CHAPTER 8

Support Information for Cisco Optical Transport

This chapter contains support information for Virtual Network Elements (VNEs) that manage Cisco optical transport in Cisco Prime Network 3.9.

Note For more information about the technologies described in this chapter , see Part 2 Technology Support.

Cisco Carrier Packet Transport Series Devices

This section includes the following information about Cisco CPT Devices optical transport (for information on the NE types supported in Cisco Prime Network 3.9, see Cisco Carrier Packet Transport Series Devices):

Cisco CPT Devices—Supported Software Versions

Table 8-1 Supported Software Versions for Cisco CPT Devices—Cisco Prime Network 3.9

Software Version	Product_Version
Image 09.30	Prime Network 3.8
Image 09.50	Prime Network 3.8 DP3

Cisco CPT Devices—Supported Topologies

Table 8-2 Supported Topologies for Cisco CPT Devices—Cisco Prime Network 3.9

Topology Type	Link Type	Product_Version
Ethernet	Ethernet	3.6.0
MPLS	MPLS	3.6.0
Physical Layer	Physical Layer	3.6.0
LAG	LAG	3.6.0
BFD	BFD	3.7.1
MPLS-TP	Tunnel	Prime Network 3.8

Cisco CPT Devices—Supported Modules

Table 8-3 Supported Modules for Cisco CPT Devices—Cisco Prime Network 3.9

Module Name	Product_Version	Module Description
POWER-SUPPLY	Prime Network 3.8	4000W DC PS for M6/M2 Chassis
FAN-TRAY	Prime Network 3.8	Fan try for M6/M2 Chassis
TNC	Prime Network 3.8	Transport Node Controller Ethernet PTP for M2, M6 Chassis
TSC	Prime Network 3.8	Transport Shelf Controller Ethernet PTP for M2, M6 Chassis
IO-SLOT	Prime Network 3.8	IO Slot for M6/M2 Chassis
PTF_10GE_LINE_CARD	Prime Network 3.8	Packet Transport Fabric 256G Fabric Card w/ 4x10GE
NGXP	Prime Network 3.8	Next Generation Process Module
PTSA_GE_LINE_CARD	Prime Network 3.8	

Table 8-3 Supported Modules for Cisco CPT Devices—Cisco Prime Network 3.9 (continued)

Module Name	Product_Version	Module Description
OC48AS-IR-1310	Prime Network 3.8	
OC192LR	Prime Network 3.8	
XC10G	Prime Network 3.8	
XFP-10G-MM-SR	Prime Network 3.8	
ONS-XC-10G-S1	Prime Network 3.8	
ONS-SE+-10G-LR	Prime Network 3.8	SFP+ LR - EXT Temp
ONS-SC+-10G-LRM	Prime Network 3.8	SFP+ LRM - Commercial Temp
ONS-SI-GE-EX	Prime Network 3.8	SFP - 100Base EX - I-Temp
ONS-SC-GE-BXU	Prime Network 3.8	SFP-1000Base BX D- GE Bidirectional Downstream C Temp
ONS-SC-GE-BXD	Prime Network 3.8	SFP-1000Base BX D- GE Bidirectional Upstream C Temp
ONS-SC+-10G-ZR	Prime Network 3.8	SFP+ ZR - Commercial Temp
ONS-SC-E1-T1-CES	Prime Network 3.8	SFP - E1/DS1 PDH over FE Pseudowire (w / sync-E) - C-Temp
ONS-SC-E3-T3-CES	Prime Network 3.8	SFP ñ E3/DS3 PDH over FE Pseudowire (w / sync-E) - C-Temp
ONS-SC+-10G-30.3	Prime Network 3.8	10G MR, SFP+ 1530.33, 100 GHz, LC

Table 8-3 Supported Modules for Cisco CPT Devices—Cisco Prime Network 3.9 (continued)

