <in_pkts_tagged_ctrl> ] [
<out_pkts_transform_error> ] [ <out_pkts_control> ] [ <out_pkts_untagged> ] [ TABLE_rx_sa_an <rx_sa_an>
] [ <in_pkts_unchecked> ] [ <in_pkts_delayed> ] [ <in_pkts_late> ] [ <in_pkts_ok> ] [ <in_pkts_invalid> ] [
<in_pkts_not_valid> ] [ <in_pkts_not_using_sa> ] [ <in_pkts_unused_sa> ] [ <in_octets_decrypted> ] [
<in_octets_validated> ] ] [ TABLE_tx_sa_an <tx_sa_an> [ <out_pkts_encrypted_protected> ] [
<out_pkts_too_long> ] [ <out_pkts_sa_not_inuse> ] [ <out_octets_encrypted_protected> ] ] ] ]
```

### Syntax Description

|                                       |   |
|---------------------------------------|---|
| show                                  | Show running system information           |
| macsec                                | Show MACSEC information                   |
| secy                                  | Show MACSEC secy entity information       |
| statistics                            | Show MACSEC secy statistics               |
| interface                             | (Optional) Specify interface              |
| <i>ifname</i>                         | (Optional) Interface list                 |
| <i>__readonly__</i>                   | (Optional)                                |
| TABLE_statistics                      | (Optional) MACsec secy statistics         |
| <i>in_pkts_unicast_uncontrolled</i>   | (Optional) In Pkts Unicast Uncontrolled   |
| <i>in_pkts_multicast_uncontrolled</i> | (Optional) In Pkts Multicast Uncontrolled |
| <i>in_pkts_broadcast_uncontrolled</i> | (Optional) In Pkts Broadcast Uncontrolled |
| <i>in_rx_drop_pkts_uncontrolled</i>   | (Optional) In Rx Drop Pkts Uncontrolled   |
| <i>in_rx_err_pkts_uncontrolled</i>    | (Optional) In Rx Err Pkts Uncontrolled    |
| <i>in_pkts_unicast_controlled</i>     | (Optional) In Pkts Unicast Controlled     |
| <i>in_pkts_multicast_controlled</i>   | (Optional) In Pkts Multicast Controlled   |

|  |  |
|--|--|
| <i>in_pkts_broadcast_controlled</i>    | (Optional) In Pkts Broadcast Controlled    |
| <i>in_rx_drop_pkts_controlled</i>      | (Optional) In Rx Drop Pkts Controlled      |
| <i>in_rx_err_pkts_controlled</i>       | (Optional) In Rx Err Pkts Controlled       |
| <i>in_octets_uncontrolled</i>          | (Optional) In Octets Uncontrolled          |
| <i>in_octets_controlled</i>            | (Optional) In Octets Controlled            |
| <i>input_rate_uncontrolled_bps</i>     | (Optional) Input Rate Uncontrolled BPS     |
| <i>input_rate_uncontrolled_pps</i>     | (Optional) Input Rate Uncontrolled PPS     |
| <i>input_rate_controlled_bps</i>       | (Optional) Input Rate Controlled BPS       |
| <i>input_rate_controlled_pps</i>       | (Optional) Input Rate Controlled PPS       |
| <i>out_pkts_unicast_uncontrolled</i>   | (Optional) Out Pkts Unicast Uncontrolled   |
| <i>out_pkts_multicast_uncontrolled</i> | (Optional) Out Pkts Multicast Uncontrolled |
| <i>out_pkts_broadcast_uncontrolled</i> | (Optional) Out Pkts Broadcast Uncontrolled |
| <i>out_rx_drop_pkts_uncontrolled</i>   | (Optional) Out Rx Drop Pkts Uncontrolled   |
| <i>out_rx_err_pkts_uncontrolled</i>    | (Optional) Out Rx Err Pkts Uncontrolled    |
| <i>out_pkts_unicast_controlled</i>     | (Optional) Out Pkts Unicast Controlled     |
| <i>out_pkts_multicast_controlled</i>   | (Optional) Out Pkts Multicast Controlled   |
| <i>out_pkts_broadcast_controlled</i>   | (Optional) Out Pkts Broadcast Controlled   |
| <i>out_rx_drop_pkts_controlled</i>     | (Optional) Out Rx Drop Pkts Controlled     |
| <i>out_rx_err_pkts_controlled</i>      | (Optional) Out Rx Err Pkts Controlled      |
| <i>out_octets_uncontrolled</i>         | (Optional) Out Octets Uncontrolled         |
| <i>out_octets_controlled</i>           | (Optional) Out Octets Controlled           |
| <i>out_octets_common</i>               | (Optional) Out Octets Common               |
| <i>output_rate_uncontrolled_bps</i>    | (Optional) Output Rate Uncontrolled BPS    |
| <i>output_rate_uncontrolled_pps</i>    | (Optional) Output Rate Uncontrolled PPS    |
| <i>output_rate_controlled_bps</i>      | (Optional) Output Rate Controlled BPS      |
| <i>output_rate_controlled_pps</i>      | (Optional) Output Rate Controlled PPS      |
| <i>in_pkts_transform_error</i>         | (Optional) In Pkts Transform Error         |
| <i>in_pkts_control</i>                 | (Optional) In Pkts Control                 |
| <i>in_pkts_untagged</i>                | (Optional) In Pkts Untagged                |

|                                       |  |
|---------------------------------------|--|
| <i>in_pkts_no_tag</i>                 | (Optional) In Pkts No Tag                  |
| <i>in_pkts_badtag</i>                 | (Optional) In Pkts Bad Tag                 |
| <i>in_pkts_no_sci</i>                 | (Optional) In Pkts No SCI                  |
| <i>in_pkts_unknown_sci</i>            | (Optional) In Pkts Unknown SCI             |
| <i>in_pkts_tagged_ctrl</i>            | (Optional) In Pkts Tagged Control          |
| <i>out_pkts_transform_error</i>       | (Optional) Out Pkts Transform Error        |
| <i>out_pkts_control</i>               | (Optional) Out Pkts Control                |
| <i>out_pkts_untagged</i>              | (Optional) Out Pkts Untagged               |
| TABLE_rx_sa_an                        | (Optional) MACsec secy rx_sa_an statistics |
| <i>rx_sa_an</i>                       | (Optional) Rx SA AN                        |
| <i>in_pkts_unchecked</i>              | (Optional) In Pkts Unchecked               |
| <i>in_pkts_delayed</i>                | (Optional) In Pkts Delayed                 |
| <i>in_pkts_late</i>                   | (Optional) In Pkts Late                    |
| <i>in_pkts_ok</i>                     | (Optional) In Pkts OK                      |
| <i>in_pkts_invalid</i>                | (Optional) In Pkts Invalid                 |
| <i>in_pkts_not_valid</i>              | (Optional) In Pkts not Valid               |
| <i>in_pkts_not_using_sa</i>           | (Optional) In Pkts not using SA            |
| <i>in_pkts_unused_sa</i>              | (Optional) In Pkts Unused SA               |
| <i>in_octets_decrypted</i>            | (Optional) In Octets Decrypted             |
| <i>in_octets_validated</i>            | (Optional) In Octets Validated             |
| TABLE_tx_sa_an                        | (Optional) MACsec secy tx_sa_an statistics |
| <i>tx_sa_an</i>                       | (Optional) Tx SA AN                        |
| <i>out_pkts_encrypted_protected</i>   | (Optional) Out Pkts Encrypted Protected    |
| <i>out_pkts_too_long</i>              | (Optional) Out Pkts too Long               |
| <i>out_pkts_sa_not_inuse</i>          | (Optional) Out Pkts SA not in use          |
| <i>out_octets_encrypted_protected</i> | (Optional) Out octets Encrypted Protected  |
| <i>ifname2</i>                        | (Optional) MACSEC Interface Name           |

**Command Mode**

- /exec

## show maintenance on-reload reset-reasons

```
show maintenance on-reload reset-reasons [ __readonly__ <rr_bitmap> TABLE_reset_reason <reset_reason> ]
```

### Syntax Description

|                     |  |
|---------------------|--|
| show                | Show running system information          |
| maintenance         | maintenance                              |
| on-reload           | on reload maintenance mode configuration |
| reset-reasons       | system reset reasons                     |
| <i>__readonly__</i> | (Optional)                               |
| <i>rr_bitmap</i>    | (Optional) reset reason bitmap           |
| TABLE_reset_reason  | (Optional)                               |
| <i>reset_reason</i> | (Optional) system reset reason           |

### Command Mode

- /exec

# show maintenance profile

show maintenance profile [ <mode> ] [ \_\_readonly\_\_ TABLE\_profile <name> TABLE\_cfg <cfg> ]

## Syntax Description

|                     |                                 |
|---------------------|---------------------------------|
| show                | Show running system information |
| maintenance         | maintenance                     |
| profile             | maintenance profile             |
| <i>mode</i>         | (Optional)                      |
| <i>__readonly__</i> | (Optional)                      |
| TABLE_profile       | (Optional)                      |
| <i>name</i>         | (Optional) profile name         |
| TABLE_cfg           | (Optional)                      |
| <i>cfg</i>          | (Optional) profile config       |

## Command Mode

- /exec

# show maintenance timeout

show maintenance timeout [ *\_\_readonly\_\_* <timeout> ]

## Syntax Description

|                     |                                 |
|---------------------|---------------------------------|
| show                | Show running system information |
| maintenance         | maintenance                     |
| timeout             | timeout value                   |
| <i>__readonly__</i> | (Optional)                      |
| <i>timeout</i>      | (Optional) timeout value        |

## Command Mode

- /exec

# show mcectest

show mcectest <arg> [ \_\_readonly\_\_ <arg\_resp> ]

## Syntax Description

|                     |                                   |
|---------------------|-----------------------------------|
| mcectest            | Show MCECTEST related information |
| <i>arg</i>          | Enter your arguments              |
| <i>__readonly__</i> | (Optional) Read Only              |
| <i>arg_resp</i>     | (Optional) Response               |

## Command Mode

- /exec



## show mcectest mcec interface

```
show mcectest mcec interface <if> [ use-cache ] [ vdc-id ] [ _readonly_ <mcec_mode> ]
```

### Syntax Description

|                         |                                   |
|-------------------------|-----------------------------------|
| <code>mcectest</code>   | Show MCECTEST related information |
| <code>mcec</code>       | Show MCECM information            |
| <i>if</i>               |                                   |
| <code>use-cache</code>  | (Optional) Use cache              |
| <i>vdc-id</i>           | (Optional) VDC ID                 |
| <code>_readonly_</code> | (Optional)                        |
| <i>mcec_mode</i>        | (Optional) MCEC port mode         |

### Command Mode

- /exec

# show mgmt-policy

```
show mgmt-policy { <policy-name> | all } [ __readonly__ { TABLE_mgmt_policy { <mgt-pol-name> [
<source-ip> <source-mask> ] [ <source-ip6> ] [ <src-port-rangestart> <src-port-range-end> ] [ <source-port>
] [ <dst-port-rangestart> <dest-port-range-end> ] [ <dest-port> ] } } ]
```

## Syntax Description

|                            |                                      |
|----------------------------|--------------------------------------|
| show                       | Show running system information      |
| mgmt-policy                | PM Management policy                 |
| <i>policy-name</i>         | Name of the policy                   |
| all                        | Show all policies                    |
| <i>__readonly__</i>        | (Optional)                           |
| TABLE_mgmt_policy          | (Optional) Management policy Details |
| <i>mgt-pol-name</i>        | (Optional)                           |
| <i>source-ip</i>           | (Optional)                           |
| <i>source-mask</i>         | (Optional)                           |
| <i>src-port-rangestart</i> | (Optional)                           |
| <i>src-port-range-end</i>  | (Optional)                           |
| <i>source-port</i>         | (Optional)                           |
| <i>dst-port-rangestart</i> | (Optional)                           |
| <i>dest-port-range-end</i> | (Optional)                           |
| <i>dest-port</i>           | (Optional)                           |

## Command Mode

- /exec

## show module

```
show module [ { <module> } | { <s0> [ <santa-cruz-range> ] } | { fabric [ <module> ] } ] [ __readonly__ {
TABLE_modinfo <modinf> <ports> <modtype> <model> <status> } [ { TABLE_modpwrinfo <modpwr>
<pwrstat> <reason> } ] [ { TABLE_modwwninfo <modwwn> <sw> <hw> <slottype> } [ { TABLE_modapplinfo
<modappl> <desc> <applver> } ] [ { TABLE_modmacinfo <modmac> <mac> <serialnum> } {
TABLE_moddiaginfo <mod> <diagstatus> } { TABLE_xbarinfo <xbarinf> <xbarports> <xbartype>
<xbarmodel> <xbarstatus> } [ { TABLE_xbarpwrinfo <xbarpwr> <xbarpwrstat> <xbarreason> } ] [ {
TABLE_xbarwwninfo <xbarwwn> <xbarsw> <xbarhw> <xbarwwnstr> } { TABLE_xbarmacinfo <xbarmac>
<xbarmacaddr> <xbarserialnum> } ] ]
```

### Syntax Description

|                         |   |
|-------------------------|---|
| show                    | Show running system information         |
| module                  | Show module information                 |
| <i>module</i>           | (Optional) Enter module number          |
| <i>s0</i>               | (Optional) Show xbar information        |
| <i>santa-cruz-range</i> | (Optional) please enter the xbar number |
| fabric                  | (Optional) Show fabric information      |
| __readonly__            | (Optional)                              |
| TABLE_modinfo           | (Optional) Show Module info             |
| <i>modinf</i>           | (Optional) Module                       |
| <i>ports</i>            | (Optional) Num Ports                    |
| <i>modtype</i>          | (Optional) Module Type                  |
| <i>model</i>            | (Optional) Model                        |
| <i>status</i>           | (Optional) Status                       |
| TABLE_modpwrinfo        | (Optional) Mod Pwr Info                 |
| <i>modpwr</i>           | (Optional) Module                       |
| <i>pwrstat</i>          | (Optional) Power Status                 |
| <i>reason</i>           | (Optional) Reason                       |
| TABLE_modwwninfo        | (Optional) Mod WWN Info                 |
| <i>modwwn</i>           | (Optional) Module                       |
| <i>sw</i>               | (Optional) SW Ver                       |
| <i>hw</i>               | (Optional) HW Ver                       |

|                    |                                |
|--------------------|--------------------------------|
| <i>slottype</i>    | (Optional) Slot                |
| TABLE_modapplinfo  | (Optional) Mod Appl image info |
| <i>modappl</i>     | (Optional) Module              |
| <i>desc</i>        | (Optional) Image desc          |
| <i>applver</i>     | (Optional) Version             |
| TABLE_modmacinfo   | (Optional) Mod MAC Info        |
| <i>modmac</i>      | (Optional) Module              |
| <i>mac</i>         | (Optional) MAC                 |
| <i>serialnum</i>   | (Optional) Serial Num          |
| TABLE_moddiaginfo  | (Optional) Mod diag info       |
| <i>mod</i>         | (Optional) Module              |
| <i>diagstatus</i>  | (Optional) Diag status         |
| TABLE_xbarinfo     | (Optional) Show xbar info      |
| <i>xbarinf</i>     | (Optional) Module              |
| <i>xbarports</i>   | (Optional) Num Ports           |
| <i>xbartype</i>    | (Optional) Module Type         |
| <i>xbarmodel</i>   | (Optional) Model               |
| <i>xbarstatus</i>  | (Optional) Status              |
| TABLE_xbarpwrinfo  | (Optional) Xbar Pwr Info       |
| <i>xbarpwr</i>     | (Optional) Module              |
| <i>xbarpwrstat</i> | (Optional) Power Status        |
| <i>xbarreason</i>  | (Optional) Reason              |
| TABLE_xbarwwninfo  | (Optional) Xbar WWN Info       |
| <i>xbarwwn</i>     | (Optional) Module              |
| <i>xbarsw</i>      | (Optional) SW Ver              |
| <i>xbarhw</i>      | (Optional) HW Ver              |
| <i>xbarwwnstr</i>  | (Optional) WWN                 |
| TABLE_xbarmacinfo  | (Optional) Xbar MAC Info       |
| <i>xbarmac</i>     | (Optional) Module              |

|                      |                       |
|----------------------|-----------------------|
| <i>xbarmacaddr</i>   | (Optional) MAC        |
| <i>xbarserialnum</i> | (Optional) Serial Num |

**Command Mode**

- /exec

# show module bandwidth-fairness

show module <module> bandwidth-fairness [ \_\_readonly\_\_ { TABLE\_fairness <statement> } ]

## Syntax Description

|                    |                                 |
|--------------------|---------------------------------|
| show               | Show running system information |
| module             | Show module information         |
| <i>module</i>      | Enter module number             |
| bandwidth-fairness | Show bandwidth fairness status  |
| __readonly__       | (Optional)                      |
| TABLE_fairness     | (Optional)                      |
| <i>statement</i>   | (Optional)                      |

## Command Mode

- /exec

# show module fex

```
show module fex { [ all | <i> ] } [ __readonly__ { TABLE_modinfo <fexinf> <modinf> <ports> <modtype>
<model> <status> } { TABLE_modwwninfo <fexwwn> <modwwn> <sw> <hw> <wwn> } {
TABLE_modmacinfo <fexmac> <modmac> <mac> <serialnum> } ]
```

## Syntax Description

|                           |   |
|---------------------------|---|
| show                      | Show running system information         |
| module                    | Show module information                 |
| fex                       | Show fex module information             |
| all                       | (Optional) Show information for all FEX |
| <i>i</i>                  | (Optional) Enter FEX identifier         |
| <code>__readonly__</code> | (Optional)                              |
| TABLE_modinfo             | (Optional) Show Module info             |
| <i>fexinf</i>             | (Optional) Fex                          |
| <i>modinf</i>             | (Optional) Module                       |
| <i>ports</i>              | (Optional) Num Ports                    |
| <i>modtype</i>            | (Optional) Module Type                  |
| <i>model</i>              | (Optional) Model                        |
| <i>status</i>             | (Optional) Status                       |
| TABLE_modwwninfo          | (Optional) Mod WWN Info                 |
| <i>fexwwn</i>             | (Optional) Fex                          |
| <i>modwwn</i>             | (Optional) Module                       |
| <i>sw</i>                 | (Optional) SW Ver                       |
| <i>hw</i>                 | (Optional) HW Ver                       |
| <i>wwn</i>                | (Optional) WWN                          |
| TABLE_modmacinfo          | (Optional) Mod MAC Info                 |
| <i>fexmac</i>             | (Optional) Fex                          |
| <i>modmac</i>             | (Optional) Module                       |
| <i>mac</i>                | (Optional) MAC                          |
| <i>serialnum</i>          | (Optional) Serial Num                   |

## Command Mode

- /exec



# show module supported

show module supported

## Syntax Description

|           |   |
|-----------|---|
| show      | Show running system information               |
| module    | Show module information                       |
| supported | Show supported sw-card-types for this chassis |

## Command Mode

- /exec

# show module uptime

```
show module uptime [ __readonly__ { TABLE_uptimeinf <slot> <starttime> <daysup> <hoursup> <minutesup>
<secondsup> } ]
```

## Syntax Description

|                  |  |
|------------------|--|
| show             | Show running system information                  |
| module           | Show module information                          |
| uptime           | Show how long the module has been up and running |
| __readonly__     | (Optional)                                       |
| TABLE_uptimeinf  | (Optional) Show uptime info                      |
| <i>slot</i>      | (Optional) Slot                                  |
| <i>starttime</i> | (Optional) Start Time                            |
| <i>daysup</i>    | (Optional) Days Up                               |
| <i>hoursup</i>   | (Optional) Hours Up                              |
| <i>minutesup</i> | (Optional) Minutes Up                            |
| <i>secondsup</i> | (Optional) Seconds Up                            |

## Command Mode

- /exec

# show monitor

show monitor [ *\_\_readonly\_\_* *TABLE\_session* <session\_number> <state> <state\_reason> <description> ]

## Syntax Description

|                       |                                 |
|-----------------------|---------------------------------|
| show                  | Show running system information |
| monitor               | Show Ethernet SPAN information  |
| <i>__readonly__</i>   | (Optional) Read only            |
| <i>TABLE_session</i>  | (Optional) show monitor         |
| <i>session_number</i> | (Optional) session id           |
| <i>state</i>          | (Optional) State                |
| <i>state_reason</i>   | (Optional) State reason         |
| <i>description</i>    | (Optional) Session Description  |

## Command Mode

- /exec

## show monitor session

```
show monitor session { all | <session_number> | range <session_range> } [ brief ] [ __readonly__
TABLE_session <session_number> <flow_id> <state> <state_reason> <description> <type> <session_mode>
[ <sources_rx> ] + [ <sources_tx> ] + [ <sources_both> ] + [ <destinations> ] + [ <acl_destinations> ] + [
<source_vlans_rx> ] + [ <src_ip> ] + [ <erspan_id> ] + [ <dst_ip> ] + [ <erspan_egress_if> ] + [ <origin_ip>
] + [ <vrf_name> ] + [ <acl_name> ] + [ <erspan_ttl> ] + [ <erspan_dscp> ] + [ <source_vlans_tx> ] + [
<source_vlans_both> ] + [ <filter_vlans> ] + [ <span_mtu> ] + [ <span_rate> ] + [ <span_sampling> ] + [
<tree-id> ] + [ <switchid> ] + [ <err_desc> ] + [ <l3_egress_span> ] + [ <fex_ingress_intf> ] + [
<sampling_capability> ] + [ <mtu_capability> ] + [ <rate_limit_cap> ] + [ <mcbe> ] + [ <switch_id> ] + [
<erspan_v3_cap> ] + [ <erspan_acl> ] + [ <version> ] + [ <erspan_granularity> ] + [ <erspan_gran_cap> ] +
[ <erspan_v2_cap> ] ]
```

### Syntax Description

|                       |   |
|-----------------------|---|
| show                  | Show running system information               |
| monitor               | Show Ethernet SPAN information                |
| session               | Show session info                             |
| all                   | All sessions                                  |
| <i>session_number</i> |   |
| range                 | Specify a range                               |
| <i>session_range</i>  |   |
| brief                 | (Optional) Brief information                  |
| __readonly__          | (Optional) Read only                          |
| TABLE_session         | (Optional) show monitor                       |
| <i>flow_id</i>        | (Optional) erspan-id                          |
| <i>description</i>    | (Optional) Session Description                |
| <i>err_desc</i>       | (Optional) Error Description                  |
| <i>type</i>           | (Optional) Session type                       |
| <i>state</i>          | (Optional) State                              |
| <i>state_reason</i>   | (Optional) State reason                       |
| <i>session_mode</i>   | (Optional) Session mode                       |
| <i>sources_rx</i>     | (Optional) List of ingress sources            |
| <i>sources_tx</i>     | (Optional) List of egress sources             |
| <i>sources_both</i>   | (Optional) List of sources in both directions |

|                            |   |
|----------------------------|---|
| <i>span_mtu</i>            | (Optional) SPAN MTU value   |
| <i>span_rate</i>           | (Optional) SPAN rate limit value                                  |
| <i>span_sampling</i>       | (Optional) SPAN sampling range                                    |
| <i>destinations</i>        | (Optional) List of destinations                                   |
| <i>acl_destinations</i>    | (Optional) List of interfaces that wont work for acl capture      |
| <i>dst_ip</i>              | (Optional) ERSPAN destination IP                                  |
| <i>erspan_egress_if</i>    | (Optional) Egress interface for ERSPAN SRC session                |
| <i>src_ip</i>              | (Optional) ERSPAN source IP                                       |
| <i>origin_ip</i>           | (Optional) ERSPAN origin IP at source router                      |
| <i>erspan_id</i>           | (Optional) ERSPAN ID Value  |
| <i>vrf_name</i>            | (Optional) ERSPAN session VRF                                     |
| <i>acl_name</i>            | (Optional) ERSPAN session ACL                                     |
| <i>erspan_ttl</i>          | (Optional) ERSPAN TTL Value                                       |
| <i>erspan_dscp</i>         | (Optional) ERSPAN DSCP Value                                      |
| <i>source_vlans_rx</i>     | (Optional) Source ingress vlan                                    |
| <i>source_vlans_tx</i>     | (Optional) Source egress vlan                                     |
| <i>source_vlans_both</i>   | (Optional) Source vlans in both directions                        |
| <i>filter_vlans</i>        | (Optional) Filter vlans   |
| <i>tree-id</i>             | (Optional) proxy layer2 gateway source tree-id                    |
| <i>switchid</i>            | (Optional) proxy layer2 gateway source switchid                   |
| <i>sampling_capability</i> | (Optional) List of modules that support Sampling                  |
| <i>mtu_capability</i>      | (Optional) List of modules that support MTU                       |
| <i>l3_egress_span</i>      | (Optional) List of modules that support L3 Multicast Egress SPAN  |
| <i>fex_ingress_intf</i>    | (Optional) List of fex interfaces that wont work for ingress span |
| <i>rate_limit_cap</i>      | (Optional) List of modules that support Rate Limit                |
| <i>mcbe</i>                | (Optional) List all modules that support multicast best effort    |
| <i>switch_id</i>           | (Optional) erspan_switch-id                                       |
| <i>erspan_v3_cap</i>       | (Optional) List of modules that support erspan version3           |
| <i>erspan_v2_cap</i>       | (Optional) List of modules that support erspan version2           |

|                           |  |
|---------------------------|--|
| <i>erspan_acl</i>         | (Optional) List of modules that support ERSPAN ACL filtering |
| <i>version</i>            | (Optional) Erspan source version: v2/v3                      |
| <i>erspan_gran_cap</i>    | (Optional) List of modules that support the granularity set  |
| <i>erspan_granularity</i> | (Optional) ERSPAN Type III Granularity                       |

**Command Mode**

- /exec

## show mpls forwarding statistics

```
show mpls forwarding statistics [ interface { <interface> | all } ] [ __readonly__ { TABLE_mpls_stats [
<intf_name> ] <mpls_packets_sent> <mpls_bytes_sent> <mpls_packets_received> <mpls_bytes_received>
<mpls_packets_forwarded> <mpls_bytes_forwarded> <mpls_packets_originated> <mpls_bytes_originated>
<mpls_packets_consumed> <mpls_bytes_consumed> <mpls_packets_input_dropped>
<mpls_bytes_input_dropped> <mpls_packets_output_dropped> <mpls_bytes_output_dropped> } ]
```

### Syntax Description

|                                    |   |
|------------------------------------|---|
| show                               | Show running system information                   |
| mpls                               | MPLS information                                  |
| forwarding                         | Display MPLS software forwarded                   |
| statistics                         | Traffic statistics                                |
| interface                          | (Optional) Interface specific information         |
| <i>interface</i>                   | (Optional) Interface chosen to display statistics |
| all                                | (Optional) All interfaces                         |
| <i>__readonly__</i>                | (Optional)  |
| TABLE_mpls_stats                   | (Optional) MPLS forwarding statistics             |
| <i>intf_name</i>                   | (Optional) Interface name                         |
| <i>mpls_packets_sent</i>           | (Optional) mpls packet sent                       |
| <i>mpls_bytes_sent</i>             | (Optional) mpls bytes sent                        |
| <i>mpls_packets_received</i>       | (Optional) mpls packet received                   |
| <i>mpls_bytes_received</i>         | (Optional) mpls bytes received                    |
| <i>mpls_packets_forwarded</i>      | (Optional) mpls packet forwarded                  |
| <i>mpls_bytes_forwarded</i>        | (Optional) mpls bytes forwarded                   |
| <i>mpls_packets_originated</i>     | (Optional) mpls packet originated                 |
| <i>mpls_bytes_originated</i>       | (Optional) mpls bytes originated                  |
| <i>mpls_packets_consumed</i>       | (Optional) mpls packet consumed                   |
| <i>mpls_bytes_consumed</i>         | (Optional) mpls bytes consumed                    |
| <i>mpls_packets_input_dropped</i>  | (Optional) mpls packet input dropped              |
| <i>mpls_bytes_input_dropped</i>    | (Optional) mpls bytes input dropped               |
| <i>mpls_packets_output_dropped</i> | (Optional) mpls packet output dropped             |

|                                  |                                      |
|----------------------------------|--------------------------------------|
| <i>mpls_bytes_output_dropped</i> | (Optional) mpls bytes output dropped |
|----------------------------------|--------------------------------------|

**Command Mode**

- /exec



# show mpls interfaces

show mpls interfaces [ *\_\_readonly\_\_* *TABLE\_mpls\_interface* <intf> <oper> ]

## Syntax Description

|                             |                                       |
|-----------------------------|---------------------------------------|
| show                        | Show running system information       |
| mpls                        | Display MPLS status and configuration |
| interfaces                  | Display MPLS Interfaces               |
| <i>__readonly__</i>         | (Optional)                            |
| <i>TABLE_mpls_interface</i> | (Optional)                            |
| <i>intf</i>                 | (Optional)                            |
| <i>oper</i>                 | (Optional)                            |

## Command Mode

- /exec

# show mpls interfaces detail

```
show mpls interfaces detail [ __readonly__ TABLE_mpls_interface_det <intf> <client_name> <oper_str>
<ls_id> <mpls_sublayer_name> <mpls_sublayer_id> ]
```

## Syntax Description

|                                 |                                       |
|---------------------------------|---------------------------------------|
| show                            | Show running system information       |
| mpls                            | Display MPLS status and configuration |
| interfaces                      | Interfaces                            |
| detail                          | Detail                                |
| <i>__readonly__</i>             | (Optional)                            |
| <i>TABLE_mpls_interface_det</i> | (Optional)                            |
| <i>intf</i>                     | (Optional)                            |
| <i>client_name</i>              | (Optional)                            |
| <i>oper_str</i>                 | (Optional)                            |
| <i>ls_id</i>                    | (Optional)                            |
| <i>mpls_sublayer_name</i>       | (Optional)                            |
| <i>mpls_sublayer_id</i>         | (Optional)                            |

## Command Mode

- /exec

## show mpls interfaces statistics

