IpPac

## Classes

### IpCurrentProblem

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NA
* objectDeletionNotification: NA

Attributes for IpCurrentProblem

Table 1: Attributes for IpCurrentProblem

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| sequenceNumber | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |
| timeStamp |  | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |
| problemSeverity |  | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |

### IpIntefaceHistoricalPerformances

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NO
* objectDeletionNotification: NO

Attributes for IpIntefaceHistoricalPerformances

Table 1: Attributes for IpIntefaceHistoricalPerformances

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| historicalPerformaceDataList | IpInterfaceHistoricalPerformanceType | 0..\* | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO |  |

### IpInterfaceCapability

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NO
* objectDeletionNotification: NO

Attributes for IpInterfaceCapability

Table 1: Attributes for IpInterfaceCapability

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| adminShutDownIsAvail | Boolean | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | 1 = Administrative shutdown is available at the interface. |
| dhcpClientIsAvail | Boolean | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | 1 = Interface is able to operate as a DHCP client. |
| arpProxyIsAvail | Boolean | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | 1 = Interface is able to forward ARP requests. |
| portShapingIsAvail | Boolean | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | 1 = The interface supports port based shaping. |
| portShapingBandwidthMin | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | Minimum configurable port shaping bandwidth in kbit/s. |
| portShapingBandwidthMax | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | Maximum configurable port shaping bandwidth in kbit/s. |
| vpnBindingIsAvail | Boolean | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | Shall be True if the port can be included as part of a VPN configuration. IP Transport Model Attribute List Annex 02.6a |
| maximumTransmissionUnitMin | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | Minimum layer 3 MTU size configurable. |
| maximumTransmissionUnitMax | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | Maximum layer 3 MTU size configurable. |
| layer3FlowStatisticsIsAvail | Boolean | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | Shall be true if L3 statistics collection and aggregation is possible on the device. IP Transport Model attribute List annex 02.6a |
| layer3FlowStatisticsUpdatePeriodMax | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | Time period over which Traffic volume is integrated. IP Transport Model Atrribute list Annex 02.6a |
| supportedAlarmList | String | 0..\* | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | Available alarms to be listed.Mandatory InterfaceStatusTransition.Further alarms might be added by the device Vendors. Names are to be separated by commas.  Supported Alarms according to configuration. IP Transport Model Attribute list Annex 02.6a |
| ingressShapingIsAvail | invalid | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | 1 = device supports ingress shaping on IP Interfaces |
| egressShapingIsAvail | invalid | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | 1 = device supports egress shaping on IP Interfaces |
| fixedDefaultGatewayConfigurationIsAvail | invalid | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | 1 = Default route per IP Interface can be configuered, 0 if multiple Default routes are not supported |
| ipv6Avail | invalid | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | 1 = device supports IPv6 |

### IpInterfaceConfiguration

Configuration of the IP interface

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NO
* objectDeletionNotification: NO

Attributes for IpInterfaceConfiguration

Table 1: Attributes for IpInterfaceConfiguration

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| ipInterfaceName | String | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Description of the Interface, could be a name, could be a number. |
| ipInterfaceIsOn | Boolean | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | 1 = Activation of the IP interface. 0 = De-activation of the IP interface (underlying layers (e.g. Ethernet MAC or Ethernet PHY) are not affected.) |
| dhcpClientIsOn | Boolean | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Only relevant when dhcpClientIsAvail == 1. Enables a DHCP client on the interface in order to request an address. |
| fixedIpV4Address | Ipv4Address | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | If (dhcpClientIsOn==0), IPv4 address fixed assigned to this interface. The format is IPv4, e.g. 172.168.0.5 |
| fixedIpV4AddressPrefixLength | Integer | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | If (dhcpClientIsOn==0), fixed assigned routing prefix (sub network) length (e.g. for 198.51.100.0/24 the ipV4AddressPrefixLength would be 24). |
| fixedDefaultGatewayIpV4Address | Ipv4Address | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | If (dhcpClientIsOn==0) And (capability fixedDefaultGatewayConfigurationIsAvail = 1) , fixed assigned IPv4 address of the default gateway. |
| arpProxy | arpProxyType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Only relevant when arpProxyIsAvail == 1. When set to a value other than DISABLE, the local system should respond to ARP requests that are for target addresses other than those that are configured on the local subinterface using its own MAC address as the target hardware address. If the REMOTE\_ONLY value is specified, replies are only sent when the target address falls outside the locally configured subnets on the interface, whereas with the ALL value, all requests, regardless of their target address are replied to. |
| \_egressShapingBandwidth | ShapingPolicy | 1..\* | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Reference to the definition of a shaping policy for egress, to which this IP interface belongs to. |
| \_ingressShapingBandwidth | ShapingPolicy | 1..\* | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Reference to the definition of a shaping policy for ingress, to which this IP interface belongs to. |
| \_vpnBinding | VirtualPrivateNetwork | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Reference to the definition of a Virtual Private Network, to which this IP interface belongs to. |
| maximumTransmissionUnitIP | Integer | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Layer 3 maximum transmission unit size in Byte. The MTU describes the maximum IP packet size that will travel along the entire route without fragmentation. |
| \_qosInterface | QosInterface\_Pac | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Reference to the definition of a QoS schema, to which this IP interface belongs to.  #### In case of a stringent layering, the QosInterface could always be assumed between EthernetContainer and MacInterface. In this case no referencing here. |
| layer3QosTaggingSource | String | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   Obsolete  OpenInterfaceModelAttribute   * AVC: YES | DSCP (DiffServ Code Point) bits. In the IP Header there is a Type of Service Byte (TOS). |
| layer3QosDiffservProfile | String | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   Obsolete  OpenInterfaceModelAttribute   * AVC: YES | Traffic profile to be used for QoS. e.g. |
| layer3FlowStatisticsIsOn | Boolean | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | 1 = Layer 3 statistics collection is turned on. |
| layer3FlowStatisticsUpdatePeriod | Integer | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | #### Falls alle 10s ausreichend, wären 16bit ausreichend.  Time period, over which layer 3 traffic volume is aggregated, in seconds. |
| problemKindSeverityList | IpInterfaceProblemSeverityType | 0..\* | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Severity of the problems to be configured. |

### IpInterfaceCurrentPerformance

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NO
* objectDeletionNotification: NO