Module Name	Product_Version	Module Description
ONS-SC+-10G-31.1	Prime Network 3.8	10G MR, SFP+ 1531.12, 100 GHz, LC
ONS-SC+-10G-31.9	Prime Network 3.8	10G MR, SFP+ 1531.90, 100 GHz, LC
ONS-SC+-10G-32.6	Prime Network 3.8	10G MR, SFP+ 1532.68, 100 GHz, LC
ONS-SC+-10G-33.4	Prime Network 3.8	10G MR, SFP+ 1533.47, 100 GHz, LC
ONS-SC+-10G-34.2	Prime Network 3.8	10G MR, SFP+ 1534.25, 100 GHz, LC
ONS-SC+-10G-35.0	Prime Network 3.8	10G MR, SFP+ 1535.04, 100 GHz, LC
ONS-SC+-10G-35.8	Prime Network 3.8	10G MR, SFP+ 1535.82, 100 GHz, LC
ONS-SC+-10G-36.6	Prime Network 3.8	10G MR, SFP+ 1536.61, 100 GHz, LC
ONS-SC+-10G-37.4	Prime Network 3.8	10G MR, SFP+ 1537.40, 100 GHz, LC
ONS-SC+-10G-38.1	Prime Network 3.8	10G MR, SFP+ 1538.19, 100 GHz, LC
ONS-SC+-10G-38.9	Prime Network 3.8	10G MR, SFP+ 1538.98, 100 GHz, LC
ONS-SC+-10G-39.7	Prime Network 3.8	10G MR, SFP+ 1539.77, 100 GHz, LC
ONS-SC+-10G-40.5	Prime Network 3.8	10G MR, SFP+ 1540.56, 100 GHz, LC
ONS-SC+-10G-41.3	Prime Network 3.8	10G MR, SFP+ 1541.35, 100 GHz, LC

Table 8-3 Supported Modules for Cisco CPT Devices—Cisco Prime Network 3.9 (continued)

Module Name	Product_Version	Module Description
ONS-SC+-10G-42.1	Prime Network 3.8	10G MR, SFP+ 1542.14, 100 GHz, LC
ONS-SC+-10G-42.9	Prime Network 3.8	10G MR, SFP+ 1542.94, 100 GHz, LC
ONS-SC+-10G-43.7	Prime Network 3.8	10G MR, SFP+ 1543.73, 100 GHz, LC
ONS-SC+-10G-44.5	Prime Network 3.8	10G MR, SFP+ 1544.53, 100 GHz, LC
ONS-SC+-10G-45.3	Prime Network 3.8	10G MR, SFP+ 1545.32, 100 GHz, LC
ONS-SC+-10G-46.1	Prime Network 3.8	10G MR, SFP+ 1546.12, 100 GHz, LC
ONS-SC+-10G-46.9	Prime Network 3.8	10G MR, SFP+ 1546.92, 100 GHz, LC
ONS-SC+-10G-47.7	Prime Network 3.8	10G MR, SFP+ 1547.72, 100 GHz, LC
ONS-SC+-10G-48.5	Prime Network 3.8	10G MR, SFP+ 1548.51, 100 GHz, LC
ONS-SC+-10G-49.3	Prime Network 3.8	10G MR, SFP+ 1549.32, 100 GHz, LC
ONS-SC+-10G-50.1	Prime Network 3.8	10G MR, SFP+ 1550.12, 100 GHz, LC
ONS-SC+-10G-50.9	Prime Network 3.8	10G MR, SFP+ 1550.92, 100 GHz, LC
ONS-SC+-10G-51.7	Prime Network 3.8	10G MR, SFP+ 1551.72, 100 GHz, LC
ONS-SC+-10G-52.5	Prime Network 3.8	10G MR, SFP+ 1552.52, 100 GHz, LC

Table 8-3 Supported Modules for Cisco CPT Devices—Cisco Prime Network 3.9 (continued)

Module Name	Product_Version	Module Description
ONS-SC+-10G-53.3	Prime Network 3.8	10G MR, SFP+ 1553.33, 100 GHz, LC
ONS-SC+-10G-54.1	Prime Network 3.8	10G MR, SFP+ 1554.13, 100 GHz, LC
ONS-SC+-10G-54.9	Prime Network 3.8	10G MR, SFP+ 1554.94, 100 GHz, LC
ONS-SC+-10G-55.7	Prime Network 3.8	10G MR, SFP+ 1555.75, 100 GHz, LC
ONS-SC+-10G-56.5	Prime Network 3.8	10G MR, SFP+ 1556.55, 100 GHz, LC
ONS-SC+-10G-57.3	Prime Network 3.8	10G MR, SFP+ 1557.36, 100 GHz, LC
ONS-SC+-10G-58.1	Prime Network 3.8	10G MR, SFP+ 1558.17, 100 GHz, LC
ONS-SC+-10G-58.9	Prime Network 3.8	10G MR, SFP+ 1558.98, 100 GHz, LC
ONS-SC+-10G-59.7	Prime Network 3.8	10G MR, SFP+ 1559.79, 100 GHz, LC
ONS-SC+-10G-60.6	Prime Network 3.8	10G MR, SFP+ 1560.61, 100 GHz, LC
ONS-SC+-10G-61.4	Prime Network 3.8	10G MR, SFP+ 1561.43, 100 GHz, LC