```
show mpls interfaces <ifname> statistics [ __readonly__ TABLE_mpls_interface_stats <intf> <enabled> [
<pkts_in> ] [ <bytes_in> ] [ <pkts_out> ] [ <bytes_out> ] ]
```

### Syntax Description

|                            |                                       |
|----------------------------|---------------------------------------|
| show                       | Show running system information       |
| mpls                       | Display MPLS status and configuration |
| interfaces                 | Interfaces                            |
| <i>ifname</i>              | Interface Name                        |
| statistics                 | statistics                            |
| <i>__readonly__</i>        | (Optional)                            |
| TABLE_mpls_interface_stats | (Optional)                            |
| <i>intf</i>                | (Optional)                            |
| <i>enabled</i>             | (Optional)                            |
| <i>pkts_in</i>             | (Optional)                            |
| <i>bytes_in</i>            | (Optional)                            |
| <i>pkts_out</i>            | (Optional)                            |
| <i>bytes_out</i>           | (Optional)                            |

### Command Mode

- /exec

## show mpls ip bindings

```
show mpls ip bindings [ vrf { <vrf-name> | <vrf-known-name> | all } ] [ generic ] [ { <prefix> { <mask> |
<mask-length> } | <prefix-mask> } [ longer-prefix ] ] [ neighbor <addr> | local ] [ [ local-label <local-label>
[ local-to <local-label-max> ] ] | [ remote-label <remote-label> [ remote-to <remote-label-max> ] ] ] [
advertisement-prefix-list | detail | summary ] [ __readonly__ { TABLE_bnd <ldp_ctx> <laf> <total_prefixes>
<total_rt_info> <current_prev_lbl> <current_prev_lblQ> <total_alloc_prev_lbl> <total_alloc_prev_lblQ>
<local_bindings> <rem_bindings> { TABLE_bnd_acl_list <oldstyle> <prefix_acl> <peer_acl> } {
TABLE_bnd_rec <lib_addr> <lib_mask> <lcl_bnd_rev> <no_route> <chkpt> <local_label> <withdraw>
<remote_lsr> <remote_label> <rem_lbl_in_use> <stale_gr> <advert_acl_pending> <peer_acl> <prefix_acl>
{ TABLE_bnd_peer_list <peer_ident> } } } ]
```

### Syntax Description

|                        |  |
|------------------------|--|
| show                   | Show running system information                        |
| mpls                   | Display MPLS status and configuration                  |
| ip                     | MPLS IP information                                    |
| bindings               | Show the MPLS IP Label Information Base (LIB)          |
| vrf                    | (Optional) VRF Routing/Forwarding instance information |
| <i>vrf-name</i>        | (Optional) VPN Routing/Forwarding instance name        |
| <i>vrf-known-name</i>  | (Optional) Known VRF name                              |
| all                    | (Optional) Display LIB information in all VRFs         |
| generic                | (Optional) Display generic labels                      |
| <i>prefix</i>          | (Optional) Destination prefix                          |
| <i>mask</i>            | (Optional) Destination prefix mask                     |
| <i>mask-length</i>     | (Optional) Mask length                                 |
| <i>prefix-mask</i>     | (Optional) Destination prefix/mask                     |
| longer-prefix          | (Optional) Include longer matches                      |
| neighbor               | (Optional) Display labels from LDP neighbor            |
| <i>addr</i>            | (Optional) IP adjacency address                        |
| local                  | (Optional) Display only locally assigned labels        |
| local-label            | (Optional) Match locally assigned label values         |
| <i>local-label</i>     | (Optional) Locally assigned label value                |
| local-to               | (Optional) Label range                                 |
| <i>local-label-max</i> | (Optional) Locally assigned label value                |

|                              |  |
|------------------------------|--|
| remote-label                 | (Optional) Match remotely assigned label values            |
| <i>remote-label</i>          | (Optional) Remotely assigned label value                   |
| remote-to                    | (Optional) Label range                                     |
| <i>remote-label-max</i>      | (Optional) Remotely assigned label value                   |
| advertisement-prefix-list    | (Optional) Show advertisement prefix lists                 |
| detail                       | (Optional) Show detailed information                       |
| summary                      | (Optional) LDP summary information                         |
| <u>__readonly__</u>          | (Optional) Read Only                                       |
| TABLE_bnd                    | (Optional) Show bindings or tib summary for a vrf          |
| <i>ldp_ctx</i>               | (Optional) LDP context                                     |
| <i>llaf</i>                  | (Optional) Local label filtering spec                      |
| <i>total_prefixes</i>        | (Optional) Total number of prefixes                        |
| <i>total_rt_info</i>         | (Optional) Total tib route info allocated                  |
| <i>current_prev_lbl</i>      | (Optional) Current tib previous label info allocated       |
| <i>current_prev_lblQ</i>     | (Optional) Current tib previous label queues allocated     |
| <i>total_alloc_prev_lbl</i>  | (Optional) Total tib previous label info allocated         |
| <i>total_alloc_prev_lblQ</i> | (Optional) Total tib previous label queues allocated       |
| <i>local_bindings</i>        | (Optional) Total number of locally assigned bindings       |
| <i>rem_bindings</i>          | (Optional) Total number of remote bindings                 |
| TABLE_bnd_acl_list           | (Optional) Show advertisement access lists for default vrf |
| <i>oldstyle</i>              | (Optional) Oldstyle assignment of prefix acls to entries   |
| <i>prefix_acl</i>            | (Optional) Prefix acl                                      |
| <i>peer_acl</i>              | (Optional) Peer acl  |
| TABLE_bnd_rec                | (Optional) Show bindings in a vrf                          |
| <i>lib_addr</i>              | (Optional) LIB entry IP address                            |
| <i>lib_mask</i>              | (Optional) LIB entry mask                                  |
| <i>lcl_bnd_rev</i>           | (Optional) Local binding revision for lib entry            |
| <i>no_route</i>              | (Optional) Displays if no route present for lib entry      |
| <i>chkpt</i>                 | (Optional) Checkpoint state for lib entry                  |

|                           |  |
|---------------------------|--|
| <i>local_label</i>        | (Optional) Local label   |
| <i>withdraw</i>           | (Optional) Displays if label withdrawn or label withdraw sent          |
| <i>remote_lsr</i>         | (Optional) Remote binding label switched route for lib entry           |
| <i>remote_label</i>       | (Optional) Remote label for lib entry                                  |
| <i>rem_lbl_in_use</i>     | (Optional) Displays if out label is in use                             |
| <i>stale_gr</i>           | (Optional) Displays if stale GR binding for lib entry                  |
| <i>advert_acl_pending</i> | (Optional) Displays if advert acl action pending for lib entry         |
| <i>peer_acl</i>           | (Optional) Advertisement acl: Peer acl name for lib entry              |
| <i>prefix_acl</i>         | (Optional) Advertisement acl: Prefix acl name for lib entry            |
| TABLE_bnd_peer_list       | (Optional) Show list of peers to which local label has been advertised |
| <i>peer_ident</i>         | (Optional) Peer to which local label has been advertised               |

**Command Mode**

- /exec

# show mpls ip ttl

```
show mpls ip ttl [ __readonly__ TABLE_mpls_ip_ttl <prop_or_exp> [ <forwarded> ] [ <local> ] [ <exp_count> ] ]
```

## Syntax Description

|                          |                                       |
|--------------------------|---------------------------------------|
| show                     | Show running system information       |
| mpls                     | Display MPLS status and configuration |
| ip                       | Display IP information                |
| ttl                      | TTL related information               |
| <i>__readonly__</i>      | (Optional)                            |
| <i>TABLE_mpls_ip_ttl</i> | (Optional)                            |
| <i>prop_or_exp</i>       | (Optional)                            |
| <i>forwarded</i>         | (Optional)                            |
| <i>local</i>             | (Optional)                            |
| <i>exp_count</i>         | (Optional)                            |

## Command Mode

- /exec

# show mpls label range

```
show mpls label range [ __readonly__ <dynamic-min> <dynamic-max> [ <static-min> <static-max> ] [
<srgb-min> <srgb-max> ] ]
```

## Syntax Description

|                     |                                 |
|---------------------|---------------------------------|
| show                | Show running system information |
| mpls                | MPLS configuration commands     |
| label               | Label properties                |
| range               | Label range                     |
| <i>__readonly__</i> | (Optional)                      |
| <i>dynamic-min</i>  | (Optional)                      |
| <i>dynamic-max</i>  | (Optional)                      |
| <i>static-min</i>   | (Optional)                      |
| <i>static-max</i>   | (Optional)                      |
| <i>srgb-min</i>     | (Optional)                      |
| <i>srgb-max</i>     | (Optional)                      |

## Command Mode

- /exec



# show mpls label statistics

show mpls label statistics <label>

## Syntax Description

|              |                                       |
|--------------|---------------------------------------|
| show         | Show running system information       |
| mpls         | Display MPLS status and configuration |
| label        | Show a specific label statistics      |
| statistics   | Statistics for the label              |
| <i>label</i> | Label                                 |

## Command Mode

- /exec

## show mpls ldp backoff

```
show mpls ldp backoff [ vrf { <vrf-name> | <vrf-known-name> | all } ] [ __readonly__ <initial_time>
<maximum_time> { TABLE_backoff [ <vrf-name> ] <total_entry> { TABLE_backoff_rec <peer_id>
<threshold> <elapsed_time> } } ]
```

### Syntax Description

|                       |  |
|-----------------------|--|
| show                  | Show running system information                        |
| mpls                  | Display MPLS status and configuration                  |
| ldp                   | Label Distribution Protocol                            |
| backoff               | LDP session setup backoff table                        |
| vrf                   | (Optional) VRF Routing/Forwarding instance information |
| <i>vrf-name</i>       | (Optional) VPN Routing/Forwarding instance name        |
| <i>vrf-known-name</i> | (Optional) Known VRF name                              |
| all                   | (Optional) Display backoff information in all VRFs     |
| <i>__readonly__</i>   | (Optional) Read Only                                   |
| <i>initial_time</i>   | (Optional) Initial backoff value in seconds            |
| <i>maximum_time</i>   | (Optional) Maximum backoff value in seconds            |
| TABLE_backoff         | (Optional) Show backoff for a vrf                      |
| <i>vrf-name</i>       | (Optional) VRF name                                    |
| <i>total_entry</i>    | (Optional) Total number of entries in Backoff table    |
| TABLE_backoff_rec     | (Optional) Show backoff record in a vrf                |
| <i>peer_id</i>        | (Optional) Peer router ID                              |
| <i>threshold</i>      | (Optional) Backoff threshold in seconds                |
| <i>elapsed_time</i>   | (Optional) Backoff elapsed time in seconds             |

### Command Mode

- /exec

## show mpls ldp bindings

```
show mpls ldp bindings [ vrf { <vrf-name> | <vrf-known-name> | all } ] [ { <prefix> { <mask> | <mask-length>
} | <prefix-mask> } [ longer-prefix ] ] [ neighbor <addr> | local ] [ local-label <local-label> [ local-to
<local-label-max> ] ] [ remote-label <remote-label> [ remote-to <remote-label-max> ] ] [
advertisement-prefix-list | detail ] [ __readonly__ { TABLE_bnd <ldp_ctx> <llaf> { TABLE_bnd_acl_list
<oldstyle> <prefix_acl> <peer_acl> } { TABLE_bnd_rec <lib_addr> <lib_mask> <lcl_bnd_rev> <no_route>
<chkpt> <local_label> <withdraw> <remote_lsr> <remote_label> <rem_lbl_in_use> <stale_gr>
<advert_acl_pending> <peer_acl> <prefix_acl> { TABLE_bnd_peer_list <peer_ident> } } } ]
```

### Syntax Description

|                        |  |
|------------------------|--|
| show                   | Show running system information                        |
| mpls                   | Display MPLS status and configuration                  |
| ldp                    | Label Distribution Protocol                            |
| bindings               | Show the LDP Label Information Base (LIB)              |
| vrf                    | (Optional) VRF Routing/Forwarding instance information |
| <i>vrf-name</i>        | (Optional) VPN Routing/Forwarding instance name        |
| <i>vrf-known-name</i>  | (Optional) Known VRF name                              |
| all                    | (Optional) Display LIB information in all VRFs         |
| <i>prefix</i>          | (Optional) Destination prefix                          |
| <i>mask</i>            | (Optional) Destination prefix mask                     |
| <i>mask-length</i>     | (Optional) Mask length                                 |
| <i>prefix-mask</i>     | (Optional) Destination prefix/mask                     |
| longer-prefix          | (Optional) Include longer matches                      |
| neighbor               | (Optional) Display labels from LDP neighbor            |
| <i>addr</i>            | (Optional) IP adjacency address                        |
| local                  | (Optional) Display only locally assigned labels        |
| local-label            | (Optional) Match locally assigned label values         |
| <i>local-label</i>     | (Optional) Locally assigned label value                |
| local-to               | (Optional) Label range                                 |
| <i>local-label-max</i> | (Optional) Locally assigned label value                |
| remote-label           | (Optional) Match remotely assigned label values        |
| <i>remote-label</i>    | (Optional) Remotely assigned label value               |

|  |  |
|--|--|
| <code>remote-to</code>                 | (Optional) Label range   |
| <code>remote-label-max</code>          | (Optional) Remotely assigned label value                               |
| <code>advertisement-prefix-list</code> | (Optional) Show advertisement prefix lists                             |
| <code>detail</code>                    | (Optional) Show detailed information                                   |
| <code>__readonly__</code>              | (Optional) Read Only   |
| <code>TABLE_bnd</code>                 | (Optional) Show bindings for a vrf                                     |
| <code>ldp_ctx</code>                   | (Optional) LDP context   |
| <code>llaf</code>                      | (Optional) Local label filtering spec                                  |
| <code>TABLE_bnd_acl_list</code>        | (Optional) Show advertisement access lists for default vrf             |
| <code>oldstyle</code>                  | (Optional) Oldstyle assignment of prefix acls to entries               |
| <code>prefix_acl</code>                | (Optional) Prefix acl  |
| <code>peer_acl</code>                  | (Optional) Peer acl  |
| <code>TABLE_bnd_rec</code>             | (Optional) Show bindings in a vrf                                      |
| <code>lib_addr</code>                  | (Optional) LIB entry IP address  |
| <code>lib_mask</code>                  | (Optional) LIB entry mask  |
| <code>lcl_bnd_rev</code>               | (Optional) Local binding revision for lib entry                        |
| <code>no_route</code>                  | (Optional) Displays if no route present for lib entry                  |
| <code>chkpt</code>                     | (Optional) Checkpoint state for lib entry                              |
| <code>local_label</code>               | (Optional) Local label   |
| <code>withdraw</code>                  | (Optional) Displays if label withdrawn or label withdraw sent          |
| <code>remote_lsr</code>                | (Optional) Remote binding label switched route for lib entry           |
| <code>remote_label</code>              | (Optional) Remote label for lib entry                                  |
| <code>rem_lbl_in_use</code>            | (Optional) Displays if out label is in use                             |
| <code>stale_gr</code>                  | (Optional) Displays if stale GR binding for lib entry                  |
| <code>advert_acl_pending</code>        | (Optional) Displays if advert acl action pending for lib entry         |
| <code>peer_acl</code>                  | (Optional) Advertisement acl: Peer acl name for lib entry              |
| <code>prefix_acl</code>                | (Optional) Advertisement acl: Prefix acl name for lib entry            |
| <code>TABLE_bnd_peer_list</code>       | (Optional) Show list of peers to which local label has been advertised |
| <code>peer_ident</code>                | (Optional) Peer to which local label has been advertised               |

**Command Mode**

- /exec

# show mpls ldp bindings summary

```
show mpls ldp bindings summary [ __readonly__ { TABLE_bnd <total_prefixes> <total_rt_info>
<local_bindings> <rem_bindings> } ]
```

## Syntax Description

|                       |  |
|-----------------------|--|
| show                  | Show running system information                        |
| mpls                  | Display MPLS status and configuration                  |
| ldp                   | Label Distribution Protocol                            |
| bindings              | Show the LDP Label Information Base (LIB)              |
| summary               | Show summary information                               |
| <i>__readonly__</i>   | (Optional) Read Only                                   |
| <i>TABLE_bnd</i>      | (Optional) Show bindings or tib summary for a vrf      |
| <i>total_prefixes</i> | (Optional) Total number of prefixes                    |
| <i>total_rt_info</i>  | (Optional) Total tib route info allocated              |
| <i>local_bindings</i> | (Optional) Total number of localally assigned bindings |
| <i>rem_bindings</i>   | (Optional) Total number of remote bindings             |

## Command Mode

- /exec

## show mpls ldp capabilities

```
show mpls ldp capabilities [ vrf { <vrf-name> | <vrf-known-name> | all } ] [ __readonly__ { TABLE_cap [ <vrf-name> ] { TABLE_cap_rec <description> [ <state> } } ] ]
```

### Syntax Description

|                       |  |
|-----------------------|--|
| show                  | Show running system information                        |
| mpls                  | Display MPLS status and configuration                  |
| ldp                   | Label Distribution Protocol                            |
| capabilities          | Display LDP Capabilities information                   |
| vrf                   | (Optional) VRF Routing/Forwarding instance information |
| <i>vrf-name</i>       | (Optional) VPN Routing/Forwarding instance name        |
| <i>vrf-known-name</i> | (Optional) Known VRF name                              |
| all                   | (Optional) Display Capabilities database in all VRFs   |
| __readonly__          | (Optional) Read Only                                   |
| <i>vrf-name</i>       | (Optional) VRF name                                    |
| TABLE_cap             | (Optional) Show capabilities for a vrf                 |
| TABLE_cap_rec         | (Optional) Show capabilities record in a vrf           |
| <i>description</i>    | (Optional) Capability description                      |
| <i>state</i>          | (Optional) Capability state information                |

### Command Mode

- /exec

# show mpls ldp checkpoint

show mpls ldp checkpoint [ \_\_readonly\_\_ ]

## Syntax Description

|              |                                       |
|--------------|---------------------------------------|
| show         | Show running system information       |
| mpls         | Display MPLS status and configuration |
| ldp          | Label Distribution Protocol           |
| checkpoint   | Display LDP checkpoint information    |
| __readonly__ | (Optional) Read Only                  |

## Command Mode

- /exec



# show mpls ldp discovery

```
show mpls ldp discovery [ vrf { <vrf-name> | <vrf-known-name> | all } ] [ detail ] [ __readonly__ {
TABLE_dsc_ctx [ <ldp_ctx> ] [ <ldp_status> ] <local_ldp_ident> [ { TABLE_dsc_if <if> <ptcl> [ <if_status>
] <xmit_rcv> [ <if_cfg> ] [ <igp_cfg> ] [ <hello_int> ] [ <local_xport_addr> ] { TABLE_dsc_adj
<remote_ldp_ident> [ <nhop_info> ] [ <remote_src_ip> ] [ <remote_xport_ip> ] [ <hold_time> ] [
<local_hold_time> ] [ <nbr_hold_time> ] [ <nhop_addr> ] [ <nhop_mask> ] [ <pwdinfo> } ] [ <clients> } ]
] [ { TABLE_dsc_tgt [ <tgtd_remote_ip> ] [ <tgtd_local_ip> ] [ <tgtd_ptcl> ] [ <tgtd_type> ] [
<tgtd_xmit_rcv> ] [ <tgtd_hello_int> ] [ <tgtd_local_xport_addr> ] [ <tgtd_remote_ldp_ident> ] [
<tgtd_nhop_info> ] [ <tgtd_remote_src_ip> ] [ <tgtd_remote_xport_ip> ] [ <tgtd_hold_time>
<tgtd_local_hold_time> <tgtd_nbr_hold_time> ] [ <tgtd_nhop_addr> <tgtd_nhop_mask> ] [ <tgtd_pwdinfo>
} } } ]
```

## Syntax Description

|                        |  |
|------------------------|--|
| show                   | Show running system information                                |
| mpls                   | Display MPLS status and configuration                          |
| ldp                    | Label Distribution Protocol                                    |
| discovery              | Display sources for locally generated LDP Discovery Hello PDUs |
| vrf                    | (Optional) VRF Routing/Forwarding instance information         |
| <i>vrf-name</i>        | (Optional) VPN Routing/Forwarding instance name                |
| <i>vrf-known-name</i>  | (Optional) Known VRF name                                      |
| all                    | (Optional) Display discovery information in all VRFs           |
| detail                 | (Optional) Display detailed LDP discovery information          |
| __readonly__           | (Optional) Read Only   |
| TABLE_dsc_ctx          | (Optional) Show discovery info across contexts                 |
| <i>ldp_ctx</i>         | (Optional) LDP context   |
| <i>ldp_status</i>      | (Optional) LDP operational status                              |
| <i>local_ldp_ident</i> | (Optional) Local router ID:Local label space                   |
| TABLE_dsc_if           | (Optional) Show discovery info across interfaces               |
| <i>if</i>              | (Optional) Discovery source interface                          |
| <i>ptcl</i>            | (Optional) LDP or TDP protocol                                 |
| <i>if_status</i>       | (Optional) LDP interface status                                |
| <i>xmit_rcv</i>        | (Optional) Transmitting and/or receiving                       |
| <i>if_cfg</i>          | (Optional) Shown if mpls ip is enabled on the interface        |

|                              |  |
|------------------------------|--|
| <i>igp_cfg</i>               | (Optional) Shown if autoconfig is enabled on the interface |
| <i>hello_int</i>             | (Optional) Hello interval in ms                            |
| <i>local_xport_addr</i>      | (Optional) Local transport ip address                      |
| TABLE_dsc_adj                | (Optional) Show link adjacencies                           |
| <i>remote_ldp_ident</i>      | (Optional) Remote router ID:Remote label space             |
| <i>nhop_info</i>             | (Optional) Shown if no next-hop info for peer              |
| <i>remote_src_ip</i>         | (Optional) Remote source ip address                        |
| <i>remote_xport_ip</i>       | (Optional) Remote transport ip address                     |
| <i>hold_time</i>             | (Optional) Hold time in seconds                            |
| <i>local_hold_time</i>       | (Optional) Proposed local hold time in seconds             |
| <i>nbr_hold_time</i>         | (Optional) Peer hold time in seconds                       |
| <i>nhop_addr</i>             | (Optional) Peer reachable via this next-hop IP address     |
| <i>nhop_mask</i>             | (Optional) Next-hop mask                                   |
| <i>pwdinfo</i>               | (Optional) Password information                            |
| <i>clients</i>               | (Optional) LDP clients (IPv4, mLDP, i.e.)                  |
| TABLE_dsc_tgtd               | (Optional) Show targeted hellos                            |
| <i>tgtd_remote_ip</i>        | (Optional) Remote ip address for targeted hellos           |
| <i>tgtd_local_ip</i>         | (Optional) Local ip address for targeted hellos            |
| <i>tgtd_ptcl</i>             | (Optional) LDP or TDP protocol for targeted hellos         |
| <i>tgtd_type</i>             | (Optional) Active/passive type for targeted hellos         |
| <i>tgtd_xmit_rcv</i>         | (Optional) Transmitting and/or receiving targeted hellos   |
| <i>tgtd_hello_int</i>        | (Optional) Targeted hello interval in ms                   |
| <i>tgtd_local_xport_addr</i> | (Optional) Local transport address for targeted hellos     |
| <i>tgtd_remote_ldp_ident</i> | (Optional) Remote router ID:Remote label space             |
| <i>tgtd_nhop_info</i>        | (Optional) Shown if no next-hop info for peer              |
| <i>tgtd_remote_src_ip</i>    | (Optional) Remote source ip address                        |
| <i>tgtd_remote_xport_ip</i>  | (Optional) Remote transport ip address                     |
| <i>tgtd_hold_time</i>        | (Optional) Targeted hold time in seconds                   |
| <i>tgtd_local_hold_time</i>  | (Optional) Proposed local targeted hold time in seconds    |

|                            |  |
|----------------------------|--|
| <i>tgt_d_nbr_hold_time</i> | (Optional) Peer targeted hold time in seconds          |
| <i>tgt_d_nhop_addr</i>     | (Optional) Peer reachable via this next-hop IP address |
| <i>tgt_d_nhop_mask</i>     | (Optional) Next-hop mask                               |
| <i>tgt_d_pwdinfo</i>       | (Optional) Password information                        |

**Command Mode**

- /exec

## show mpls ldp graceful-restart

```
show mpls ldp graceful-restart [ __readonly__ <gr-st-enabled> [ <gr-st-restarted> <gr-st-fwd-holding-left-sec>
] <gr-st-nbr-liveness-sec> <gr-st-max-recovery-sec> [ <gr-st-fwd-holding-sec> ] { TABLE_dnbr <dnbr-rec_cnt>
{ TABLE_dnbr_rec [ <dnbr-rec-vrf-name> ] <dnbr-peer-id> <dnbr-peer-inst> <dnbr-lcl-id> [
<dnbr-reconn-left-sec> <dnbr-recovery-left-sec> ] <dnbr-addr-list-cnt> [ { TABLE_dnbr_addr_list_rec
<dnbr_addr_list_rec_addr> } ] } } { TABLE_gr_sess [ <gr-sess-vrf-name> ] <gr-sess-peer-id> <gr-sess-state>
} ]
```

### Syntax Description

|                                   |  |
|-----------------------------------|--|
| show                              | Show running system information                    |
| mpls                              | Display MPLS status and configuration              |
| ldp                               | Label Distribution Protocol                        |
| graceful-restart                  | Show Graceful Restart summary                      |
| <i>__readonly__</i>               | (Optional) Read Only                               |
| <i>gr-st-enabled</i>              | (Optional) LDP Graceful Restart Enabled            |
| <i>gr-st-restarted</i>            | (Optional) LDP is restarting gracefully            |
| <i>gr-st-fwd-holding-left-sec</i> | (Optional) LDP forwarding state holdtime left      |
| <i>gr-st-nbr-liveness-sec</i>     | (Optional) LDP GR neighbor liveness time           |
| <i>gr-st-max-recovery-sec</i>     | (Optional) LDP GR max recovery time                |
| <i>gr-st-fwd-holding-sec</i>      | (Optional) LDP GR forwarding state holdtime        |
| TABLE_dnbr                        | (Optional) LDP GR down neighbor information        |
| <i>dnbr-rec_cnt</i>               | (Optional) LDP GR down neighbor count              |
| TABLE_dnbr_rec                    | (Optional) LDP GR down neighbor record             |
| <i>dnbr-rec-vrf-name</i>          | (Optional) LDP GR down neighbor vrf                |
| <i>dnbr-peer-id</i>               | (Optional) LDP GR down neighbor peer ID            |
| <i>dnbr-peer-inst</i>             | (Optional) LDP GR down neighbor instance           |
| <i>dnbr-lcl-id</i>                | (Optional) LDP GR down neighbor local ID           |
| <i>dnbr-reconn-left-sec</i>       | (Optional) LDP GR down neighbor reconnection left  |
| <i>dnbr-recovery-left-sec</i>     | (Optional) LDP GR down neighbor recovery left      |
| <i>dnbr-addr-list-cnt</i>         | (Optional) LDP GR down neighbor address list count |
| TABLE_dnbr_addr_list_rec          | (Optional) LDP GR down neighbor address list       |

|                                |   |
|--------------------------------|---|
| <i>dnbr_addr_list_rec_addr</i> | (Optional) LDP GR down neighbor address |
| TABLE_gr_sess                  | (Optional) LDP GR session information   |
| <i>gr-sess-vrf-name</i>        | (Optional) LDP GR session vrf           |
| <i>gr-sess-peer-id</i>         | (Optional) LDP GR session peer ID       |
| <i>gr-sess-state</i>           | (Optional) LDP GR session state         |

**Command Mode**

- /exec

## show mpls ldp igp sync

```
show mpls ldp igp sync [ vrf { <vrf-name> | <vrf-known-name> | all } | interface <intfc> ] [ __readonly__ {
TABLE_ismnc <ldp_ctx> { TABLE_ismnc_if_list <if_name> <ldp_status> <ismnc_status> <sync_achieved>
<peer_reachable> <delay_time> <secs_left> <holddown_time> { TABLE_ismnc_peer_list <peer_ident>
<gr_enabled> } { TABLE_ismnc_nsi_rec <nsi_ident> <chkpt_created> } { TABLE_ismnc_igp_rec
<igp_enabled> <igp_instance> } } } ]
```

### Syntax Description

|                       |  |
|-----------------------|--|
| show                  | Show running system information                        |
| mpls                  | Display MPLS status and configuration                  |
| ldp                   | Label Distribution Protocol                            |
| igp                   | IGP-related information                                |
| sync                  | LDP-IGP Synchronization                                |
| vrf                   | (Optional) VRF Routing/Forwarding instance information |
| <i>vrf-name</i>       | (Optional) VPN Routing/Forwarding instance name        |
| <i>vrf-known-name</i> | (Optional) Known VRF name                              |
| all                   | (Optional) Display IGP SYNC information in all VRFs    |
| interface             | (Optional) Interface of interest                       |
| <i>intfc</i>          | (Optional)   |
| __readonly__          | (Optional) Read Only                                   |
| TABLE_ismnc           | (Optional) Show igp sync info for a vrf                |
| <i>ldp_ctx</i>        | (Optional) LDP context                                 |
| TABLE_ismnc_if_list   | (Optional) Show igp sync info for a single interface   |
| <i>if_name</i>        | (Optional) Interface namestring                        |
| <i>ldp_status</i>     | (Optional) LDP configured/not configured               |
| <i>ismnc_status</i>   | (Optional) LDP-IGP Synchronization enabled/disabled    |
| <i>sync_achieved</i>  | (Optional) Sync status: sync achieved/not achieved     |
| <i>peer_reachable</i> | (Optional) Sync status: peer reachable/not reachable   |
| <i>delay_time</i>     | (Optional) Sync delay time (seconds)                   |
| <i>secs_left</i>      | (Optional) Sync timer remaining time (seconds left)    |
| <i>holddown_time</i>  | (Optional) IGP holddown time                           |

|                       |   |
|-----------------------|---|
| TABLE_isync_peer_list | (Optional) Show all peers for interface                         |
| <i>peer_ident</i>     | (Optional) Peer LDP Ident                                       |
| <i>gr_enabled</i>     | (Optional) Displays if GR is enabled for session                |
| TABLE_isync_nsi_rec   | (Optional) Show all interface-level neighbor id records         |
| <i>nsi_ident</i>      | (Optional) GR-enabled peer ID                                   |
| <i>chkpt_created</i>  | (Optional) Displays if NSI checkpoint created                   |
| TABLE_isync_igp_rec   | (Optional) Show sync-enabled IGP instances enabled on interface |
| <i>igp_enabled</i>    | (Optional) Displays if IGP sync is enabled on intf              |
| <i>igp_instance</i>   | (Optional) IGP instance protocol and handle                     |

**Command Mode**

- /exec

## show mpls ldp neighbor

