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# Classes

## VlanInterfaceCapability

Applied stereotypes:

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

Attributes for VlanInterfaceCapability

Table 1: Attributes for VlanInterfaceCapability

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| supportedSubLayerProtocolNameList | SubLayerProtocolNameType  NOT\_YET\_DEFINED | 0..\* | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Lists the supported kinds of components. |
| supportedInterfaceKindList | InterfaceKindType  NOT\_YET\_DEFINED | 0..\* | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | type-capabilties. |
| taggingAndMvrpIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | capabilities::tagging. true = Interface supports tagging of frames and MVRP. |
| configuringIngressTagFilteringIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | capabilities::tagging. true = Configuring ingressTagFiltering is available. |
| ingressVlanIdFilteringIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | capabilities::ingress-filtering. true = Discarding ingress frames that are tagged with a VLAN ID, which is unknown to the interface, is available at the interface. false = Filtering happens only at the egress. |
| availablePcpBitsInterpretationKindList | PcpBitsInterpretationKindType  NOT\_YET\_DEFINED | 0..\* | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | List of the available ways of translating the PCP bits of the ingress frames into Priority values. |
| configuringPcpBitsDecodingIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | false = PCP-bits are decoded according to table 3 in chapter 6.9.3 of IEEE Std 802.1Q-2018; true = Device supports flexibly configuring the translation of PCP-bits values to Priority values and drop eligibility. |
| configuringPcpBitsEncodingIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | false = PCP-bits are encoded according to table 2 in chapter 6.9.3 of IEEE Std 802.1Q-2018; true = Device supports flexibly configuring the translation of Priority values and drop eligibility to PCP-bits values. |
| dropEligibleIndicatorIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | true = Decoding and encoding of the Drop Eligible Indicator (DEI) bit of the VLAN header is supported by the device. |
| numberOfAvailablePriorities | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_8\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Number of Priority values, which are supported at the device (usually 8 (0-7)). |
| receivedPriorityOverwritingIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | true = Device supports overwriting the Received Priority of the ingress frames with Regenerated Priority values. |
| vlanIdTranslationIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | true = Translation of VLAN IDs is available at this interface. |
| egressVlanIdTranslationIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | true = Separate translation table for VLAN IDs of egress frames is available. |
| portAndProtocolBasedVlanIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  Reference | true = Restricting forwarding of frames of specific VLANs on specific protocols at this interface is available. Name in ieee802-dot1q-bridge.yang: protocol-based-vlan-classification. |
| maxNumberOfProtocolVlanIdGroupings | 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  Reference | Only meaningful if (portAndProtocolBasedVlanIsAvail==true) AND (subLayerProtocolName!=D\_BRIDGE\_COMPONENT). Maximum number of entries supported in the forwardedProtocolVidGroupingList at this interface. Name in ieee802-dot1q-bridge.yang: max-vid-set-entries. |
| serviceAccessPriorityTaggingIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | true = Adding a priority S-VLAN tag (no VID value) is available on this C\_VLAN\_BRIDGE\_PORT. |
| configuringServiceAccessPriorityMappingIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | true = Freely configuring of the mapping of Priority values to the PCP-bits values of the amended priority S-VLAN tag (no VID value) is available on this C\_VLAN\_BRIDGE\_PORT. |
| priorityToTrafficClassMappingIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | true = configuring the mapping of the Priority values into Traffic Classes (queues) is available for individual interfaces. (If similar configuration would be available on switch and on interface level, the interface specific configuration would overwrite the configuration made on switch level.) |
| numberOfAvailableTrafficClasses | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_8\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Number of Traffic Classes (queues), which are supported at the device (usually 8). |
| restrictedAutomatedVlanRegistrationIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | false = The automated registration and modification of VLANs by the Multiple Registration Protocol (MRP) can not be restricted to those VIDs that already had a static entry. |
| 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 | false = Manual switching on and off of the interface without deleting it (underlying OSI network layers are also not affected) is available. |
| 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 | true = Statistics collection and aggregation is supported on this interface. |

## VlanInterfaceConfiguration

Applied stereotypes:

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

Attributes for VlanInterfaceConfiguration

Table 1: Attributes for VlanInterfaceConfiguration

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **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. |
| subLayerProtocolName | SubLayerProtocolNameType  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 | Used to reference configured component kind. Name in ieee802-dot1q-bridge.yang: component-name. |
| interfaceKind | InterfaceKindType  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  Reference | Indicates the capabilities of this port. Name in ieee802-dot1q-bridge.yang: port-type. |
| defaultVlanId | Integer  -1 | 1 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: LENGTH\_64\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  Reference | Not effective if (subLayerProtocolName==D\_BRIDGE\_COMPONENT). Untagged frames on the ingress of this VlanInterface get amended by a VLAN header and its 12 VID-bits (VLAN ID) get filled with the default VLAN ID (1-4094). If a value between 4096 and 4294967295 gets assigned, then it represents a local VLAN. Name in ieee802-dot1q-bridge.yang: pvid. |
| defaultPriority | Integer  -1 | 1 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: LENGTH\_8\_BIT  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  Reference | Untagged frames on the ingress of this VlanInterface get associated with this Priority value. Name in ieee802-dot1q-bridge.yang: default-priority. |
| ingressTagFiltering | IngressTagFilteringType  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  Reference | Only effective if (configuringIngressTagFilteringIsAvail==true) AND (subLayerProtocolName!=D\_BRIDGE\_COMPONENT). Defines the type of frame acceptable at this interface. Name in ieee802-dot1q-bridge.yang: acceptable-frame. |
| ingressVlanIdFilteringIsOn | Boolean  false | 1 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  Reference | Only effective if (ingressVlanIdFilteringIsAvail==true) and (subLayerProtocolName!=D\_BRIDGE\_COMPONENT). true = Received frames with a VID that is unknown to the interface get discarded already at the ingress. Name in ieee802-dot1q-bridge.yang: enable-ingress-filtering. |
| pcpBitsInterpretationKind | PcpBitsInterpretationKindType  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  Reference | Defines how to decode and encode the values of the 3 Priority Code Point (PCP) bits of the VLAN header at this interface. Name in ieee802-dot1q-bridge.yang: pcp-selection. |
| pcpBitToPriorityMappingList | PcpBitsToPriorityMappingType  ./. | 0..8 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Only effective if (configuringPcpBitsDecodingIsAvail==true). Configurable decoding of the PCP-bits of the ingress VLAN header into Priority values and drop eligibility. This attribute is shortening the ieee802-dot1q-bridge.yang from a table to a list, because it allows only configuring the values for the way of PCP bit interpretation, which is actually chosen in pcpBitsInterpretationKind. Name in ieee802-dot1q-bridge.yang: pcp-decoding-table. |
| pcpBitsEncodingMappingList | PriorityToPcpBitsMappingType  ./. | 0..16 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Only effective if (configuringPcpBitsEncodingIsAvail==true). Configurable encoding of Priority value and drop eligibility into the PCP-bits of the ingress VLAN header. This attribute is shortening the ieee802-dot1q-bridge.yang from a table to a list, because it allows only configuring the values for the way of PCP bit interpretation, which is actually chosen in pcpBitsInterpretationKind. Name in ieee802-dot1q-bridge.yang: pcp-encoding-table. |
| dropEligibleIndicatorIsOn | Boolean  false | 1 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  Reference | Only effective if (dropEligibleIndicatorIsAvail==true). true = The Drop Eligible Indicator (DEI) bit of ingress VLAN header is decoded into drop eligibility and vice versa for egress frames. Name in ieee802-dot1q-bridge.yang: use-dei. |
| dropEligibleEncodingIsRequired | Boolean  false | 1 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  Reference | true = Queued frames, which have drop eligibility==true, get dropped, if the chosen pcpBitsInterpretationKind does not allow encoding the DEI bit set on true on the egress. Name in ieee802-dot1q-bridge.yang: drop-encoding. |
| receivedPriorityOverwritingIsOn | 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 effective if (receivedPriorityOverwritingIsAvail==true). true = Overwriting the Received Priority value derived from the PCP-bits of the ingress frame with the Regenerated Priority values listed in ingressPriorityOverwritingTable is activated. |
| receivedPriorityOverwritingList | ReceivedPriorityOverwritingType  ./. | 0..8 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  Reference | Only effective if (receivedPriorityOverwritingIsAvail==true) AND (receivedPriorityOverwritingIsOn==true). The Received Priority value derived from the PCP-bits of the ingress frame will be overwritten with the Regenerated Priority value from the list. Name in ieee802-dot1q-bridge.yang: priority-regeneration. |