Cisco CPT Devices—Supported Technologies

The following technologies are supported by the Cisco CPT Devices in Cisco Prime Network 3.9:

- IP, page 8-8
- Routing Protocols, page 8-11
- Ethernet, page 8-13
- MPLS, page 8-18
- MPLS-TE, page 8-20

Cisco CPT Devices—Supported Service Events

Table 8-4 Supported Service Events for Cisco CPT Devices—Cisco Prime Network 3.9

Event Name	Product_Version	Expedited
Active IP Interfaces Found	Prime Network 3.8	N
All IP Interfaces Down	Prime Network 3.8	N
Card Down	Prime Network 3.8	Y
Card In	Prime Network 3.8	Y
Card Out	Prime Network 3.8	Y
Card Up	Prime Network 3.8	Y
CPU utilization exceeded upper threshold	Prime Network 3.8	N
CPU utilization less than lower threshold	Prime Network 3.8	N
Device Unsupported	Prime Network 3.8	N

Table 8-4 Supported Service Events for Cisco CPT Devices—Cisco Prime Network 3.9

Event Name	Product_Version	Expedited
Link up	Prime Network 3.8	N

Supported Technologies on Cisco Optical Transport

The following sections list the objects and attributes that are supported on Cisco optical transport in Cisco Prime Network 3.9 per technology:

IP

Table 8-5 IP Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
IMO Name—IIPInterface	
IP Address	Y
Subnetwork Mask	Y
IP Interface Addresses Array	Y
Interface Name	Y
Interface Description	Y
IP Interface State	Y

Table 8-5 IP Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
OSPF Interface Cost	
Broadcast Address	
MTU	
Lookup Method	
Address Resolution Type	
ARP Timeout	
Secured ARP	
ICMP Mask Reply	
IGMP Proxy	
HSRP Groups	
IP Multiplexing Table	
IANA Type	
Containing CTPs	
Contained CTPs	
IMO Name—IIPMuxEntry	
Termination Point	
Destination IP Subnet	
IMO Name—IRoutingEntity	
Routing Table	Y
ARP Entity	Y
Routing Table Changes	
Name	Y
Logical Sons	Y
IMO Name—IRoutingEntry	
Destination IP Subnet	Y
Next Hop IP Address	Y
Type	Y
Routing Protocol Type	Y
Outgoing Interface Name	Y
IMO Name—IARPEntity	
ARP Table	Y
IMO Name—IARPEntry	
IP Address	Y
MAC Address	Y
Port	Y
Entry Type	Y

Table 8-5 IP Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
IMO Name—IIPPool	
IP Address Pool Entries	
Name	
Index	
IMO Name—IIPRangeBasedIPPoolEntry	
Start IP Address	
End IP Address	
Unused Addresses	
Used Addresses	
Reserved Addresses	
IMO Name—IIPSubnetBasedIPPoolEntry	
IP Subnet	
Unused Addresses	
Used Addresses	
Reserved Addresses	
IMO Name—HSRPGroupEntry	
Group Number	
Port Description	
Priority	
Coupled Router	
State	
Tracking Interfaces	
Virtual IP Address	
Virtual MAC Address	
IMO Name—ITunnelGRE	
Name	
Tunnel Destination and Source	
IP Address	
IP Interface State	
IANA Type	
Containing CTPs	
Contained CTPs	
Keep Alive Time	
Keep Alive Retry	
IMO Name—IVrrpGroupEntry	
Group Number	