```
show mpls ldp neighbor [ vrf { <vrf-name> | <vrf-known-name> | all } ] [ <address> | <interface> ] [ capabilities
| detail | graceful-restart | password | internal ] [ __readonly__ { TABLE_ctx <ldp_ctx> <tdp_status> {
TABLE_rec <peer_router_id> <local_router_id> <remote_addr> <remote_tcp_port> <local_addr>
<local_tcp_port> [ <md5_status> <sha1_status> ] [ <pwd_info> <adj_pwd_rx> <adj_pwd_tx> <tcp_pwd_rx>
<tcp_pwd_tx> ] <state> <msgs_sent> <msgs_rcvd> <advert> <last_rev_sent> <up_time> <uid> <peer_id>
[ <gr_status> <gr_reconnect_time> ] <peer_holdtime> <ka_interval> <peer_state> [ <inbound_filter> ] [
<sp_state> <sp_info> <sp_timer_left> ] [ <loop_det_peer> <loop_det_local> <pvl_peer> <pvl_local> ] {
TABLE_adj <intf> <src_ip> <hello_holdtime> <hello_intvl> <dhcb_local> <dhcb_target> <dhcb_mode>
<dhcb_holdtime> <dhcb_intvl> } { TABLE_addr <peer_addr> } { TABLE_dup_addr <dup_addr> } {
TABLE_client <client_name> } { TABLE_cap_sent <cap_sent_name> } { TABLE_cap_rcvd
<cap_rcvd_name> } } } ]
```

### Syntax Description

|                       |  |
|-----------------------|--|
| show                  | Show running system information                          |
| mpls                  | Display MPLS status and configuration                    |
| ldp                   | Label Distribution Protocol                              |
| neighbor              | LDP neighbor   |
| vrf                   | (Optional) VRF Routing/Forwarding instance information   |
| <i>vrf-name</i>       | (Optional) VPN Routing/Forwarding instance name          |
| <i>vrf-known-name</i> | (Optional) Known VRF name                                |
| all                   | (Optional) Display neighbor information in all VRFs      |
| <i>address</i>        | (Optional) Neighbor address                              |
| <i>interface</i>      | (Optional) Local interface                               |
| capabilities          | (Optional) Display neighbor capability information       |
| detail                | (Optional) Display detailed neighbor information         |
| graceful-restart      | (Optional) Display graceful restart neighbor information |
| password              | (Optional) Display neighbor password information         |
| internal              | (Optional) Display internal neighbor information         |
| __readonly__          | (Optional) Read Only                                     |
| TABLE_ctx             | (Optional) Show session info across all contexts         |
| <i>ldp_ctx</i>        | (Optional) LDP context                                   |
| <i>tdp_status</i>     | (Optional) LDP status                                    |



|                          |   |
|--------------------------|---|
| <i>TABLE_rec</i>         | (Optional) Show session info for a vrf                  |
| <i>peer_router_id</i>    | (Optional) Peer router LDP ID                           |
| <i>local_router_id</i>   | (Optional) Local router LDP ID                          |
| <i>remote_addr</i>       | (Optional) TCP connection remote IP address             |
| <i>remote_tcp_port</i>   | (Optional) TCP connection remote port number            |
| <i>local_addr</i>        | (Optional) TCP connection local IP address              |
| <i>local_tcp_port</i>    | (Optional) TCP connection local port number             |
| <i>md5_status</i>        | (Optional) MD5 on for this LDP session                  |
| <i>sha1_status</i>       | (Optional) SHA1 on for this LDP session                 |
| <i>pwd_info</i>          | (Optional) Password status                              |
| <i>adj_pwd_rx</i>        | (Optional) Adj pwd Rx                                   |
| <i>adj_pwd_tx</i>        | (Optional) Adj pwd Tx                                   |
| <i>tcp_pwd_rx</i>        | (Optional) TCP pwd Rx                                   |
| <i>tcp_pwd_tx</i>        | (Optional) TCP pwd Tx                                   |
| <i>state</i>             | (Optional) LDP session state                            |
| <i>msgs_sent</i>         | (Optional) Number of msgs/PIEs sent                     |
| <i>msgs_rcvd</i>         | (Optional) Number of msgs/PIEs received                 |
| <i>advert</i>            | (Optional) Neighbor label advertisement type            |
| <i>last_rev_sent</i>     | (Optional) Last TIB revision sent                       |
| <i>up_time</i>           | (Optional) LDP session up time                          |
| <i>uid</i>               | (Optional) Unique ID for adjacency                      |
| <i>peer_id</i>           | (Optional) Peer index for adjacency                     |
| <i>gr_status</i>         | (Optional) Graceful restart status                      |
| <i>gr_reconnect_time</i> | (Optional) Graceful restart peer reconnect time (msecs) |
| <i>peer_holdtime</i>     | (Optional) Holdtime of peer (ms)                        |
| <i>ka_interval</i>       | (Optional) Keepalive interval                           |
| <i>peer_state</i>        | (Optional) State of session with peer                   |
| <i>inbound_filter</i>    | (Optional) LDP inbound filtering accept acl             |
| <i>sp_state</i>          | (Optional) LDP Session Protection state                 |

|                       |  |
|-----------------------|--|
| <i>sp_info</i>        | (Optional) LDP Session Protection filter and duration (secs)   |
| <i>sp_timer_left</i>  | (Optional) LDP Session Protection holdup time remaining (secs) |
| <i>loop_det_peer</i>  | (Optional) Loop Detection peer status                          |
| <i>loop_det_local</i> | (Optional) Loop Detection local status                         |
| <i>pvl_peer</i>       | (Optional) Path Vector Limit of peer                           |
| <i>pvl_local</i>      | (Optional) Path Vector Limit of local                          |
| TABLE_adj             | (Optional) LDP discovery sources                               |
| <i>intf</i>           | (Optional) Local interface to peer                             |
| <i>src_ip</i>         | (Optional) Source IP address of hello packet                   |
| <i>hello_holdtime</i> | (Optional) Hello holdtime (ms)                                 |
| <i>hello_intvl</i>    | (Optional) Hello interval (ms)                                 |
| <i>dhcb_local</i>     | (Optional) DHCB local IP address                               |
| <i>dhcb_target</i>    | (Optional) DHCB target IP address                              |
| <i>dhcb_mode</i>      | (Optional) DHCB active or passive mode                         |
| <i>dhcb_holdtime</i>  | (Optional) Targeted hello holdtime                             |
| <i>dhcb_intvl</i>     | (Optional) Targeted hello interval                             |
| TABLE_addr            | (Optional) Addresses bound to peer LDP ID                      |
| <i>peer_addr</i>      | (Optional) Address bound to peer LDP Ident                     |
| TABLE_dup_addr        | (Optional) Duplicate addresses advertised by peer              |
| <i>dup_addr</i>       | (Optional) Duplicate address advertised by peer                |
| TABLE_client          | (Optional) Client names associated with session                |
| <i>client_name</i>    | (Optional) Client name   |
| TABLE_cap_sent        | (Optional) Capabilities sent                                   |
| <i>cap_sent_name</i>  | (Optional) Capability sent                                     |
| TABLE_cap_rcvd        | (Optional) Capabilities received                               |
| <i>cap_rcvd_name</i>  | (Optional) Capability received                                 |

**Command Mode**

- /exec

## show mpls ldp parameters

```
show mpls ldp parameters [ __readonly__ <ptcl-version> [ <sess-hold-infinite> <sess-hold-sec> ]
<kpalive-intvl-sec> <hello-hold-sec> <hello-intvl-sec> <tgthello-hold-sec> <tgthello-intvl-sec>
<tgthello-acpt-fltr> <omit-xport-addr> <ignore-xport-addr> <hello-spoofing> <max-hop-count>
<loop-detection-st> { TABLE_fctrl <fctrl_state> [ <fctrl_compat_fset> ] [ { TABLE_features <feature_name>
} ] [ <feature_none> ] } ]
```

### Syntax Description

|                           |   |
|---------------------------|---|
| show                      | Show running system information                                   |
| mpls                      | Display MPLS status and configuration                             |
| ldp                       | Label Distribution Protocol                                       |
| parameters                | Display LDP configuration parameters                              |
| <i>__readonly__</i>       | (Optional) Read Only  |
| <i>ptcl-version</i>       | (Optional) LDP protocol version                                   |
| <i>sess-hold-infinite</i> | (Optional) LDP session holdtime infinite                          |
| <i>sess-hold-sec</i>      | (Optional) LDP session holdtime in seconds                        |
| <i>kpalive-intvl-sec</i>  | (Optional) LDP session keepalive interval in seconds              |
| <i>hello-hold-sec</i>     | (Optional) LDP discovery adjacency holdtime in seconds            |
| <i>hello-intvl-sec</i>    | (Optional) LDP discovery hello interval in seconds                |
| <i>tgthello-hold-sec</i>  | (Optional) LDP targeted adjacency holdtime in seconds             |
| <i>tgthello-intvl-sec</i> | (Optional) LDP targeted hello interval in seconds                 |
| <i>tgthello-acpt-fltr</i> | (Optional) LDP targeted hello acceptance filter                   |
| <i>omit-xport-addr</i>    | (Optional) Omitting transport addr in transmitted hello           |
| <i>ignore-xport-addr</i>  | (Optional) Ignoring transport addr in received hello              |
| <i>hello-spoofing</i>     | (Optional) Accepting undirected hellos to non-broadcast addresses |
| <i>max-hop-count</i>      | (Optional) Downstream on Demand max hop count                     |
| <i>loop-detection-st</i>  | (Optional) LDP loop detection                                     |
| TABLE_fctrl               | (Optional) LDP feature set manager                                |
| <i>fctrl_state</i>        | (Optional) LDP feature set manager state                          |
| <i>fctrl_compat_fset</i>  | (Optional) LDP feature set compatible                             |
| TABLE_features            | (Optional) LDP feature list                                       |

|                     |                             |
|---------------------|-----------------------------|
| <i>feature_name</i> | (Optional) LDP feature name |
| <i>feature_none</i> | (Optional) LDP not enabled  |

**Command Mode**

- /exec

# show mpls static binding

```
show mpls static binding [ ipv4 ] [ vrf { <vrf-name> | <vrf-known-name> } ] [ <prefix> { <mask> |
<mask-length> } | <prefix-mask> ] [ local | remote ] [ nexthop <addr> ] [ __readonly__ { TABLE_slb [
<slb_prefix> <slb_mask> ] <slb_vrf> <slb_inlabel> [ { TABLE_slb_outlbl_list <slb_nhop> <slb_outlabel>
} ] } ] ]
```

## Syntax Description

|                       |  |
|-----------------------|--|
| show                  | Show running system information                          |
| mpls                  | Display MPLS status and configuration                    |
| static                | Show MPLS static information                             |
| binding               | Show static label bindings                               |
| ipv4                  | (Optional) Show ipv4 static label bindings               |
| vrf                   | (Optional) VRF Routing/Forwarding instance information   |
| <i>vrf-name</i>       | (Optional) VRF name                                      |
| <i>vrf-known-name</i> | (Optional) Known VRF name                                |
| <i>prefix</i>         | (Optional) Destination prefix                            |
| <i>mask</i>           | (Optional) Destination prefix mask                       |
| <i>mask-length</i>    | (Optional) Mask length                                   |
| <i>prefix-mask</i>    | (Optional) Destination prefix/mask                       |
| local                 | (Optional) Incoming (local) static label bindings        |
| remote                | (Optional) Outgoing (remote) static label bindings       |
| nexthop               | (Optional) Next hop address                              |
| <i>addr</i>           | (Optional) Next hop address                              |
| __readonly__          | (Optional) Read Only                                     |
| TABLE_slb             | (Optional) Show static label bindings for a given prefix |
| <i>slb_prefix</i>     | (Optional) Prefix  |
| <i>slb_mask</i>       | (Optional) Mask bits                                     |
| <i>slb_vrf</i>        | (Optional) VRF name for prefix                           |
| <i>slb_inlabel</i>    | (Optional) Incoming label for prefix                     |
| TABLE_slb_outlbl_list | (Optional) Show static outgoing labels for prefix        |

|                     |  |
|---------------------|--|
| <i>slb_nhop</i>     | (Optional) Next-hop address                    |
| <i>slb_outlabel</i> | (Optional) Outgoing label for next-hop address |

**Command Mode**

- /exec

## show mpls static binding

```
show mpls static binding [ vrf { <vrf-name> | <vrf-known-name> } ] { { ipv4 [ <prefix> { <mask> |
<mask-length> } | <prefix-mask> ] [ local | remote ] [ nexthop <addr> ] [ inconsistency ] } | { ipv6 [
<ipv6-prefix> ] [ local | remote ] [ ipv6-nexthop <ipv6-addr> ] [ inconsistency ] } | all [ inconsistency ] } [
__readonly__ [ TABLE_slb <slb_prefix> [ <slb_mask> ] <slb_vrf> <slb_inlabel> [ TABLE_slb_outlbl_list
<slb_nhop> <slb_outlabel> ] [ <inconsistency_reason> ] ] ]
```

### Syntax Description

|                       |  |
|-----------------------|--|
| show                  | Show running system information                          |
| mpls                  | Display MPLS status and configuration                    |
| static                | Show MPLS static information                             |
| binding               | Show static label bindings                               |
| ipv4                  | Show ipv4 static label bindings                          |
| ipv6                  | Show ipv6 static label bindings                          |
| all                   | Show all static label bindings                           |
| vrf                   | (Optional) VRF Routing/Forwarding instance information   |
| <i>vrf-name</i>       | (Optional) VRF name                                      |
| <i>vrf-known-name</i> | (Optional) Known VRF name                                |
| local                 | (Optional) Incoming (local) static label bindings        |
| remote                | (Optional) Outgoing (remote) static label bindings       |
| inconsistency         | (Optional) Inconsistent bindings between config and URIB |
| <i>prefix</i>         | (Optional) Destination ipv4 prefix                       |
| <i>mask</i>           | (Optional) Destination ipv4 prefix mask                  |
| <i>mask-length</i>    | (Optional) Ipv4 mask length                              |
| <i>prefix-mask</i>    | (Optional) Destination prefix/mask                       |
| nexthop               | (Optional) Ipv4 next hop address                         |
| <i>addr</i>           | (Optional) Ipv4 Next hop address                         |
| ipv6-nexthop          | (Optional) Ipv6 next hop address                         |
| __readonly__          | (Optional) Read Only                                     |
| TABLE_slb             | (Optional) Show static label bindings for a given prefix |
| <i>slb_prefix</i>     | (Optional) Prefix  |

|                             |   |
|-----------------------------|---|
| <i>slb_mask</i>             | (Optional) Mask bits                              |
| <i>slb_vrf</i>              | (Optional) VRF name for prefix                    |
| <i>slb_inlabel</i>          | (Optional) Incoming label for prefix              |
| TABLE_slb_outlbl_list       | (Optional) Show static outgoing labels for prefix |
| <i>slb_nhop</i>             | (Optional) Next-hop address                       |
| <i>slb_outlabel</i>         | (Optional) Outgoing label for next-hop address    |
| <i>inconsistency_reason</i> | (Optional) Reason for inconsistency               |

**Command Mode**

- /exec



## show mpls static binding vrf per-vrf

```
show mpls static binding [ ipv4 ] vrf { <vrf-name> | <vrf-known-name> } per-vrf [ __readonly__ {
TABLE_slb_per_vrf <slb_vrf_per_vrf> <slb_inlabel_per_vrf> } ]
```

### Syntax Description

|                            |   |
|----------------------------|---|
| show                       | Show running system information                                 |
| mpls                       | Display MPLS status and configuration                           |
| static                     | Show MPLS static information                                    |
| binding                    | Show static label bindings                                      |
| ipv4                       | (Optional) Show ipv4 static label bindings                      |
| vrf                        | VRF Routing/Forwarding instance information                     |
| <i>vrf-name</i>            | VRF name  |
| <i>vrf-known-name</i>      | Known VRF name  |
| per-vrf                    | per-vrf static label bindings                                   |
| __readonly__               | (Optional) Read Only  |
| TABLE_slb_per_vrf          | (Optional) Show static label bindings for per-vrf deaggregation |
| <i>slb_vrf_per_vrf</i>     | (Optional) VRF name   |
| <i>slb_inlabel_per_vrf</i> | (Optional) Incoming label                                       |

### Command Mode

- /exec

# show mpls static trace

show mpls static trace { error | warning | event } [ size ]

## Syntax Description

|         |  |
|---------|--|
| show    | Show running system information        |
| mpls    | Display MPLS status and configuration  |
| static  | Static Label Bindings                  |
| trace   | MPLS static trace                      |
| error   | MPLS static error trace                |
| warning | MPLS static warning trace              |
| event   | MPLS static event trace                |
| size    | (Optional) trace buffer size in Kbytes |

## Command Mode

- /exec

## show mpls strip labels

```
show mpls strip labels [ all | static | dynamic | <label_val> ] [ __readonly__ <disp_summary> TABLE_labels
<disp_label> <disp_age> <disp_interface> <disp_pkt_cnt> <disp_stats> <disp_static> ]
```

### Syntax Description

|                       |  |
|-----------------------|--|
| show                  | Show running system information        |
| mpls                  | Configure MPLS settings                |
| strip                 | Stripping of MPLS headers              |
| labels                | labels added in the system             |
| all                   | (Optional) all labels [default]        |
| static                | (Optional) labels programmed using cli |
| dynamic               | (Optional) dynamically learned         |
| <i>label_val</i>      | (Optional) Label to show               |
| <i>__readonly__</i>   | (Optional) Read Only                   |
| TABLE_labels          | (Optional) MPLS Strip Labels Tables    |
| <i>disp_label</i>     | (Optional) Label                       |
| <i>disp_age</i>       | (Optional) Age                         |
| <i>disp_interface</i> | (Optional) Interface                   |
| <i>disp_pkt_cnt</i>   | (Optional) Packet Count                |
| <i>disp_stats</i>     | (Optional) Statistics                  |
| <i>disp_static</i>    | (Optional) Static                      |
| <i>disp_summary</i>   | (Optional) Summary                     |

### Command Mode

- /exec

## show mpls switching

```
show mpls switching [ labels <label> [ <max-label> ] | interface <intf> | { <ip-addr> | <ipv4-prefix> } [ vrf
<vrf-name> ] | <ipv6-prefix> [ vrf <vrf-name> ] | traffic-eng tunnels [ cbts ] [ <tunnel-id> ] | traffic-eng lsp
ipv4 [ <ingress-addr> <tunnel-id> ] | aggregate [ ipv4 | ipv6 ] [ vrf <vrf-name> ] | { fec { te_if | ipv4_te_lsp
| ipv6_te_lsp | ipv4_prefix [ vrf <vrf-name> ] | ipv6_prefix [ vrf <vrf-name> ] | deagg [ vrf <vrf-name> ] } }
| { summary } ] [ detail ] [ private ] [ vrf <vrf-name> ] [ __readonly__ [ TABLE_vrf <vrf_name> [
TABLE_inlabel <in_label> <out_label_stack> { <ipv4_prefix> | <ipv6_prefix> } [ { <tunnel_v4_mid_source>
| <tunnel_v6_mid_source> } <tunnel_id> { <ext_v4_tunnel_id> | <ext_v6_tunnel_id> } <tunnel_instance>
<deagg_vrf> <deagg_af> <tunnel_head> ] <out_interface> { <ipv4_next_hop> | <ipv6_next_hop> } [
<nhlfe_p2p_flag> ] [ <nhlfe_frr_status> ] [ <nhlfe_stale_flag> ] [ <in_packets> <in_bytes> ] [ <out_label>
] <out_packets> <out_bytes> ] [ { <tunnel_v4_mid_dest> | <tunnel_v6_mid_dest> } { <ipv4_next_hop> |
<ipv6_next_hop> } ] [ <per_ce_table> <per_ce_nh_set_id> ] ] ] ] ]
```

### Syntax Description

|                     |   |
|---------------------|---|
| show                | Show running system information                       |
| mpls                | Display MPLS status and configuration                 |
| switching           | Display the MPLS label switching database             |
| traffic-eng         | (Optional) Show traffic-engineering related entries   |
| <i>ip-addr</i>      | (Optional) Match destination address                  |
| <i>ipv4-prefix</i>  | (Optional) Specify an IP prefix/mask                  |
| fec                 | (Optional) Show FEC information in the ULIB           |
| private             | (Optional) Show more detailed information in the ULIB |
| labels              | (Optional) Show a specific label-related information  |
| <i>label</i>        | (Optional) Low label value                            |
| <i>max-label</i>    | (Optional) High label value                           |
| interface           | (Optional) Match outgoing interface                   |
| tunnels             | (Optional) Show TE head-end information               |
| cbts                | (Optional) Show TE head-end CBTS information          |
| lsp                 | (Optional) Show TE mid-point information              |
| aggregate           | (Optional) Show aggregate-related information         |
| <i>intf</i>         | (Optional) Specify outgoing interface                 |
| <i>ingress-addr</i> | (Optional) Match TE ingress address                   |
| summary             | (Optional) Summarized information                     |

|                             |  |
|-----------------------------|--|
| detail                      | (Optional) Detailed information        |
| te_if                       | (Optional) TE tunnel head-end          |
| ipv4_te_lsp                 | (Optional) TE IPv4 LSP midpoint        |
| ipv6_te_lsp                 | (Optional) TE IPv6 LSP midpoint        |
| ipv4_prefix                 | (Optional) IPv4 prefix                 |
| ipv6_prefix                 | (Optional) IPv6 prefix                 |
| ipv4                        | (Optional) Display IPv4 information    |
| ipv6                        | (Optional) Display IPv6 information    |
| deagg                       | (Optional) De-aggregation              |
| <i>tunnel-id</i>            | (Optional) LSP Tunnel ID               |
| vrf                         | (Optional) Display per-VRF information |
| <i>vrf-name</i>             | (Optional) VRF name (Max Size 32)      |
| __readonly__                | (Optional)                             |
| TABLE_vrf                   | (Optional)                             |
| <i>vrf_name</i>             | (Optional)                             |
| TABLE_inlabel               | (Optional)                             |
| <i>in_label</i>             | (Optional)                             |
| <i>out_label_stack</i>      | (Optional)                             |
| <i>ipv4_prefix</i>          | (Optional)                             |
| <i>tunnel_v4_mid_source</i> | (Optional)                             |
| <i>tunnel_v4_mid_dest</i>   | (Optional)                             |
| <i>tunnel_id</i>            | (Optional)                             |
| <i>ext_v4_tunnel_id</i>     | (Optional)                             |
| <i>tunnel_instance</i>      | (Optional)                             |
| <i>tunnel_head</i>          | (Optional)                             |
| <i>deagg_vrf</i>            | (Optional)                             |
| <i>deagg_af</i>             | (Optional)                             |
| <i>out_interface</i>        | (Optional)                             |
| <i>ipv4_next_hop</i>        | (Optional)                             |

|                         |            |
|-------------------------|------------|
| <i>ipv6_next_hop</i>    | (Optional) |
| <i>nhlfe_frr_status</i> | (Optional) |
| <i>nhlfe_stale_flag</i> | (Optional) |
| <i>nhlfe_p2p_flag</i>   | (Optional) |
| <i>in_packets</i>       | (Optional) |
| <i>in_bytes</i>         | (Optional) |
| <i>out_label</i>        | (Optional) |
| <i>out_packets</i>      | (Optional) |
| <i>out_bytes</i>        | (Optional) |
| <i>per_ce_table</i>     | (Optional) |
| <i>per_ce_nh_set_id</i> | (Optional) |

**Command Mode**

- /exec

## show mpls switching clients

```
show mpls switching clients [ __readonly__ [ TABLE_client <pib-name> <pib-index> <pib-uuid> <pib-sap>
<stale-time> <pib-flag> [ <stale-due> ] <reg-msg> <conv-msg> [ <inv-conv> ] <fec-msg> <fec-add> <ile-add>
<fec-del> <ile-del> <last-xid> <fec-ack> ] ]
```

### Syntax Description

|                   |  |
|-------------------|--|
| show              | Show running system information                  |
| mpls              | Display MPLS status and configuration            |
| switching         | Display the MPLS label switching database        |
| clients           | Display ULIB client components                   |
| __readonly__      | (Optional)                                       |
| TABLE_client      | (Optional)                                       |
| <i>pib-name</i>   | (Optional) Name of the client(pib)               |
| <i>pib-index</i>  | (Optional) PIB Index                             |
| <i>pib-uuid</i>   | (Optional) PIB UUID                              |
| <i>pib-sap</i>    | (Optional) MTS SAP for the pib                   |
| <i>stale-time</i> | (Optional) Stale time                            |
| <i>pib-flag</i>   | (Optional) Flags set by the pib                  |
| <i>stale-due</i>  | (Optional) Stale timer due in                    |
| <i>reg-msg</i>    | (Optional) Number of Registration Message        |
| <i>conv-msg</i>   | (Optional) Number of Converge Message            |
| <i>inv-conv</i>   | (Optional) Number of Invalid Convergence message |
| <i>fec-msg</i>    | (Optional) Number of FEC messages                |
| <i>fec-add</i>    | (Optional) Number of FEC Add messages            |
| <i>ile-add</i>    | (Optional) Number of ILE Add messages            |
| <i>fec-del</i>    | (Optional) Number of FEC delete messages         |
| <i>ile-del</i>    | (Optional) Number of ILE delete messages         |
| <i>last-xid</i>   | (Optional) Last XID                              |
| <i>fec-ack</i>    | (Optional) Number of FEC Ack messages sent       |

### Command Mode

- /exec



## show mpls traffic-eng

```
show mpls traffic-eng { fast-reroute database summary | tunnels fast-reroute summary | tunnels protection
summary } [ __readonly__ [ <frr_num_lsps> <frr_num_active_lsps> <frr_backup_tunnels> <frr_active_intf>
]]
```

### Syntax Description

|                            |   |
|----------------------------|---|
| show                       | Show running system information         |
| mpls                       | Display MPLS status and configuration   |
| traffic-eng                | Traffic engineering information         |
| fast-reroute               | Fast Reroute information                |
| database                   | Fast Reroute Database information       |
| summary                    | Summary information                     |
| tunnels                    | MPLS traffic-eng tunnel status          |
| protection                 | Failure protection provided for tunnels |
| summary                    | Summary information                     |
| fast-reroute               | Fast Reroute information                |
| summary                    | Summary information                     |
| <i>__readonly__</i>        | (Optional)                              |
| <i>frr_num_lsps</i>        | (Optional) num lsps                     |
| <i>frr_num_active_lsps</i> | (Optional) num active lsps              |
| <i>frr_backup_tunnels</i>  | (Optional) num backup tunnels           |
| <i>frr_active_intf</i>     | (Optional) num active interfaces        |

### Command Mode

- /exec

# show mpls traffic-eng

```
show mpls traffic-eng { { fast-reroute database [ destination <dest-addr> ] [ interface <intfc> ] [ backup-interface
{ <tunnel-intf> | unresolved } ] [ role { head | middle } | state { active | ready | requested } ] [ detail ] } | {
tunnels fast-reroute } } [ __readonly__ [ { TABLE_frr_db <protected_tun> [ <sprint_downlink_name>
<sprint_tun_protected_bw> [ <sprint_prot_bw> ] [ <backup_none> | <sprint_tun_backup_name>
<sprint_tun_lsp_frr_out_active> <sprint_tun_frr_protect_level> <sprint_tun_frr_out_nnhop> ] ] } ] ] }
```

## Syntax Description

|                    |  |
|--------------------|--|
| show               | Show running system information                              |
| mpls               | Display MPLS status and configuration                        |
| traffic-eng        | Traffic engineering information                              |
| database           | Fast Reroute Database information                            |
| destination        | (Optional) Match LSP destination address                     |
| <i>dest-addr</i>   | (Optional) Tunnel destination address                        |
| interface          | (Optional) Match protected outgoing interface                |
| <i>intfc</i>       | (Optional)   |
| backup-interface   | (Optional) Match backup outgoing interface                   |
| <i>tunnel-intf</i> | (Optional) Tunnel interface                                  |
| unresolved         | (Optional) Unresolved backup interface                       |
| role               | (Optional) Restrict display to LSPs with specified role      |
| head               | (Optional) LSPs that originate locally                       |
| middle             | (Optional) LSPs that transit locally                         |
| state              | (Optional) Restrict display to LSPs with specified FRR state |
| active             | (Optional) LSPs with active FRR state                        |
| ready              | (Optional) LSPs with ready FRR state                         |
| requested          | (Optional) LSPs with requested FRR state                     |
| detail             | (Optional) Detailed information                              |
| tunnels            | MPLS traffic-eng tunnel status                               |
| fast-reroute       | Fast Reroute information                                     |
| __readonly__       | (Optional)   |
| TABLE_frr_db       | (Optional) frr_db info                                       |

|                                      |  |
|--------------------------------------|--|
| <i>protected_tun</i>                 | (Optional) protected tunnel              |
| <i>backup_none</i>                   | (Optional) backup none                   |
| <i>sprint_downlink_name</i>          | (Optional) sprint downlink name          |
| <i>sprint_tun_protected_bw</i>       | (Optional) sprint tun protected bw       |
| <i>sprint_prot_bw</i>                | (Optional) sprint protected flag         |
| <i>sprint_tun_backup_name</i>        | (Optional) sprint tun backup name        |
| <i>sprint_tun_lsp_frr_out_active</i> | (Optional) sprint tun lsp frr out active |
| <i>sprint_tun_frr_protect_level</i>  | (Optional) sprint tun frr protect level  |
| <i>sprint_tun_frr_out_nnhop</i>      | (Optional) sprint tun frr out nnhop      |

**Command Mode**

- /exec

# show mpls traffic-eng autoroute