Attributes for IpInterfaceCurrentPerformance

Table 1: Attributes for IpInterfaceCurrentPerformance

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| currentPerformanceDataList | IpInterfaceCurrentPerformanceType | 0..\* | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO |  |

### IpInterfaceCurrentProblems

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NO
* objectDeletionNotification: NO

Attributes for IpInterfaceCurrentProblems

Table 1: Attributes for IpInterfaceCurrentProblems

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| currentProblemList | IpInterfaceCurrentProblemType | 0..\* | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |

### IpInterfaceStatus

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NO
* objectDeletionNotification: NO

Attributes for IpInterfaceStatus

Table 1: Attributes for IpInterfaceStatus

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| ipInterfaceStatus | InterfaceStatusType | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | If the IP interface is active, this shall be expressed as a 1. |
| ipV4AddressCur | Ipv4Address | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | IPv4 address currently active on this interface. The format is IPv4, e.g. 172.168.0.5 |
| ipV4AddressPrefixLengthCur | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | If (dhcpClientIsOn==0), fixed assigned routing prefix (sub network) length (e.g. for 198.51.100.0/24 the ipV4AddressPrefixLength would be 24). |
| defaultGatewayIpV4AddressCur | Ipv4Address | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | IPv4 address of the default gateway currently active on this interface. |
| ipAddressOrigin | ipAddressOriginType | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES   Preliminary | The origin of this address, e.g., statically configured, assigned by DHCP, etc.. |
| maximumTransmissionUnitCur | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | The currently effective (passing through the entire transmission path without fragmentation) maximum size of a layer 3 transmission unit in Byte. |
| vpnBindingIsUp | Boolean | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | If the binding to a VPN definition is currently effective, this shall be expressed as a 1. |
| neighbor | neighborType | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA   Preliminary | Current IP and MAC addresses of the remote site of the IP link. |
| layer3FlowStatisticsIsUp | Boolean | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | If layer 3 flow statistics are currently collected and aggregated, this shall be expressed as a 1. |

### IpInterface\_Pac

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: YES
* objectDeletionNotification: YES

Attributes for IpInterface\_Pac

Table 1: Attributes for IpInterface\_Pac

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| \_ipInterfaceCapability | IpInterfaceCapability | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |
| \_ipInterfaceConfiguration | IpInterfaceConfiguration | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |
| \_ipInterfaceStatus | IpInterfaceStatus | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |
| \_ipInterfaceCurrentProblems | IpInterfaceCurrentProblems | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |
| \_ipInterfaceCurrentPerformance | IpInterfaceCurrentPerformance | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   Obsolete  OpenInterfaceModelAttribute   * AVC: NA |  |
| \_ipIntefaceHistoricalPerformances | IpIntefaceHistoricalPerformances | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   Obsolete  OpenInterfaceModelAttribute   * AVC: NA |  |

### MplsL3VPnCurrentProblems

Proactively informs about VRF related events and faults.

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NA
* objectDeletionNotification: NA

Attributes for MplsL3VPnCurrentProblems

Table 1: Attributes for MplsL3VPnCurrentProblems

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| currentProblemList | MplsL3VpnCurrentProblemsType | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Lists the alarms related to MPLS L3VPN |

### MplsL3VpnCapability

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NA
* objectDeletionNotification: NA

Attributes for MplsL3VpnCapability

Table 1: Attributes for MplsL3VpnCapability

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| l3VpnStatisticsIsAvail | Boolean | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Feature definition for L3VPN statistics. |
| l3VpnSupportIsAvail | Boolean | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Indicates the support for L3VPN configuration on the device. |

### MplsL3VpnConfiguration

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NA
* objectDeletionNotification: NA

Attributes for MplsL3VpnConfiguration

Table 1: Attributes for MplsL3VpnConfiguration

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| l3VpnStaticIsEnable | Boolean | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | True value enables Static VPN.Static MPLS IP VPN is completely manually configured and its configurations are under full control of the network administrator. |
| vpnInstanceConfig | L3VpnInstanceType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | L3 VPN instance Configuration. |
| vrfName | String | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | VPN VRF name |
| vrfDescirption | String | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | VPN VRF short Description |
| routeDistinguisher | String | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | The route distinguisher that should be used for the local VRF or VSI instance when it is signalled via BGP. |

### MplsL3VpnCurrentPerformance

current-status of VRF performance counters i.e. until the time of fetching.

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NA
* objectDeletionNotification: NA

Attributes for MplsL3VpnCurrentPerformance

Table 1: Attributes for MplsL3VpnCurrentPerformance

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| currentPerformanceDataList | MplsL3VpnPerformanceType | 1..2 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | MPLS L3VPN CurrentPerformance counters |

### MplsL3VpnHistoricalPerformance

The device informs about the status of its performance counters at the end of a well-defined time-period.

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NA
* objectDeletionNotification: NA

Attributes for MplsL3VpnHistoricalPerformance

Table 1: Attributes for MplsL3VpnHistoricalPerformance

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| historicalPerformanceDataList | MplsL3VpnPerformanceType | 0..\* | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | MPLS L3VPN Historical Performance counters |

### MplsL3VpnProblem

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NA
* objectDeletionNotification: NA

Attributes for MplsL3VpnProblem

Table 1: Attributes for MplsL3VpnProblem

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| problemSeverity | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |
| sequenceNumber | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |
| timeStamp |  | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Time at which the problem occurs. |

### MplsL3VpnStatus

Operational and Derived Status information of L3 VRF.

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NA
* objectDeletionNotification: NA

Attributes for MplsL3VpnStatus

Table 1: Attributes for MplsL3VpnStatus

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| vrfAfInfo | VrfAFInfoType | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | VRF verbose information. |

### MplsL3Vpn\_Pac

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NA
* objectDeletionNotification: NA

Attributes for MplsL3Vpn\_Pac

Table 1: Attributes for MplsL3Vpn\_Pac

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| mplsl3vpncapability | MplsL3VpnCapability | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |
| mplsl3vpnconfiguration | MplsL3VpnConfiguration | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |
| mplsl3vpn\_currentperformance | MplsL3VpnCurrentPerformance | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |
| mplsl3vpnhistoricalperformance | MplsL3VpnHistoricalPerformance | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |
| mplsl3vpnstatus | MplsL3VpnStatus | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |
| mplsl3vpncurrentproblems | MplsL3VPnCurrentProblems | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |
| forwardingdomain |  | 0..1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |

### QosCurrentProblem

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NA
* objectDeletionNotification: NA

Attributes for QosCurrentProblem

Table 1: Attributes for QosCurrentProblem

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| sequenceNumber | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |
| timeStamp |  | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |
| problemSeverity |  | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |

### QosInterfaceCapability

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NO
* objectDeletionNotification: NO

Attributes for QosInterfaceCapability

Table 1: Attributes for QosInterfaceCapability

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| availableQueueList | queueNameType | 1..8 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | List of queues, which are available at the physical interface. |

### QosInterfaceConfiguration

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NO
* objectDeletionNotification: NO

Attributes for QosInterfaceConfiguration

Table 1: Attributes for QosInterfaceConfiguration

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| qosInterfaceName | String | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Defines the profile that will be used for the mapping between bits and queues. |
| qosInterfaceKind | qosInterfaceKindType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Defines whether the interface is prioritizing according to layer 2 (IEEE8021P) or layer 3 (IP\_DSCP). |
| ingress8021pToPerHopBehaviorAssociationList | perHopBehaviorType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Only relevant when qosInterfaceKind == IEEE8021P. Associates the entry of the three p-bits of the VLAN header with a per hop behavior at the physical interface. First entry in the list [0] relates to p-bit value 0. Last entry in the list [7] relates to p-bit value 7. |
| ingressExpToPerHopBehaviorAssociationList | perHopBehaviorType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Only relevant when qosInterfaceKind == MPLS\_EXP. Associates the entry of the three p-bits of the MPLS header with a per hop behavior at the physical interface. First entry in the list [0] relates to p-bit value 0. Last entry in the list [7] relates to p-bit value 7. |
| ingressIpDscpToPerHopBehaviorAssociationList | perHopBehaviorType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Only relevant when qosInterfaceKind == IP\_DSCP. Associates the entries of the 8 dscp bits of the IP header with a per hop behavior at the physical interface. First entry in the list [0] relates to dscp value 0. Last entry in the list [7] relates to dscp value 63. |
| egressPerHopBehaviorTo8021pAssociationList | egressPerHopBehaviorTo8021pAssociationType | 0..24 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Only relevant when qosInterfaceKind == IEEE8021P. Associates the entries of the three p-bits of the VLAN header with a per hop behavior at the physical interface. First entry in the list [0] relates to p-bit value 0. Last entry in the list [7] relates to p-bit value 7. |
| egressPerHopBehaviorToIpDscpAssociationList | egressPerHopBehaviorToIpDscpAssociationType | 0..24 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Only relevant when qosInterfaceKind == IP\_DSCP. Last entry is 24 because there are 8 queues with 3 different priorities. Associates the entries of the 8 dscp bits of the IP header with a per hop behavior at the physical interface. First entry in the list [0] relates to dscp value 0 (lowest priority). Last entry in the list [192] relates to dscp value 63 (highest priority). |
| egressPerHopBehaviorToMplsExpAssociationList | egressPerHopBehaviorTo8021pAssociationType | 0..24 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Only relevant when qosInterfaceKind == MPLS\_EXP. Associates the entry of the three p-bits of the MPLS header with a per hop behavior at the physical interface. First entry in the list [0] relates to p-bit value 0 (lowest priority). Last entry in the list [7] relates to p-bit value 7 (highest priority). |

### QosInterfaceCurrentPerformance

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NO
* objectDeletionNotification: NO

Attributes for QosInterfaceCurrentPerformance

Table 1: Attributes for QosInterfaceCurrentPerformance

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| currentPerformanceDataList | QoSInterfaceCurrentPerformanceType | 0..\* | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO |  |

### QosInterfaceCurrentProblems

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NO
* objectDeletionNotification: NO

Attributes for QosInterfaceCurrentProblems

Table 1: Attributes for QosInterfaceCurrentProblems

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| currentProblemList | QoSInterfaceCurrentProblemType | 0..\* | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |

### QosInterfaceHistoricalPerformances

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NO
* objectDeletionNotification: NO

Attributes for QosInterfaceHistoricalPerformances

Table 1: Attributes for QosInterfaceHistoricalPerformances

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| historicalPerformaceDataList | QoSInterfaceHistoricalPerformanceType | 0..\* | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO |  |

### QosInterfaceStatus

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NO
* objectDeletionNotification: NO

### QosInterface\_Pac

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: YES
* objectDeletionNotification: YES

Attributes for QosInterface\_Pac

Table 1: Attributes for QosInterface\_Pac

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| qosinterfaceconfiguration | QosInterfaceConfiguration | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |
| qosinterfacestatus | QosInterfaceStatus | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |
| qosinterfacecurrentproblems | QosInterfaceCurrentProblems | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |
| qosinterfacecurrentperformance | QosInterfaceCurrentPerformance | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |
| qosinterfacehistoricalperformances | QosInterfaceHistoricalPerformances | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |
| qosinterfacecapability | QosInterfaceCapability | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |

### QueueConfiguration

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NO
* objectDeletionNotification: NO

Attributes for QueueConfiguration

Table 1: Attributes for QueueConfiguration

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| servingRate | ServingRateType | 0..8 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Associates a queue with a serving rate as a percentage value. |
| wredProfile | wredProfileType | 0..8 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Associates a queue with a WRED profile. |

### ShapingPolicy

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NA
* objectDeletionNotification: NA

Attributes for ShapingPolicy

Table 1: Attributes for ShapingPolicy

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| policyName | invalid | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |
| shapingBandwidth | Integer | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |

### VirtualPrivateNetwork

Definition of a Virtual Private Network, which is to be referenced by the IP interfaces.

Applied stereotypes:

* OpenModelClass
* support: MANDATORY
* OpenInterfaceModelClass
* objectCreationNotification: NA
* objectDeletionNotification: NA

Attributes for VirtualPrivateNetwork

Table 1: Attributes for VirtualPrivateNetwork

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| vpnName | String | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | unique name for the VPN |
| Description | String | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | short description for the VPN. |
| RouteDistinguisher | invalid | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | 8 Byte. the three formats have to be supported TEF MBH typical use IP based format. e.g. 10.13.128.33:3 |
| RouteTargetImport | invalid | 1..\* | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Route targets that will be imported to this VPN |
| RouteTargetExport | invalid | 1..\* | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Route targets that will be tagged to outgoing routes |

## Data Types

### EnableAlertPercentType

Specifies the percentage of the maximum number of
routes. When the maximum number of routes that join
the VPN instance is up to the value
(number\*alert-percent)/100, the system prompts
alarms. The VPN routes can be still added to the
routing table, but after the number of routes
reaches number, the subsequent routes are
dropped.