Table 8-5 IP Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
State	
Port Description	
Master IP Address	
Primary IP Address	
Priority	
Virtual Mac Address	
Preempt Mode	
Admin State	
Advertisement Interval	
Tracking Interfaces	
IMO Name—IIPSLAResponderService	
responderStatus	
TWAMPResponderStatus	
tcpConnect	
udpEcho	
IMO Name—IIPAddressPortPair	
type	
ipAddress	
port	

Routing Protocols

Table 8-6 Routing Protocols Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
IMO Name—IBgpNeighborEntry	
Remote Identifier	
Neighbor Type	
Distributing Interfaces	
Remote Address	
Remote Autonomous System	
Peer State	
Peer AdminState	
Hold Time	
Keep Alive Time	

Table 8-6 Routing Protocols Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9 (continued)

Attribute	CPT
VrfName	
Address family	
IMO Name—IOspfEntry	
Area Identifier	
IP Address	
Type	
Administrative Status	
Ospf Entry State	
IMO Name—IOspfProcess	
Process Id	Y
OSPF Version	Y
Router Id	Y
IMO Name—IOspfNeighbor	
Neighbor Id	Y
Outgoing Interface	Y
State	Y
Neighbor Interface Address	Y
Area Id	Y
IMO Name—IOspfInterface	
Area Id	Y
Network Type	Y
Cost	Y
State	Y
Interface Address	Y
Type	Y
IF Proirity	Y
DR Id	Y
BDR Id	Y
IMO Name—ISpfTimers	
Schedule Delay	Y
Min Hold Time	Y
Max Wait Time	Y
IMO Name—IISISProcess	
ISIS Version	
Manual Area Address	

Table 8-6 Routing Protocols Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9 (continued)

Attribute	CPT
IS Type	
System Id	
Process Id	
IMO Name—IISISMetric	
IS Type	
Metric Style	
Metric Value	
Address Family	
IMO Name—IISISInterface	
Interface Name	
IMO Name—IISISNeighbor	
IS Type	
System Id	
Admin State	
Hold Time	
SNPA	
Interface Name	
IP Address	
Adress Family	

Ethernet

Table 8-7 Ethernet Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
IMO Name—ILinkAggregationGroup802dot3ad	
dot3adAggMACAddress	Y
dot3adAggActorSystemPriority	Y
dot3adAggActorSystemID	Y
dot3adAggActorAdminKey	Y
dot3adAggActorOperKey	Y
dot3adAggPartnerSystemID	Y
dot3adAggPartnerSystemPriority	Y
dot3adAggPartnerOperKey	Y

Table 8-7 Ethernet Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
dot3adAggCollectorMaxDelay	Y
GroupNumber	Y
AggregationProtocolType	Y
MacAddress	Y
ChannelAdminStatus	Y
ChannelOperStatus	Y
IMO Name—IEthernet	
MAC Address	Y
Duplex Mode	
Output Flow Control	
Input Flow Control	
IANA Type	
Containing CTPs	
Contained CTPs	
Port Type	Y
isElmiEnabled	Y
isLOAMEnabled	
IMO Name—IVlanInterface	
Mode	
Native VLAN Identification	
Virtual LAN Table	
IANA Type	
Containing CTPs	
Contained CTPs	
vlanAdminType	
vlanencapType	
getAccess	
Allowed Vlans	
IMO Name—IVlanEncapMux	
IANA Type	Y
Containing CTPs	
Contained CTPs	
IMO Name—IVlanMapping	
direction	
vlanMatchCriteria	
vlanRewriteDefinition	

Table 8-7 Ethernet Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
Drop	
Vlan	
innerVlan	
translatedVlan	
translatedInnerVlan	
IMO Name—IIEEE802	
VLAN Identification	
Binding Information	
Binding Status	
IANA Type	
Containing CTPs	
Contained CTPs	
IMO Name—IStpService	
StpProtocol	
StpMaxAge	
StpHelloTime	
StpBridgeForwardDelay	
StpInstanceInfoTable	
Same as ISystemService	
StpUplinkFastState	
StpBackboneFastState	
StpForwardDelay	
StpBridgeMaxAge	
StpBridgeHelloTime	
IMO Name—IMstService	
MstProperties	
Same as IStpService	
IMO Name—IPvstpService	
UpLinkFast	
BackboneFast	
IMO Name—IMstProperties	
MstForceVersion	
MstCfgIdFmtSel	
MstExternalRootCost	
MstMaxInstances	
MstCfgIdName	