```
show mpls traffic-eng autoroute [ <ipaddr> ] [ __readonly__ [ <aa_enabled> ] [ { TABLE_dest
<aa_fa_tun_list_type> <aa_fa_igp_node_id> <aa_fa_igp_area_id> <aa_fa_tun_count> [ { TABLE_tunidx
<aa_fa_intf_name> [ <aa_fa_load_balance_metric> ] <aa_fa_nexthop_addr> [ <aa_fa_metric_mode>
<aa_fa_igp_metric> ] <aa_set> <fa_set> [ <fa_holdtime> } } ] ] ] ]
```

**Syntax Description**

|                                  |   |
|----------------------------------|---|
| show                             | Show running system information                                 |
| mpls                             | Display MPLS status and configuration                           |
| traffic-eng                      | Traffic engineering information                                 |
| autoroute                        | Autorouted tunnel destination information                       |
| <i>ipaddr</i>                    | (Optional) destination address for autorouted tunnels (A.B.C.D) |
| <i>__readonly__</i>              | (Optional)  |
| <i>aa_enabled</i>                | (Optional) is autoroute enabled or disabled                     |
| TABLE_dest                       | (Optional) destination info                                     |
| <i>aa_fa_tun_list_type</i>       | (Optional) autoroute tun list type                              |
| <i>aa_fa_igp_node_id</i>         | (Optional) autoroute igp node id                                |
| <i>aa_fa_igp_area_id</i>         | (Optional) autoroute igp area id                                |
| <i>aa_fa_tun_count</i>           | (Optional) autoroute tun count                                  |
| TABLE_tunidx                     | (Optional) tunnel info  |
| <i>aa_fa_intf_name</i>           | (Optional) autoroute intf name                                  |
| <i>aa_fa_load_balance_metric</i> | (Optional) autoroute load balance metric                        |
| <i>aa_fa_nexthop_addr</i>        | (Optional) autoroute nexthop addr                               |
| <i>aa_fa_metric_mode</i>         | (Optional) autoroute metric mode                                |
| <i>aa_fa_igp_metric</i>          | (Optional) autoroute igp metric                                 |
| <i>aa_set</i>                    | (Optional) autoroute announce                                   |
| <i>fa_set</i>                    | (Optional) autoroute fwd adj                                    |
| <i>fa_holdtime</i>               | (Optional) autoroute fwd adj holdtime                           |

**Command Mode**

- /exec

## show mpls traffic-eng exp

```
show mpls traffic-eng exp [ <ipaddr> ] [ __readonly__ [ TABLE_bundles <exp_bundle_dest>
<exp_bundle_master> <exp_bundle_master_state> [ TABLE_exp_member <exp_bundle_member>
<exp_bundle_member_state> <exp_bundle_member_conf_exp> <exp_bundle_member_actual_exp> ] ] ]
```

### Syntax Description

|                                     |   |
|-------------------------------------|---|
| show                                | Show running system information                               |
| mpls                                | Display MPLS status and configuration                         |
| traffic-eng                         | Traffic engineering information                               |
| exp                                 | MPLS traffic-eng tunnel exp information                       |
| <i>ipaddr</i>                       | (Optional) destination address of the master tunnel (A.B.C.D) |
| <i>__readonly__</i>                 | (Optional)  |
| TABLE_bundles                       | (Optional) Bundle info  |
| <i>exp_bundle_dest</i>              | (Optional) Bundle tunnel destination                          |
| <i>exp_bundle_master</i>            | (Optional) Bundle master tunnel name                          |
| <i>exp_bundle_master_state</i>      | (Optional) Bundle master tunnel state                         |
| TABLE_exp_member                    | (Optional) Bundle member info                                 |
| <i>exp_bundle_member</i>            | (Optional) Bundle member tunnel name                          |
| <i>exp_bundle_member_state</i>      | (Optional) Bundle member tunnel state                         |
| <i>exp_bundle_member_conf_exp</i>   | (Optional) Bundle member tunnel configured exp                |
| <i>exp_bundle_member_actual_exp</i> | (Optional) Bundle member tunnel actual exp                    |

### Command Mode

- /exec

# show mpls traffic-eng explicit-paths

```
show mpls traffic-eng explicit-paths [ detail | identifier <id> [ detail ] | name <name> [ detail ] ] [ __readonly__
{ TABLE_explpath <eph_style> <eph_path_id_str> <eph_path_loose_strict> <eph_complete_flag>
<eph_generation> [ <eph_status> ] { TABLE_nxtaddr <eph_idx> <eph_type> <eph_subtype> <eph_addr>
[ <eph_lasthop> ] } } ]
```

## Syntax Description

|                              |   |
|------------------------------|---|
| show                         | Show running system information                   |
| mpls                         | Display MPLS status and configuration             |
| traffic-eng                  | Traffic engineering information                   |
| explicit-paths               | Show explicit paths                               |
| detail                       | (Optional) Show explicit paths in detail          |
| identifier                   | (Optional) Show a specific numbered explicit path |
| <i>id</i>                    | (Optional) Enter path number                      |
| name                         | (Optional) Show a specific named explicit path    |
| <i>name</i>                  | (Optional) Enter path name                        |
| __readonly__                 | (Optional)  |
| TABLE_explpath               | (Optional) explpath info                          |
| <i>eph_style</i>             | (Optional) eph style                              |
| <i>eph_path_id_str</i>       | (Optional) eph path id str                        |
| <i>eph_path_loose_strict</i> | (Optional) eph path loose strict                  |
| <i>eph_complete_flag</i>     | (Optional) eph path complete flag                 |
| <i>eph_generation</i>        | (Optional) eph generation                         |
| <i>eph_status</i>            | (Optional) eph status                             |
| TABLE_nxtaddr                | (Optional) next address                           |
| <i>eph_idx</i>               | (Optional) eph idx                                |
| <i>eph_type</i>              | (Optional) eph type                               |
| <i>eph_subtype</i>           | (Optional) eph subtype                            |
| <i>eph_addr</i>              | (Optional) eph addr                               |
| <i>eph_lasthop</i>           | (Optional) eph lasthop                            |

**Command Mode**

- /exec

## show mpls traffic-eng forwarding-adjacency

```
show mpls traffic-eng forwarding-adjacency [ <ipaddr> ] [ __readonly__ [ <aa_enabled> ] [ { TABLE_dest
<aa_fa_tun_list_type> <aa_fa_igp_node_id> <aa_fa_igp_area_id> <aa_fa_tun_count> [ { TABLE_tunidx
<aa_fa_intf_name> [ <aa_fa_load_balance_metric> ] <aa_fa_nexthop_addr> [ <aa_fa_metric_mode>
<aa_fa_igp_metric> ] <aa_set> <fa_set> [ <fa_holdtime> } } ] ] ]
```

### Syntax Description

|                                  |  |
|----------------------------------|--|
| show                             | Show running system information  |
| mpls                             | Display MPLS status and configuration                                    |
| traffic-eng                      | Traffic engineering information  |
| forwarding-adjacency             | forwarding-adjacency tunnel destination information                      |
| <i>ipaddr</i>                    | (Optional) destination address for forwarding-adjacency tunnels(A.B.C.D) |
| <i>__readonly__</i>              | (Optional)   |
| <i>aa_enabled</i>                | (Optional) is autoroute enabled or disabled                              |
| TABLE_dest                       | (Optional) destination info  |
| <i>aa_fa_tun_list_type</i>       | (Optional) autoroute tun list type                                       |
| <i>aa_fa_igp_node_id</i>         | (Optional) autoroute igp node id   |
| <i>aa_fa_igp_area_id</i>         | (Optional) autoroute igp area id   |
| <i>aa_fa_tun_count</i>           | (Optional) autoroute tun count   |
| TABLE_tunidx                     | (Optional) tunnel info   |
| <i>aa_fa_intf_name</i>           | (Optional) autoroute intf name   |
| <i>aa_fa_load_balance_metric</i> | (Optional) autoroute load balance metric                                 |
| <i>aa_fa_nexthop_addr</i>        | (Optional) autoroute nexthop addr  |
| <i>aa_fa_metric_mode</i>         | (Optional) autoroute metric mode   |
| <i>aa_fa_igp_metric</i>          | (Optional) autoroute igp metric  |
| <i>aa_set</i>                    | (Optional) autoroute announce  |
| <i>fa_set</i>                    | (Optional) autoroute fwd adj   |
| <i>fa_holdtime</i>               | (Optional) autoroute fwd adj holdtime                                    |

### Command Mode

- /exec



## show mpls traffic-eng high-availability

```
show mpls traffic-eng high-availability { database [ summary ] | shared-database | sso-database | status } [
  __readonly__ < __dummy_string__ > < __dummy_hex__ > < __dummy_int__ > < __dummy_unsigned__ >
  < __dummy_long_unsigned__ > < __dummy_long_long_unsigned__ > ]
```

### Syntax Description

|                              |                                       |
|------------------------------|---------------------------------------|
| high-availability            | MPLS TE HA information                |
| database                     | MPLS TE checkpoint database           |
| summary                      | (Optional) Summary counters only      |
| shared-database              | MPLS TE shared database               |
| sso-database                 | MPLS TE SSO read-write databases      |
| status                       | MPLS TE HA status and events          |
| show                         | Show running system information       |
| mpls                         | Display MPLS status and configuration |
| traffic-eng                  | Traffic engineering information       |
| __readonly__                 | (Optional)                            |
| __dummy_string__             | (Optional) dummy string               |
| __dummy_hex__                | (Optional) dummy hex                  |
| __dummy_int__                | (Optional) dummy int                  |
| __dummy_unsigned__           | (Optional) dummy unsigned             |
| __dummy_long_unsigned__      | (Optional) dummy long                 |
| __dummy_long_long_unsigned__ | (Optional) dummy long long            |

### Command Mode

- /exec



|                                    |  |
|------------------------------------|--|
| <i>tun_name</i>                    | (Optional) tunnel name                         |
| <i>uplink_name</i>                 | (Optional) uplink name                         |
| <i>downlink_name</i>               | (Optional) downlink name                       |
| <i>priority_string</i>             | (Optional) priority string                     |
| <i>tun_state</i>                   | (Optional) tunnel state                        |
| <i>bw_kbps</i>                     | (Optional) bandwidth in KBps                   |
| <i>bw_state</i>                    | (Optional) bandwidth state                     |
| <i>bw_kind</i>                     | (Optional) bandwidth kind                      |
| <i>links_count</i>                 | (Optional) number of links                     |
| <i>bw_hold_time</i>                | (Optional) bandwidth hold time                 |
| <i>flooding_system_status</i>      | (Optional) flooding system status              |
| TABLE_flooding                     | (Optional) flooding info                       |
| <i>flooding_igp_area_id</i>        | (Optional) flooding IGP area ID                |
| <i>flooding_protocol</i>           | (Optional) flooding protocol                   |
| <i>flooding_status</i>             | (Optional) flooding status                     |
| <i>flooding_periodic_status</i>    | (Optional) flooding periodic status            |
| <i>flooding_periodic_interval</i>  | (Optional) flooding periodic interval          |
| <i>flooding_periodic_remaining</i> | (Optional) flooding periodic remaining         |
| <i>number_of_flooded_links</i>     | (Optional) number of flooded links             |
| <i>flooding_igp_system_id</i>      | (Optional) flooding IGP system ID              |
| <i>flooding_rtr_ipaddress</i>      | (Optional) flooding router address             |
| <i>flooding_neighbor_count</i>     | (Optional) flooding neighbor count             |
| TABLE_links                        | (Optional) table of information for each link  |
| <i>link_name</i>                   | (Optional) link name                           |
| <i>link_ipaddress</i>              | (Optional) link IP address                     |
| <i>link_is_numbered</i>            | (Optional) whether or not the link is numbered |
| <i>local_intf_id</i>               | (Optional) local interface ID                  |
| <i>rlp_capability</i>              | (Optional) RLP capability                      |
| <i>rlp_working_priority</i>        | (Optional) RLP working priority                |

|                            |   |
|----------------------------|---|
| <i>srlg_group_none</i>     | (Optional) no SRLG group numbers                |
| TABLE_srlg                 | (Optional) SRLGs                                |
| <i>srlg_group_number</i>   | (Optional) SRLG group number                    |
| TABLE_ixcd                 | (Optional) IXCD                                 |
| <i>link_key</i>            | (Optional) link key                             |
| <i>intfc_switching_cap</i> | (Optional) interface switching capacity         |
| <i>encoding</i>            | (Optional) interface encoding                   |
| <i>link_label_type</i>     | (Optional) link label type                      |
| <i>link_installed</i>      | (Optional) is link installed                    |
| <i>link_local_label</i>    | (Optional) link local label                     |
| <i>phys_bw</i>             | (Optional) link physical bandwidth              |
| <i>phys_bw_units</i>       | (Optional) link physical bandwidth units        |
| <i>model_id</i>            | (Optional) model ID (e.g., MAM, RDM)            |
| <i>link_min_flow</i>       | (Optional) link min flow                        |
| <i>bw_units</i>            | (Optional) bandwidth units                      |
| <i>max_link_rsvbl_bw</i>   | (Optional) link maximum reservable bandwidth    |
| <i>rsvbl_bw_units</i>      | (Optional) reservable bandwidth units           |
| <i>rsvd_up</i>             | (Optional) reserved up                          |
| <i>rsvd_down</i>           | (Optional) reserved down                        |
| <i>max_global_rsvbl_bw</i> | (Optional) maximum global reservable bandwidth  |
| <i>max_sub_rsvbl_bw</i>    | (Optional) maximum subpool reservable bandwidth |
| <i>bw_descriptors</i>      | (Optional) bandwidth descriptors                |
| <i>descriptor_count</i>    | (Optional) bandwidth descriptor count           |
| <i>descriptor_kind</i>     | (Optional) descriptor kind                      |
| <i>link_state</i>          | (Optional) link state                           |
| <i>admit_method_up</i>     | (Optional) admit method up                      |
| <i>admit_method_down</i>   | (Optional) admit method down                    |
| <i>admin_weight</i>        | (Optional) admin weight                         |
| <i>admin_state</i>         | (Optional) admin state                          |

|                                |                                     |
|--------------------------------|-------------------------------------|
| <i>neighbor_interface_info</i> | (Optional) neighbor interface info  |
| <i>interface_name</i>          | (Optional) interface name           |
| TABLE_nbr_src                  | (Optional) neighbor information     |
| <i>neighbor_source</i>         | (Optional) neighbor source          |
| TABLE_ami_flags                | (Optional) AMI flags                |
| <i>ami_flag_string</i>         | (Optional) AMI flag                 |
| <i>interface_id</i>            | (Optional) interface ID             |
| <i>sw_cap</i>                  | (Optional) Sw Cap                   |
| <i>source_te_id</i>            | (Optional) TE ID                    |
| <i>source_up_down</i>          | (Optional) is the source up or down |
| <i>source_floodable</i>        | (Optional) is the source floodable  |
| <i>source_link_lable_id</i>    | (Optional) link table ID            |
| <i>igp_neighbor_count</i>      | (Optional) IGP neighbor count       |
| TABLE_igp                      | (Optional) IGP information          |
| <i>neighbor_id</i>             | (Optional) neighbor's name          |
| <i>neighbor_ipaddress</i>      | (Optional) neighbor's IP address    |
| <i>neighbor_igp_area_id</i>    | (Optional) neighbor's IGP area ID   |
| <i>neighbor_link_name</i>      | (Optional) neighbor's link name     |
| <i>neighbor_up_down</i>        | (Optional) is neighbor up or down   |
| <i>link_up_thresholds</i>      | (Optional) link up thresholds       |
| <i>link_down_thresholds</i>    | (Optional) link down thresholds     |
| <i>flooded_areas</i>           | (Optional) number of flooded areas  |
| TABLE_dlist                    | (Optional) table                    |
| <i>area_tag</i>                | (Optional) area tag                 |
| <i>area_id</i>                 | (Optional) area ID                  |
| <i>area_flooding_status</i>    | (Optional) area flooding status     |
| <i>area_not_flooded_reason</i> | (Optional) area not-flooded reason  |
| TABLE_up_down                  | (Optional) up/down information      |
| <i>link_dir_name</i>           | (Optional) link dir name            |

|                             |  |
|-----------------------------|--|
| <i>link_dir_bw_kind</i>     | (Optional) link dir bandwidth kind     |
| <i>link_dir_bw_units</i>    | (Optional) link dir bandwidth units    |
| TABLE_pool                  | (Optional) information about each pool |
| <i>link_bw_keep_prio</i>    | (Optional) keep priority               |
| <i>link_bw_held</i>         | (Optional) bandwidth held              |
| <i>link_bw_total_held</i>   | (Optional) total bandwidth held        |
| <i>link_bw_locked</i>       | (Optional) bandwidth locked            |
| <i>link_bw_total_locked</i> | (Optional) total bandwidth locked      |

**Command Mode**

- /exec



|                                     |   |
|-------------------------------------|---|
| <i>link_name</i>                    | (Optional) link name                        |
| <i>link_subnet_type</i>             | (Optional) link subnet type                 |
| <i>link_ipaddress</i>               | (Optional) link IP address                  |
| <i>link_local_interface_id</i>      | (Optional) link local interface ID          |
| <i>link_designated_router</i>       | (Optional) link designated router           |
| <i>link_neighbor_id</i>             | (Optional) link neighbor ID                 |
| <i>link_neighbor_ipaddress</i>      | (Optional) link neighbor IP address         |
| <i>link_remote_interface_id</i>     | (Optional) link remote interface ID         |
| <i>link_protection_capabilities</i> | (Optional) link protection capabilities     |
| <i>link_protection_working_prio</i> | (Optional) link protection working priority |
| <i>intfc_sw_cap</i>                 | (Optional) intfc switching cap              |
| <i>link_encoding</i>                | (Optional) link encoding                    |
| <i>flsvc</i>                        | (Optional) flsvc                            |
| TABLE_flsvc                         | (Optional) flsvc info                       |
| <i>max_lsp_bw</i>                   | (Optional) maximum LSP bandwidth            |
| <i>min_lsp_bw</i>                   | (Optional) minimum LSP bandwidth            |
| <i>interface_mtu</i>                | (Optional) interface MTU                    |
| <i>sonet_sdh_indication</i>         | (Optional) SONET/SDH indication             |
| <i>link_te_metric</i>               | (Optional) link TE metric                   |
| <i>link_igp_metric</i>              | (Optional) link IGP metric                  |
| <i>link_srlg_number</i>             | (Optional) link SRLG number                 |
| TABLE_srlgs                         | (Optional) SRLG info                        |
| <i>link_srlg_none</i>               | (Optional) link SRLG -- none                |
| <i>link_bandwidth</i>               | (Optional) link bandwidth                   |
| <i>link_bandwidth_units</i>         | (Optional) link bandwidth units             |
| <i>link_max_res_bandwidth</i>       | (Optional) link max res bandwidth           |
| <i>link_global_bc0_bandwidth</i>    | (Optional) link global bc0 bandwidth        |
| <i>link_subpool_bc1_bandwidth</i>   | (Optional) link subpool bc1 bandwidth       |
| <i>link_dir_down</i>                | (Optional) link direction down              |



|  |  |
|--|--|
| <i>TABLE_down_classes</i>                  | (Optional) direction down class info       |
| <i>link_down_te_class</i>                  | (Optional) link down TE class              |
| <i>link_down_class_bandwidth</i>           | (Optional) link down class bandwidth       |
| <i>link_down_bandwidth_units</i>           | (Optional) link down bandwidth units       |
| <i>link_dir_up</i>                         | (Optional) link direction up               |
| <i>TABLE_up_pools</i>                      | (Optional) direction up pool info          |
| <i>up_exp_prio</i>                         | (Optional) up export priority              |
| <i>link_up_global_pool_bc0_bandwidth</i>   | (Optional) link up global pool bandwidth   |
| <i>link_up_subpool_bc1_bandwidth</i>       | (Optional) link up subpool bandwidth       |
| <i>link_up_pool_bandwidth_units</i>        | (Optional) link up pool bandwidth units    |
| <i>TABLE_down_pools</i>                    | (Optional) direction down pool info        |
| <i>down_exp_prio</i>                       | (Optional) down export priority            |
| <i>link_down_global_pool_bc0_bandwidth</i> | (Optional) link down global pool bandwidth |
| <i>link_down_subpool_bc1_bandwidth</i>     | (Optional) link down subpool bandwidth     |
| <i>link_down_pool_bandwidth_units</i>      | (Optional) link down pool bandwidth units  |
| <i>link_affinity_flags</i>                 | (Optional) link affinity flags             |

**Command Mode**

- /exec

## show mpls traffic-eng link-management bandwidth-allocation

```
show mpls traffic-eng link-management bandwidth-allocation [ summary ] [ <intfc> ] [ __readonly__ [
<links_count> ] [ <bw_hold_time> ] [ <flooding_system_status> ] [ { TABLE_flooding <flooding_igp_area_id>
<flooding_protocol> <flooding_status> <flooding_periodic_status> [ <flooding_periodic_interval> ] [
<number_of_flooded_links> ] <flooding_igp_system_id> <flooding_rtr_ipaddress> <flooding_neighbor_count>
} ] { TABLE_links <link_name> [ [ <link_global_bc0_bandwidth> ] <link_max_res_bandwidth>
<max_global_rsvbl_bw> <link_subpool_bc1_bandwidth> <max_sub_rsvbl_bw> ] [ [ <link_ipaddress> ] [
<link_is_numbered> ] [ <local_intf_id> ] [ <rlp_capability> <rlp_working_priority> ] [ { <srng_group_none>
| { TABLE_srng <srng_group_number> } } ] { TABLE_ixcd <link_key> <intfc_switching_cap> <encoding>
} [ <link_label_type> <link_installed> [ <link_local_label> ] ] <phys_bw> <phys_bw_units> [ <model_id>
] [ <link_min_flow> <bw_units> ] [ <max_link_rsvbl_bw> <rsvbl_bw_units> <rsvd_up> <rsvd_down> ] [
<link_max_res_bandwidth> <rsvbl_bw_units> <rsvd_up> <rsvd_down> ] [ <max_global_rsvbl_bw>
<rsvbl_bw_units> <rsvd_up> <rsvd_down> ] [ <link_subpool_bc1_bandwidth> <max_sub_rsvbl_bw>
<rsvbl_bw_units> <rsvd_up> <rsvd_down> ] [ <bw_descriptors> [ <descriptor_count> <descriptor_kind> ]
] [ <link_state> ] [ <admit_method_up> ] [ <admit_method_down> ] [ <admin_weight> <admin_state> [
<neighbor_interface_info> [ <interface_name> ] [ { TABLE_nbr_src [ <neighbor_source> } ] ] [ {
TABLE_ami_flags <ami_flag_string> } <interface_id> <sw_cap> <source_te_id> <source_up_down>
<source_floodable> [ <source_link_label_id> ] ] ] <igp_neighbor_count> [ { TABLE_igp <neighbor_id>
<neighbor_ipaddress> [ <neighbor_igp_area_id> ] [ <neighbor_link_name> ] <neighbor_up_down> } ] [
<link_up_thresholds> <link_down_thresholds> ] [ <flooded_areas> [ { TABLE_dlist <area_tag> <area_id>
<area_flooding_status> [ <area_not_flooded_reason> } ] ] ] [ { TABLE_up_down <link_dir_name>
<link_dir_bw_kind> <link_dir_bw_units> { TABLE_pool <link_bw_keep_prio> <link_bw_held>
<link_bw_total_held> <link_bw_locked> <link_bw_total_locked> } } ] ] ] }
```

### Syntax Description

|                               |  |
|-------------------------------|--|
| link-management               | Link Management information                |
| bandwidth-allocation          | Link Management bandwidth-allocation       |
| summary                       | (Optional) Summary of bandwidth-allocation |
| <i>intfc</i>                  | (Optional)                                 |
| show                          | Show running system information            |
| mpls                          | Display MPLS status and configuration      |
| traffic-eng                   | Traffic engineering information            |
| __readonly__                  | (Optional)                                 |
| <i>links_count</i>            | (Optional) number of links                 |
| <i>bw_hold_time</i>           | (Optional) bandwidth hold time             |
| <i>flooding_system_status</i> | (Optional) flooding system status          |
| TABLE_flooding                | (Optional) flooding info                   |
| <i>flooding_igp_area_id</i>   | (Optional) flooding IGP area ID            |

|                                   |  |
|-----------------------------------|--|
| <i>flooding_protocol</i>          | (Optional) flooding protocol                   |
| <i>flooding_status</i>            | (Optional) flooding status                     |
| <i>flooding_periodic_status</i>   | (Optional) flooding periodic status            |
| <i>flooding_periodic_interval</i> | (Optional) flooding periodic interval          |
| <i>number_of_flooded_links</i>    | (Optional) number of flooded links             |
| <i>flooding_igp_system_id</i>     | (Optional) flooding IGP system ID              |
| <i>flooding_rtr_ipaddress</i>     | (Optional) flooding router address             |
| <i>flooding_neighbor_count</i>    | (Optional) flooding neighbor count             |
| TABLE_links                       | (Optional) table of information for each link  |
| <i>link_name</i>                  | (Optional) link name                           |
| <i>link_ipaddress</i>             | (Optional) link IP address                     |
| <i>link_is_numbered</i>           | (Optional) whether or not the link is numbered |
| <i>local_intf_id</i>              | (Optional) local interface ID                  |
| <i>rlp_capability</i>             | (Optional) RLP capability                      |
| <i>rlp_working_priority</i>       | (Optional) RLP working priority                |
| <i>srlg_group_none</i>            | (Optional) no SRLG group numbers               |
| TABLE_srlg                        | (Optional) SRLGs                               |
| <i>srlg_group_number</i>          | (Optional) SRLG group number                   |
| TABLE_ixcd                        | (Optional) IXCD                                |
| <i>link_key</i>                   | (Optional) link key                            |
| <i>intfc_switching_cap</i>        | (Optional) interface switching capacity        |
| <i>encoding</i>                   | (Optional) interface encoding                  |
| <i>link_label_type</i>            | (Optional) link label type                     |
| <i>link_installed</i>             | (Optional) is link installed                   |
| <i>link_local_label</i>           | (Optional) link local label                    |
| <i>phys_bw</i>                    | (Optional) link physical bandwidth             |
| <i>phys_bw_units</i>              | (Optional) link physical bandwidth units       |
| <i>model_id</i>                   | (Optional) model ID (e.g., MAM, RDM)           |
| <i>link_min_flow</i>              | (Optional) link min flow                       |

|                                   |   |
|-----------------------------------|---|
| <i>bw_units</i>                   | (Optional) bandwidth units                      |
| <i>max_link_rsvbl_bw</i>          | (Optional) link maximum reservable bandwidth    |
| <i>rsvbl_bw_units</i>             | (Optional) reservable bandwidth units           |
| <i>rsvd_up</i>                    | (Optional) reserved up                          |
| <i>rsvd_down</i>                  | (Optional) reserved down                        |
| <i>link_max_res_bandwidth</i>     | (Optional) link max res bandwidth               |
| <i>max_global_rsvbl_bw</i>        | (Optional) maximum global reservable bandwidth  |
| <i>link_subpool_bc1_bandwidth</i> | (Optional) link subpool bc1 res bandwidth       |
| <i>max_sub_rsvbl_bw</i>           | (Optional) maximum subpool reservable bandwidth |
| <i>bw_descriptors</i>             | (Optional) bandwidth descriptors                |
| <i>descriptor_count</i>           | (Optional) bandwidth descriptor count           |
| <i>descriptor_kind</i>            | (Optional) descriptor kind                      |
| <i>link_state</i>                 | (Optional) link state                           |
| <i>admit_method_up</i>            | (Optional) admit method up                      |
| <i>admit_method_down</i>          | (Optional) admit method down                    |
| <i>admin_weight</i>               | (Optional) admin weight                         |
| <i>admin_state</i>                | (Optional) admin state                          |
| <i>neighbor_interface_info</i>    | (Optional) neighbor interface info              |
| <i>interface_name</i>             | (Optional) interface name                       |
| TABLE_nbr_src                     | (Optional) neighbor information                 |
| <i>neighbor_source</i>            | (Optional) neighbor source                      |
| TABLE_ami_flags                   | (Optional) AMI flags                            |
| <i>ami_flag_string</i>            | (Optional) AMI flag                             |
| <i>interface_id</i>               | (Optional) interface ID                         |
| <i>sw_cap</i>                     | (Optional) Sw Cap                               |
| <i>source_te_id</i>               | (Optional) TE ID                                |
| <i>source_up_down</i>             | (Optional) is the source up or down             |
| <i>source_floodable</i>           | (Optional) is the source floodable              |
| <i>source_link_lable_id</i>       | (Optional) link table ID                        |

|                                  |  |
|----------------------------------|--|
| <i>igp_neighbor_count</i>        | (Optional) IGP neighbor count          |
| TABLE_igp                        | (Optional) IGP information             |
| <i>neighbor_id</i>               | (Optional) neighbor's name             |
| <i>neighbor_ipaddress</i>        | (Optional) neighbor's IP address       |
| <i>neighbor_igp_area_id</i>      | (Optional) neighbor's IGP area ID      |
| <i>neighbor_link_name</i>        | (Optional) neighbor's link name        |
| <i>neighbor_up_down</i>          | (Optional) is neighbor up or down      |
| <i>link_up_thresholds</i>        | (Optional) link up thresholds          |
| <i>link_down_thresholds</i>      | (Optional) link down thresholds        |
| <i>flooded_areas</i>             | (Optional) number of flooded areas     |
| TABLE_dlist                      | (Optional) table                       |
| <i>area_tag</i>                  | (Optional) area tag                    |
| <i>area_id</i>                   | (Optional) area ID                     |
| <i>area_flooding_status</i>      | (Optional) area flooding status        |
| <i>area_not_flooded_reason</i>   | (Optional) area not-flooded reason     |
| TABLE_up_down                    | (Optional) up/down information         |
| <i>link_dir_name</i>             | (Optional) link dir name               |
| <i>link_dir_bw_kind</i>          | (Optional) link dir bandwidth kind     |
| <i>link_dir_bw_units</i>         | (Optional) link dir bandwidth units    |
| TABLE_pool                       | (Optional) information about each pool |
| <i>link_bw_keep_prio</i>         | (Optional) keep priority               |
| <i>link_bw_held</i>              | (Optional) bandwidth held              |
| <i>link_bw_total_held</i>        | (Optional) total bandwidth held        |
| <i>link_bw_locked</i>            | (Optional) bandwidth locked            |
| <i>link_bw_total_locked</i>      | (Optional) total bandwidth locked      |
| <i>link_global_bc0_bandwidth</i> | (Optional) link global bc0 bandwidth   |

**Command Mode**

- /exec

# show mpls traffic-eng link-management igp-neighbors ip

