



# CHAPTER 3

## Commands

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### 3.1 Introduction

This chapter provides details of all IOS and IOS XR commands executed by the troubleshooting workflows in the Cisco MPLS Diagnostics Expert (MDE) 2.1.3 application for the Cisco IP Solution Center (ISC) Release 5.1.

### 3.2 IOS Commands

This section lists the IOS commands used by MDE. If TACACS+ (or another authentication/authorization system) is used, ensure that these are all allowed for MDE.



**Note**

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This list might be updated when MDE releases or patches are made available, e-mail: [mpls-diagnostics-expert@cisco.com](mailto:mpls-diagnostics-expert@cisco.com) for the latest list.

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1. attach *<slot>* show version
2. execute-on slot *<slot>* 'show mpls forwarding-table *<destinationPrefix>* *<subnetMask>*'
3. execute-on slot *<slot>* 'show mpls forwarding-table *<destinationPrefix>*'
4. execute-on slot *<slot>* 'show mpls forwarding-table vrf *<vrfName>* *<destinationPrefix>* *<subnetMask>*'
5. execute-on slot *<slot>* 'show mpls forwarding-table vrf *<vrfName>* *<destinationPrefix>*'
6. execute-on slot *<slot>* 'show mpls forwarding-table vrf *<vrfName>*'
7. execute-on slot *<slot>* 'show mpls forwarding-table'
8. execute-on slot *<slot>* show ip cef vrf *<vrfName>* *<networkPrefix>*
9. execute-on slot *<slot>* show ip cef vrf *<vrfName>* *<networkPrefix>* *<subnetMask>*
10. execute-on slot *<slot>* show version

11. ping (interactive)
12. ping <targetIp>
13. ping mpls ipv4 <targetIp>/<targetIpSubnetMask> source <source> sweep <minSweepSize> <maxSweepSize> <sweepInterval> <repeatCount> timeout <timeout> replyMode <replyMode>
14. ping mpls traffic-eng Tunnel <tunnelNumber>
15. ping vrf <vrfName> (interactive)
16. show access-lists <listName>
17. show atm map
18. show atm pvc <interface>
19. show cef drop
20. show cef drop | include ^<slot>
21. show frame-relay lmi
22. show frame-relay lmi interface <interface>
23. show frame-relay map
24. show frame-relay pvc <interface> dlci <dlci>
25. show interfaces <interface>
26. show ip bgp summary
27. show ip bgp vpnv4 <vrfName> rib-failure
28. show ip bgp vpnv4 all neighbors
29. show ip bgp vpnv4 all neighbors <destIp>
30. show ip bgp vpnv4 all | include local router
31. show ip bgp vpnv4 vrf <vrfName> <networkPrefix>
32. show ip bgp vpnv4 vrf <vrfName> neighbors <destIp>
33. show ip bgp vpnv4 vrf <vrfName> <prefix> <subnetMask>
34. show ip bgp vpnv4 vrf <vrfName> labels | include <networkPrefix>/<subnetMask> | [0-9]+\.[0-9]+\.[0-9]+\.[0-9]+
35. show ip bgp vpnv4 vrf <vrfName> labels | include <classfulPrefix>
36. show ip bgp vpnv4 vrf <vrfName> labels | include <networkPrefix>/<subnetMask>
37. show ip cef <destinationPrefix>
38. show ip cef summary
39. show ip cef vrf <vrfName> <networkPrefix> <subnetMask> detail
40. show ip cef vrf <vrfName> <networkPrefix> detail
41. show ip cef vrf <vrfName> adjacency <interface> <destip> detail
42. show ip eigrp <vrfName> interfaces <vrfInterface>
43. show ip interface <interface>
44. show ip interface <interface> | include access list is
45. show ip interface brief <interface>
46. show ip ospf <processId> <area> interface <intName>

47. show ip protocols <vrfName>
48. show ip route <targetIp>
49. show ip route vrf <vrfName> <targetIp>
50. show ip traffic
51. show ip vrf detail <vrfName>
52. show ip vrf interfaces <vrfName>
53. show mpls forwarding-table <destinationPrefix>
54. show mpls forwarding-table <destinationPrefix> <subnetMask>
55. show mpls forwarding-table <destinationPrefix> detail
56. show mpls forwarding-table labels <label>
57. show mpls forwarding-table labels <label> detail
58. show mpls forwarding-table vrf <vrfName>
59. show mpls forwarding-table vrf <vrfName> <destinationPrefix>
60. show mpls forwarding-table
61. show mpls interfaces <interface>
62. show mpls interfaces all
63. show mpls ip binding <destinationPrefix> <destinationMask>
64. show mpls ip binding local
65. show mpls ip binding summary
66. show mpls label range
67. show mpls ldp bindings <ip> <subnetMask>
68. show mpls ldp bindings neighbor <neighbor ip> <subnetMask>
69. show mpls ldp discovery
70. show mpls ldp neighbor
71. show mpls ldp neighbor <interface>
72. show mpls traffic-eng tunnels
73. show mpls traffic-eng tunnels <status>
74. show mpls traffic-eng tunnels <tunnelId>
75. show mpls traffic-eng tunnels destination <destination> <status>
76. show mpls traffic-eng tunnels destination <destination>
77. show mpls traffic-eng tunnels role <role>
78. show mpls traffic-eng tunnels role <role> <status>
79. show mpls traffic-eng tunnels role <role> destination <destination> <status>
80. show mpls traffic-eng tunnels role <role> destination <destination> up
81. show ppp multilink interface <interface>
82. show route-map <mapName>
83. show running-config
84. show running-config interface <interface>