Table 8-7 Ethernet Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
MstCfgIdRevLevel	
IMO Name—IStpInstanceInfo	
Object Identification	
StpBridgeId	
BridgePriority	
Designated Parent and Root Bridges	
StpRootCost	
IsRoot	
StpRootPort	
StpPortInfoTable	
STP Instance Id	
Vlan Id	
StpDesignatedBridge	
StpDesignatedRoot	
IMO Name—IMstInstanceInfo	
MstVlanIds	
Same as IStpInstanceInfo	
IMO Name—IPvstpInstanceInfo	
Protocol Type	
StpBridgeMaxAge	
StpBridgeHelloTime	
StpBridgeForwardDelay	
StpProtocolSpecification	
StpVlanId	
StpForwardDelay	
StpMaxAge	
IMO Name—IRstpInstanceInfo	
StpForceVersion	
Same as IStpInstanceInfo	
IMO Name—IStpPortInfo	
StpPort	
StpPortPriority	
StpPortState	
StpPortPathCost	
StpPortEdgePort	

Table 8-7 Ethernet Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
StpPortPointToPoint	
StpPortRole	
StpDesignatedPortIdentifier	
StpDesignatedBridge	
StpPortIdentifier	
StpPortBpduGuardState	
StpPortBpduFilterState	
IMO Name—IMstPortInfo	
MstPortHelloTime	
Same as IStpPortInfo	
IMO Name—IPvstpPortInfo	
PvstpPortFastState	
IMO Name—IEthernetChannel	
Group Number	
Bandwidth	
Aggregation Protocol	
IANA Type	
Containing CTPs	
Contained CTPs	
Mac Address	
Admin Status	
Oper Status	
IMO Name—ITokenRingLayer2	
MAC Address	
IANA Type	
Containing CTPs	
Contained CTPs	
IMO Name—ITokenRingLayer1	
Same as IPhysicalLayer	
IMO Name—IVtpService	
Version	
OperatingMode	
DomainName	
ConfigurationRevision	
isPruningEnabled	
isAuthenticationEnabled	

Table 8-7 Ethernet Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
IMO Name—IREPService	
version	Y
administrativeVlan	Y
notificationEnabled	Y
IMO Name—IREPSegmentInfo	
segmentId	Y
segmentComplete	Y
IMO Name—IREPPortInfo	
portName	Y
portKey	Y
segmentId	Y
portType	Y
portRole	Y
operStatus	Y
blockedVlans	Y
preemptTimer	Y
lslAgeoutTimer	Y
remoteDeviceName	Y
remoteDeviceMac	Y
remotePortName	Y
configuredLoadBalancingBlockedVlans	Y
IMO Name—IBridgeILan	
Id	
IMO Name—IIBBridgeEntry	
IS Id	
IBridge	
BBridge	

MPLS

Table 8-8 MPLS Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
IMO Name—IMpls	
Distribution Protocol	Y

Table 8-8 MPLS Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
LabelStack	
TopLabel	
Outer and Inner Labels	
Traffic Engineering Properties	Y
Resource reservation Properties	
IANA Type	Y
Containing CTPs	
Contained CTPs	
IMO Name—ILse	
MPLS Table	Y
MPLS Aggregate Table	Y
MPLS Tunnel Segments	Y
LDP Service	Y
Logical Sons	Y
IMO Name—ILdpService	
Local Identification Status	Y
LDP Peers	Y
IMO Name—ILdpPeer	
Peer Identification	Y
Transport Address	Y
Distribution Method	Y
Protocol Type	Y
Path Vector Limit	Y
Session Status	Y
Protocol Version Hold Time	
Hold Time	Y
Keep Alive Time	
Peer Discovery Sources	Y
IMO Name—ILdpDiscoverySource	
Interface Name	Y
Source Address	Y
Type	Y
IMO Name—IMplsEntry	
Incoming Label	Y
Outgoing Interface and Label	Y
Switching Action	Y

Table 8-8 MPLS Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
Next Hop IP Address	Y
Destination Mask	Y
Destination address	Y
IMO Name—IMplsAggregateEntry	
Virtual Routing Entity	Y
Incoming Label	Y
Outgoing Interface and Label	Y
Switching Action	Y
Next Hop IP Address	Y
IMO Name—IMplsLabelRange	
Type	Y
minValue	Y
MaxValue	Y