```
show mpls traffic-eng link-management igp-neighbors ip <ipaddr> [ __readonly__
<neighbor_ippeer_hdr_ipaddress> [ TABLE_nbr <neighbor_ippeer_id> <neighbor_ippeer_igp_area_id>
<neighbor_ippeer_link_name> ] ]
```

## Syntax Description

|                                      |  |
|--------------------------------------|--|
| link-management                      | Link Management information                  |
| igp-neighbors                        | Link Management igp-neighbors                |
| ip                                   | Show neighbors with matching link IP address |
| <i>ipaddr</i>                        | neighbor's IP address (A.B.C.D)              |
| show                                 | Show running system information              |
| mpls                                 | Display MPLS status and configuration        |
| traffic-eng                          | Traffic engineering information              |
| <i>__readonly__</i>                  | (Optional)                                   |
| <i>neighbor_ippeer_hdr_ipaddress</i> | (Optional) header neighbor ip address        |
| TABLE_nbr                            | (Optional) list of neighbors                 |
| <i>neighbor_ippeer_id</i>            | (Optional) neighbor ID                       |
| <i>neighbor_ippeer_igp_area_id</i>   | (Optional) neighbor's IGP area ID            |
| <i>neighbor_ippeer_link_name</i>     | (Optional) neighbor link's name              |

## Command Mode

- /exec

# show mpls traffic-eng link-management igp-neighbors igp-id isis

```
show mpls traffic-eng link-management igp-neighbors igp-id { isis <isis-id> | ospf <ospf-ipaddr> } [
__readonly__ <hdr_neighbor_id> [ TABLE_nbr [ <igppeer_neighbor_id> ] <igppeer_neighbor_ipaddress>
[ <igppeer_neighbor_igp_area_id> ] [ <igppeer_neighbor_link_name> ] ] ]
```

## Syntax Description

|                                     |  |
|-------------------------------------|--|
| link-management                     | Link Management information                      |
| igp-neighbors                       | Link Management igp-neighbors                    |
| igp-id                              | Link Management igp-neighbors by IGP ID          |
| isis                                | Show neighbors with matching ISIS node ID        |
| <i>isis-id</i>                      | neighbor's ISIS ID in XX.XXXXX. ... .XXX.XX form |
| ospf                                | Show neighbors with matching OSPF node ID        |
| <i>ospf-ipaddr</i>                  | neighbor's OSPF ID (A.B.C.D)                     |
| show                                | Show running system information                  |
| mpls                                | Display MPLS status and configuration            |
| traffic-eng                         | Traffic engineering information                  |
| <i>__readonly__</i>                 | (Optional)                                       |
| <i>hdr_neighbor_id</i>              | (Optional) header neighbor id                    |
| TABLE_nbr                           | (Optional) list of neighbors                     |
| <i>igppeer_neighbor_id</i>          | (Optional) neighbor's name                       |
| <i>igppeer_neighbor_igp_area_id</i> | (Optional) neighbor's IGP area ID                |
| <i>igppeer_neighbor_ipaddress</i>   | (Optional) neighbor ip address                   |
| <i>igppeer_neighbor_link_name</i>   | (Optional) neighbor link's name                  |

## Command Mode

- /exec

## show mpls traffic-eng link-management igp-neighbors

```
show mpls traffic-eng link-management igp-neighbors [ <intfc> ] [ __readonly__ [ TABLE_link_nbr
<hdr_neighbor_link_name> [ TABLE_nbr [ <neighbor_id> [ <neighbor_igp_area_id> ] <neighbor_ipaddress>
] [ <neighbor_up_down> ] [ { TABLE_nbr_src_list <neighbor_source> } ] ] ] ]
```

### Syntax Description

|                               |   |
|-------------------------------|---|
| link-management               | Link Management information               |
| igp-neighbors                 | Link Management igp-neighbors             |
| <i>intfc</i>                  | (Optional)                                |
| show                          | Show running system information           |
| mpls                          | Display MPLS status and configuration     |
| traffic-eng                   | Traffic engineering information           |
| <i>__readonly__</i>           | (Optional)                                |
| TABLE_link_nbr                | (Optional) list of neighbors on a link    |
| <i>hdr_neighbor_link_name</i> | (Optional) header neighbor link's name    |
| TABLE_nbr                     | (Optional) list of neighbors              |
| <i>neighbor_id</i>            | (Optional) neighbor's name                |
| <i>neighbor_igp_area_id</i>   | (Optional) neighbor's IGP area ID         |
| <i>neighbor_ipaddress</i>     | (Optional) neighbor's IP address          |
| <i>neighbor_up_down</i>       | (Optional) is neighbor up or down         |
| TABLE_nbr_src_list            | (Optional) list of sources for a neighbor |
| <i>neighbor_source</i>        | (Optional) neighbor source                |

### Command Mode

- /exec



## show mpls traffic-eng link-management statistics

```
show mpls traffic-eng link-management statistics [ <intfc> ] [ __readonly__ [
<lsp_path_adm_ctr_setup_requests> <lsp_path_adm_ctr_setup_admits> <lsp_path_adm_ctr_setup_rejects>
<lsp_path_adm_ctr_setup_errors> <lsp_path_adm_ctr_tear_requests> <lsp_path_adm_ctr_tear_preempts>
<lsp_path_adm_ctr_tear_errors> <lsp_resv_adm_ctr_setup_requests> <lsp_resv_adm_ctr_setup_admits>
<lsp_resv_adm_ctr_setup_rejects> <lsp_resv_adm_ctr_setup_errors> <lsp_resv_adm_ctr_tear_requests>
<lsp_resv_adm_ctr_tear_preempts> <lsp_resv_adm_ctr_tear_errors> [ TABLE_links <link_name> [
<link_ipaddress> ] <up_path_ctr_setup_requests> <up_path_ctr_setup_admits> <up_path_ctr_setup_rejects>
<up_path_ctr_setup_errors> <up_path_ctr_tear_requests> <up_path_ctr_tear_preempts>
<up_path_ctr_tear_errors> <up_resv_ctr_setup_requests> <up_resv_ctr_setup_admits>
<up_resv_ctr_setup_rejects> <up_resv_ctr_setup_errors> <up_resv_ctr_tear_requests>
<up_resv_ctr_tear_preempts> <up_resv_ctr_tear_errors> <down_path_ctr_setup_requests>
<down_path_ctr_setup_admits> <down_path_ctr_setup_rejects> <down_path_ctr_setup_errors>
<down_path_ctr_tear_requests> <down_path_ctr_tear_preempts> <down_path_ctr_tear_errors>
<down_resv_ctr_setup_requests> <down_resv_ctr_setup_admits> <down_resv_ctr_setup_rejects>
<down_resv_ctr_setup_errors> <down_resv_ctr_tear_requests> <down_resv_ctr_tear_preempts>
<down_resv_ctr_tear_errors> ] [ <igp_mem_stats_rims_name> <igp_mem_stats_rims_allocs>
<igp_mem_stats_rims_frees> <igp_mem_stats_rims_locks> <igp_mem_stats_rims_unlocks> ] ] ]
```

### Syntax Description

|  |  |
|--|--|
| link-management                        | Link Management information                    |
| statistics                             | Link Management Traffic Engineering statistics |
| <i>intfc</i>                           | (Optional)                                     |
| show                                   | Show running system information                |
| mpls                                   | Display MPLS status and configuration          |
| traffic-eng                            | Traffic engineering information                |
| <i>__readonly__</i>                    | (Optional)                                     |
| <i>lsp_path_adm_ctr_setup_requests</i> | (Optional) setup requests                      |
| <i>lsp_path_adm_ctr_setup_admits</i>   | (Optional) setup admits                        |
| <i>lsp_path_adm_ctr_setup_rejects</i>  | (Optional) setup rejects                       |
| <i>lsp_path_adm_ctr_setup_errors</i>   | (Optional) setup errors                        |
| <i>lsp_path_adm_ctr_tear_requests</i>  | (Optional) tear requests                       |
| <i>lsp_path_adm_ctr_tear_preempts</i>  | (Optional) tear preempts                       |
| <i>lsp_path_adm_ctr_tear_errors</i>    | (Optional) tear errors                         |
| <i>lsp_resv_adm_ctr_setup_requests</i> | (Optional) setup requests                      |
| <i>lsp_resv_adm_ctr_setup_admits</i>   | (Optional) setup admits                        |

|                                       |   |
|---------------------------------------|---|
| <i>lsp_resv_adm_ctr_setup_rejects</i> | (Optional) setup rejects                      |
| <i>lsp_resv_adm_ctr_setup_errors</i>  | (Optional) setup errors                       |
| <i>lsp_resv_adm_ctr_tear_requests</i> | (Optional) tear requests                      |
| <i>lsp_resv_adm_ctr_tear_preempts</i> | (Optional) tear preempts                      |
| <i>lsp_resv_adm_ctr_tear_errors</i>   | (Optional) tear errors                        |
| TABLE_links                           | (Optional) table of information for each link |
| <i>link_name</i>                      | (Optional) link name                          |
| <i>link_ipaddress</i>                 | (Optional) link IP address                    |
| <i>up_path_ctr_setup_requests</i>     | (Optional) setup requests                     |
| <i>up_path_ctr_setup_admits</i>       | (Optional) setup admits                       |
| <i>up_path_ctr_setup_rejects</i>      | (Optional) setup rejects                      |
| <i>up_path_ctr_setup_errors</i>       | (Optional) setup errors                       |
| <i>up_path_ctr_tear_requests</i>      | (Optional) tear requests                      |
| <i>up_path_ctr_tear_preempts</i>      | (Optional) tear preempts                      |
| <i>up_path_ctr_tear_errors</i>        | (Optional) tear errors                        |
| <i>up_resv_ctr_setup_requests</i>     | (Optional) setup requests                     |
| <i>up_resv_ctr_setup_admits</i>       | (Optional) setup admits                       |
| <i>up_resv_ctr_setup_rejects</i>      | (Optional) setup rejects                      |
| <i>up_resv_ctr_setup_errors</i>       | (Optional) setup errors                       |
| <i>up_resv_ctr_tear_requests</i>      | (Optional) tear requests                      |
| <i>up_resv_ctr_tear_preempts</i>      | (Optional) tear preempts                      |
| <i>up_resv_ctr_tear_errors</i>        | (Optional) tear errors                        |
| <i>down_path_ctr_setup_requests</i>   | (Optional) setup requests                     |
| <i>down_path_ctr_setup_admits</i>     | (Optional) setup admits                       |
| <i>down_path_ctr_setup_rejects</i>    | (Optional) setup rejects                      |
| <i>down_path_ctr_setup_errors</i>     | (Optional) setup errors                       |
| <i>down_path_ctr_tear_requests</i>    | (Optional) tear requests                      |
| <i>down_path_ctr_tear_preempts</i>    | (Optional) tear preempts                      |
| <i>down_path_ctr_tear_errors</i>      | (Optional) tear errors                        |

|                                     |                                       |
|-------------------------------------|---------------------------------------|
| <i>down_resv_ctr_setup_requests</i> | (Optional) setup requests             |
| <i>down_resv_ctr_setup_admits</i>   | (Optional) setup admits               |
| <i>down_resv_ctr_setup_rejects</i>  | (Optional) setup rejects              |
| <i>down_resv_ctr_setup_errors</i>   | (Optional) setup errors               |
| <i>down_resv_ctr_tear_requests</i>  | (Optional) tear requests              |
| <i>down_resv_ctr_tear_preempts</i>  | (Optional) tear preempts              |
| <i>down_resv_ctr_tear_errors</i>    | (Optional) tear errors                |
| <i>igp_mem_stats_rims_name</i>      | (Optional) IGP mem stats RIMS name    |
| <i>igp_mem_stats_rims_allocs</i>    | (Optional) IGP mem stats RIMS allocs  |
| <i>igp_mem_stats_rims_frees</i>     | (Optional) IGP mem stats RIMS frees   |
| <i>igp_mem_stats_rims_locks</i>     | (Optional) IGP mem stats RIMS locks   |
| <i>igp_mem_stats_rims_unlocks</i>   | (Optional) IGP mem stats RIMS unlocks |

**Command Mode**

- /exec

## show mpls traffic-eng lsp attributes

```
show mpls traffic-eng lsp attributes [ name <attr-list> ] [ __readonly__ [ <lsp_id_count> <lsp_list_count> ]
{ TABLE_lspattr [ <lsp_name> <lsp_id_name> ] [ <lsp_sd_command> ] [ <lsp_aff_command> ] [
<lsp_abw_command> ] [ <lsp_bw_command> ] [ <lsp_frr_command> ] [ <lsp_ld_command> ] [
<lsp_prio_command> ] [ <lsp_rec_rte_command> ] } ]
```

### Syntax Description

|                            |   |
|----------------------------|---|
| lsp                        | Show LSP information                            |
| attributes                 | Show LSP attribute lists                        |
| name                       | (Optional) Show a specific named attribute list |
| <i>attr-list</i>           | (Optional) Enter list name                      |
| show                       | Show running system information                 |
| mpls                       | Display MPLS status and configuration           |
| traffic-eng                | Traffic engineering information                 |
| <i>__readonly__</i>        | (Optional)                                      |
| <i>lsp_id_count</i>        | (Optional) lsp id count                         |
| <i>lsp_list_count</i>      | (Optional) lsp list count                       |
| TABLE_lspattr              | (Optional) lspattr info                         |
| <i>lsp_name</i>            | (Optional) lsp name                             |
| <i>lsp_id_name</i>         | (Optional) lsp id name                          |
| <i>lsp_sd_command</i>      | (Optional) lsp sd command                       |
| <i>lsp_aff_command</i>     | (Optional) lsp aff command                      |
| <i>lsp_abw_command</i>     | (Optional) lsp abw command                      |
| <i>lsp_bw_command</i>      | (Optional) lsp bw command                       |
| <i>lsp_frr_command</i>     | (Optional) lsp frr command                      |
| <i>lsp_ld_command</i>      | (Optional) lsp ld command                       |
| <i>lsp_prio_command</i>    | (Optional) lsp prio command                     |
| <i>lsp_rec_rte_command</i> | (Optional) lsp rec rte command                  |

### Command Mode

- /exec



|                                 |                                 |
|---------------------------------|---------------------------------|
| traffic-eng                     | Traffic engineering information |
| <i>__readonly__</i>             | (Optional)                      |
| TABLE_areas                     | (Optional) areas info           |
| <i>hdr_pcalc_system_id</i>      | (Optional) pcalc system id      |
| <i>hdr_pcalc_area_id</i>        | (Optional) pcalc area id        |
| <i>hdr_pcalc_maxage</i>         | (Optional) pcalc maxage         |
| <i>hdr_pcalc_generation</i>     | (Optional) pcalc generation     |
| <i>hdr_pcalc_dste_mode</i>      | (Optional) pcalc dste mode      |
| TABLE_nodes                     | (Optional) nodes info           |
| <i>pcalc_node_system_id</i>     | (Optional) pcalc system id      |
| <i>pcalc_node_router_id</i>     | (Optional) pcalc router id      |
| <i>pcalc_node_type</i>          | (Optional) pcalc node type      |
| <i>pcalc_node_valid_for_spf</i> | (Optional) pcalc valid for spf  |
| <i>pcalc_node_area_id</i>       | (Optional) pcalc area id        |
| <i>pcalc_node_node_id</i>       | (Optional) pcalc node id        |
| TABLE_mg_list                   | (Optional) mg_list info         |
| <i>pcalc_mg_id</i>              | (Optional) pcalc mg id          |
| <i>pcalc_dest_addr</i>          | (Optional) pcalc dest addr      |
| TABLE_links                     | (Optional) links info           |
| <i>pcalc_link_index</i>         | (Optional) pcalc link index     |
| <i>pcalc_subnet_type</i>        | (Optional) pcalc subnet type    |
| <i>pcalc_dr</i>                 | (Optional) pcalc dr             |
| <i>pcalc_system_id</i>          | (Optional) pcalc system id      |
| <i>pcalc_node_id</i>            | (Optional) pcalc node id        |
| <i>pcalc_generation</i>         | (Optional) pcalc generation     |
| <i>pcalc_frag_id</i>            | (Optional) pcalc frag id        |
| <i>pcalc_ip_addr</i>            | (Optional) pcalc ip addr        |
| <i>pcalc_if_id</i>              | (Optional) pcalc if id          |
| <i>pcalc_nbr_ip_addr</i>        | (Optional) pcalc nbr ip addr    |

|                                 |                                       |
|---------------------------------|---------------------------------------|
| <i>pcalc_nbr_if_id</i>          | (Optional) pcalc nbr if id            |
| <i>pcalc_te_metric</i>          | (Optional) pcalc TE metric            |
| <i>pcalc_igp_metric</i>         | (Optional) pcalc IGP metric           |
| <i>pcalc_affinity</i>           | (Optional) pcalc affinity             |
| TABLE_srlgs                     | (Optional) srlgs info                 |
| <i>pcalc_srlg_number</i>        | (Optional) pcalc srlg number          |
| <i>pcalc_switch_cap</i>         | (Optional) pcalc switch cap           |
| <i>pcalc_encode</i>             | (Optional) pcalc encode               |
| <i>pcalc_bw</i>                 | (Optional) pcalc bw                   |
| <i>pcalc_dste_mode</i>          | (Optional) pcalc dste mode            |
| TABLE_pcalc_migr                | (Optional) pcalc migration info       |
| <i>pcalc_migration_mode</i>     | (Optional) pcalc migration mode       |
| <i>pcalc_migration_bw</i>       | (Optional) pcalc migration bw         |
| <i>pcalc_lsp_bw</i>             | (Optional) pcalc lsp bw               |
| TABLE_prios                     | (Optional) prios info                 |
| <i>pcalc_pri</i>                | (Optional) pcalc pri                  |
| <i>pcalc_lsp_bw_alloc</i>       | (Optional) pcalc lsp bw alloc         |
| <i>pcalc_lsp_bw_avail</i>       | (Optional) pcalc lsp bw avail         |
| TABLE_inprogress                | (Optional) in progress info           |
| <i>pcalc_in_progress_pri</i>    | (Optional) pcalc in progress priority |
| <i>pcalc_in_progress_bw</i>     | (Optional) pcalc in progress bw       |
| <i>pcalc_in_progress_sub_bw</i> | (Optional) pcalc in progress sub bw   |

### Command Mode

- /exec

## show mpls traffic-eng topology path

```
show mpls traffic-eng topology path { <tunnel-intf> [ destination <ipaddr> ] | destination <ipaddr> } [
bandwidth <kbps> | { priority <take-priority> [ <keep-priority> ] } | { affinity <affinity-value> [ mask
<mask-value> ] } ] + [ __readonly__ <path_dest_ipaddr> <path_bw> <path_setup_pri> <path_hold_pri>
<path_affinity_value> <path_affinity_mask> [ <path_match> <path_dest_ipaddr> ] [ <path_min_bw> ] [
<path_max_bw> ] [ TABLE_hops <path_n_hop> [ <path_hop_link_id> ] [ <path_hop_affinity_value> ] [
<path_hop_available_bw> ] [ <path_hop_dest_ipaddr> ] ] ]
```

### Syntax Description

|                         |  |
|-------------------------|--|
| topology                | Show topology commands                     |
| path                    | MPLS traffic-eng path information          |
| <i>tunnel-intf</i>      | Tunnel interface                           |
| destination             | (Optional) Specify LSP destination address |
| <i>ipaddr</i>           | (Optional) destination address (A.B.C.D)   |
| bandwidth               | (Optional) Specify LSP bandwidth           |
| <i>kbps</i>             | (Optional) bandwidth in kbps               |
| priority                | (Optional) Specify LSP priority            |
| <i>take-priority</i>    | (Optional) setup (take) priority           |
| <i>keep-priority</i>    | (Optional) hold (keep) priority            |
| affinity                | (Optional) Specify LSP affinity            |
| <i>affinity-value</i>   | (Optional) affinity value                  |
| mask                    | (Optional) Specify LSP affinity mask       |
| <i>mask-value</i>       | (Optional) affinity mask value             |
| show                    | Show running system information            |
| mpls                    | Display MPLS status and configuration      |
| traffic-eng             | Traffic engineering information            |
| <i>__readonly__</i>     | (Optional)                                 |
| <i>path_dest_ipaddr</i> | (Optional) path dest ipaddr                |
| <i>path_bw</i>          | (Optional) path bw                         |
| <i>path_setup_pri</i>   | (Optional) path setup pri                  |
| <i>path_hold_pri</i>    | (Optional) path hold pri                   |



|                                |                                    |
|--------------------------------|------------------------------------|
| <i>path_affinity_value</i>     | (Optional) path affinity value     |
| <i>path_affinity_mask</i>      | (Optional) path affinity mask      |
| <i>path_match</i>              | (Optional) path match              |
| <i>path_min_bw</i>             | (Optional) path min bw             |
| <i>path_max_bw</i>             | (Optional) path min bw             |
| TABLE_hops                     | (Optional) hops info               |
| <i>path_n_hop</i>              | (Optional) path n hop              |
| <i>path_hop_link_id</i>        | (Optional) path hop link id        |
| <i>path_hop_affinity_value</i> | (Optional) path hop affinity value |
| <i>path_hop_available_bw</i>   | (Optional) path hop available bw   |
| <i>path_hop_dest_ipaddr</i>    | (Optional) path hop dest ipaddr    |

**Command Mode**

- /exec

## show mpls traffic-eng tunnels

```

show mpls traffic-eng tunnels { summary | { <tun-intf> } [ brief | statistics | accounting | backup | protection
] | { { [ destination <address> ] [ source-id { <ipaddress> | <tunnel-id> | <ipaddress> <tunnel-id> } ] [ role {
all | head | middle | tail | remote } ] [ up | down } ] [ suboptimal constraints { none | current | max } ] [ property
{ backup-tunnel | fast-reroute } ] [ frstate { ready | active } ] [ name <string> | name-regexp <regexp-string>
] [ interface { in <in-intf> | out <out-intf> | <phys-intf> | backup <bkup-intf> } ] [ attributes <attr-string> } ]
+ [ brief | statistics [ summary ] | accounting | backup | protection ] } [ __readonly__ [ [ [
<tun_process_signaller_status> ] [ <passive_listener_running> ] [ <rsvp_running> ] [ <forwarding_configured>
] [ <head_vifs> <heads_active> <heads_est> <heads_activated> <heads_deactivated> <recov_attempts>
<recovered> <midpoints> <tails> ] [ <reopt_interval> <reopt_remaining> ] [ <reopt_running> ] [
<fr_promote_interval> <fr_promote_remaining> ] [ <fr_promote_running> ] [ <fr_onehop_est_interval>
<fr_onehop_est_remaining> ] [ <fr_est_scan_running> ] [ <fr_rm_active_est_interval>
<fr_rm_active_est_remaining> ] [ <fr_active_scan_running> ] [ <fr_bu_notinuse_interval>
<fr_bu_notinuse_remaining> ] [ <fr_bu_notinuse_scan_running> ] [ <auto_bw_coll_interval>
<auto_bw_coll_remaining> ] [ <auto_bw_coll_running> ] [ <reeval_interval> <reeval_remaining> ] [
<reeval_running> ] ] [ TABLE_tunnels_brief <tun_brief_name> <tun_brief_dest_ip> [ <tun_brief_uplink>
] [ <tun_brief_downlink> ] <tun_brief_gen_status> <tun_brief_conn_status> ] ] [ TABLE_tunnels_protect [
<prot_tunnel_role> ] <prot_name> <prot_head_name> <prot_gen_status> <prot_conn_status>
<prot_tsp_src_ipaddr> <prot_tsp_dst_ipaddr> <prot_tsp_tun_instances> [ [ <backup_none> ] ] [
TABLE_frr_backup_db <bu_protected_intfcs> ] [ <bu_num_lsps> <bu_num_active_lsps> ] [
<bu_bw_any_unlimited_inuse> ] [ <bu_bw_any_limit> <bu_bw_any_limited_inuse>
<bu_bw_any_limited_bwp_inuse> ] [ <bu_bw_sub_limit> <bu_bw_sub_limited_inuse> [
<bu_bw_sub_limited_bwp_inuse> ] ] [ <bu_bw_global_limit> <bu_bw_global_limited_inuse> [
<bu_bw_global_limited_bwp_inuse> ] ] ] [ <frr_protection_none> ] [ <no_rsvp_info> ] [ <in_frr_is_active>
<in_orig_intf> <in_tun_tag_label> <in_frr_orig_phop> [ <in_intf_with_frr> <in_frr_phop> ] ] [
<unprotected> <out_orig_name> <out_tun_tag_label> <out_lsp_orig_phop> [ <nhop_is_tail> ] [
<no_frr_nnhop_info> ] [ <out_frr_orig_nnhop> <out_frr_orig_nnhop_rtr> ] ] [ <frr_active_or_ready>
<frr_backup_lsp_intf> <frr_nnhop_or_nhop> <frr_out_backup_intf> <lsp_out_intf>
<frr_backup_lsp_out_label> <frr_orig_out_intf> <frr_orig_out_label> <frr_orig_out_nhop> [
<frr_backup_nnhop> <frr_backup_nnhop_rtr> ] <frr_backup_intf> <frr_backup_label> <frr_protected_bw>
<frr_protect_level> <frr_bw_type> ] [ [ TABLE_prot_protection [ <protection_path_status> ] [
<protection_common_links> ] [ <protection_common_nodes> ] [ <protection_p2p_links>
<protection_multiaccess_links> <protection_both_interfaces> <protection_one_interface>
<protection_zero_interfaces> ] [ TABLE_primary_protection <protection_primary_path> ] ] [
TABLE_protect_protection <protection_protect_path> ] [ <protection_type> <protection_autobw_req>
<protection_bw_kbps> <protection_setup_pri> <protection_hold_pri> <protection_affinity_value>
<protection_affinity_mask> <protection_metric_type> ] [ [ <protection_in_name> ] [ <protection_in_label>
] [ <protection_out_name> ] [ <protection_out_label> ] [ <protection_backup_name> ] [
<protection_backup_label> ] [ <protection_frr_active> ] ] [ <protection_rsvp_lsp_source_addr>
<protection_rsvp_lsp_dest_addr> <protection_rsvp_lsp_dest_port> <protection_rsvp_lsp_source_port>
<protection_rsvp_lsp_local_addr> ] [ { TABLE_ero_in_protection [ <in_protection_rsvp_ero_addr>
<in_protection_rsvp_ero_loose> ] [ <in_protection_rsvp_ero_routerid> <in_protection_rsvp_ero_if_id> ] }
] [ { TABLE_ero_out_protection [ <out_protection_rsvp_ero_addr> <out_protection_rsvp_ero_loose> ] [
<out_protection_rsvp_ero_routerid> <out_protection_rsvp_ero_if_id> ] } ] [ { TABLE_rro_protection [
<protection_rsvp_rro_addr> ] [ <protection_rsvp_rro_protect_avail> ] [ <protection_rsvp_rro_protect_in_use>
] [ <protection_rsvp_rro_bw_protected> ] [ <protection_rsvp_rro_node_protect_avail> ] [
<protection_rsvp_rro_is_node_id> ] [ <protection_rsvp_rro_if_addr> <protection_rsvp_rro_if_id> ] [
<protection_rsvp_rro_label> ] } ] [ <protection_rsvp_tspec_rate> ] [ <protection_rsvp_tspec_burst> ] [
<protection_rsvp_tspec_peak> ] ] [ { TABLE_rro_resv_protection [ <resv_protection_rsvp_rro_addr> ] [