| vlanIdTranslationIsOn | Boolean  false | 1 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  Reference | Only effective if (vlanIdTranslationIsAvail==true) AND (subLayerProtocolName!=D\_BRIDGE\_COMPONENT). If (vlanIdTranslationIsOn==true) AND (egressVlanIdTranslationIsOn==true), the VLAN IDs of ingress frames get translated according to the mapping, which is defined in vidTranslationMapping. If (vlanIdTranslationIsOn==true) AND (egressVlanIdTranslationIsOn==false), the mapping, which is defined in vidTranslationMapping, is used for both ingress and egress frames. Name in ieee802-dot1q-bridge.yang: enable-vid-translation-table. |
| externalToInternalVlanIdMappingList | ExternalToInternalVlanIdMappingType  ./. | 0..\* | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Only effective if (subLayerProtocolName!=D\_BRIDGE\_COMPONENT). If (vlanIdTranslationIsOn==true) AND (egressVlanIdTranslationIsOn==true), the VLAN IDs of ingress frames get translated according to this mapping. If (vlanIdTranslationIsOn==true) AND (egressVlanIdTranslationIsOn==false), the VLAN IDs of both ingress and egress frames get mapped according to this mapping. Name in ieee802-dot1q-bridge.yang: vid-translations. |
| egressVlanIdTranslationIsOn | Boolean  false | 1 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  Reference | Only effective if (egressVlanIdTranslationIsAvail==true) AND (subLayerProtocolName!=D\_BRIDGE\_COMPONENT). true = The VLAN IDs of egress frames get translated according to the mapping, which is defined in egressVidTranslationMapping. Name in ieee802-dot1q-bridge.yang: enable-egress-vid-translation-table. References: 12.10.1.9 of IEEE Std 802.1Q-2018 and 6.9 of IEEE Std 802.1Q-2018. |
| internalToEgressVlanIdMappingList | InternalToEgressVlanIdMappingType  ./. | 0..\* | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Only effective if (subLayerProtocolName!=D\_BRIDGE\_COMPONENT) AND (egressVlanIdTranslationIsOn==true). The VLAN IDs of egress frames get translated according to this mapping. Name in ieee802-dot1q-bridge.yang: egress-vid-translations. |
| forwardedProtocolVlanIdGroupingList | ForwardedProtocolVlanIdGroupingType  ./. | 0..\* | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  Reference | Only effective if (portAndProtocolBasedVlanIsAvail==true). Associates lists of protocols with lists of VIDs to combinations, which are forwarded at this interface. Name in ieee802-dot1q-bridge.yang: protocol-group-vid-set. |
| serviceAccessPriorityTaggingIsOn | Boolean  false | 1 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  Reference | Only effective if (serviceAccessPriorityTaggingIsAvail==true). true = Amending priority S-VLAN tags (no VID value) to egress frames at this C\_VLAN\_BRIDGE\_PORT is activated. Name in ieee802-dot1q-bridge.yang: service-access-priority-selection. |
| serviceAccessPriorityMappingList | ServiceAccessPriorityMappingType  ./. | 0..8 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  Reference | Only effective if (serviceAccessPriorityTaggingIsOn==true) AND (configuringServiceAccessPriorityMappingIsAvail==true). The PCP-bits of the priority S-VLAN tag (no VID value), which is amended to the egress frames at this C\_VLAN\_BRIDGE\_PORT, are generated according to this table from the Priority value. Name in ieee802-dot1q-bridge.yang: service-access-priority. |
| priorityToTrafficClassMappingList | PriorityToTrafficClassMappingType  ./. | 0..8 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  Reference | Mapping of the Priority values into Traffic Classes (queues). This attribute is shortening the ieee802-dot1q-bridge.yang from a table to a list, because it allows only configuring the values for the number of traffic classes actually available at the device. Name in ieee802-dot1q-bridge.yang: traffic-class-map. |
| restrictedAutomatedVlanRegistrationIsOn | Boolean  false | 1 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY  Reference | Only effective if (restrictedAutomatedVlanRegistrationIsAvail==true) and (subLayerProtocolName!=D\_BRIDGE\_COMPONENT). true = Automated VLAN registration by the Multiple Registration Protocol (MRP) is restricted to those VIDs that already had a static entry. Name in ieee802-dot1q-bridge.yang: enable-restricted-vlan-registration. |
| adminPointToPoint | AdminPointToPointType  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  Reference | For a port running spanning tree, this object represents the administrative point-to-point status of the LAN segment attached to this port, using the enumeration values of IEEE Std 802.1AC. A value of forceTrue(1) indicates that this port should always be treated as if it is connected to a point-to-point link. A value of forceFalse(2) indicates that this port should be treated as having a shared media connection. A value of auto(3) indicates that this port is considered to have a point-to-point link if it is an Aggregator and all of its members are aggregatable, or if the MAC entity is configured for full duplex operation, either through auto-negotiation or by management means. Manipulating this object changes the underlying adminPointToPointMAC. Name in ieee802-dot1q-bridge.yang: admin-point-to-point. |
| 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 effective if (statisticsIsAvail==true). true = Continuous statistics counters are switched on. |