MPLS-TE

Table 8-9 MPLS-TE Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
IMO Name—IMplsTETunnel	
Destination Address	Y
Outgoing Interface and Label	Y
LSP Identification	Y
Requested Bandwidth	Y
Measured Average Burst and Peak Bandwidth	Y
Setup and Hold Priority	Y
Affinity Bits and Mask	Y
Automatic Route Announcement Status	Y
Optimization Lock Down Status	Y
Path Option	Y
Name	Y
Description	Y
Administrative Status	Y
Operational Status	Y

Table 8-9 MPLS-TE Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
IANA Type	Y
is FRR Enabled	Y
TunnelType	Y
DestinationAddress	Y
Sub Lsp Status	Y
OutInterface	Y
OutLabel	Y
TunnelAffinity	Y
TunnelAffinityMask	Y
TunnelAutoRoute	Y
TunnelBandwidthKbps	Y
TunnelAverageRateKbps	Y
TunnelBurstKbps	Y
TunnelPeakRateKbps	Y
TunnelSetupPriority	Y
TunnelHoldPriority	Y
TunnelLockdown	Y
TunnelPolicyClass	
P2MPDestinations	Y
IMO Name—IMplsTEProperties	
Administrative Weight	Y
Attributes Identifier	
Signaling Protocol	Y
Available Physical and Reservable Bandwidth	Y
Reserved Bandwidth	Y
IMO Name—IMplsTEPropertiesAllocationEntry	
Priority Level	
Allocated and Cumulative Bandwidth	
IMO Name—IMplsTESegment	
Segment Type	Y
Measured Average Burst and Peak Bandwidth	Y
LSP Identification	Y

Table 8-9 MPLS-TE Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
Name	Y
FRRTunnelName	
FRRTunnelState	
AverageBandwidth	Y
In Interface	Y
Out interface	Y
In Label	Y
Out Label	Y
Source address	Y
Destination address	Y
TunnelType	Y

MPLS-TP

Table 8-10 MPLS-TP Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
IMO Name—IMPLSTPGlobal	
icc	Y
globalId	Y
protectionMode	Y
redundancyMode	Y
routerId	Y
tpEnabledLinks	Y
lspEndpoints	Y
lspMidpoints	Y
mplsTpTunnelEps	Y
IMO Name—IMPLSTPTunnelEP	
tunnelId	Y
remoteTunnelId	Y
globalId	Y
destGlobalId	Y
localInfo	Y
peerInfo	Y
adminStatus	Y
operStatus	Y

Table 8-10 MPLS-TP Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
bandwidthTransmit	Y
bfdTemplate	Y
workingLspNum	Y
protectLspNum	Y
wlBfdState	Y
plBfdState	Y
wlFaultOAM	Y
plFaultOAM	Y
pseudowireList	Y
direction	Y
lspEndPoints	Y
lspMidPoints	Y
internalId	Y
tpDescription	Y
PeerTunnelId	Y
PeerGlobalId	Y
MPLSTPDirection	Y
IMO Name—ILSPEntry	
lspId	Y
internalId	Y
umc	Y
lspType	Y
IMO Name—ILSPMPEntry	
fwdInLabel	Y
fwdOutLabel	Y
fwdBandwidth	Y
fwdOutInterface	Y
revInLabel	Y
revOutLabel	Y
revOutLinkId	Y
revBandwidth	Y
revOutInterface	Y
bandwidthDiff	Y
IMO Name—ILSPEPEntry	
inLabel	Y
outLabel	Y

Table 8-10 MPLS-TP Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
outLinkId	Y
bandwidth	Y
outInterface	Y
state	Y
IMO Name—ITPEnabledLink	
linkId	Y
interfaceAddress	Y
nextHop	Y
IMO Name—IMPLSTPBfdSession	
lspType	Y