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<resv_protection_rsvp_rro_protect_avail> ][ <resv_protection_rsvp_rro_protect_in_use> ][
<resv_protection_rsvp_rro_bw_protected> ][ <resv_protection_rsvp_rro_node_protect_avail> ][
<resv_protection_rsvp_rro_is_node_id> ][ <resv_protection_rsvp_rro_if_addr>
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][ <protection_rsvp_fspect_burst> ][ <protection_rsvp_fspect_peak> ]][ ]][ TABLE_tunnels [
<vif_head_name> ][ <lsp_name> ][ <sprint_tun_name_stats> ][ <tunnels_shown> ][ <dest_intf> ]][
<lm_tunnel_name_stats> ][ <tsp_dest_ipaddr_stats> ][ <vif_head_name_stats> ]][ <tsp_cnt_num_tunnels>
][ <tsp_cnt_idx_no_path> <tsp_cnt_idx_inval_path> <tsp_cnt_idx_no_iep> <tsp_cnt_idx_pathchg>
<tsp_cnt_idx_loose_reopt> <tsp_cnt_idx_statechg> <tsp_cnt_idx_tun_down> <tsp_cnt_idx_oper_down>
<tsp_cnt_idx_sig_ok> <tsp_cnt_idx_sig_timeout> <tsp_cnt_idx_bad_path> <tsp_cnt_idx_sig_abort>
<tsp_cnt_idx_nobw> <tsp_cnt_idx_noroute> <tsp_cnt_idx_admin> <tsp_cnt_idx_bad> <tsp_cnt_idx_rro_loop>
<tsp_cnt_idx_frr_active> <tsp_cnt_idx_other> [ TABLE_rrr_db <tsp_rrr_db_type> <tsp_rrr_db_in_use>
<tsp_rrr_db_allocated> <tsp_rrr_db_freed> ][ <he_mgr_tbl_id> ][ <lm_mgr_tbl_id> ]][ <time_passed>
<output_rate> <packet_rate> <normalized> ]][ <sprint_tun_name> <tsp_dest_ipaddr> ][ <lm_tunnel_name>
][ <gen_status> ][ <conn_status> ][ <tsp_setup_valid> ][ <tsp_setup_status> ][ TABLE_members [
<member_name> [ TABLE_member_exp [ <member_exp_bits> ]][ <member_default_exp_bit> ]][ ]][
<current_reopt_in_progress> ][ <current_delayed_clean> ][ <current_popt_protect> <current_popt_idx_str>
<current_popt_lockdown> <current_popt_type_str> <current_popt_verbatim> <current_popt_path_id> [
<current_popt_accum_admin_weight> ][ <current_popt_out_interface_name> [ <current_popt_label_str>
<current_popt_int_prop> ][ <current_popt_label_raw_value> ]][ <current_fwd_adj_hold_up_ms_remaining>
][ <current_reroute_pending> ]][ <current_type> <current_autobw_req> <current_bw_kbps>
<current_setup_pri> <current_hold_pri> <current_affinity_value> <current_affinity_mask>
<current_metric_type> ]][ TABLE_prot_current [ <current_path_status> ][ <current_common_links> ]][
<current_common_nodes> ]][ <current_p2p_links> <current_multiaccess_links> <current_both_interfaces>
<current_one_interface> <current_zero_interfaces> ]][ TABLE_primary_current <current_primary_path> ]
[ TABLE_protect_current <current_protect_path> ]][ <current_type> <current_autobw_req>
<current_bw_kbps> <current_setup_pri> <current_hold_pri> <current_affinity_value> <current_affinity_mask>
<current_metric_type> ]][ [ <current_in_name> ][ <current_in_label> ][ <current_out_name> ][
<current_out_label> ]][ <current_backup_name> ][ <current_backup_label> ][ <current_frr_active> ]][
<current_rsvp_lsp_source_addr> <current_rsvp_lsp_dest_addr> <current_rsvp_lsp_dest_port>
<current_rsvp_lsp_source_port> <current_rsvp_lsp_local_addr> ]][ { TABLE_ero_in_current [
<in_current_rsvp_ero_addr> <in_current_rsvp_ero_loose> ][ <in_current_rsvp_ero_routerid>
<in_current_rsvp_ero_if_id> ]} ]][ { TABLE_ero_out_current [ <out_current_rsvp_ero_addr>
<out_current_rsvp_ero_loose> ][ <out_current_rsvp_ero_routerid> <out_current_rsvp_ero_if_id> ]} ]][ {
TABLE_rro_current [ <current_rsvp_rro_addr> ][ <current_rsvp_rro_protect_avail> ]][
<current_rsvp_rro_protect_in_use> ][ <current_rsvp_rro_bw_protected> ]][
<current_rsvp_rro_node_protect_avail> ][ <current_rsvp_rro_is_node_id> ][ <current_rsvp_rro_if_addr>
<current_rsvp_rro_if_id> ][ <current_rsvp_rro_label> ]} ]][ [ <current_rsvp_tspect_rate> ][
<current_rsvp_tspect_burst> ][ <current_rsvp_tspect_peak> ]][ ]][ { TABLE_rro_resv_current [
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<resv_current_rsvp_rro_protect_in_use> ][ <resv_current_rsvp_rro_bw_protected> ]][
<resv_current_rsvp_rro_node_protect_avail> ][ <resv_current_rsvp_rro_is_node_id> ]][
<resv_current_rsvp_rro_if_addr> <resv_current_rsvp_rro_if_id> ][ <resv_current_rsvp_rro_label> ]} ]][ [
<current_rsvp_fspect_rate> ][ <current_rsvp_fspect_burst> ][ <current_rsvp_fspect_peak> ]][ ]][ ]][
<prot_current_popt_protect> <prot_current_popt_idx_str> <prot_current_popt_lockdown>
<prot_current_popt_type_str> <prot_current_popt_verbatim> <prot_current_popt_path_id> [
<prot_current_popt_accum_admin_weight> ][ <prot_current_popt_out_interface_name> [
<prot_current_popt_label_str> <prot_current_popt_int_prop> ][ <prot_current_popt_label_raw_value> ]]
][ ]][ TABLE_popts [ [ <popts_reopt_in_progress> ][ <popts_delayed_clean> ]][ <popts_popt_protect>
<popts_popt_idx_str> <popts_popt_lockdown> <popts_popt_type_str> <popts_popt_verbatim>
<popts_popt_path_id> [ <popts_popt_accum_admin_weight> ][ <popts_popt_out_interface_name> [

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<popts_popt_label_str> <popts_popt_int_prop> ][ <popts_popt_label_raw_value> ] ] ] [
<popts_fwd_adj_hold_up_ms_remaining> ][ <popts_reroute_pending> ][ <popts_type> <popts_autobw_req>
<popts_bw_kbps> <popts_setup_pri> <popts_hold_pri> <popts_affinity_value> <popts_affinity_mask>
<popts_metric_type> ] [ [ TABLE_prot_popts [ <popts_path_status> ] [ <popts_common_links> ] [
<popts_common_nodes> ] [ <popts_p2p_links> <popts_multiaccess_links> <popts_both_interfaces>
<popts_one_interface> <popts_zero_interfaces> ] [ TABLE_primary_popts <popts_primary_path> ] [
TABLE_protect_popts <popts_protect_path> ] [ <popts_type> <popts_autobw_req> <popts_bw_kbps>
<popts_setup_pri> <popts_hold_pri> <popts_affinity_value> <popts_affinity_mask> <popts_metric_type>
] [ [ [ <popts_in_name> ] [ <popts_in_label> ] [ <popts_out_name> ] [ <popts_out_label> ] [
<popts_backup_name> ] [ <popts_backup_label> ] [ <popts_fir_active> ] ] [ <popts_rsvp_lsp_source_addr>
<popts_rsvp_lsp_dest_addr> <popts_rsvp_lsp_dest_port> <popts_rsvp_lsp_source_port>
<popts_rsvp_lsp_local_addr> ] [ { TABLE_ero_in_popts [ <in_popts_rsvp_ero_addr>
<in_popts_rsvp_ero_loose> ] [ <in_popts_rsvp_ero_routerid> <in_popts_rsvp_ero_if_id> } ] ] [ {
TABLE_ero_out_popts [ <out_popts_rsvp_ero_addr> <out_popts_rsvp_ero_loose> ] [
<out_popts_rsvp_ero_routerid> <out_popts_rsvp_ero_if_id> } ] ] [ { TABLE_rro_popts [
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<popts_rsvp_rro_bw_protected> ] [ <popts_rsvp_rro_node_protect_avail> ] [ <popts_rsvp_rro_is_node_id>
] [ <popts_rsvp_rro_if_addr> <popts_rsvp_rro_if_id> ] [ <popts_rsvp_rro_label> } ] ] [ [
<popts_rsvp_tspeg_rate> ] [ <popts_rsvp_tspeg_burst> ] [ <popts_rsvp_tspeg_peak> ] ] [ {
TABLE_rro_resv_popts [ <resv_popts_rsvp_rro_addr> ] [ <resv_popts_rsvp_rro_protect_avail> ] [
<resv_popts_rsvp_rro_protect_in_use> ] [ <resv_popts_rsvp_rro_bw_protected> ] [
<resv_popts_rsvp_rro_node_protect_avail> ] [ <resv_popts_rsvp_rro_is_node_id> ] [
<resv_popts_rsvp_rro_if_addr> <resv_popts_rsvp_rro_if_id> ] [ <resv_popts_rsvp_rro_label> } ] ] [ [
<popts_rsvp_fspeg_rate> ] [ <popts_rsvp_fspeg_burst> ] [ <popts_rsvp_fspeg_peak> ] ] ] ] ] [
<prot_popts_popt_protect> <prot_popts_popt_idx_str> <prot_popts_popt_lockdown>
<prot_popts_popt_type_str> <prot_popts_popt_verbatim> <prot_popts_popt_path_id> [
<prot_popts_popt_accum_admin_weight> ] [ <prot_popts_popt_out_interface_name> [
<prot_popts_popt_label_str> <prot_popts_popt_int_prop> ] [ <prot_popts_popt_label_raw_value> ] ] ] ] [
<passive_dest_ipaddr> <passive_tunnel_id> <passive_incomplete_properties> <passive_dest_str> ] [
<config_type> <config_autobw_req> <config_bw_kbps> <config_setup_pri> <config_hold_pri>
<config_affinity_value> <config_affinity_mask> <config_metric_type> ] [ <tsp_flg_annce> ] [
<tsp_active_popt_enbl> ] [ <fa_holdtime> ] [ <tsp_autobw_freq> <tsp_autobw_time_left>
<tsp_autobw_time_max> <tsp_autobw_collect> <tsp_autobw_high_or_req> <tsp_autobw_samp_missed>
<tsp_autobw_samp_collected> ] [ <auto_bw_disabled> ] [ <active_popt_type_str> <active_popt_idx_str>
<active_popt_bw_override_enabled> <active_popt_lockdown_enabled> <active_popt_verbatim_enabled> [
<active_bw> <active_bw_pool> [ <active_autobw> <active_autobw_pool> ] [ <active_cfg_bw>
<active_cfg_bw_pool> ] ] ] [ <passive_sig_name> <passive_sig_setup> <passive_sig_reserve> ] [ [ [
<rsvp_current_in_name> ] [ <rsvp_current_in_label> ] [ <rsvp_current_out_name> ] [ <rsvp_current_out_label>
] [ <rsvp_current_backup_name> ] [ <rsvp_current_backup_label> ] [ <rsvp_current_fir_active> ] ] [
<rsvp_current_rsvp_lsp_source_addr> <rsvp_current_rsvp_lsp_dest_addr> <rsvp_current_rsvp_lsp_dest_port>
<rsvp_current_rsvp_lsp_source_port> <rsvp_current_rsvp_lsp_local_addr> ] [ { TABLE_ero_in_rsvp_current
[ <in_rsvp_current_rsvp_ero_addr> <in_rsvp_current_rsvp_ero_loose> ] [ <in_rsvp_current_rsvp_ero_routerid>
<in_rsvp_current_rsvp_ero_if_id> } ] ] [ { TABLE_ero_out_rsvp_current [ <out_rsvp_current_rsvp_ero_addr>
<out_rsvp_current_rsvp_ero_loose> ] [ <out_rsvp_current_rsvp_ero_routerid>
<out_rsvp_current_rsvp_ero_if_id> } ] ] [ { TABLE_rro_rsvp_current [ <rsvp_current_rsvp_rro_addr> ] [
<rsvp_current_rsvp_rro_protect_avail> ] [ <rsvp_current_rsvp_rro_protect_in_use> ] [
<rsvp_current_rsvp_rro_bw_protected> ] [ <rsvp_current_rsvp_rro_node_protect_avail> ] [
<rsvp_current_rsvp_rro_is_node_id> ] [ <rsvp_current_rsvp_rro_if_addr> <rsvp_current_rsvp_rro_if_id> ]
[ <rsvp_current_rsvp_rro_label> } ] ] [ [ <rsvp_current_rsvp_tspeg_rate> ] [ <rsvp_current_rsvp_tspeg_burst>
] [ <rsvp_current_rsvp_tspeg_peak> ] ] [ { TABLE_rro_resv_rsvp_current [ <resv_rsvp_current_rsvp_rro_addr>
] [ <resv_rsvp_current_rsvp_rro_protect_avail> ] [ <resv_rsvp_current_rsvp_rro_protect_in_use> ] [