Applied Stereotypes:

Attributes for EnableAlertPercentType

Table 1: Attributes for EnableAlertPercentType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| isPercentBasedAlertEnabled | Boolean | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Enables routing table limit alert based on the percentage defined. |
| alertPercentValue | Integer | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Specifies the percentage of the maximum number of routes. When the maximum number of routes that join the VPN instance is up to the value (number\*alert-percent)/100, the system prompts alarms. The VPN routes can be still added to the routing table, but after the number of routes reaches number, the subsequent routes are dropped. |

### EnableSimpleAlertType

Indicates that when VPN routes exceed number, routes can still be added into the routing table, but the system prompts alarms. However, after the total number of VPN routes and network public routes reaches the unicast route limit specified in the License, the subsequent VPN routes
are dropped.

Applied Stereotypes:

Attributes for EnableSimpleAlertType

Table 1: Attributes for EnableSimpleAlertType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| isSimpleAlertEnabled | Boolean | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Indicates that when VPN routes exceed number, routes can still be added into the routing table, but the system prompts alarms. However, after the total number of VPN routes and network public routes reaches the unicast route limit specified in the License, the subsequent VPN routes are dropped. |

### ImportRibType

Used to import Routes from other Routing protocols or VPN instances.

Applied Stereotypes:

Attributes for ImportRibType

Table 1: Attributes for ImportRibType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| srcVrfName | String | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | VRF from which the routes are imported. Default is to import from the Global instance. |
| protocol | L3VpnProtocolType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Protocol type to import routes as specified in the enumeration L3VpnProtocolType. |
| processId | Integer | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Range 0.. 4294967295.Specifies the process ID of an imported routing protocol. The process ID must be specified if the imported routing protocol is RIP, OSPF, RIPng, or OSPFv3. |
| policyNameRef | String | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | This is a reference to the Routing Policy defined.When routes are imported from other routing protocols, the Route-Policy filter specified by the parameter can be used to filter the routes and change the route attributes. |

### IpInterfaceCurrentPerformanceType

#### Generalization of OTN\_CurrentData is missing

Applied Stereotypes:

Attributes for IpInterfaceCurrentPerformanceType

Table 1: Attributes for IpInterfaceCurrentPerformanceType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| performanceData | IpInterfacePerformanceType | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |

### IpInterfaceCurrentProblemType

Applied Stereotypes:

Attributes for IpInterfaceCurrentProblemType

Table 1: Attributes for IpInterfaceCurrentProblemType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| problemName | String | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Name of the alarm according to IpInterface\_Pac::IpInterfaceCapability::supportedAlarmList |

### IpInterfaceHistoricalPerformanceType

#### Generalization of OTN\_HistoryData is missing

Applied Stereotypes:

Attributes for IpInterfaceHistoricalPerformanceType

Table 1: Attributes for IpInterfaceHistoricalPerformanceType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| performanceData | IpInterfacePerformanceType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |

### IpInterfacePerformanceType

Applied Stereotypes:

Attributes for IpInterfacePerformanceType

Table 1: Attributes for IpInterfacePerformanceType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| last10SecDataInputRate | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | Data receive rate over the last 10 second interval in kbit/s. |
| last10SecDataOutputRate | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | Data transmit rate over the last 10 second interval in kbit/s. |
| last10SecPacketsInputRate | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | Packet receive rate over the last 10 second interval. |
| last10SecPacketsOutputRate | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | Packet transmit rate over the last 10 second interval. |
| dataVolumeInput | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | Received data volume in kByte. |
| dataVolumeOutput | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | Sent data volume in kByte. |
| totalPacketsInput | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | The total number of IP packets received for the specified address family, including those received in error |
| totalPacketsOutput | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | The total number of IP packets for the specified address family that the device supplied to the lower layers for transmission.This includes packets generated locally and those forwarded by the device. |
| forwardedDataVolumeInput | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | The number of octets received in input IP packets for the specified address family for which the device was not their final IP destination and for which the device attempted to find a route to forward them to that final destination. |
| forwardedDataVolumeOutput | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | The number of octets in packets for which this entity was not their final IP destination and for which it was successful in finding a path to their final destination. |
| forwardedPacketsInput | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | The number of input packets for which the device was not their final IP destination and for which the device attempted to find a route to forward them to that final destination. |
| forwardedPacketsOutput | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | The number of packets for which this entity was not their final IP destination and for which it was successful in finding a path to their final destination. |
| unicastPacketsInput | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | Total number of received unicast packets. |
| unicastPacketsOutput | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | Total number of sent unicast packets. |
| multicastPacketsInput | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | Total number of received multicast packets. |
| multicastPacketsOutput | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | Total number of sent multicast packets. |
| broadcastPacketsInput | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | Total number of received broadcast packets. |
| broadcastPacketsOutput | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | Total number of sent broadcast packets. |
| fragmentedPacketsInput | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | Total number of received fragmented packets. |
| erroredPacketsInput | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | Total number of received errored packets. |
| erroredPacketsOutput | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | Number of IP packets for the specified address family locally generated and discarded due to errors, including no route found to the IP destination. |
| droppedPacketsInput | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | Total number of packets dropped at the receiver. The number of input IP packets for the specified address family, for which no problems were encountered to prevent their continued processing, but were discarded (e.g., for lack of buffer space). |
| droppedPacketsOutput | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NO | The number of output IP packets for the specified address family for which no problem was encountered to prevent their transmission to their destination, but were discarded (e.g., for lack of buffer space). |

### IpInterfaceProblemSeverityType

Applied Stereotypes:

Attributes for IpInterfaceProblemSeverityType

Table 1: Attributes for IpInterfaceProblemSeverityType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| problemKindName | String | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Name of the alarm according to IpInterface\_Pac::IpInterfaceCapability::supportedAlarmList |
| problemKindSeverity | SeverityType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Severity of this type of alarm. |

### L3VpnInstanceType

L3 VRF instance configuration information.

