# Classes

## CurrentProblem

Applied stereotypes:

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

Attributes for CurrentProblem

Table 1: Attributes for CurrentProblem

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| sequenceNumber | Integer  ./. | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_16\_BIT  OpenModelAttribute  • partOfObjectKey: 1  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Unique sequence number of the current problem object. |
| timestamp | DateTime  2010-11-20T14:00:00+01:00 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Time when the alarm was raised. |
| problemSeverity | SeverityType  NOT\_YET\_DEFINED | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY |  |

## IpInterfaceCapability

Applied stereotypes:

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

Attributes for IpInterfaceCapability

Table 1: Attributes for IpInterfaceCapability

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| maximumNumberOfIpV4Addresses | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_16\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Maximum number of IP addresses at this IP interface (translates into maximum multiplicity of IpInterfaceConfiguration::fixedIpV4AddressList) |
| dhcpClientIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | 1 = Interface is able to operate as a DHCP client. |
| fixedDefaultGatewayConfigurationIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | 1 = Default route per IP Interface can be configuered, 0 if multiple Default routes are not supported |
| maximumTransmissionUnitMin | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_16\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: Byte  • support: MANDATORY | Minimum layer 3 MTU size configurable. |
| maximumTransmissionUnitMax | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_16\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: Byte  • support: MANDATORY | Maximum layer 3 MTU size configurable. |
| ipV6IsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | 1 = interface supports IPv6 (even if not yet supported by this information model). |
| arpProxyIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | 1 = Interface is able to forward ARP requests. |
| ingressPolicingIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | 1 = Shaping on the ingress is available at this interface. |
| egressShapingIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | 1 = This interface supports shaping. |
| informationRateMin | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_32\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: kbit/s  • support: MANDATORY | Only relevant if (egressShapingIsAvail==1): Minimum configurable throuput in kbit/s. |
| informationRateMax | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_32\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: kbit/s  • support: MANDATORY | Only relevant if (egressShapingIsAvail==1): Maximum configurable throuput in kbit/s. |
| burstSizeMin | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_16\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: kByte  • support: MANDATORY | Only relevant if (egressShapingIsAvail==1): Minimum configurable value for the number of kBytes, which could be sent in a single burst. |
| burstSizeMax | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_16\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: kByte  • support: MANDATORY | Only relevant if (egressShapingIsAvail==1): Maximum configurable value for the number of kBytes, which could be sent in a single burst. |
| vpnBindingIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | 1 = Interface supports being part of a Virtual Private Network. |
| adminShutDownIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | 1 = Manual switching on and off of the interface without deleting it (underlying OSI network layers are also not affected) is available. |
| supportedLoopBackKindList | LoopBackType  NOT\_YET\_DEFINED | 1..3 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | List of supported kinds of looping back. |
| maintenanceTimerRange | String  Range of the maintenance timer not yet defined. | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Available time periods for maintenance configurations to be described. Concrete values shall be separated by commas (e.g. '10, 60, 360'). Ranges shall be expressed as two values separated by a minus (e.g. '10-360'). |
| statisticsIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | 1 = Statistics collection and aggregation is supported on this interface. |
| supportedAlarmList | String  Supported Alarms Not Yet Defined | 2..\* | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Available alarms to be listed. Mandatory: 'IpInterfaceDown' and 'MtuMissmatch'. Further alarms might be added by the device vendors. |

## IpInterfaceConfiguration

Applied stereotypes:

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

Attributes for IpInterfaceConfiguration

Table 1: Attributes for IpInterfaceConfiguration

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| interfaceName | String  Interface name not yet defined. | 1 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Description of the interface, could be a name, could be a number. Free text field to be filled by the operator. |
| interfaceIsOn | Boolean  false | 1 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Only relevant if (adminShutDownIsAvail==1). 1 = Activation of the interface. 0 = De-activation of the interface without deleting it (underlying OSI network layers are not affected). |
| dhcpClientIsOn | Boolean  false | 1 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Only relevant if (dhcpClientIsAvail==1). 1 = Activation of a DHCP client on the interface. |
| fixedIpV4AddressList | IpV4AddressType  ./. | 1..\* | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Only relevant if (dhcpClientIsOn==0). Secondary IP addresses. |
| maximumTransmissionUnitIp | Integer  -1 | 1 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: LENGTH\_16\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: Byte  • support: MANDATORY | Layer 3 maximum transmission unit size in Byte. The MTU describes the maximum IP packet size that can be put into the Ethernet frame before sending |
| arpProxy | ArpProxyType  NOT\_YET\_DEFINED | 1 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | openconfig-if-ip. Only relevant if (arpProxyIsAvail == 1). If set to a value different from '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 configured to 'REMOTE\_ONLY', replies are only sent when the target address falls outside the locally configured subnets on the interface. If configured to 'ALL', all requests regardless of their target address are answered. |
| \_ingressPolicingProfile | Profile  ./. | 0..1 | RW | PassedByReference  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Only relevant if (ingressPolicingIsAvail ==1). Reference to the definition of a policing profile. Attribute to point to an instance of Profile with profileName=='PROFILE\_NAME\_TYPE\_POLICING\_PROFILE'. |
| egressShapingIsOn | Boolean  false | 1 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | 1 = Shaping on the egress is activated. |
| maximumInformationRate | Integer  -1 | 1 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: LENGTH\_32\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: kbit/s  • support: MANDATORY | Only relevant if (egressShapingIsAvail==1): Limits the throughput on the egress. |
| maximumBurstSize | Integer  -1 | 1 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: LENGTH\_16\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: kByte  • support: MANDATORY | Only relevant if (egressShapingIsAvail==1): Limits the number of kBytes, which are sent in a single burst. |
| \_l3vpnProfile | Profile  ./. | 0..1 | RW | PassedByReference  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Reference to the definition of a Virtual Private Network, to which this interface belongs to. Attribute to point to an instance of Profile with profileName=='PROFILE\_NAME\_TYPE\_L3VPN\_PROFILE'. |
| \_qosProfile | Profile  ./. | 0..1 | RW | PassedByReference  OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Reference to the definition of the QoS profile, which shall be applied on this interface. Attribute to point to an instance of Profile with profileName=='PROFILE\_NAME\_TYPE\_QOS\_PROFILE'. |
| loopBackKindOn | LoopBackType  NOT\_YET\_DEFINED | 1 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Maintenance Feature. Configuration of a loop back of Ethernet frames on this interface. |
| maintenanceTimer | Integer  -1 | 1 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: LENGTH\_32\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: s  • support: MANDATORY | Time of existence of any maintenance configuration. Valid values are defined in \*Capability::maintenanceTimerRange. |
| statisticsIsOn | Boolean  false | 1 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Only relevant if (FlowStatisticsIsAvail==1). 1 = Collection and aggregation of statistics is switched on. |
| problemKindSeverityList | ProblemKindSeverityType  ./. | 0..\* | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Severity of each entry of the SupportedAlarmList to be configured. |

## IpInterfaceCurrentProblems

Applied stereotypes:

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

Attributes for IpInterfaceCurrentProblems

Table 1: Attributes for IpInterfaceCurrentProblems

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| currentProblemList | IpInterfaceCurrentProblemType  ./. | 0..\* | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY |  |
| numberOfCurrentProblems | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_8\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Number of alarms, which are currently active on this interface. |
| timeOfLatestChange | 2010-11-20T14:00:00+01:00 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Date and time when the list of alarms has been changed for the last time. |

## IpInterfaceLpSpec

Applied stereotypes:

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

Attributes for IpInterfaceLpSpec

Table 1: Attributes for IpInterfaceLpSpec

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| \_ipInterface\_Pac | IpInterface\_Pac  ./. | 1 | RW | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | See referenced class |

## IpInterfaceStatus

Applied stereotypes:

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

Attributes for IpInterfaceStatus

Table 1: Attributes for IpInterfaceStatus

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| interfaceStatus | InterfaceStatusType  NOT\_YET\_DEFINED | 1 | R | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Operational status of the interface. |
| ipV4AddressCurList | IpV4AddressType  ./. | 1..\* | R | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | IPv4 address, which is currently active on this interface. The format is IPv4, e.g. 172.168.0.5 |
| ipAddressOrigin | IpAddressOriginType  NOT\_YET\_DEFINED | 1 | R | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | openconfig-if-ip. Describes the origin of the currently active IP address information, e.g. statically configured, assigned by DHCP, etc.. |
| neighborList | NeighborType  ./. | 0..\* | R | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | openconfig-if-ip. Current IP and MAC addresses of the remote site of the IP link. |
| vpnBindingIsUp | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | 1 = Binding to a VPN definition is currently effective. |
| loopBackKindUp | LoopBackType  NOT\_YET\_DEFINED | 1 | R | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | The currently active (not just configured) type of looping back of the air interface header shall be expressed here. The received header is returned to the remote site. |
| statisticsIsUp | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | 1 = Statistics are currently counted |
| timestamp | DateTime  2010-11-20T14:00:00+01:00 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | The timestamp associated with when the current data was collected. |
| last10SecDataInputRate | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_32\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: kbit/s  • support: MANDATORY | Data receive rate over the last 10 second interval in kbit/s. |
| last10SecDataOutputRate | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_32\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: kbit/s  • support: MANDATORY | Data transmit rate over the last 10 second interval in kbit/s. |
| last10SecPacketInputRate | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_32\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: packet/s  • support: MANDATORY | Packet receive rate over the last 10 second interval. |
| last10SecPacketOutputRate | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_32\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: packet/s  • support: MANDATORY | Packet transmit rate over the last 10 second interval. |
| dataVolumeInput | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_32\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: kByte  • support: MANDATORY | Received data volume in kByte. |
| dataVolumeOutput | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_32\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: kByte  • support: MANDATORY | Sent data volume in kByte. |
| totalPacketsInput | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_64\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: packets  • support: MANDATORY | The total number of IP packets received for the specified address family, including those received in error |
| totalPacketsOutput | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_64\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: packets  • support: MANDATORY | 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 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_32\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: kByte  • support: MANDATORY | 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 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_32\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: kByte  • support: MANDATORY | 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 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_64\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: packets  • support: MANDATORY | 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 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_64\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: packets  • support: MANDATORY | 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 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_64\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: packets  • support: MANDATORY | Total number of received unicast packets. |
| unicastPacketsOutput | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_64\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: packets  • support: MANDATORY | Total number of sent unicast packets. |
| multicastPacketsInput | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_32\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: packets  • support: MANDATORY | Total number of received multicast packets. |
| multicastPacketsOutput | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_32\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: packets  • support: MANDATORY | Total number of sent multicast packets. |
| broadcastPacketsInput | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_32\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: packets  • support: MANDATORY | Total number of received broadcast packets. |
| broadcastPacketsOutput | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_32\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: packets  • support: MANDATORY | Total number of sent broadcast packets. |
| fragmentedPacketsInput | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_32\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: packets  • support: MANDATORY | Total number of received fragmented packets. |
| erroredPacketsInput | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_32\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: packets  • support: MANDATORY | Total number of received errored packets. |
| erroredPacketsOutput | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_32\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: packets  • support: MANDATORY | 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 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_32\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: packets  • support: MANDATORY | 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 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_32\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: packets  • support: MANDATORY | 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). |

## IpInterface\_Pac

Applied stereotypes:

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

Attributes for IpInterface\_Pac

Table 1: Attributes for IpInterface\_Pac

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| \_ipInterfaceCapability | IpInterfaceCapability  ./. | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | See referenced class |
| \_ipInterfaceConfiguration | IpInterfaceConfiguration  ./. | 1 | RW | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | See referenced class |
| \_ipInterfaceStatus | IpInterfaceStatus  ./. | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | See referenced class |
| \_ipInterfaceCurrentProblems | IpInterfaceCurrentProblems  ./. | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | See referenced class |

# Data Types

## IpInterfaceCurrentProblemType

Applied Stereotypes:

Attributes for IpInterfaceCurrentProblemType

Table 1: Attributes for IpInterfaceCurrentProblemType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| problemName | String  NOT\_YET\_DEFINED | 1 | RW | OpenInterfaceModelAttribute   * AVC: NO * bitLength: NA   OpenModelAttribute   * partOfObjectKey: 0 * isInvariant: true * valueRange: no range constraint * unit: no unit defined * support: MANDATORY | Name of the alarm according to SupportedAlarmList |

## IpV4AddressType

Applied Stereotypes:

Attributes for IpV4AddressType

Table 1: Attributes for IpV4AddressType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| fixedIpV4Address | Ipv4Address  ./. | 1 | RW | OpenInterfaceModelAttribute   * AVC: NO * bitLength: NA   OpenModelAttribute   * partOfObjectKey: 1 * isInvariant: true * valueRange: no range constraint * unit: no unit defined * support: MANDATORY | IPv4 address fixed assigned to this interface. The format is e.g. 172.168.0.5 |
| fixedIpV4AddressPrefixLength | Integer  ./. | 1 | RW | OpenInterfaceModelAttribute   * AVC: NO * bitLength: LENGTH\_8\_BIT   OpenModelAttribute   * partOfObjectKey: 2 * isInvariant: true * valueRange: no range constraint * unit: no unit defined * support: MANDATORY | Fixed assigned routing prefix (sub network) length (e.g. for 198.51.100.0/24 the fixedIpV4AddressPrefixLength would be 24). |
| fixedDefaultGatewayIpV4Address | Ipv4Address  0.0.0.0 | 1 | RW | OpenInterfaceModelAttribute   * AVC: YES * bitLength: NA   OpenModelAttribute   * partOfObjectKey: 0 * isInvariant: false * valueRange: no range constraint * unit: no unit defined * support: MANDATORY | Only relevant if ( (dhcpClientIsOn==0) AND (fixedDefaultGatewayConfigurationIsAvail==1) ). Fixed assigned IPv4 address of the default gateway. |

## NeighborType

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

Applied Stereotypes:

Attributes for NeighborType

Table 1: Attributes for NeighborType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| neighborMacAddress | MacAddress  ./. | 1 | R | OpenInterfaceModelAttribute   * AVC: YES * bitLength: NA   OpenModelAttribute   * partOfObjectKey: 1 * isInvariant: true * valueRange: no range constraint * unit: no unit defined * support: MANDATORY | MAC address of the neighbor node. The format is e.g. 00:80:41:ae:fd:7e |
| neighborIpV4AddressList | Ipv4Address  0.0.0.0 | 1..\* | R | OpenInterfaceModelAttribute   * AVC: YES * bitLength: NA   OpenModelAttribute   * partOfObjectKey: 0 * isInvariant: true * valueRange: no range constraint * unit: no unit defined * support: MANDATORY | IPv4 address of the neighbor node. The format is IPv4, e.g. 172.168.0.5 |
| neighborOrigin | NeighborOriginType  NOT\_YET\_DEFINED | 1 | R | OpenInterfaceModelAttribute   * AVC: YES * bitLength: NA   OpenModelAttribute   * partOfObjectKey: 0 * isInvariant: true * valueRange: no range constraint * unit: no unit defined * support: MANDATORY | The origin of a neighbor entry. |

## ProblemKindSeverityType

Applied Stereotypes:

Attributes for ProblemKindSeverityType

Table 1: Attributes for ProblemKindSeverityType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| problemKindName | String  ./. | 1 | RW | OpenInterfaceModelAttribute   * AVC: NO * bitLength: NA   OpenModelAttribute   * partOfObjectKey: 1 * isInvariant: true * valueRange: no range constraint * unit: no unit defined * support: MANDATORY | Name of the alarm according to SupportedAlarmList |
| problemKindSeverity | SeverityType  NOT\_YET\_DEFINED | 1 | RW | OpenInterfaceModelAttribute   * AVC: YES * bitLength: NA   OpenModelAttribute   * partOfObjectKey: 0 * isInvariant: false * valueRange: no range constraint * unit: no unit defined * support: MANDATORY | Severity of this type of alarm. |

# Enumeration Types

## ArpProxyType

openconfig-if-ip.

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:

## InterfaceStatusType

Current Operational 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:

## IpAddressOriginType

openconfig-if-ip. 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:

## LayerProtocolNameType

A controlled list of LayerProtocol names.

Contains Enumeration Literals:

* LAYER\_PROTOCOL\_NAME\_TYPE\_IP\_LAYER:

## LoopBackType

Contains Enumeration Literals:

* NONE:
* BACK\_TO\_LOCAL:
  + Returning Ethernet frames of the local site on the Ethernet MAC interface back to the local site.
* BACK\_TO\_REMOTE:
  + Returning Ethernet frames of the remote site on the Ethernet MAC interface back to the remote site.
* NOT\_YET\_DEFINED:

## NeighborOriginType

openconfig-if-ip. 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:

## SeverityType

Contains Enumeration Literals:

* NON-ALARMED:
* WARNING:
* MAJOR:
* MINOR:
* CRITICAL:
* NOT\_YET\_DEFINED:

# Primitive Types