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<resv_rsvp_current_rsvp_rro_bw_protected> ][ <resv_rsvp_current_rsvp_rro_node_protect_avail> ][
<resv_rsvp_current_rsvp_rro_is_node_id> ][ <resv_rsvp_current_rsvp_rro_if_addr>
<resv_rsvp_current_rsvp_rro_if_id> ][ <resv_rsvp_current_rsvp_rro_label> ] } ][ [
<rsvp_current_rsvp_fspec_rate> ][ <rsvp_current_rsvp_fspec_burst> ][ <rsvp_current_rsvp_fspec_peak> ]
] ][ [ <spf_path_info_str> ][ <spfw_pathw_str> ][ <spfw_unknown_str> ][ <spfw_accum_admin_weigth>
][ <spfw_metric_type> ][ <spf_exp_prefix> ][ <spf_hop_unknown> ][ TABLE_spf_hoplist <spf_hop_ipaddr>
[ <spf_hop_intf> ] ] ][ [ <hist_create_time> ][ <hist_path_change_time> ][ <hist_tun_instances> ][
<hist_uptime> ][ <hist_setup_time> ][ <hist_selection> ][ <hist_perr_loc_current> ][
<hist_perr_desc_current> ][ <hist_uptime_reopt> ][ <hist_setup_time_reopt> ][ <hist_perr_loc_reopt> ][
<hist_perr_desc_reopt> ][ <hist_prev_popt_idx_str> ][ <hist_prev_instance> ][ <hist_prev_unknown> ][
<hist_setup_fail_reason> ][ <hist_perr_loc_prev> ][ <hist_perr_desc_prev> ][ <hist_other_po_idx> ][
<hist_perr_loc_other> ][ <hist_perr_desc_other> ] ] ][ <heads_shown> <head_vifs> <mids_shown>
<midpoints> <tails_shown> <tails> ] ]

```

### Syntax Description

|                  |   |
|------------------|---|
| show             | Show running system information                               |
| mpls             | Display MPLS status and configuration                         |
| traffic-eng      | Traffic engineering information                               |
| tunnels          | MPLS traffic-eng tunnel status                                |
| summary          | Show summary information                                      |
| <i>tun-intf</i>  | Tunnel interface  |
| brief            | (Optional) Brief summary of tunnel status and configuration   |
| statistics       | (Optional) Tunnel counters and statistics                     |
| accounting       | (Optional) Tunnel accounting                                  |
| backup           | (Optional) Fast reroute backup protection provided by tunnels |
| protection       | (Optional) Failure protection provided for tunnels            |
| destination      | (Optional) Restrict display to tunnels with this destination  |
| <i>address</i>   | (Optional) tunnel destination address                         |
| source-id        | (Optional) Tunnel identifier address/id                       |
| <i>ipaddress</i> | (Optional) Source address part of tunnel identifier           |
| <i>tunnel-id</i> | (Optional) Number part of tunnel identifier                   |
| role             | (Optional) Restrict display to tunnels with specified role    |
| all              | (Optional) head, middle, or tail LSP tunnels                  |
| head             | (Optional) tunnels that originate locally                     |
| middle           | (Optional) tunnels that transit locally                       |

|                      |   |
|----------------------|---|
| tail                 | (Optional) tunnels that terminate locally                                   |
| remote               | (Optional) middle or tail tunnels   |
| up                   | (Optional) Restrict display to tunnels in up state                          |
| down                 | (Optional) Restrict display to tunnels in down state                        |
| suboptimal           | (Optional) Restrict display to tunnels using a suboptimal path              |
| constraints          | (Optional) Specify constraints for finding best comparison path             |
| none                 | (Optional) path lookup without any constraints                              |
| current              | (Optional) path lookup constrained by available resources                   |
| max                  | (Optional) path lookup constrained by network's maximum potential resources |
| property             | (Optional) Restrict display to tunnels with specified property              |
| backup-tunnel        | (Optional) Tunnels used as fast reroute                                     |
| fast-reroute         | (Optional) Tunnels protected by fast reroute                                |
| frystate             | (Optional) Restrict display to tunnels with specific fr state               |
| ready                | (Optional) Tunnels in FRR ready state                                       |
| active               | (Optional) Tunnels in FRR active state                                      |
| name                 | (Optional) Restrict display to tunnels with this name                       |
| <i>string</i>        | (Optional) LSP Tunnel name  |
| name-regexp          | (Optional) Restrict display to tunnels matching this name                   |
| <i>regexp-string</i> | (Optional) LSP Tunnel name (regular expression)                             |
| interface            | (Optional) Restrict display to tunnels using a specified interface          |
| in                   | (Optional) input interface  |
| <i>in-intf</i>       | (Optional)  |
| out                  | (Optional) output interface   |
| <i>out-intf</i>      | (Optional)  |
| <i>phys-intf</i>     | (Optional)  |
| backup               | (Optional) Fast reroute backup protection provided by tunnels               |
| <i>bkup-intf</i>     | (Optional)  |
| attributes           | (Optional) Restrict display to tunnels using a matching attribute list      |

|                                     |   |
|-------------------------------------|---|
| <i>attr-string</i>                  | (Optional) LSP attribute list name (regular expression)     |
| <i>brief</i>                        | (Optional) Brief summary of tunnel status and configuration |
| <i>statistics</i>                   | (Optional) Tunnel counters and statistics                   |
| <i>summary</i>                      | (Optional) Summarize tunnel counters and statistics         |
| <i>accounting</i>                   | (Optional) Tunnel accounting                                |
| <i>protection</i>                   | (Optional) Failure protection provided for tunnels          |
| <i>__readonly__</i>                 | (Optional)  |
| <i>tun_process_signaller_status</i> | (Optional) tunnel process signaller status                  |
| <i>passive_listener_running</i>     | (Optional) is the passive listener running                  |
| <i>forwarding_configured</i>        | (Optional) is forwarding configured                         |
| <i>rsyp_running</i>                 | (Optional) is RSVP running                                  |
| <i>head_vifs</i>                    | (Optional) head VIFs  |
| <i>heads_active</i>                 | (Optional) number of active heads                           |
| <i>heads_est</i>                    | (Optional) heads est  |
| <i>heads_activated</i>              | (Optional) number of heads activated                        |
| <i>heads_deactivated</i>            | (Optional) number of heads deactivated                      |
| <i>recov_attempts</i>               | (Optional) number of recovery attempts                      |
| <i>recovered</i>                    | (Optional) number recovered                                 |
| <i>midpoints</i>                    | (Optional) number of midpoints                              |
| <i>tails</i>                        | (Optional) number of tails                                  |
| <i>reopt_interval</i>               | (Optional) reopt interval                                   |
| <i>reopt_remaining</i>              | (Optional) reopt remaining                                  |
| <i>reopt_running</i>                | (Optional) reopt is running                                 |
| <i>frr_promote_interval</i>         | (Optional) FRR promote interval                             |
| <i>frr_promote_remaining</i>        | (Optional) FRR promote remaining                            |
| <i>frr_promote_running</i>          | (Optional) FRR promote is running                           |
| <i>frr_onehop_est_interval</i>      | (Optional) FRR one hop est interval                         |
| <i>frr_onehop_est_remaining</i>     | (Optional) FRR one hop est remaining                        |
| <i>frr_est_scan_running</i>         | (Optional) FRR est scan is running                          |

|                                     |  |
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| <i>frr_rm_active_est_interval</i>   | (Optional) FRR rm active est interval        |
| <i>frr_rm_active_est_remaining</i>  | (Optional) FRR rm active est remaining       |
| <i>frr_active_scan_running</i>      | (Optional) FRR active scan is running        |
| <i>frr_bu_notinuse_interval</i>     | (Optional) FRR BU not in use interval        |
| <i>frr_bu_notinuse_remaining</i>    | (Optional) FRR BU not in use remaining       |
| <i>frr_bu_notinuse_scan_running</i> | (Optional) FRR BU not in use scan is running |
| <i>auto_bw_coll_interval</i>        | (Optional) auto BW coll interval             |
| <i>auto_bw_coll_remaining</i>       | (Optional) auto BW coll remaining            |
| <i>auto_bw_coll_running</i>         | (Optional) auto BW coll is running           |
| <i>reeval_interval</i>              | (Optional) re-eval interval                  |
| <i>reeval_remaining</i>             | (Optional) re-eval remaining                 |
| <i>reeval_running</i>               | (Optional) re-eval is running                |
| TABLE_tunnels_brief                 | (Optional) tunnels brief                     |
| <i>tun_brief_name</i>               | (Optional) name                              |
| <i>tun_brief_dest_ip</i>            | (Optional) destinatin IP address             |
| <i>tun_brief_uplink</i>             | (Optional) uplink name                       |
| <i>tun_brief_downlink</i>           | (Optional) down name                         |
| <i>tun_brief_gen_status</i>         | (Optional) gen status                        |
| <i>tun_brief_conn_status</i>        | (Optional) connection status                 |
| <i>gen_status</i>                   | (Optional) gen status                        |
| <i>conn_status</i>                  | (Optional) conn status                       |
| <i>tsp_setup_valid</i>              | (Optional) tsp setup valid                   |
| <i>tsp_setup_status</i>             | (Optional) tsp setup status                  |
| TABLE_tunnels                       | (Optional) tunnel information                |
| <i>vif_head_name</i>                | (Optional) vif head name                     |
| <i>tunnels_shown</i>                | (Optional) tunnels shown                     |
| <i>lm_tunnel_name</i>               | (Optional) tunnel name                       |
| <i>dest_intf</i>                    | (Optional) dest intf                         |
| <i>lm_tunnel_name_stats</i>         | (Optional) tunnel name                       |



|                                |                                    |
|--------------------------------|------------------------------------|
| <i>lsp_name</i>                | (Optional) lsp name                |
| <i>sprint_tun_name</i>         | (Optional) sprint tun name         |
| <i>tsp_dest_ipaddr</i>         | (Optional) tsp dest ipaddr         |
| <i>vif_head_name_stats</i>     | (Optional) vif head name           |
| <i>sprint_tun_name_stats</i>   | (Optional) sprint tun name         |
| <i>tsp_dest_ipaddr_stats</i>   | (Optional) tsp dest ipaddr         |
| <i>tsp_cnt_num_tunnels</i>     | (Optional) tsp cnt num tunnels     |
| <i>tsp_cnt_idx_no_path</i>     | (Optional) tsp cnt idx no path     |
| <i>tsp_cnt_idx_inval_path</i>  | (Optional) tsp cnt idx inval path  |
| <i>tsp_cnt_idx_no_iep</i>      | (Optional) tsp cnt idx no iep      |
| <i>tsp_cnt_idx_pathchg</i>     | (Optional) tsp cnt idx pathchg     |
| <i>tsp_cnt_idx_loose_reopt</i> | (Optional) tsp cnt idx loose reopt |
| <i>tsp_cnt_idx_statechg</i>    | (Optional) tsp cnt idx statechg    |
| <i>tsp_cnt_idx_tun_down</i>    | (Optional) tsp cnt idx tun down    |
| <i>tsp_cnt_idx_oper_down</i>   | (Optional) tsp cnt idx oper down   |
| <i>tsp_cnt_idx_sig_ok</i>      | (Optional) tsp cnt idx sig ok      |
| <i>tsp_cnt_idx_sig_timeout</i> | (Optional) tsp cnt idx sig timeout |
| <i>tsp_cnt_idx_bad_path</i>    | (Optional) tsp cnt idx bad path    |
| <i>tsp_cnt_idx_sig_abort</i>   | (Optional) tsp cnt idx sig abort   |
| <i>tsp_cnt_idx_nobw</i>        | (Optional) tsp cnt idx nobw        |
| <i>tsp_cnt_idx_noroute</i>     | (Optional) tsp cnt idx noroute     |
| <i>tsp_cnt_idx_admin</i>       | (Optional) tsp cnt idx admin       |
| <i>tsp_cnt_idx_bad</i>         | (Optional) tsp cnt idx bad         |
| <i>tsp_cnt_idx_rro_loop</i>    | (Optional) tsp cnt idx rro loop    |
| <i>tsp_cnt_idx_frr_active</i>  | (Optional) tsp cnt idx frr active  |
| <i>tsp_cnt_idx_other</i>       | (Optional) tsp cnt idx other       |
| TABLE_rrr_db                   | (Optional) rrr_db info             |
| <i>tsp_rrr_db_type</i>         | (Optional) tsp rrr db type         |
| <i>tsp_rrr_db_in_use</i>       | (Optional) tsp rrr db in use       |

|                                  |                                      |
|----------------------------------|--------------------------------------|
| <i>tsp_rrr_db_allocated</i>      | (Optional) tsp rrr db allocated      |
| <i>tsp_rrr_db_freed</i>          | (Optional) tsp rrr db freed          |
| <i>he_mgr_tbl_id</i>             | (Optional) he mgr tbl id             |
| <i>lm_mgr_tbl_id</i>             | (Optional) lm mgr tbl id             |
| <i>time_passed</i>               | (Optional) time passed               |
| <i>output_rate</i>               | (Optional) output rate               |
| <i>packet_rate</i>               | (Optional) packet rate               |
| <i>normalized</i>                | (Optional) normalized                |
| TABLE_tunnels_protect            | (Optional) tunnels protection        |
| <i>prot_tunnel_role</i>          | (Optional) tunnel role               |
| <i>prot_name</i>                 | (Optional) protect name              |
| <i>prot_head_name</i>            | (Optional) head name                 |
| <i>prot_gen_status</i>           | (Optional) gen status                |
| <i>prot_conn_status</i>          | (Optional) conn status               |
| <i>prot_tsp_src_ipaddr</i>       | (Optional) tsp src ipaddr            |
| <i>prot_tsp_dst_ipaddr</i>       | (Optional) tsp dst ipaddr            |
| <i>prot_tsp_tun_instances</i>    | (Optional) tsp tun instances         |
| <i>unprotected</i>               | (Optional) unprotected               |
| <i>out_orig_name</i>             | (Optional) out orig name             |
| <i>out_tun_tag_label</i>         | (Optional) out tun tag label         |
| <i>out_lsp_orig_phop</i>         | (Optional) out lsp orig phop         |
| <i>out_frr_orig_nnhop</i>        | (Optional) out frr orig nnhop        |
| <i>out_frr_orig_nnhop_rtr</i>    | (Optional) out frr orig nnhop rtr    |
| TABLE_frr_backup_db              | (Optional) frr_backup_db info        |
| <i>bu_protected_intfcs</i>       | (Optional) protected intfcs          |
| <i>bu_num_lsps</i>               | (Optional) num lsps                  |
| <i>bu_num_active_lsps</i>        | (Optional) num active lsps           |
| <i>bu_bw_any_unlimited_inuse</i> | (Optional) bu bw any unlimited inuse |
| <i>bu_bw_any_limit</i>           | (Optional) bu bw any limit           |

|                                       |   |
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| <i>bu_bw_any_limited_inuse</i>        | (Optional) bu bw any limited inuse        |
| <i>bu_bw_any_limited_bwp_inuse</i>    | (Optional) bu bw any limited bwp inuse    |
| <i>bu_bw_global_limit</i>             | (Optional) bu bw global limit             |
| <i>bu_bw_global_limited_inuse</i>     | (Optional) bu bw global limited inuse     |
| <i>bu_bw_global_limited_bwp_inuse</i> | (Optional) bu bw global limited bwp inuse |
| <i>bu_bw_sub_limit</i>                | (Optional) bu bw sub limit                |
| <i>bu_bw_sub_limited_inuse</i>        | (Optional) bu bw sub limited inuse        |
| <i>bu_bw_sub_limited_bwp_inuse</i>    | (Optional) bu bw sub limited bwp inuse    |
| <i>backup_none</i>                    | (Optional) backup none                    |
| <i>frr_protection_none</i>            | (Optional) frr protection none            |
| <i>no_rsvp_info</i>                   | (Optional) no rsvp info                   |
| <i>in_frr_is_active</i>               | (Optional) in frr is active               |
| <i>in_orig_intf</i>                   | (Optional) in orig intf                   |
| <i>in_tun_tag_label</i>               | (Optional) in tun tag label               |
| <i>in_frr_orig_phop</i>               | (Optional) in frr orig phop               |
| <i>in_intf_with_frr</i>               | (Optional) in intf with frr               |
| <i>in_frr_phop</i>                    | (Optional) in frr phop                    |
| <i>nhop_is_tail</i>                   | (Optional) nhop is tail                   |
| <i>no_frr_nnhop_info</i>              | (Optional) no frr nnhop info              |
| <i>frr_active_or_ready</i>            | (Optional) frr active or ready            |
| <i>frr_backup_lsp_intf</i>            | (Optional) frr backup lsp intf            |
| <i>frr_nnhop_or_nhop</i>              | (Optional) frr nnhop or nhop              |
| <i>frr_out_backup_intf</i>            | (Optional) frr out backup intf            |
| <i>lsp_out_intf</i>                   | (Optional) lsp out intf                   |
| <i>frr_backup_lsp_out_label</i>       | (Optional) frr backup lsp out label       |
| <i>frr_orig_out_intf</i>              | (Optional) frr orig out intf              |
| <i>frr_orig_out_label</i>             | (Optional) frr orig out label             |
| <i>frr_orig_out_nhop</i>              | (Optional) frr orig out nhop              |
| <i>frr_backup_nnhop</i>               | (Optional) frr backup nnhop               |

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| <i>frr_backup_nnhop_rtr</i>         | (Optional) frr backup nnhop rtr         |
| <i>frr_backup_intfc</i>             | (Optional) frr backup intfc             |
| <i>frr_backup_label</i>             | (Optional) frr backup label             |
| <i>frr_protected_bw</i>             | (Optional) frr protected bw             |
| <i>frr_protect_level</i>            | (Optional) frr protect level            |
| <i>frr_bw_type</i>                  | (Optional) frr bw type                  |
| TABLE_prot_protection               | (Optional) protection path info         |
| <i>protection_path_status</i>       | (Optional) protection path status       |
| <i>protection_common_links</i>      | (Optional) protection common links      |
| <i>protection_common_nodes</i>      | (Optional) protection common nodes      |
| <i>protection_p2p_links</i>         | (Optional) protection p2p links         |
| <i>protection_multiaccess_links</i> | (Optional) protection multiaccess links |
| <i>protection_both_interfaces</i>   | (Optional) protection both interfaces   |
| <i>protection_one_interface</i>     | (Optional) protection one interface     |
| <i>protection_zero_interfaces</i>   | (Optional) protection zero interfaces   |
| TABLE_primary_protection            | (Optional) primary path                 |
| <i>protection_primary_path</i>      | (Optional) protection primary path      |
| TABLE_protect_protection            | (Optional) primary path                 |
| <i>protection_protect_path</i>      | (Optional) protection protect path      |
| <i>protection_type</i>              | (Optional) parameter type               |
| <i>protection_autobw_req</i>        | (Optional) autobw req                   |
| <i>protection_bw_kbps</i>           | (Optional) bw kbps                      |
| <i>protection_setup_pri</i>         | (Optional) setup priority               |
| <i>protection_hold_pri</i>          | (Optional) hold priority                |
| <i>protection_affinity_value</i>    | (Optional) affinity value               |
| <i>protection_affinity_mask</i>     | (Optional) affinity mask                |
| <i>protection_metric_type</i>       | (Optional) metric type                  |
| <i>protection_in_name</i>           | (Optional) input interface name         |
| <i>protection_in_label</i>          | (Optional) input label                  |

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| <i>protection_out_name</i>                    | (Optional) output interface name              |
| <i>protection_out_label</i>                   | (Optional) output label                       |
| <i>protection_backup_name</i>                 | (Optional) backup interface name              |
| <i>protection_backup_label</i>                | (Optional) backup label                       |
| <i>protection_frr_active</i>                  | (Optional) FRR active/in use                  |
| <i>protection_rsvp_lsp_source_addr</i>        | (Optional) rsvp lsp source addr               |
| <i>protection_rsvp_lsp_dest_addr</i>          | (Optional) rsvp lsp dest addr                 |
| <i>protection_rsvp_lsp_dest_port</i>          | (Optional) rsvp lsp dest port                 |
| <i>protection_rsvp_lsp_source_port</i>        | (Optional) rsvp lsp source port               |
| <i>protection_rsvp_lsp_local_addr</i>         | (Optional) rsvp lsp local addr                |
| TABLE_ero_in_protection                       | (Optional) ero info                           |
| <i>in_protection_rsvp_ero_addr</i>            | (Optional) rsvp ero addr                      |
| <i>in_protection_rsvp_ero_loose</i>           | (Optional) rsvp ero loose                     |
| <i>in_protection_rsvp_ero_routerid</i>        | (Optional) rsvp ero routerid                  |
| <i>in_protection_rsvp_ero_if_id</i>           | (Optional) rsvp ero if id                     |
| TABLE_ero_out_protection                      | (Optional) ero info                           |
| <i>out_protection_rsvp_ero_addr</i>           | (Optional) rsvp ero addr                      |
| <i>out_protection_rsvp_ero_loose</i>          | (Optional) rsvp ero loose                     |
| <i>out_protection_rsvp_ero_routerid</i>       | (Optional) rsvp ero routerid                  |
| <i>out_protection_rsvp_ero_if_id</i>          | (Optional) rsvp ero if id                     |
| TABLE_rro_protection                          | (Optional) rro info                           |
| <i>protection_rsvp_rro_protect_avail</i>      | (Optional) rsvp rro protection available      |
| <i>protection_rsvp_rro_protect_in_use</i>     | (Optional) rsvp rro protection in use         |
| <i>protection_rsvp_rro_bw_protected</i>       | (Optional) rsvp rro bw protected              |
| <i>protection_rsvp_rro_node_protect_avail</i> | (Optional) rsvp rro node protection available |
| <i>protection_rsvp_rro_is_node_id</i>         | (Optional) rsvp rro is node id                |
| <i>protection_rsvp_rro_addr</i>               | (Optional) rsvp rro addr                      |
| <i>protection_rsvp_rro_if_addr</i>            | (Optional) rsvp rro if addr                   |
| <i>protection_rsvp_rro_if_id</i>              | (Optional) rsvp rro if id                     |

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| <i>protection_rsvp_rro_label</i>                   | (Optional) rsvp rro label                     |
| <i>protection_rsvp_tspec_rate</i>                  | (Optional) rsvp tspec rate                    |
| <i>protection_rsvp_tspec_burst</i>                 | (Optional) rsvp tspec burst                   |
| <i>protection_rsvp_tspec_peak</i>                  | (Optional) rsvp tspec peak                    |
| TABLE_rro_resv_protection                          | (Optional) rro info                           |
| <i>resv_protection_rsvp_rro_protect_avail</i>      | (Optional) rsvp rro protection available      |
| <i>resv_protection_rsvp_rro_protect_in_use</i>     | (Optional) rsvp rro protection in use         |
| <i>resv_protection_rsvp_rro_bw_protected</i>       | (Optional) rsvp rro bw protected              |
| <i>resv_protection_rsvp_rro_node_protect_avail</i> | (Optional) rsvp rro node protection available |
| <i>resv_protection_rsvp_rro_is_node_id</i>         | (Optional) rsvp rro is node id                |
| <i>resv_protection_rsvp_rro_addr</i>               | (Optional) rsvp rro addr                      |
| <i>resv_protection_rsvp_rro_if_addr</i>            | (Optional) rsvp rro if addr                   |
| <i>resv_protection_rsvp_rro_if_id</i>              | (Optional) rsvp rro if id                     |
| <i>resv_protection_rsvp_rro_label</i>              | (Optional) rsvp rro label                     |
| <i>protection_rsvp_fspec_rate</i>                  | (Optional) rsvp rspec rate                    |
| <i>protection_rsvp_fspec_burst</i>                 | (Optional) rsvp rspec burst                   |
| <i>protection_rsvp_fspec_peak</i>                  | (Optional) rsvp rspec peak                    |
| TABLE_members                                      | (Optional) members info                       |
| <i>member_name</i>                                 | (Optional) tunnel name                        |
| TABLE_member_exp                                   | (Optional) member exp info                    |
| <i>member_exp_bits</i>                             | (Optional) exp bits                           |
| <i>member_default_exp_bit</i>                      | (Optional) default exp bit                    |
| <i>current_reopt_in_progress</i>                   | (Optional) reopt in progress                  |
| <i>current_delayed_clean</i>                       | (Optional) delayed clean                      |
| <i>current_popt_protect</i>                        | (Optional) popt protect                       |
| <i>current_popt_idx_str</i>                        | (Optional) popt idx str                       |
| <i>current_popt_lockdown</i>                       | (Optional) popt lockdown                      |
| <i>current_popt_type_str</i>                       | (Optional) popt type str                      |
| <i>current_popt_verbatim</i>                       | (Optional) popt verbatim                      |

|   |   |
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| <i>current_popt_path_id</i>                 | (Optional) popt path id                 |
| <i>current_popt_accum_admin_weight</i>      | (Optional) popt accum admin weight      |
| <i>current_popt_out_interface_name</i>      | (Optional) out interface name           |
| <i>current_popt_label_str</i>               | (Optional) popt label str               |
| <i>current_popt_int_prop</i>                | (Optional) popt int prop                |
| <i>current_popt_label_raw_value</i>         | (Optional) popt label raw value         |
| <i>current_fwd_adj_hold_up_ms_remaining</i> | (Optional) fwd adj hold up ms remaining |
| <i>current_reroute_pending</i>              | (Optional) reroute pending              |
| <i>current_type</i>                         | (Optional) parameter type               |
| <i>current_autobw_req</i>                   | (Optional) autobw req                   |
| <i>current_bw_kbps</i>                      | (Optional) bw kbps                      |
| <i>current_setup_pri</i>                    | (Optional) setup priority               |
| <i>current_hold_pri</i>                     | (Optional) hold priority                |
| <i>current_affinity_value</i>               | (Optional) affinity value               |
| <i>current_affinity_mask</i>                | (Optional) affinity mask                |
| <i>current_metric_type</i>                  | (Optional) metric type                  |
| TABLE_prot_current                          | (Optional) protection path info         |
| <i>current_path_status</i>                  | (Optional) protection path status       |
| <i>current_common_links</i>                 | (Optional) protection common links      |
| <i>current_common_nodes</i>                 | (Optional) protection common nodes      |
| <i>current_p2p_links</i>                    | (Optional) protection p2p links         |
| <i>current_multiaccess_links</i>            | (Optional) protection multiaccess links |
| <i>current_both_interfaces</i>              | (Optional) protection both interfaces   |
| <i>current_one_interface</i>                | (Optional) protection one interface     |
| <i>current_zero_interfaces</i>              | (Optional) protection zero interfaces   |
| TABLE_primary_current                       | (Optional) primary path                 |
| <i>current_primary_path</i>                 | (Optional) protection primary path      |
| TABLE_protect_current                       | (Optional) primary path                 |
| <i>current_protect_path</i>                 | (Optional) protection protect path      |

|                                      |                                  |
|--------------------------------------|----------------------------------|
| <i>current_type</i>                  | (Optional) parameter type        |
| <i>current_autobw_req</i>            | (Optional) autobw req            |
| <i>current_bw_kbps</i>               | (Optional) bw kbps               |
| <i>current_setup_pri</i>             | (Optional) setup priority        |
| <i>current_hold_pri</i>              | (Optional) hold priority         |
| <i>current_affinity_value</i>        | (Optional) affinity value        |
| <i>current_affinity_mask</i>         | (Optional) affinity mask         |
| <i>current_metric_type</i>           | (Optional) metric type           |
| <i>current_in_name</i>               | (Optional) input interface name  |
| <i>current_in_label</i>              | (Optional) input label           |
| <i>current_out_name</i>              | (Optional) output interface name |
| <i>current_out_label</i>             | (Optional) output label          |
| <i>current_backup_name</i>           | (Optional) backup interface name |
| <i>current_backup_label</i>          | (Optional) backup label          |
| <i>current_frr_active</i>            | (Optional) FRR active/in use     |
| <i>current_rsvp_lsp_source_addr</i>  | (Optional) rsvp lsp source addr  |
| <i>current_rsvp_lsp_dest_addr</i>    | (Optional) rsvp lsp dest addr    |
| <i>current_rsvp_lsp_dest_port</i>    | (Optional) rsvp lsp dest port    |
| <i>current_rsvp_lsp_source_port</i>  | (Optional) rsvp lsp source port  |
| <i>current_rsvp_lsp_local_addr</i>   | (Optional) rsvp lsp local addr   |
| TABLE_ero_in_current                 | (Optional) ero info              |
| <i>in_current_rsvp_ero_addr</i>      | (Optional) rsvp ero addr         |
| <i>in_current_rsvp_ero_loose</i>     | (Optional) rsvp ero loose        |
| <i>in_current_rsvp_ero_routerid</i>  | (Optional) rsvp ero routerid     |
| <i>in_current_rsvp_ero_if_id</i>     | (Optional) rsvp ero if id        |
| TABLE_ero_out_current                | (Optional) ero info              |
| <i>out_current_rsvp_ero_addr</i>     | (Optional) rsvp ero addr         |
| <i>out_current_rsvp_ero_loose</i>    | (Optional) rsvp ero loose        |
| <i>out_current_rsvp_ero_routerid</i> | (Optional) rsvp ero routerid     |



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|---|---|
| <i>out_current_rsvp_ero_if_id</i>               | (Optional) rsvp ero if id                     |
| TABLE_rro_current                               | (Optional) rro info                           |
| <i>current_rsvp_rro_protect_avail</i>           | (Optional) rsvp rro protection available      |
| <i>current_rsvp_rro_protect_in_use</i>          | (Optional) rsvp rro protection in use         |
| <i>current_rsvp_rro_bw_protected</i>            | (Optional) rsvp rro bw protected              |
| <i>current_rsvp_rro_node_protect_avail</i>      | (Optional) rsvp rro node protection available |
| <i>current_rsvp_rro_is_node_id</i>              | (Optional) rsvp rro is node id                |
| <i>current_rsvp_rro_addr</i>                    | (Optional) rsvp rro addr                      |
| <i>current_rsvp_rro_if_addr</i>                 | (Optional) rsvp rro if addr                   |
| <i>current_rsvp_rro_if_id</i>                   | (Optional) rsvp rro if id                     |
| <i>current_rsvp_rro_label</i>                   | (Optional) rsvp rro label                     |
| <i>current_rsvp_tspec_rate</i>                  | (Optional) rsvp tspec rate                    |
| <i>current_rsvp_tspec_burst</i>                 | (Optional) rsvp tspec burst                   |
| <i>current_rsvp_tspec_peak</i>                  | (Optional) rsvp tspec peak                    |
| TABLE_rro_resv_current                          | (Optional) rro info                           |
| <i>resv_current_rsvp_rro_protect_avail</i>      | (Optional) rsvp rro protection available      |
| <i>resv_current_rsvp_rro_protect_in_use</i>     | (Optional) rsvp rro protection in use         |
| <i>resv_current_rsvp_rro_bw_protected</i>       | (Optional) rsvp rro bw protected              |
| <i>resv_current_rsvp_rro_node_protect_avail</i> | (Optional) rsvp rro node protection available |
| <i>resv_current_rsvp_rro_is_node_id</i>         | (Optional) rsvp rro is node id                |
| <i>resv_current_rsvp_rro_addr</i>               | (Optional) rsvp rro addr                      |
| <i>resv_current_rsvp_rro_if_addr</i>            | (Optional) rsvp rro if addr                   |
| <i>resv_current_rsvp_rro_if_id</i>              | (Optional) rsvp rro if id                     |
| <i>resv_current_rsvp_rro_label</i>              | (Optional) rsvp rro label                     |
| <i>current_rsvp_fspec_rate</i>                  | (Optional) rsvp rspec rate                    |
| <i>current_rsvp_fspec_burst</i>                 | (Optional) rsvp rspec burst                   |
| <i>current_rsvp_fspec_peak</i>                  | (Optional) rsvp rspec peak                    |
| <i>prot_current_popt_protect</i>                | (Optional) popt protect                       |
| <i>prot_current_popt_idx_str</i>                | (Optional) popt idx str                       |

|   |   |
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| <i>prot_current_popt_lockdown</i>           | (Optional) popt lockdown                |
| <i>prot_current_popt_type_str</i>           | (Optional) popt type str                |
| <i>prot_current_popt_verbatim</i>           | (Optional) popt verbatim                |
| <i>prot_current_popt_path_id</i>            | (Optional) popt path id                 |
| <i>prot_current_popt_accum_admin_weight</i> | (Optional) popt accum admin weight      |
| <i>prot_current_popt_out_interface_name</i> | (Optional) out interface name           |
| <i>prot_current_popt_label_str</i>          | (Optional) popt label str               |
| <i>prot_current_popt_int_prop</i>           | (Optional) popt int prop                |
| <i>prot_current_popt_label_raw_value</i>    | (Optional) popt label raw value         |
| TABLE_popts                                 | (Optional) path options table           |
| <i>popts_reopt_in_progress</i>              | (Optional) reopt in progress            |
| <i>popts_delayed_clean</i>                  | (Optional) delayed clean                |
| <i>popts_popt_protect</i>                   | (Optional) popt protect                 |
| <i>popts_popt_idx_str</i>                   | (Optional) popt idx str                 |
| <i>popts_popt_lockdown</i>                  | (Optional) popt lockdown                |
| <i>popts_popt_type_str</i>                  | (Optional) popt type str                |
| <i>popts_popt_verbatim</i>                  | (Optional) popt verbatim                |
| <i>popts_popt_path_id</i>                   | (Optional) popt path id                 |
| <i>popts_popt_accum_admin_weight</i>        | (Optional) popt accum admin weight      |
| <i>popts_popt_out_interface_name</i>        | (Optional) out interface name           |
| <i>popts_popt_label_str</i>                 | (Optional) popt label str               |
| <i>popts_popt_int_prop</i>                  | (Optional) popt int prop                |
| <i>popts_popt_label_raw_value</i>           | (Optional) popt label raw value         |
| <i>popts_fwd_adj_hold_up_ms_remaining</i>   | (Optional) fwd adj hold up ms remaining |
| <i>popts_reroute_pending</i>                | (Optional) reroute pending              |
| <i>popts_type</i>                           | (Optional) parameter type               |
| <i>popts_autobw_req</i>                     | (Optional) autobw req                   |
| <i>popts_bw_kbps</i>                        | (Optional) bw kbps                      |
| <i>popts_setup_pri</i>                      | (Optional) setup priority               |

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| <i>popts_hold_pri</i>          | (Optional) hold priority                |
| <i>popts_affinity_value</i>    | (Optional) affinity value               |
| <i>popts_affinity_mask</i>     | (Optional) affinity mask                |
| <i>popts_metric_type</i>       | (Optional) metric type                  |
| TABLE_prot_popts               | (Optional) protection path info         |
| <i>popts_path_status</i>       | (Optional) protection path status       |
| <i>popts_common_links</i>      | (Optional) protection common links      |
| <i>popts_common_nodes</i>      | (Optional) protection common nodes      |
| <i>popts_p2p_links</i>         | (Optional) protection p2p links         |
| <i>popts_multiaccess_links</i> | (Optional) protection multiaccess links |
| <i>popts_both_interfaces</i>   | (Optional) protection both interfaces   |
| <i>popts_one_interface</i>     | (Optional) protection one interface     |
| <i>popts_zero_interfaces</i>   | (Optional) protection zero interfaces   |
| TABLE_primary_popts            | (Optional) primary path                 |
| <i>popts_primary_path</i>      | (Optional) protection primary path      |
| TABLE_protect_popts            | (Optional) primary path                 |
| <i>popts_protect_path</i>      | (Optional) protection protect path      |
| <i>popts_type</i>              | (Optional) parameter type               |
| <i>popts_autobw_req</i>        | (Optional) autobw req                   |
| <i>popts_bw_kbps</i>           | (Optional) bw kbps                      |
| <i>popts_setup_pri</i>         | (Optional) setup priority               |
| <i>popts_hold_pri</i>          | (Optional) hold priority                |
| <i>popts_affinity_value</i>    | (Optional) affinity value               |
| <i>popts_affinity_mask</i>     | (Optional) affinity mask                |
| <i>popts_metric_type</i>       | (Optional) metric type                  |
| <i>popts_in_name</i>           | (Optional) input interface name         |
| <i>popts_in_label</i>          | (Optional) input label                  |
| <i>popts_out_name</i>          | (Optional) output interface name        |
| <i>popts_out_label</i>         | (Optional) output label                 |

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| <i>popts_backup_name</i>                 | (Optional) backup interface name              |
| <i>popts_backup_label</i>                | (Optional) backup label                       |
| <i>popts_frr_active</i>                  | (Optional) FRR active/in use                  |
| <i>popts_rsvp_lsp_source_addr</i>        | (Optional) rsvp lsp source addr               |
| <i>popts_rsvp_lsp_dest_addr</i>          | (Optional) rsvp lsp dest addr                 |
| <i>popts_rsvp_lsp_dest_port</i>          | (Optional) rsvp lsp dest port                 |
| <i>popts_rsvp_lsp_source_port</i>        | (Optional) rsvp lsp source port               |
| <i>popts_rsvp_lsp_local_addr</i>         | (Optional) rsvp lsp local addr                |
| TABLE_ero_in_popts                       | (Optional) ero info                           |
| <i>in_popts_rsvp_ero_addr</i>            | (Optional) rsvp ero addr                      |
| <i>in_popts_rsvp_ero_loose</i>           | (Optional) rsvp ero loose                     |
| <i>in_popts_rsvp_ero_routerid</i>        | (Optional) rsvp ero routerid                  |
| <i>in_popts_rsvp_ero_if_id</i>           | (Optional) rsvp ero if id                     |
| TABLE_ero_out_popts                      | (Optional) ero info                           |
| <i>out_popts_rsvp_ero_addr</i>           | (Optional) rsvp ero addr                      |
| <i>out_popts_rsvp_ero_loose</i>          | (Optional) rsvp ero loose                     |
| <i>out_popts_rsvp_ero_routerid</i>       | (Optional) rsvp ero routerid                  |
| <i>out_popts_rsvp_ero_if_id</i>          | (Optional) rsvp ero if id                     |
| TABLE_rro_popts                          | (Optional) rro info                           |
| <i>popts_rsvp_rro_protect_avail</i>      | (Optional) rsvp rro protection available      |
| <i>popts_rsvp_rro_protect_in_use</i>     | (Optional) rsvp rro protection in use         |
| <i>popts_rsvp_rro_bw_protected</i>       | (Optional) rsvp rro bw protected              |
| <i>popts_rsvp_rro_node_protect_avail</i> | (Optional) rsvp rro node protection available |
| <i>popts_rsvp_rro_is_node_id</i>         | (Optional) rsvp rro is node id                |
| <i>popts_rsvp_rro_addr</i>               | (Optional) rsvp rro addr                      |
| <i>popts_rsvp_rro_if_addr</i>            | (Optional) rsvp rro if addr                   |
| <i>popts_rsvp_rro_if_id</i>              | (Optional) rsvp rro if id                     |
| <i>popts_rsvp_rro_label</i>              | (Optional) rsvp rro label                     |
| <i>popts_rsvp_tspec_rate</i>             | (Optional) rsvp tspec rate                    |

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| <i>popts_rsvp_tspec_burst</i>                 | (Optional) rsvp tspec burst                      |
| <i>popts_rsvp_tspec_peak</i>                  | (Optional) rsvp tspec peak                       |
| TABLE_rro_resv_popts                          | (Optional) rro info                              |
| <i>resv_popts_rsvp_rro_protect_avail</i>      | (Optional) rsvp rro protection available         |
| <i>resv_popts_rsvp_rro_protect_in_use</i>     | (Optional) rsvp rro protection in use            |
| <i>resv_popts_rsvp_rro_bw_protected</i>       | (Optional) rsvp rro bw protected                 |
| <i>resv_popts_rsvp_rro_node_protect_avail</i> | (Optional) rsvp rro node protection available    |
| <i>resv_popts_rsvp_rro_is_node_id</i>         | (Optional) rsvp rro is node id                   |
| <i>resv_popts_rsvp_rro_addr</i>               | (Optional) rsvp rro addr                         |
| <i>resv_popts_rsvp_rro_if_addr</i>            | (Optional) rsvp rro if addr                      |
| <i>resv_popts_rsvp_rro_if_id</i>              | (Optional) rsvp rro if id                        |
| <i>resv_popts_rsvp_rro_label</i>              | (Optional) rsvp rro label                        |
| <i>popts_rsvp_fspect_rate</i>                 | (Optional) rsvp rspec rate                       |
| <i>popts_rsvp_fspect_burst</i>                | (Optional) rsvp rspec burst                      |
| <i>popts_rsvp_fspect_peak</i>                 | (Optional) rsvp rspec peak                       |
| <i>prot_popts_popt_protect</i>                | (Optional) popt protect                          |
| <i>prot_popts_popt_idx_str</i>                | (Optional) popt idx str                          |
| <i>prot_popts_popt_lockdown</i>               | (Optional) popt lockdown                         |
| <i>prot_popts_popt_type_str</i>               | (Optional) popt type str                         |
| <i>prot_popts_popt_verbatim</i>               | (Optional) popt verbatim                         |
| <i>prot_popts_popt_path_id</i>                | (Optional) popt path id                          |
| <i>prot_popts_popt_accum_admin_weight</i>     | (Optional) popt accum admin weight               |
| <i>prot_popts_popt_out_interface_name</i>     | (Optional) out interface name                    |
| <i>prot_popts_popt_label_str</i>              | (Optional) popt label str                        |
| <i>prot_popts_popt_int_prop</i>               | (Optional) popt int prop                         |
| <i>prot_popts_popt_label_raw_value</i>        | (Optional) popt label raw value                  |
| <i>passive_dest_ipaddr</i>                    | (Optional) passive tunnel destination ip address |
| <i>passive_tunnel_id</i>                      | (Optional) passive tunnel id                     |
| <i>passive_incomplete_properties</i>          | (Optional) passive tunnel incomplete properties  |

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| <i>passive_dest_str</i>                | (Optional) passive destination string      |
| <i>config_type</i>                     | (Optional) parameter type                  |
| <i>config_autobw_req</i>               | (Optional) autobw req                      |
| <i>config_bw_kbps</i>                  | (Optional) bw kbps                         |
| <i>config_setup_pri</i>                | (Optional) setup priority                  |
| <i>config_hold_pri</i>                 | (Optional) hold priority                   |
| <i>config_affinity_value</i>           | (Optional) affinity value                  |
| <i>config_affinity_mask</i>            | (Optional) affinity mask                   |
| <i>config_metric_type</i>              | (Optional) metric type                     |
| <i>tsp_flg_annnc</i>                   | (Optional) tsp flg annnc                   |
| <i>tsp_active_popt_enbl</i>            | (Optional) tsp active popt enbl            |
| <i>fa_holdtime</i>                     | (Optional) fa holdtime                     |
| <i>tsp_autobw_freq</i>                 | (Optional) tsp autobw freq                 |
| <i>tsp_autobw_time_left</i>            | (Optional) tsp autobw time left            |
| <i>tsp_autobw_time_max</i>             | (Optional) tsp autobw time max             |
| <i>tsp_autobw_collect</i>              | (Optional) tsp autobw collect              |
| <i>tsp_autobw_high_or_req</i>          | (Optional) tsp autobw high or req          |
| <i>tsp_autobw_samp_missed</i>          | (Optional) tsp autobw samp missed          |
| <i>tsp_autobw_samp_collected</i>       | (Optional) tsp autobw samp collected       |
| <i>auto_bw_disabled</i>                | (Optional) auto bw disabled                |
| <i>active_popt_type_str</i>            | (Optional) active popt type                |
| <i>active_popt_idx_str</i>             | (Optional) active popt index               |
| <i>active_popt_bw_override_enabled</i> | (Optional) active popt bw override enabled |
| <i>active_popt_lockdown_enabled</i>    | (Optional) active popt lockdown enabled    |
| <i>active_popt_verbatim_enabled</i>    | (Optional) active popt verbatim enabled    |
| <i>active_bw</i>                       | (Optional) active bandwidth                |
| <i>active_bw_pool</i>                  | (Optional) active bw pool                  |
| <i>active_autobw</i>                   | (Optional) active autobw bandwidth         |
| <i>active_autobw_pool</i>              | (Optional) active autobw pool              |

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| <i>active_cfg_bw</i>                       | (Optional) active configured bandwidth   |
| <i>active_cfg_bw_pool</i>                  | (Optional) active configured bw pool     |
| <i>passive_sig_name</i>                    | (Optional) passive signalled name        |
| <i>passive_sig_setup</i>                   | (Optional) passive signalled setup       |
| <i>passive_sig_reserv</i>                  | (Optional) passive signalled reserved    |
| <i>rsvp_current_in_name</i>                | (Optional) input interface name          |
| <i>rsvp_current_in_label</i>               | (Optional) input label                   |
| <i>rsvp_current_out_name</i>               | (Optional) output interface name         |
| <i>rsvp_current_out_label</i>              | (Optional) output label                  |
| <i>rsvp_current_backup_name</i>            | (Optional) backup interface name         |
| <i>rsvp_current_backup_label</i>           | (Optional) backup label                  |
| <i>rsvp_current_frr_active</i>             | (Optional) FRR active/in use             |
| <i>rsvp_current_rsvp_lsp_source_addr</i>   | (Optional) rsvp lsp source addr          |
| <i>rsvp_current_rsvp_lsp_dest_addr</i>     | (Optional) rsvp lsp dest addr            |
| <i>rsvp_current_rsvp_lsp_dest_port</i>     | (Optional) rsvp lsp dest port            |
| <i>rsvp_current_rsvp_lsp_source_port</i>   | (Optional) rsvp lsp source port          |
| <i>rsvp_current_rsvp_lsp_local_addr</i>    | (Optional) rsvp lsp local addr           |
| TABLE_ero_in_rsvp_current                  | (Optional) ero info                      |
| <i>in_rsvp_current_rsvp_ero_addr</i>       | (Optional) rsvp ero addr                 |
| <i>in_rsvp_current_rsvp_ero_loose</i>      | (Optional) rsvp ero loose                |
| <i>in_rsvp_current_rsvp_ero_routerid</i>   | (Optional) rsvp ero routerid             |
| <i>in_rsvp_current_rsvp_ero_if_id</i>      | (Optional) rsvp ero if id                |
| TABLE_ero_out_rsvp_current                 | (Optional) ero info                      |
| <i>out_rsvp_current_rsvp_ero_addr</i>      | (Optional) rsvp ero addr                 |
| <i>out_rsvp_current_rsvp_ero_loose</i>     | (Optional) rsvp ero loose                |
| <i>out_rsvp_current_rsvp_ero_routerid</i>  | (Optional) rsvp ero routerid             |
| <i>out_rsvp_current_rsvp_ero_if_id</i>     | (Optional) rsvp ero if id                |
| TABLE_rro_rsvp_current                     | (Optional) rro info                      |
| <i>rsvp_current_rsvp_rro_protect_avail</i> | (Optional) rsvp rro protection available |

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| <i>rsvp_current_rsvp_rro_protect_in_use</i>          | (Optional) rsvp rro protection in use         |
| <i>rsvp_current_rsvp_rro_bw_protected</i>            | (Optional) rsvp rro bw protected              |
| <i>rsvp_current_rsvp_rro_node_protect_avail</i>      | (Optional) rsvp rro node protection available |
| <i>rsvp_current_rsvp_rro_is_node_id</i>              | (Optional) rsvp rro is node id                |
| <i>rsvp_current_rsvp_rro_addr</i>                    | (Optional) rsvp rro addr                      |
| <i>rsvp_current_rsvp_rro_if_addr</i>                 | (Optional) rsvp rro if addr                   |
| <i>rsvp_current_rsvp_rro_if_id</i>                   | (Optional) rsvp rro if id                     |
| <i>rsvp_current_rsvp_rro_label</i>                   | (Optional) rsvp rro label                     |
| <i>rsvp_current_rsvp_tspeg_rate</i>                  | (Optional) rsvp tspeg rate                    |
| <i>rsvp_current_rsvp_tspeg_burst</i>                 | (Optional) rsvp tspeg burst                   |
| <i>rsvp_current_rsvp_tspeg_peak</i>                  | (Optional) rsvp tspeg peak                    |
| TABLE_rro_resv_rsvp_current                          | (Optional) rro info                           |
| <i>resv_rsvp_current_rsvp_rro_protect_avail</i>      | (Optional) rsvp rro protection available      |
| <i>resv_rsvp_current_rsvp_rro_protect_in_use</i>     | (Optional) rsvp rro protection in use         |
| <i>resv_rsvp_current_rsvp_rro_bw_protected</i>       | (Optional) rsvp rro bw protected              |
| <i>resv_rsvp_current_rsvp_rro_node_protect_avail</i> | (Optional) rsvp rro node protection available |
| <i>resv_rsvp_current_rsvp_rro_is_node_id</i>         | (Optional) rsvp rro is node id                |
| <i>resv_rsvp_current_rsvp_rro_addr</i>               | (Optional) rsvp rro addr                      |
| <i>resv_rsvp_current_rsvp_rro_if_addr</i>            | (Optional) rsvp rro if addr                   |
| <i>resv_rsvp_current_rsvp_rro_if_id</i>              | (Optional) rsvp rro if id                     |
| <i>resv_rsvp_current_rsvp_rro_label</i>              | (Optional) rsvp rro label                     |
| <i>rsvp_current_rsvp_fspeg_rate</i>                  | (Optional) rsvp rspeg rate                    |
| <i>rsvp_current_rsvp_fspeg_burst</i>                 | (Optional) rsvp rspeg burst                   |
| <i>rsvp_current_rsvp_fspeg_peak</i>                  | (Optional) rsvp rspeg peak                    |
| <i>spf_path_info_str</i>                             | (Optional) spf path info string               |
| <i>spf_pathw_str</i>                                 | (Optional) spf path weight string             |
| <i>spf_weight_unknown_str</i>                        | (Optional) spf weight unknown string          |
| <i>spf_accum_admin_weight</i>                        | (Optional) spf accumulated admin weight       |
| <i>spf_metric_type</i>                               | (Optional) spf metric type                    |



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| <i>spf_exp_prefix</i>         | (Optional) spf exp prefix                      |
| <i>spf_hop_unknown</i>        | (Optional) spf hop unknown                     |
| TABLE_spf_hoplist             | (Optional) spf hoplist table                   |
| <i>spf_hop_ipaddr</i>         | (Optional) spf hop IP address                  |
| <i>spf_hop_intf</i>           | (Optional) spf hop interface                   |
| <i>hist_create_time</i>       | (Optional) creation time                       |
| <i>hist_path_change_time</i>  | (Optional) path change time                    |
| <i>hist_tun_instances</i>     | (Optional) tunnel instances                    |
| <i>hist_uptime</i>            | (Optional) uptime                              |
| <i>hist_setup_time</i>        | (Optional) setup time                          |
| <i>hist_selection</i>         | (Optional) path option selection               |
| <i>hist_perr_loc_current</i>  | (Optional) current LSP path error location     |
| <i>hist_perr_desc_current</i> | (Optional) current LSP path error description  |
| <i>hist_uptime_reopt</i>      | (Optional) reopt LSP uptime                    |
| <i>hist_setup_time_reopt</i>  | (Optional) reopt LSP setup time                |
| <i>hist_perr_loc_reopt</i>    | (Optional) reopt LSP path error location       |
| <i>hist_perr_desc_reopt</i>   | (Optional) reopt LSP path error description    |
| <i>hist_prev_popt_idx_str</i> | (Optional) previous LSP popt index str         |
| <i>hist_prev_instance</i>     | (Optional) previous LSP instance               |
| <i>hist_prev_unknown</i>      | (Optional) previous LSP unknown                |
| <i>hist_setup_fail_reason</i> | (Optional) setup fail reason                   |
| <i>hist_perr_loc_prev</i>     | (Optional) previous LSP path error location    |
| <i>hist_perr_desc_prev</i>    | (Optional) previous LSP path error description |
| <i>hist_other_po_idx</i>      | (Optional) other LSP popt index                |
| <i>hist_perr_loc_other</i>    | (Optional) other LSP path error location       |
| <i>hist_perr_desc_other</i>   | (Optional) other LSP path error description    |
| <i>heads_shown</i>            | (Optional) number of heads shown               |
| <i>mids_shown</i>             | (Optional) number of midpoints shown           |
| <i>tails_shown</i>            | (Optional) number of tails shown               |

**Command Mode**

- /exec

## show mpls traffic-eng tunnels statistics internal