Applied Stereotypes:

Attributes for L3VpnInstanceType

Table 1: Attributes for L3VpnInstanceType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| addressFamilyType | L3vpnAddressFamilyType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Address family type for each the VPN instance is created |
| importRib | ImportRibType | 0..\* | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Import Routes from RIB. |
| vpnTarget | VpnTargetType | 0..\* | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Route target definitions |
| routingTableLimit | RoutingTableLimitType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Source is IETF L3VPN YANG. The routing-table limit command sets a limit on the maximum number of routes that the IPv4 or IPv6 address family of a VPN instance can support. By default, there is no limit on the maximum number of routes that the IPv4 or IPv6 address family of a VPN instance can support, but the total number of private network and public network routes on a device cannot exceed the allowed maximum number of unicast routes. |
| l3VpnInterfacesRef | L3VpnIpStaticRouteRefType | 0..\* | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | After a VPN instance is configured on a PE, an interface that belongs to the VPN must be bound to the VPN instance. Otherwise, the interface functions as a public network interface and cannot forward VPN data. |
| vrfLabelMode | L3VpnLabelModeType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Label model used by the VRF. |
| l3VpnStaticRoute | L3VpnIpStaticRouteRefType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Reference to the static routes for a VPN instance. |

### L3VpnInterfaceRefType

After an interface is bound to a VPN instance, the interface becomes a part of the VPN. Packets entering the interface will be forwarded based on the VRF table of the VPN.

Applied Stereotypes:

Attributes for L3VpnInterfaceRefType

Table 1: Attributes for L3VpnInterfaceRefType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| ifNameRef | String | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Reference to the Interface associated with the L3VPN instance . |
| ipv4AddrRef | String | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Reference to the configured IPv4 address on the Interface associated with the VPN instance. |
| subnetMaskRef | String | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Reference to the configured Subnetmask on the Interface associated with the VPN instance. |

### L3VpnIpStaticRouteRefType

Configures static routes for a VPN instance.

Applied Stereotypes:

Attributes for L3VpnIpStaticRouteRefType

Table 1: Attributes for L3VpnIpStaticRouteRefType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| ifNameRef | String | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Specifies the type and number of an outbound interface of a static route. |
| ipv4AddrRef |  | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Specifies the destination IP address of a static route. |
| subnetMaskRef |  | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Reference to the configured Subnetmask of the static route |
| nextHopAddressRef |  | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Specifies the next hop address of a static route. |
| Description | String | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Specifies the description of a static route. You can specify description to add the description of static routes. This makes it convenient for the administrator to check and maintain static routes |

### MplsL3VpnCurrentProblemsType

Applied Stereotypes:

Attributes for MplsL3VpnCurrentProblemsType

Table 1: Attributes for MplsL3VpnCurrentProblemsType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| problemName | String | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | VRF event or fault name. |
| routerId | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | ID of the router on which a problem pertaining to a VRF is seen. |

### MplsL3VpnPerformanceType

Applied Stereotypes:

Attributes for MplsL3VpnPerformanceType

Table 1: Attributes for MplsL3VpnPerformanceType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| l3VpnQosPolicyStatisticsData | QosL3vpnPolicyStatType | 0..\* | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | MPLS L3VPN QoS policy statistics that a paritcular QoS policy matched, dropped. Also pegs QoS classifier statistics. |
| l3vpnVrfPerformanceMetrics | MplsL3vpnVrfPerformanceParmatersType | 0..\* | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | L3VPN VRF routing table metrics such as Routes added, deleted, dropped and total number of routes |

### MplsL3vpnVrfPerformanceParmatersType

Source is L3VPN IETF SNMP MIB. L3VPN enabled VRF routing table related performance metrics.

Applied Stereotypes:

Attributes for MplsL3vpnVrfPerformanceParmatersType

Table 1: Attributes for MplsL3vpnVrfPerformanceParmatersType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| vrfName | String | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Reference to the L3VPN VRF name for which the counters are valid. |
| mplsL3vpnVrfPerfRoutesAdded | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Indicates the number of routes added to this VPN/VRF since the last discontinuity. Discontinuities in the value of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of mpls-l3vpn-vrf-perf-disc-time |
| mplsL3vpnVrfPerfRoutesDeleted | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Indicates the number of routes deleted from this VPN/VRF since the last discontinuity. Discontinuities in the value of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of mpls-l3vpn-vrf-perf-disc-time. |
| mplsL3vpnVrfPerfCurrNumRoutes | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Indicates the number of routes currently used by this VRF. |
| mplsL3vpnVrfPerfRoutesDropped | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | This counter should be incremented when the number of routes contained by the specified VRF exceeds or attempts to exceed the maximum allowed value as indicated by mplsL3VpnVrfMaxRouteThreshold. |
| mplsL3vpnVrfPerfDiscTime |  | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | The value of sysUpTime on the most recent occasion at which any one or more of this entry's counters suffered a discontinuity. If no such discontinuities have occurred since the last re-initialization of the local management subsystem, then this object contains a |

### QoSInterfaceCurrentPerformanceType

#### Generalization of OTN\_CurrentData is missing

Applied Stereotypes:

Attributes for QoSInterfaceCurrentPerformanceType

Table 1: Attributes for QoSInterfaceCurrentPerformanceType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| performanceData | QoSInterfacePerformanceType | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |

### QoSInterfaceCurrentProblemType

Applied Stereotypes:

Attributes for QoSInterfaceCurrentProblemType

Table 1: Attributes for QoSInterfaceCurrentProblemType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| problemName | String | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Name of the alarm according to IpInterface\_Pac::IpInterfaceCapability::supportedAlarmList |

### QoSInterfaceHistoricalPerformanceType

#### Generalization of OTN\_HistoryData is missing

Applied Stereotypes:

Attributes for QoSInterfaceHistoricalPerformanceType

Table 1: Attributes for QoSInterfaceHistoricalPerformanceType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| performanceData | QoSInterfacePerformanceType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |

### QoSInterfacePerformanceType

Applied Stereotypes:

### QoSInterfaceProblemSeverityType

Applied Stereotypes:

Attributes for QoSInterfaceProblemSeverityType

Table 1: Attributes for QoSInterfaceProblemSeverityType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| problemKindName | String | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Name of the alarm according to IpInterface\_Pac::IpInterfaceCapability::supportedAlarmList |
| problemKindSeverity | SeverityType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Severity of this type of alarm. |

### QosL3vpnClassifierStatisticsType

Traffic classifier statistics.