PWE3

Table 8-11 PWE3 Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
IMO Name—IPTPLayer2MplsTunnel	
Local and Remote Router Addresses	Y
Local and Remote Virtual Connection Labels	Y
Tunnel Identification	Y
Tunnel Status	Y
Local and Remote Tunnel Interface	
IANA Type	Y
Containing CTPs	
Contained CTPs	
PsuedowireType	Y
PreferredPathTunnel	Y
LocalMTU	Y
RemoteMTU	Y
PeerStatus	Y
SignalingProtocol	Y
VFIName	Y
psuedowireRole	Y
PeerRouterIp	Y

Table 8-11 PWE3 Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
LocalRouterIp	Y
LocalVcLabel	Y
PeerVcLabel	Y

Security

Table 8-12 Security Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
IMO Name—IAccessList	
Type	Y
Access List Entries	Y
Name or Id	Y
Index	Y
IMO Name—IAccessListEntry	
Entry Identification	Y
Action Logic	Y
Source and Destination Address	Y
Source and Destination Wildcard	Y
Protocol Type	Y
Source and Destination Port Ranges	Y
Source and Destination Port Action	Y
Protocol Specific Info	Y
Differential Services Code Points	Y
Type of Service	Y
Precedence	Y
Matches	Y

Hardware

Table 8-13 Hardware Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
IMO Name—IChassis	
Description	Y
Equipment Holder Type	Y
Contained Equipment Holders	
Contained Equipments	
Serial Number	Y
IMO Name—IShelf	
Description	
Status	
Equipment Holder Type	
Contained Equipment Holders	
Contained Equipments	
Serial Number	
IMO Name—IModule	
Module Name	Y
Module Description	Y
Software Version	Y
Operational Status	Y
Hardware Type + Version	Y
Managed IP Address	
Redundant Equipment	
Configured Redundancy	
Redundancy Status	
Operational Status Last Changed	Y
Supported Physical Termination Points	Y
Serial Number (soft property)	Y
Slots Number	
IMO Name—IPowerSupply	
Same as IModule	Y
IMO Name—IFanTray	
Same as IModule	Y
IMO Name—IPluggableTransceiver	
ConnectorDescription	Y

Table 8-13 Hardware Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
PID	Y
ConnectorSerialNumber	Y
ConnectorType	Y
PluggablePortState	Y
PluggableType	Y
IMO Name—IManagedElement	
IP Address	Y
Communication State	Y
Investigation State	Y
Element Category	Y
Element Type and Key	Y
Device Name	Y
System Name	Y
System Description	Y
Up Time	Y
Software Version	Y
Vendor Identity	Y
Memory and CPU Usage	Y
DRAM Free	Y
DRAM Used	Y
DRAM Usage	Y
Flash Device Size	Y
NVRAM Size	Y
Processor DRAM	Y
Sys Contact	Y
Sys Location	Y
Serial Number	Y
File Systems	
IMO Name—IContext	
Name	Y
Bounded Connections	
IP Address Pools	
Forwarding Components List	
Traffic Descriptors List	
Tunnel Containers List	

Table 8-13 Hardware Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
Data Link Aggregation Containers List	
IMO Name—ISystemService	
Type	
Status	
Up Time	Y
IMO Name—IBridge	
Bridge Table	
Type	Y
MAC Address	
IP Interface	
Name	Y
Logical Sons	Y
Vlan Type	Y
IMO Name—IBridgeEntry	
Destination MAC	
Outgoing Interface	

Serial

Table 8-14 Serial Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
IMO Name—IPhysicalLayer	
Media Type	Y
Clocking Source	
Maximum Speed	Y
Is Internal Port	Y
Discarded Bandwidth	
Dropped Bandwidth	
Input Bandwidth	
Output Bandwidth	
Discarded and Received Input Data Counters	Y
Dropped and Forward Output Data Counters	Y
Administrative Status	Y

Table 8-14 Serial Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
Operational Status	Y
Last Changed	Y
IANA Type	Y
Containing CTPs	
Contained CTPs	
Port Alias	Y
Location	Y
Sending Alarms	Y
Connector Description	Y
Part ID	Y
Connector Serial Num	Y
Product	Y
Status	Y
Managed	Y

BFD

Table 8-15 BFD Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
IMO Name—IBfdService	
Status	
IMO Name—IBfdCommon	
RegisteredProtocols	Y
InterfaceName	Y
IMO Name—IBfdSession	
SourceIp	Y
DestinationIp	Y
Interval	Y
Multiplier	Y
Protocol	Y
State	Y
Interface	Y
Process	Y