```
show mpls traffic-eng tunnels { <tun-intf> | { [ destination <address> ] [ source-id { <ipaddress> | <tunnel-id> | <ipaddress> <tunnel-id> } ] [ role { all | head | middle | tail | remote } ] [ { up | down } ] [ suboptimal constraints { none | current | max } ] [ property { backup-tunnel | fast-reroute } ] [ frststate { ready | active } ] [ name <string> | name-regexp <regexp-string> ] [ interface { in <in-intf> | out <out-intf> | <phys-intf> | backup <bkup-intf> } ] [ attributes <attr-string> ] } + } statistics internal
```

### Syntax Description

|                  |   |
|------------------|---|
| show             | Show running system information                                 |
| mpls             | Display MPLS status and configuration                           |
| traffic-eng      | Traffic engineering information                                 |
| tunnels          | MPLS traffic-eng tunnel status                                  |
| <i>tun-intf</i>  | Tunnel interface  |
| destination      | (Optional) Restrict display to tunnels with this destination    |
| <i>address</i>   | (Optional) tunnel destination address                           |
| source-id        | (Optional) Tunnel identifier address/id                         |
| <i>ipaddress</i> | (Optional) Source address part of tunnel identifier             |
| <i>tunnel-id</i> | (Optional) Number part of tunnel identifier                     |
| role             | (Optional) Restrict display to tunnels with specified role      |
| all              | (Optional) head, middle, or tail LSP tunnels                    |
| head             | (Optional) tunnels that originate locally                       |
| middle           | (Optional) tunnels that transit locally                         |
| tail             | (Optional) tunnels that terminate locally                       |
| remote           | (Optional) middle or tail tunnels                               |
| up               | (Optional) Restrict display to tunnels in up state              |
| down             | (Optional) Restrict display to tunnels in down state            |
| suboptimal       | (Optional) Restrict display to tunnels using a suboptimal path  |
| constraints      | (Optional) Specify constraints for finding best comparison path |
| none             | (Optional) path lookup without any constraints                  |
| current          | (Optional) path lookup constrained by available resources       |

|                      |   |
|----------------------|---|
| max                  | (Optional) path lookup constrained by network's maximum potential resources |
| property             | (Optional) Restrict display to tunnels with specified property              |
| backup-tunnel        | (Optional) Tunnels used as fast reroute                                     |
| fast-reroute         | (Optional) Tunnels protected by fast reroute                                |
| frrstate             | (Optional) Restrict display to tunnels with specific frr state              |
| ready                | (Optional) Tunnels in FRR ready state                                       |
| active               | (Optional) Tunnels in FRR active state                                      |
| name                 | (Optional) Restrict display to tunnels with this name                       |
| <i>string</i>        | (Optional) LSP Tunnel name  |
| name-regexp          | (Optional) Restrict display to tunnels matching this name                   |
| <i>regexp-string</i> | (Optional) LSP Tunnel name (regular expression)                             |
| interface            | (Optional) Restrict display to tunnels using a specified interface          |
| in                   | (Optional) input interface  |
| <i>in-intf</i>       | (Optional)  |
| out                  | (Optional) output interface   |
| <i>out-intf</i>      | (Optional)  |
| <i>phys-intf</i>     | (Optional)  |
| backup               | (Optional) Fast reroute backup protection provided by tunnels               |
| <i>bkup-intf</i>     | (Optional)  |
| attributes           | (Optional) Restrict display to tunnels using a matching attribute list      |
| <i>attr-string</i>   | (Optional) LSP attribute list name (regular expression)                     |
| statistics           | Tunnel counters and statistics  |
| internal             | Commands for internal use   |

**Command Mode**

- /exec

# show mvpn bgp mdt

```
show mvpn bgp { mdt-safi | auto-discovery } [ mdt-source <src-addr> ] [ __readonly__ { TABLE_entry
<bgp_rd> <mdt_src> <mdt_grp> <local> } ]
```

## Syntax Description

|                     |   |
|---------------------|---|
| show                | Show running system information               |
| mvpn                | Display Multicast VPN information             |
| bgp                 | Display BGP related information               |
| mdt-safi            | Display Auto-discovered BGP MDT-SAFI database |
| auto-discovery      | Display Auto-discovered BGP MDT-SAFI database |
| mdt-source          | (Optional) Source address of MVPN neighbor    |
| <i>src-addr</i>     | (Optional) Source Address                     |
| <i>__readonly__</i> | (Optional)                                    |
| TABLE_entry         | (Optional)                                    |
| <i>bgp_rd</i>       | (Optional)                                    |
| <i>mdt_src</i>      | (Optional)                                    |
| <i>mdt_grp</i>      | (Optional)                                    |
| <i>local</i>        | (Optional)                                    |

## Command Mode

- /exec

# show mvpn mdt encap

```
show mvpn mdt encap [ vrf { <vrf-name> | <vrf-known-name> | all } ] [ __readonly__ TABLE_vrf
<out_context> { TABLE_encap <encap_index> <mdt_grp> <mdt_src> <mdt_src_if> } ]
```

## Syntax Description

|                       |   |
|-----------------------|---|
| show                  | Show running system information             |
| mvpn                  | Display Multicast VPN information           |
| mdt                   | Display MDT information                     |
| encap                 | Display MDT Encap table                     |
| vrf                   | (Optional) Display per-VRF information      |
| <i>vrf-name</i>       | (Optional) VRF name                         |
| <i>vrf-known-name</i> | (Optional) Known VRF name                   |
| all                   | (Optional) Display information for all VRFs |
| <i>__readonly__</i>   | (Optional)                                  |
| TABLE_vrf             | (Optional)                                  |
| <i>out_context</i>    | (Optional)                                  |
| TABLE_encap           | (Optional)                                  |
| <i>encap_index</i>    | (Optional)                                  |
| <i>mdt_grp</i>        | (Optional)                                  |
| <i>mdt_src</i>        | (Optional)                                  |
| <i>mdt_src_if</i>     | (Optional)                                  |

## Command Mode

- /exec

# show mvpn mdt route

```
show mvpn mdt route [ detail ] [ __readonly__ TABLE_vrf <out_context> { TABLE_mroute <src_addr>
<grp_addr> <ref_count> } ]
```

## Syntax Description

|                     |   |
|---------------------|---|
| show                | Show running system information         |
| mvpn                | Display Multicast VPN information       |
| mdt                 | Display MDT information                 |
| route               | Display MDT route information           |
| detail              | (Optional) Display detailed information |
| <i>__readonly__</i> | (Optional)                              |
| TABLE_vrf           | (Optional)                              |
| <i>out_context</i>  | (Optional)                              |
| TABLE_mroute        | (Optional)                              |
| <i>src_addr</i>     | (Optional)                              |
| <i>grp_addr</i>     | (Optional)                              |
| <i>ref_count</i>    | (Optional)                              |

## Command Mode

- /exec

## show mvpn snmp mib genericTable

```
show mvpn snmp mib genericTable [ <mplsVpnVrfName-in> ] [ __readonly__
TABLE_ciscoMvpnGenericTable <mplsVpnVrfName-out> <ciscoMvpnGenOperStatusChange>
<ciscoMvpnGenOperChangeTime> <ciscoMvpnGenAssociatedInterfaces> <ciscoMvpnGenRowStatus> ]
```

### Syntax Description

|   |  |
|---|--|
| show                                    | Show running system information                        |
| mvpn                                    | Display Multicast VPN information                      |
| snmp                                    | show snmp  |
| mib                                     | show mib tables  |
| genericTable                            | Show MVPN Generic Table                                |
| <i>mplsVpnVrfName-in</i>                | (Optional) mplsVpnVrfName                              |
| <i>__readonly__</i>                     | (Optional)   |
| <i>TABLE_ciscoMvpnGenericTable</i>      | (Optional)   |
| <i>mplsVpnVrfName-out</i>               | (Optional) mib table index mplsVpnVrfName              |
| <i>ciscoMvpnGenOperStatusChange</i>     | (Optional) mib object ciscoMvpnGenOperStatusChange     |
| <i>ciscoMvpnGenOperChangeTime</i>       | (Optional) mib object ciscoMvpnGenOperChangeTime       |
| <i>ciscoMvpnGenAssociatedInterfaces</i> | (Optional) mib object ciscoMvpnGenAssociatedInterfaces |
| <i>ciscoMvpnGenRowStatus</i>            | (Optional) mib object ciscoMvpnGenRowStatus            |

### Command Mode

- /exec



## show mvpn snmp mib mvpnBgpMdtUpdateTable

```
show mvpn snmp mib mvpnBgpMdtUpdateTable [ <ciscoMvpnBgpMdtUpdGrpAddrType-in>
<ciscoMvpnBgpMdtUpdateGroup-in> <ciscoMvpnBgpMdtUpdSrcAddrType-in>
<ciscoMvpnBgpMdtUpdateSource-in> ] [ __readonly__ TABLE_ciscoMvpnBgpMdtUpdateTable
<ciscoMvpnBgpMdtUpdGrpAddrType-out> <ciscoMvpnBgpMdtUpdateGroup-out>
<ciscoMvpnBgpMdtUpdateRd> <ciscoMvpnBgpMdtUpdSrcAddrType-out>
<ciscoMvpnBgpMdtUpdateSource-out> <ciscoMvpnBgpMdtUpdOrigAddrType>
<ciscoMvpnBgpMdtUpdateOriginator> <ciscoMvpnBgpMdtUpdNhAddrType>
<ciscoMvpnBgpMdtUpdateNextHop> ]
```

### Syntax Description

|  |   |
|--|---|
| show                                     | Show running system information   |
| mvpn                                     | Display Multicast VPN information   |
| snmp                                     | show snmp   |
| mib                                      | show mib tables   |
| mvpnBgpMdtUpdateTable                    | show mib table mvpnBgpMdtUpdateTable  |
| <i>ciscoMvpnBgpMdtUpdGrpAddrType-in</i>  | (Optional) Data MDT Group Address Type  |
| <i>ciscoMvpnBgpMdtUpdateGroup-in</i>     | (Optional) Data MDT group address in the MDT join TLV   |
| <i>ciscoMvpnBgpMdtUpdSrcAddrType-in</i>  | (Optional) MDT mulitcast routing enty source address type   |
| <i>ciscoMvpnBgpMdtUpdateSource-in</i>    | (Optional) Souce adres for the MDT mulitcast routing enty created following the receipt of MDT join TLV |
| __readonly__                             | (Optional)  |
| TABLE_ciscoMvpnBgpMdtUpdateTable         | (Optional)  |
| <i>ciscoMvpnBgpMdtUpdGrpAddrType-out</i> | (Optional) mib table index ciscoMvpnBgpMdtUpdGrpAddrType  |
| <i>ciscoMvpnBgpMdtUpdateGroup-out</i>    | (Optional) mib table index ciscoMvpnBgpMdtUpdateGroup   |
| <i>ciscoMvpnBgpMdtUpdateRd</i>           | (Optional) mib object ciscoMvpnBgpMdtUpdateRd   |
| <i>ciscoMvpnBgpMdtUpdSrcAddrType-out</i> | (Optional) mib table index ciscoMvpnBgpMdtUpdSrcAddrType  |
| <i>ciscoMvpnBgpMdtUpdateSource-out</i>   | (Optional) mib table index ciscoMvpnBgpMdtUpdateSource  |
| <i>ciscoMvpnBgpMdtUpdOrigAddrType</i>    | (Optional) mib object ciscoMvpnBgpMdtUpdOrigAddrType  |
| <i>ciscoMvpnBgpMdtUpdateOriginator</i>   | (Optional) mib object ciscoMvpnBgpMdtUpdateOriginator   |
| <i>ciscoMvpnBgpMdtUpdNhAddrType</i>      | (Optional) mib object ciscoMvpnBgpMdtUpdNhAddrType  |
| <i>ciscoMvpnBgpMdtUpdateNextHop</i>      | (Optional) mib object ciscoMvpnBgpMdtUpdateNextHop  |

**Command Mode**

- /exec

# show mvpn snmp mib mvpnMdtDataTable

```
show mvpn snmp mib mvpnMdtDataTable [ <mplsVpnVrfName-in> ] [ __readonly__
TABLE_ciscoMvpnMdtDataTable <mplsVpnVrfName-out> <ciscoMvpnMdtDataRangeAddrType>
<ciscoMvpnMdtDataRangeAddress> <ciscoMvpnMdtDataWildcardType> <ciscoMvpnMdtDataWildcardBits>
<ciscoMvpnMdtDataThreshold> <ciscoMvpnMdtDataRowStatus> ]
```

## Syntax Description

|                                      |  |
|--------------------------------------|--|
| show                                 | Show running system information                    |
| mvpn                                 | Display Multicast VPN information                  |
| snmp                                 | show snmp  |
| mib                                  | show mib tables                                    |
| mvpnMdtDataTable                     | show mib table mvpnMdtDataTable                    |
| <i>mplsVpnVrfName-in</i>             | (Optional) VRF name                                |
| <i>__readonly__</i>                  | (Optional)   |
| <i>TABLE_ciscoMvpnMdtDataTable</i>   | (Optional)   |
| <i>mplsVpnVrfName-out</i>            | (Optional) mib table index mplsVpnVrfName          |
| <i>ciscoMvpnMdtDataRangeAddrType</i> | (Optional) mib object ciscoMvpnMdtDefaultAddrType  |
| <i>ciscoMvpnMdtDataRangeAddress</i>  | (Optional) mib object ciscoMvpnMdtDataRangeAddress |
| <i>ciscoMvpnMdtDataWildcardType</i>  | (Optional) mib object ciscoMvpnMdtDataWildcardType |
| <i>ciscoMvpnMdtDataWildcardBits</i>  | (Optional) mib object ciscoMvpnMdtDataWildcardBits |
| <i>ciscoMvpnMdtDataThreshold</i>     | (Optional) mib object ciscoMvpnMdtDataThreshold    |
| <i>ciscoMvpnMdtDataRowStatus</i>     | (Optional) mib object ciscoMvpnMdtDataRowStatus    |

## Command Mode

- /exec

## show mvpn snmp mib mvpnMdtDefaultTable

```
show mvpn snmp mib mvpnMdtDefaultTable [ <mplsVpnVrfName-in> ] [ __readonly__
TABLE_ciscoMvpnMdtDefaultTable <mplsVpnVrfName-out> <ciscoMvpnMdtDefaultAddrType>
<ciscoMvpnMdtDefaultAddress> <ciscoMvpnMdtEncapsType> <ciscoMvpnMdtDefaultRowStatus> ]
```

### Syntax Description

|                                       |  |
|---------------------------------------|--|
| show                                  | Show running system information                    |
| mvpn                                  | Display Multicast VPN information                  |
| snmp                                  | show snmp  |
| mib                                   | show mib tables                                    |
| mvpnMdtDefaultTable                   | show mib table ciscoMvpnMdtDefaultTable            |
| <i>mplsVpnVrfName-in</i>              | (Optional) mplsVpnVrfName                          |
| <i>__readonly__</i>                   | (Optional)   |
| <i>TABLE_ciscoMvpnMdtDefaultTable</i> | (Optional)   |
| <i>mplsVpnVrfName-out</i>             | (Optional) mib table index mplsVpnVrfName          |
| <i>ciscoMvpnMdtDefaultAddrType</i>    | (Optional) mib object ciscoMvpnMdtDefaultAddrType  |
| <i>ciscoMvpnMdtDefaultAddress</i>     | (Optional) mib object ciscoMvpnMdtDefaultAddress   |
| <i>ciscoMvpnMdtEncapsType</i>         | (Optional) mib object ciscoMvpnMdtEncapsType       |
| <i>ciscoMvpnMdtDefaultRowStatus</i>   | (Optional) mib object ciscoMvpnMdtDefaultRowStatus |

### Command Mode

- /exec

## show mvpn snmp mib mvpnMdtJnRcvTable

```
show mvpn snmp mib mvpnMdtJnRcvTable [ <mplsVpnVrfName-in> <ciscoMvpnMdtJnRcvGrpAddrType-in>
<ciscoMvpnMdtJnRcvGroup-in> <ciscoMvpnMdtJnRcvSrcAddrType-in> <ciscoMvpnMdtJnRcvSource-in>
] [ __readonly__ TABLE_ciscoMvpnMdtJnRcvTable <mplsVpnVrfName-out>
<ciscoMvpnMdtJnRcvGrpAddrType-out> <ciscoMvpnMdtJnRcvGroup-out>
<ciscoMvpnMdtJnRcvSrcAddrType-out> <ciscoMvpnMdtJnRcvSource-out> <ciscoMvpnMdtJnRcvUpTime>
<ciscoMvpnMdtJnRcvExpTime> ]
```

### Syntax Description

|   |   |
|---|---|
| show                                    | Show running system information   |
| mvpn                                    | Display Multicast VPN information   |
| snmp                                    | show snmp   |
| mib                                     | show mib tables   |
| mvpnMdtJnRcvTable                       | show mib table ciscoMvpnMdtJnRcvTable   |
| <i>mplsVpnVrfName-in</i>                | (Optional) VRF name   |
| <i>ciscoMvpnMdtJnRcvGrpAddrType-in</i>  | (Optional) Data MDT group address type  |
| <i>ciscoMvpnMdtJnRcvGroup-in</i>        | (Optional) Data MDT group address in the MDT join TLV   |
| <i>ciscoMvpnMdtJnRcvSrcAddrType-in</i>  | (Optional) Source address type  |
| <i>ciscoMvpnMdtJnRcvSource-in</i>       | (Optional) Source address for the MDT multicast routing entry created following the receipt of MDT join TLV |
| <i>__readonly__</i>                     | (Optional)  |
| TABLE_ciscoMvpnMdtJnRcvTable            | (Optional)  |
| <i>mplsVpnVrfName-out</i>               | (Optional) mib table index mplsVpnVrfName   |
| <i>ciscoMvpnMdtJnRcvGrpAddrType-out</i> | (Optional) mib table index ciscoMvpnMdtJnRcvGrpAddrType   |
| <i>ciscoMvpnMdtJnRcvGroup-out</i>       | (Optional) mib table index ciscoMvpnMdtJnRcvGroup   |
| <i>ciscoMvpnMdtJnRcvSrcAddrType-out</i> | (Optional) mib table index ciscoMvpnMdtJnRcvSrcAddrType   |
| <i>ciscoMvpnMdtJnRcvSource-out</i>      | (Optional) mib table index ciscoMvpnMdtJnRcvSource  |
| <i>ciscoMvpnMdtJnRcvUpTime</i>          | (Optional) mib object ciscoMvpnMdtJnRcvUpTime   |
| <i>ciscoMvpnMdtJnRcvExpTime</i>         | (Optional) mib object ciscoMvpnMdtJnRcvExpTime  |

### Command Mode

- /exec

## show mvpn snmp mib mvpnMdtJnSendTable

```
show mvpn snmp mib mvpnMdtJnSendTable [ <mplsVpnVrfName-in>
<ciscoMvpnMdtJnSendGrpAddrType-in> <ciscoMvpnMdtJnSendGroup-in>
<ciscoMvpnMdtJnSendSrcAddrType-in> <ciscoMvpnMdtJnSendSource-in> ] [ __readonly__
TABLE_<ciscoMvpnMdtJnSendTable <mplsVpnVrfName-out> <ciscoMvpnMdtJnSendGrpAddrType-out>
<ciscoMvpnMdtJnSendGroup-out> <ciscoMvpnMdtJnSendSrcAddrType-out>
<ciscoMvpnMdtJnSendSource-out> <ciscoMvpnMdtJnSendMdtGroup> <ciscoMvpnMdtJnSendMdtRefCt>
]
```

### Syntax Description

|  |   |
|--|---|
| show                                     | Show running system information   |
| mvpn                                     | Display Multicast VPN information   |
| snmp                                     | show snmp   |
| mib                                      | show mib tables   |
| mvpnMdtJnSendTable                       | show mib table ciscoMvpnMdtJnSendTable  |
| <i>mplsVpnVrfName-in</i>                 | (Optional) VRF name   |
| <i>ciscoMvpnMdtJnSendGrpAddrType-in</i>  | (Optional) Data MDT group address type  |
| <i>ciscoMvpnMdtJnSendGroup-in</i>        | (Optional) Data MDT group address in the MDT join TLV   |
| <i>ciscoMvpnMdtJnSendSrcAddrType-in</i>  | (Optional) Source address type  |
| <i>ciscoMvpnMdtJnSendSource-in</i>       | (Optional) Souce address for the MDT mulitcast routing enty created following the receipt of MDT join TLV |
| <i>__readonly__</i>                      | (Optional)  |
| TABLE_<ciscoMvpnMdtJnSendTable           | (Optional)  |
| <i>mplsVpnVrfName-out</i>                | (Optional) mib table index mplsVpnVrfName   |
| <i>ciscoMvpnMdtJnSendGrpAddrType-out</i> | (Optional) mib table index ciscoMvpnMdtJnSendGrpAddrType  |
| <i>ciscoMvpnMdtJnSendGroup-out</i>       | (Optional) mib table index ciscoMvpnMdtJnSendGroup  |
| <i>ciscoMvpnMdtJnSendSrcAddrType-out</i> | (Optional) mib table index ciscoMvpnMdtJnSendSrcAddrType  |
| <i>ciscoMvpnMdtJnSendSource-out</i>      | (Optional) mib table index ciscoMvpnMdtJnSendSource   |
| <i>ciscoMvpnMdtJnSendMdtGroup</i>        | (Optional) mib object ciscoMvpnMdtJnSendMdtGroup  |
| <i>ciscoMvpnMdtJnSendMdtRefCt</i>        | (Optional) mib object ciscoMvpnMdtJnSendMdtRefCt  |

### Command Mode

- /exec

## show mvpn snmp mib mvpnMrouteMdtTable

```
show mvpn snmp mib mvpnMrouteMdtTable [ <mplsVpnVrfName-in>
<ciscoMvpnMrouteMvrfGrpAddrType-in> <ciscoMvpnMrouteMvrfGroup-in>
<ciscoMvpnMrouteMvrfSrcAddrType-in> <ciscoMvpnMrouteMvrfSource-in>
<ciscoMvpnMrouteUpDownStreamInfo-in> ] [ __readonly__ TABLE_ciscoMvpnMrouteMdtTable
<mplsVpnVrfName-out> <ciscoMvpnMrouteMvrfGrpAddrType-out> <ciscoMvpnMrouteMvrfGroup-out>
<ciscoMvpnMrouteMvrfSrcAddrType-out> <ciscoMvpnMrouteMvrfSource-out>
<ciscoMvpnMrouteUpDownStreamInfo-out> <ciscoMvpnMrouteMdtGrpAddrType>
<ciscoMvpnMrouteMdtGroup> <ciscoMvpnMrouteMdtType> ]
```

### Syntax Description

|  |   |
|--|---|
| show                                       | Show running system information   |
| mvpn                                       | Display Multicast VPN information   |
| snmp                                       | show snmp   |
| mib  | show mib tables   |
| mvpnMrouteMdtTable                         | show mib table mvpnMrouteMdtTable   |
| <i>mplsVpnVrfName-in</i>                   | (Optional) VRF name   |
| <i>ciscoMvpnMrouteMvrfGrpAddrType-in</i>   | (Optional) Group address type of multicast routing entry                          |
| <i>ciscoMvpnMrouteMvrfGroup-in</i>         | (Optional) Group address of multicast routing entry                               |
| <i>ciscoMvpnMrouteMvrfSrcAddrType-in</i>   | (Optional) Source address type  |
| <i>ciscoMvpnMrouteMvrfSource-in</i>        | (Optional) Source address of multicast routing entry                              |
| <i>ciscoMvpnMrouteUpDownStreamInfo-in</i>  | (Optional) if PE is Upstream or downstream router for the multicast routing entry |
| <i>__readonly__</i>                        | (Optional)  |
| <i>TABLE_ciscoMvpnMrouteMdtTable</i>       | (Optional)  |
| <i>mplsVpnVrfName-out</i>                  | (Optional) mib table index mplsVpnVrfName   |
| <i>ciscoMvpnMrouteMvrfGrpAddrType-out</i>  | (Optional) mib table index ciscoMvpnMrouteMvrfGrpAddrType                         |
| <i>ciscoMvpnMrouteMvrfGroup-out</i>        | (Optional) mib table index ciscoMvpnMrouteMvrfGroup                               |
| <i>ciscoMvpnMrouteMvrfSrcAddrType-out</i>  | (Optional) mib table index ciscoMvpnMrouteMvrfSrcAddrType                         |
| <i>ciscoMvpnMrouteMvrfSource-out</i>       | (Optional) mib table index ciscoMvpnMrouteMvrfSource                              |
| <i>ciscoMvpnMrouteUpDownStreamInfo-out</i> | (Optional) mib table index ciscoMvpnMrouteUpDownStreamInfo                        |
| <i>ciscoMvpnMrouteMdtGrpAddrType</i>       | (Optional) mib object ciscoMvpnMrouteMdtGrpAddrType                               |
| <i>ciscoMvpnMrouteMdtGroup</i>             | (Optional) mib object ciscoMvpnMrouteMdtGroup                                     |

|                               |  |
|-------------------------------|--|
| <i>ciscoMvpnMrouteMdtType</i> | (Optional) mib object ciscoMvpnMrouteMdtType |
|-------------------------------|--|

**Command Mode**

- /exec



# show mvpn snmp mib mvpnMvrfNumber

```
show mvpn snmp mib mvpnMvrfNumber [ __readonly__ <ciscoMvpnMvrfNumber> ]
```

## Syntax Description

|                            |   |
|----------------------------|---|
| show                       | Show running system information           |
| mvpn                       | Display Multicast VPN information         |
| snmp                       | show snmp                                 |
| mib                        | show mib tables/scalars                   |
| mvpnMvrfNumber             | Show number of MVRFs                      |
| <i>__readonly__</i>        | (Optional) Read Only                      |
| <i>ciscoMvpnMvrfNumber</i> | (Optional) mib object ciscoMvpnMvrfNumber |

## Command Mode

- /exec

## show mvpn snmp mib mvpnNotificationEnable

show mvpn snmp mib mvpnNotificationEnable [ \_\_readonly\_\_ <ciscoMvpnNotificationEnable> ]

### Syntax Description

|                                    |   |
|------------------------------------|---|
| show                               | Show running system information                   |
| mvpn                               | Display Multicast VPN information                 |
| snmp                               | show snmp   |
| mib                                | show mib tables/scalars                           |
| mvpnNotificationEnable             | Show value of ciscoMvpnNotificationEnable         |
| __readonly__                       | (Optional) Read Only                              |
| <i>ciscoMvpnNotificationEnable</i> | (Optional) mib object ciscoMvpnNotificationEnable |

### Command Mode

- /exec

## show mvpn snmp mib mvpnTunnelTable

```
show mvpn snmp mib mvpnTunnelTable [ <ifIndex-in> ] [ __readonly__ TABLE_ciscoMvpnTunnelTable
<ifIndex-out> <ciscoMvpnTunnelName> <ciscoMvpnTunnelMvrf> ]
```

### Syntax Description

|                                   |   |
|-----------------------------------|---|
| show                              | Show running system information           |
| mvpn                              | Display Multicast VPN information         |
| snmp                              | show snmp                                 |
| mib                               | show mib tables                           |
| mvpnTunnelTable                   | show mib table mvpnTunnelTable            |
| <i>ifIndex-in</i>                 | (Optional) Interface Index                |
| <i>__readonly__</i>               | (Optional)                                |
| <i>TABLE_ciscoMvpnTunnelTable</i> | (Optional)                                |
| <i>ifIndex-out</i>                | (Optional) mib table index ifIndex        |
| <i>ciscoMvpnTunnelName</i>        | (Optional) mib object ciscoMvpnTunnelName |
| <i>ciscoMvpnTunnelMvrf</i>        | (Optional) mib object ciscoMvpnTunnelMvrf |

### Command Mode

- /exec

```
show mvpn snmp mib mvpnTunnelTable
```