Applied Stereotypes:

Attributes for QosL3vpnClassifierStatisticsType

Table 1: Attributes for QosL3vpnClassifierStatisticsType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| slotId | String | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Slot ID. The chassis ID must also be specified when have multi chassis. |
| vpnClassifierName | String | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Name of a traffic classifier. |
| vpnMatchPackets | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Number of matched packets. |
| vpnMatchBytes | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Number of matched bytes. |
| vpnMatchPktRt | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Rate of matched packets (unit: packet/s). |
| vpnMatchByteRt | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Rate of matched bytes (unit: bit/s). |
| vpnMatchPassPackets | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Number of matched and passed packets. |
| vpnMatchPassBytes | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Number of matched and passed bytes. |
| vpnMatchDropPackets | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Number of matched but discarded packets. |
| vpnMatchDropBytes | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Number of matched but discarded bytes. |
| vpnMatchPassPktsRate | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Rate of the packets matching the traffic classifier and passed (unit: packet/s). |
| vpnMatchPassBytesRate | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Rate of the bytes matching the traffic classifier and passed (unit: bit/s). |
| vpnMatchDropPktsRate | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Rate of the packets matching the traffic classifier but discarded (unit: packet/s). |
| vpnMatchDropBytesRate | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Rate of the bytes matching the traffic classifier but discarded (unit: bit/s). |
| vpnFilterPackets | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Number of filtered bytes. |
| vpnFilterBytes | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Number of filtered packets. |
| vpnFilterPktsRate | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Rate of filtered packets (unit: packet/s). |
| vpnFilterBytesRate | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Rate of filtered bytes. |

### QosL3vpnPolicyStatType

VRF level traffic policy statistics.

Applied Stereotypes:

Attributes for QosL3vpnPolicyStatType

Table 1: Attributes for QosL3vpnPolicyStatType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| slotId | String | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Slot ID. The chassis ID must also be specified when have multi chassis. |
| vrfName | String | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | VRF for which the counters are pegged. |
| vpnPolicyName | String | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Reference to VPN QoS policy for which the counters are measured. |
| vpnApplyTime |  | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Time of applying a policy. |
| vpnStatEnableTime |  | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Time of enabling/disabling statistics. |
| vpnStatClearTime |  | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Time of clearing statistics. |
| isVpnstatClearFlagEnabled | Boolean | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | True indicates that the Statistics should be reset. |
| vpnMatchPackets | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Number of matched packets. |
| vpnMatchBytes | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Number of matched bytes. |
| vpnMatchPktRate | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Rate of matched packets (unit: packet/s). |
| vpnMatchByteRate | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Rate of matched bytes (unit: bit/s). |
| vpnMissPackets | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Number of unmatched packets. |
| vpnMissBytes | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Number of unmatched bytes. |
| vpnMatchPassPkts | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Number of matched and passed packets. |
| vpnMatchPassBytes | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Number of matched and passed bytes. |
| vpnMatchDropPkts | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Number of matched but discarded packets. |
| vpnMatchDropBytes | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Number of matched but discarded bytes. |
| vpnMissPktsRate | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Rate of the packets that do not match the policy (unit: packet/s). |
| vpnMissBytesRate | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Rate of the bytes that do not match the policy (unit: bit/s). |
| vpnMatchPassPktsRate | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Rate of the packets that match the policy and passed (unit: packet/s). |
| vpnMatchPassBytesRate | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Rate of the bytes that match the policy and passed (unit: bit/s). |
| vpnMatchDropPktsRate | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Rate of the packets that match the policy but are discarded (unit: packet/s). |
| vpnMatchDropBytesRate | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Rate of the bytes that match the policy but are discarded. |
| qosL3vpnClassifierStatistics | QosL3vpnClassifierStatisticsType | 0..\* | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Traffic classifier statistics. |

### RoutingTableLimitActionType

Actions to be taken when the defined limit is reached.

Applied Stereotypes:

Attributes for RoutingTableLimitActionType

Table 1: Attributes for RoutingTableLimitActionType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| enableAlertPercent | EnableAlertPercentType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Specifies the percentage of the maximum number of routes. When the maximum number of routes that join the VPN instance is up to the value (number\*alert-percent)/100, the system prompts alarms. The VPN routes can be still added to the routing table, but after the number of routes reaches number, the subsequent routes are dropped. |
| enableSimpleAlert | EnableSimpleAlertType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Indicates that when VPN routes exceed number, routes can still be added into the routing table, but the system prompts alarms. However, after the total number of VPN routes and network public routes reaches the unicast route limit specified in the License, the subsequent VPN routes are dropped. |

### RoutingTableLimitType

The routing-table limit command sets a limit on the maximum number of routes that the IPv4 or IPv6 address family of a VPN instance can support. By default, there is no limit on the maximum number of routes that the IPv4 or IPv6 address family of a VPN instance can support, but the total number of private network and public network routes on a device cannot exceed the allowed maximum number of unicast routes.

Applied Stereotypes:

Attributes for RoutingTableLimitType

Table 1: Attributes for RoutingTableLimitType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| routingTableLimitNumber | Integer | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Specifies the maximum number of routes supported by a VPN instance. |
| routingTableLimitAction | RoutingTableLimitActionType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Actions to be taken when the defined limit is reached. |

### ServingRateType

Applied Stereotypes:

Attributes for ServingRateType

Table 1: Attributes for ServingRateType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| queueName | invalid | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Name of the queue. |
| servingRate | Integer | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Serving rate for this queue as a percentage value. |

### ServingRateType

Applied Stereotypes:

Attributes for ServingRateType

Table 1: Attributes for ServingRateType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| queueName | queueNameType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Name of the queue. |
| servingRate | Integer | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Serving rate for this queue as a percentage value. |

### VpnInstanceRoutingTableInfoType

Routing table of a specified VPN instance address family

Applied Stereotypes:

Attributes for VpnInstanceRoutingTableInfoType

Table 1: Attributes for VpnInstanceRoutingTableInfoType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| destinationPrefix |  | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Destination IP address. It identifies the destination IP address or the destination network address of an IP packet. |
| maskLength | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | IP address Mask length. |
| protocolId | L3VpnProtocolType | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Routing manager base protocol type |
| preference | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Indicates the preference. Different routing protocols, including the static routing protocol may discover different routes to the same destination, but not all these routes are optimal. At a certain moment, only one routing protocol determines the preferred route to a certain destination. To select the optimal route, routes of these routing protocols (including static routes) are configured with priorities. When there are multiple protocol types of routes, the route learned by the routing protocol with the highest priority becomes the optimal route. The smaller the value, the higher the priority. 0 indicates the direct route and 255 indicates any route learnt from unreliable sources. The smaller the value, the higher the priority. |
| routeCost | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Cost of the Route |
| ifName | String | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | An interface from which packets are sent to the next router. |
| nextHop |  | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Next router that an IP packet will pass |
| relayNexthop |  | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Iterated next hop. If the received next hop address is not the address of a directly-connected router, a direct next hop needs to be iterated for traffic forwarding. |
| isActive | Boolean | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Flag that indicates that a route is active. An inactive route is not advertised to the forwarding table for packet forwarding. |
| processId | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | ID of a routing protocol process . |
| tag | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Tag that indicates whether a route has been imported. |
| priority | RoutePritorityType | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Advertisement priority. The route with a higher priority is advertised preferentially. |
| label | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Label that is used for tunnel forwarding. If a label is applied for by an LSP, the label is saved in the VPN routing table. When the label is added to the packet, the packet enters the LSP tunnel and is forwarded over the tunnel. |
| qosId | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Indicates QoS information in Hexa-decimal format. |
| indirectID | Integer | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | IID index of a route in hexa-decimal format. Multiple routes may have a same next hop. If these routes are all saved, the next hop will be saved for many times. When the reachability of the next hop is affected or the next hop of some routes changes, all of these routes will be re-traversed. An IID can be used to identify repeated next hops so that the same next hop is saved only for one time. This consumes less storage space and enhances the response efficiency when the next hop changes. |
| state | RouteState | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | none. |
| neighbour |  | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Neighbor sending the route to the local NE. |
| age | String | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Keepalive time of a route. Length of the time from the generation of a route to the current time. HrMMSS format. |
| directNexthop |  | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Direct next hop. It is the address of a direct interface. |
| flags | RouteFlagType | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Route flag. R indicates an iterated route and D indicates that a route is advertised to the FIB table. |

### VpnTargetType

A group of Route Targets

Applied Stereotypes:

Attributes for VpnTargetType

Table 1: Attributes for VpnTargetType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| vrfRtValue | String | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | VRF Route target value. |
| vrfTtype | L3VpnVrfRtType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | RT types are as follows: export-extcommunity: Specifies the value of the extended community attribute of the route from an outbound interface to the destination VPN. import-extcommunity: Receives routes that carry the specified extended community attribute value. |

### VrfAFInfoType

VRF Creation, UP time and Status information.

Applied Stereotypes:

Attributes for VrfAFInfoType

Table 1: Attributes for VrfAFInfoType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| vrfName | String | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Name of the Vrf for which the information is available. |
| vrfCreationTime |  | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | VRF creation date and Time |
| vrfUpTime |  | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | VRF Address family up time. Time elapsed since the VRF is continously in UP state. |
| vrfStatus | VrfOperationalStatusType | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | VPN instance status. A VPN instance is up when there is at least one interface associated with the VRF whose ifOperStatus is up. A VRF is down when:1. There does not exist at least one interface whose ifOperStatus is up. 2. There are no interfaces associated with the VRF. |
| vrfAfInfo | L3vpnAddressFamilyType | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Type of the Address Family supported by the VRF. IPV4 or IPV6 UNICAST |
| routingTable | VpnInstanceRoutingTableInfoType | 0..\* | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Routing table of an IPV4 VPN instance address family. |

### egressPerHopBehaviorTo8021pAssociationType

Applied Stereotypes:

Attributes for egressPerHopBehaviorTo8021pAssociationType

Table 1: Attributes for egressPerHopBehaviorTo8021pAssociationType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| perHopBehavior | perHopBehaviorType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Per hop behavior, which is to be translated into a p-bit entry in the VLAN header. |
| associatedPriority | Integer | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Associated entry of the three p-bits of the VLAN header. |

### egressPerHopBehaviorToIpDscpAssociationType

Applied Stereotypes:

Attributes for egressPerHopBehaviorToIpDscpAssociationType

Table 1: Attributes for egressPerHopBehaviorToIpDscpAssociationType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| perHopBehavior | perHopBehaviorType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Per hop behavior, which is to be translated into a IP DSCP value. |
| associatedDscpValue | Integer | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Associated DSCP value. |

### neighborType

Neighbor entries are analagous to static ARP entries, i.e., they create a correspondence between IP and link-layer addresses.

Applied Stereotypes:

* Preliminary

Attributes for neighborType

Table 1: Attributes for neighborType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| neighborIpV4Address | Ipv4Address | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | IPv4 address of the neighbor node. The format is IPv4, e.g. 172.168.0.5 |
| neighborMacAddress | MacAddress | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | MAC address of the neighbor node. The format is e.g. 00:80:41:ae:fd:7e |
| neighborOrigin | neighborOriginType | 1 | R | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | The origin of a neighbor entry. |

### perHopBehaviorType

Applied Stereotypes:

Attributes for perHopBehaviorType

Table 1: Attributes for perHopBehaviorType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| queueName | queueNameType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA | Name of the queue. |
| dropPrecedenceInsideQueue | dropPrecedenceType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: NA |  |

### wredProfileType

Applied Stereotypes:

Attributes for wredProfileType

Table 1: Attributes for wredProfileType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| queueName | String | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Name of the queue. |
| wredName | wredNameType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Serving rate for this queue as a percentage value. |

### wredProfileType

Applied Stereotypes:

Attributes for wredProfileType

Table 1: Attributes for wredProfileType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| queueName | queueNameType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Name of the queue. |
| wredName | wredNameType | 1 | RW | OpenModelAttribute   * valueRange: no range constraint * support: MANDATORY   OpenInterfaceModelAttribute   * AVC: YES | Serving rate for this queue as a percentage value. |

## Enumeration Types

### InterfaceStatusType

Current Interface Status

Contains Enumeration Literals:

* UP:
  + Ready to pass packets.
* DOWN:
  + The interface does not pass any packets.
* TESTING:
  + In some test mode. No operational packets can be passed.
* UNKNOWN:
  + Status cannot be determined for some reason.
* DORMANT:
  + Waiting for some external event.
* NOT\_PRESENT:
  + Some component (typically hardware) is missing.
* LOWER\_LAYER\_DOWN:
  + Down due to state of lower-layer interface(s).
* ADMIN\_DOWN:
  + Down due to configuration.
* NOT\_YET\_DEFINED:

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* ADMIN\_DOWN:
  + Down due to configuration.
* NOT\_YET\_DEFINED:

### L3QosTaggingSourceType

Contains Enumeration Literals:

* 8021P:
* DSCP:
* NOT-SPECIFIED:

### L3VpnLabelModeType

Contains Enumeration Literals:

* PER-INSTANCE:
  + Labels are assigned to VPN instances in one label per instance mode, that is, all routes in a VPN instance are assigned with the same label.
* PER-ROUTE:
  + Labels are assigned to routes in the 'one label per route' mode, that is, each route is assigned with one label.