Carrier Ethernet

Table 8-16 Carrier Ethernet Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
IMO Name—IVsi	
vsiInstanceName	
vpnId	
discoveryMode	
vsiMode	
Operational state	
Administrative state	
IMO Name—IPseudowireProperties	
isSplitHorizonEnabled	
isAutoDiscovered	
IMO Name—IVLANTaggedInterface	
InterfaceName	
Inner Vlan Id	
Outer Vlan Id	
Encap Type	
Operational state	
Administrative state	
ConfiguredDescription	
IMO Name—IEfp	
EfpId	Y
RewriteParams	Y
EncapsParams	Y
AdminStatus	Y
OperStatus	Y
SplitHorizonGroup	Y
MatchCriteria	Y
ConfiguredDescription	Y
GetServiceInstanceId	Y
SetServiceInstanceId	Y

CDP

Table 8-17 CDP Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
IMO Name—ICdpService	
cdpHoldtime	Y
cdpMessageInterval	Y
cdpDeviceId	Y
cdpState	Y
cdpVersion	Y
IMO Name—ICdpNeighbor	
remoteDeviceId	Y
remotePortId	Y
remoteIPAddress	Y
localPortId	Y

Discovery Protocol

Table 8-18 Discovery Protocol Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
IMO Name—IDiscoveryProtocol	
DiscoveryProtocolType	Y
Info	Y

Ethernet OAM

Table 8-19 Ethernet OAM Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9

Attribute	CPT
IMO Name—ICfmService	
cacheSize	Y
maximumCacheSize	Y
holdTime	Y
version	Y

Table 8-19 Ethernet OAM Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9 (continued)

Attribute	CPT
maintenanceIntermedatePointsTable	Y
maintenanceDomain	Y
IMO Name—IMaintenanceDomain	
name	Y
level	Y
Id	Y
maintenanceAssociation	Y
IMO Name—IMaintenanceEndPoint	
macAddress	Y
Interface	Y
continuityCheckStatus	Y
direction	Y
IMO Name—IMaintenanceAssociation	
name	Y
associationType	Y
maximalMeps	Y
continuityCheckInterval	Y
continuityCheckEnable	Y
crossCheckEnable	Y
direction	Y
bridge	Y
maintenanceEndPoints	Y
cfmRemoteMaintenanceEndPoints	Y
IMO Name—IMaintenanceIntermediatePoint	
level	Y
cfmInterface	Y
isAutocreated	Y
Vlans	Y
macAddress	Y
IMO Name—IRemoteMaintenanceEndPoint	
mepId	Y
macAddress	Y

Table 8-19 Ethernet OAM Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9 (continued)

Attribute	CPT
level	Y
maintenanceEndPointStatus	Y
maintenanceEndPointOid	Y
IMO Name—IOAMData	
adminState	Y
pduMaxRate	Y
pduMinRate	Y
linkTimeout	Y
highThresholdAction	Y
linkFaultAction	Y
dyingGaspAction	Y
criticalEventAction	Y
mode	Y
unidirectional	Y
linkMonitor	Y
remoteLoopback	Y
portStatus	Y
loopbackStatus	Y
remoteData	Y
name	Y
ethernetPort	Y
IMO Name—IOAMRemoteData	
macAddress	Y
vendor	Y
mode	Y
unidirection	Y
linkMonitor	Y
remoteLoopback	Y
IMO Name—IUNIProperties	
UNIId	
isServiceMultiplexing	
isBundlingEnabled	
bundlingType	
IMO Name—IEthernetLMI	
isGlobalEnabled	

Table 8-19 Ethernet OAM Attribute Support on Cisco Optical Transport—Cisco Prime Network 3.9 (continued)

Attribute	CPT
mode	
ELMIInterfaces	
deviceEVCs	
IMO Name—IDeviceEVC	
EVCName	
EVCStatus	
EVCType	
cfmMaName	
configuredRemoteUNICount	
activeRemoteUNICount	
UNIInterfaces	
IMO Name—IUNIInterfaces	
UNIStatus	
UNIId	
interfaceName	
vlanList	
lmiLinkStatus	
IMO Name—IELMIInterfaces	
interfaceName	
T391	
T392	
N391	
N393	