85. show running-config interface <interface> | include frame-relay interface-dlci
86. show running-config interface <interface> | include map-group
87. show running-config interface <interface> | include no frame-relay inverse-arp
88. show running-config | begin router bgp
89. show running-config | include advertise-
90. show running-config | include ldp password
91. show running-config | include mpls label protocol
92. show running-config | include no
93. show version
94. show vlans
95. traceroute mpls ipv4 <ipAddress>/<subnetMask> source <source> destination <destination> ttl 15
96. traceroute mpls traffic-eng Tunnel <tunnelNumber>
97. traceroute vrf <vrfName> (interactive)

## 3.3 IOS XR Commands

This section lists the IOS XR commands used by MDE. If TACACS+ (or another authentication/authorization system) is used, ensure that these are all allowed for MDE.



### Note

This list might be updated when MDE releases or patches are made available, e-mail: [mpls-diagnostics-expert@cisco.com](mailto:mpls-diagnostics-expert@cisco.com) for the latest list.

1. ping <targetIp>
2. ping atm interface <interface> <vpi>/<vci>
3. ping atm interface <interface> <vpi>/<vci> end-loopback
4. ping atm interface <interface> <vpi>/<vci> seg-loopback
5. ping mpls ipv4 <destination>/<subnetMask>
6. ping mpls ipv4 <destination>/<subnetMask> reply mode router-alert
7. ping mpls ipv4 <destination>/<subnetMask> source <source>
8. ping mpls traffic-eng Tunnel <tunnelId>
9. ping vrf <vrfName>
10. ping vrf <vrfName> <targetIp> <sourceInterface> <minSweepSize> <maxSweepSize> <sweepInterval>
11. show access-lists ipv4 <listName>
12. show bgp ipv4 all summary
13. show bgp vpv4 unicast neighbors
14. show bgp vpv4 unicast summary
15. show bgp vpv4 unicast vrf <vrfName> <prefix> <mask>

16. show bgp vpnv4 unicast vrf <vrfName> labels
17. show bgp vrf <vrfName> neighbors
18. show bgp vrf <vrfName> vpnv4 unicast neighbors
19. show cef ipv4 <destinationPrefix>
20. show cef ipv4 drops
21. show cef ipv4 drops location <slot>
22. show cef ipv4 summary
23. show cef vrf <vrfName> ipv4 <networkPrefix> detail
24. show cef vrf <vrfName> ipv4 <networkPrefix> <subnetMask> detail
25. show cef vrf <vrfName> <networkPrefix> <subnetMask> location <location>
26. show eigrp <vrfName> interfaces <vrfInterface>
27. show frame-relay lmi
28. show frame-relay lmi interface <interface>
29. show install active summary
30. show install inactive summary
31. show install location <slot>
32. show interfaces <interface>
33. show ip cef vrf <vrfName> adjacency <interface> <destip> detail
34. show ip ospf <processId> <area> interface <intName>
35. show ipv4 interface <interface>
36. show ipv4 interface brief <interface>
37. show ipv4 traffic
38. show ipv4 vrf <vrfName> interface brief
39. show ipv4 vrf <vrfName> interface <interface>
40. show ipv4 vrf all interface brief
41. show mpls forwarding
42. show mpls forwarding labels <label>
43. show mpls forwarding prefix <destinationPrefix>/<subnetMask>
44. show mpls forwarding prefix <destinationPrefix>/<subnetMask> detail
45. show mpls forwarding vrf <vrf>
46. show mpls forwarding vrf <vrf> prefix <destinationPrefix>/<subnetMask>
47. show mpls forwarding vrf <vrfName> prefix <destinationPrefix>/<subnetMask> labels <label> location <location>
48. show mpls forwarding vrf <vrfName> prefix <destinationPrefix>/<subnetMask> location <location>
49. show mpls interfaces
50. show mpls interfaces <interface>
51. show mpls label range

52. show mpls label table summary
53. show mpls ldp bindings <ip> <mask>
54. show mpls ldp bindings neighbor <neighbor> <ip> <mask>
55. show mpls ldp discovery
56. show mpls ldp neighbor
57. show mpls ldp neighbor <interface>
58. show mpls traffic-eng tunnels
59. show mpls traffic-eng tunnels <status> detail
60. show mpls traffic-eng tunnels <tunnelNumber> detail
61. show mpls traffic-eng tunnels destination <destination> <status> detail
62. show mpls traffic-eng tunnels destination <destination> detail
63. show mpls traffic-eng tunnels detail
64. show mpls traffic-eng tunnels role <role> <status> detail
65. show mpls traffic-eng tunnels role <role> destination <destination> <status> detail
66. show mpls traffic-eng tunnels role <role> destination <destination> up detail
67. show mpls traffic-eng tunnels role <role> detail
68. show rib ipv4 tables
69. show route ipv4 <targetIp>
70. show route vrf <vrfName> ipv4 <targetIp>
71. show rpl route-policy <mapName>
72. show running-config
73. show running-config interface <interface>
74. show running-config mpls ldp label advertise
75. show running-config router bgp
76. show vlan interface
77. show version
78. show vrf <vrfName> ipv4 detail
79. traceroute mpls ipv4 <destination>/<subnetMask>
80. traceroute mpls traffic-eng Tunnel <tunnelId>
81. traceroute vrf <vrf>