### L3VpnProtocolType

Enumeration listing different protocols.

Contains Enumeration Literals:

* DIRECT:
  + Indicates Direct routes.
* OSPF:
  + Indicates OSPF routes.
* ISIS:
  + Indicates ISIS routes.
* STATIC:
  + Indicates Static routes.
* BGP:
  + Indicates BGP Routes.

### L3VpnVrfRtType

Contains Enumeration Literals:

* EXPORT-EXTCOMMUNITY:
* IMPORT-EXTCOMMUNITY:
* BOTH:
* UNDEFINED:

### L3vpnAddressFamilyType

Address family of the VRF IPv4/IPV6.

Contains Enumeration Literals:

* IPV4-UNICAST-FAMILY:
* IPV6-UNICAST-FAMILY:
* UNKNOWN:

### ProtocolType

Routing Manager base protocol Type

Contains Enumeration Literals:

* DIRECT:
* OSPF:
* ISIS:
* STATIC:
* BGP:

### RouteFlagType

Indicates the route flag, that is, Route Flags in the heading of the routing table displayed. It is a combination of one or more of the following flags: D and,R Meaning of each of the flag is availble under corresponding flag value.

Contains Enumeration Literals:

* D:
  + A route is advertised to the Forwarding Information Base table.
* RD:
  + A route is an iterated route and needs to be advertised to the FIB table.
* R:
  + A route is an iterated route.

### RoutePritorityType

The priority of the Route

Contains Enumeration Literals:

* CRITICAL:
  + Highest protocol priority.
* HIGH:
  + High protocol priority
* MEDIUM:
  + Medium protocol priority.
* LOW:
  + Low protocol priority.

### RouteState

The state of the route as per the routing table. It is a combination of the one or more of the following states: ADV, NOADV,ACTIVE, INACTIVE, RELIED.

Contains Enumeration Literals:

* ACTIVE\_ADV:
  + The route state is active and advertised.
* ACTIVE\_NOADV:
  + The route state is active and not advertised.
* ACTIVE\_ADV\_RELIED:
  + The route state is active, advertised, and relied.
* ACTIVE\_NOADV\_RELIED:
  + The route state is active, not advertised, and relied.
* INVALID\_NOADV:
  + The route state is invalid and not advertised.
* INACTIVE\_NOADV:
  + The route state is inactive and not advertised.

### SeverityType

Contains Enumeration Literals:

* NON-ALARMED:
* WARNING:
* MAJOR:
* MINOR:

### SeverityType

Contains Enumeration Literals:

* NON-ALARMED:
* WARNING:
* MAJOR:
* MINOR:

### VrfOperationalStatusType

The status of the vpn-instance

Contains Enumeration Literals:

* VRF\_STATUS\_UP:
  + Indicates that VRF is configured and working.
* VRF\_STATUS\_DOWN:
  + Indicates that the VRF status is down.
* UNKNOWN:

### arpProxyType

Contains Enumeration Literals:

* DISABLE:
  + The system should not respond to ARP requests that do not specify an IP address configured on the local subinterface as the target address.
* REMOTE\_ONLY:
  + The system responds to ARP requests only when the sender and target IP addresses are in different subnets.
* ALL:
  + The system responds to ARP requests where the sender and target IP addresses are in different subnets, as well as those where they are in the same subnet.
* NOT\_YET\_DEFINED:

### dropPrecedenceType

Contains Enumeration Literals:

* NONE:
* LOW:
* MEDIUM:
* HIGH:
* DROP\_PRECEDENCE\_NOT\_YET\_DEFINED:

### ipAddressOriginType

The origin of the interface's own IP address.

Contains Enumeration Literals:

* OTHER:
  + None of the following.
* STATIC:
  + Indicates that the address has been statically configured - for example, using NETCONF or a Command Line Interface.
* DHCP:
  + Indicates an address that has been assigned to this system by a DHCP server.
* LINK\_LAYER:
  + Indicates an address created by IPv6 stateless autoconfiguration that embeds a link-layer address in its interface identifier.
* RANDOM:
  + Indicates an address chosen by the system at random, e.g., an IPv4 address within 169.254/16, an RFC 4941 temporary address, or an RFC 7217 semantically opaque address.
* NOT\_YET\_DEFINED:

### neighborOriginType

The origin of a neighbor entry.

Contains Enumeration Literals:

* OTHER:
  + None of the following.
* STATIC:
  + Indicates that the mapping has been statically configured - for example, using NETCONF or a Command Line Interface.
* DYNAMIC:
  + Indicates that the mapping has been dynamically resolved using, e.g., IPv4 ARP.
* NOT\_YET\_DEFINED:

### qosInterfaceKindType

Contains Enumeration Literals:

* NONE:
* IEEE8021P:
* MPLS\_EXP:
* IP\_DSCP:
* NOT\_YET\_DEFINED:

### queueNameType

Contains Enumeration Literals:

* BEST\_EFFORT\_QUEUE:
* ASSURED\_FORWARDING\_QUEUE1:
* ASSURED\_FORWARDING\_QUEUE2:
* ASSURED\_FORWARDING\_QUEUE3:
* ASSURED\_FORWARDING\_QUEUE4:
* EXPEDITED\_FORWARDING\_QUEUE:
* CLASS\_SELECTOR\_QUEUE6:
* CLASS\_SELECTOR\_QUEUE7:
* QUEUENAME\_NOT\_YET\_DEFINED:

### wredNameType

Contains Enumeration Literals:

* WRED\_NAME\_NOT\_YET\_DEFINED:

### wredNameType

Contains Enumeration Literals:

* WRED\_NAME\_NOT\_YET\_DEFINED:

## Primitive Types

Normal back matter in the document.