## VlanInterfaceLpSpec

Applied stereotypes:

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

Attributes for VlanInterfaceLpSpec

Table 1: Attributes for VlanInterfaceLpSpec

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| \_vlanInterface\_Pac | VlanInterface\_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 |

## VlanInterface\_Pac

Applied stereotypes:

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

Attributes for VlanInterface\_Pac

Table 1: Attributes for VlanInterface\_Pac

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| \_vlanInterfaceCapability | VlanInterfaceCapability  ./. | 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 |
| \_vlanInterfaceConfiguration | VlanInterfaceConfiguration  ./. | 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 |

# Data Types

## ExternalToInternalVlanIdMappingType

To configure the VID Translation Table (6.9) associated with a Port. If no translation relationship is defined for some VID value, then it is assumed that the VID does not change. The translation relation applies on ingress and egress frames unless a separate egress translation relations are defined in egressVidTranslationMapping. Name in ieee802-dot1q-bridge.yang: vid-translations.

Applied Stereotypes:

Attributes for ExternalToInternalVlanIdMappingType

Table 1: Attributes for ExternalToInternalVlanIdMappingType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| externalVlanId | Integer  ./. | 1 | RW | OpenInterfaceModelAttribute   * AVC: NO * bitLength: LENGTH\_16\_BIT   OpenModelAttribute   * partOfObjectKey: 1 * isInvariant: true * valueRange: no range constraint * unit: no unit defined * support: MANDATORY   Reference | VID of the frame as long as it is inside the interface. If ingress frame, this would be before translation. If egress frame (AND egressVidTranslationMapping not activated!), this would be after translation. Name in ieee802-dot1q-bridge.yang: local-vid. |
| internalVlanId | Integer  -1 | 1 | RW | OpenInterfaceModelAttribute   * AVC: YES * bitLength: LENGTH\_16\_BIT   OpenModelAttribute   * partOfObjectKey: 0 * isInvariant: false * valueRange: no range constraint * unit: no unit defined * support: MANDATORY   Reference | VID of the frame as long as it is inside the bridge. If ingress frame, this would be after translation. If egress frame (AND egressVidTranslationMapping not activated!), this would be before translation. Name in ieee802-dot1q-bridge.yang: relay-vid. |

## ForwardedProtocolVlanIdGroupingType

Limits the forwarded frames of a list of VIDs to the protocols, which are consolidated under a specific group ID. The protocol group is to be defined on Bridge level. Name in ieee802-dot1q-bridge.yang: protocol-group-vid-set.

Applied Stereotypes:

Attributes for ForwardedProtocolVlanIdGroupingType

Table 1: Attributes for ForwardedProtocolVlanIdGroupingType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| forwardedProtocolGroupId | Integer  ./. | 1 | RW | OpenInterfaceModelAttribute   * AVC: NO * bitLength: LENGTH\_32\_BIT   OpenModelAttribute   * partOfObjectKey: 1 * isInvariant: true * valueRange: no range constraint * unit: no unit defined * support: MANDATORY   Reference | Bridge wide identifier of a group of protocols that shall be forwarded within the listed VLANs. Name in ieee802-dot1q-bridge.yang: group-id. |
| forwardedVlanIdList | Integer  -1 | 0..\* | RW | OpenInterfaceModelAttribute   * AVC: YES * bitLength: LENGTH\_64\_BIT   OpenModelAttribute   * partOfObjectKey: 0 * isInvariant: false * valueRange: no range constraint * unit: no unit defined * support: MANDATORY   Reference | List of VLANs that shall forward the protocols, which are consolidated unter the protocolGroupId. Name in ieee802-dot1q-bridge.yang: vid. |

## InternalToEgressVlanIdMappingType

To configure the Egress VID Translation Table (6.9) associated with a Port. If no translation relationship is defined for some VID value, then it is assumed that the VID does not change. Name in ieee802-dot1q-bridge.yang: egress-vid-translationsType.

Applied Stereotypes:

Attributes for InternalToEgressVlanIdMappingType

Table 1: Attributes for InternalToEgressVlanIdMappingType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| internalVlanId | Integer  ./. | 1 | RW | OpenInterfaceModelAttribute   * AVC: NO * bitLength: LENGTH\_16\_BIT   OpenModelAttribute   * partOfObjectKey: 1 * isInvariant: true * valueRange: no range constraint * unit: no unit defined * support: MANDATORY   Reference | VID of the frame as long as it is inside the bridge, but before translating the VID and egress of the frame at this interface. Name in ieee802-dot1q-bridge.yang: relay-vid. |
| egressVlanId | Integer  -1 | 1 | RW | OpenInterfaceModelAttribute   * AVC: YES * bitLength: LENGTH\_16\_BIT   OpenModelAttribute   * partOfObjectKey: 0 * isInvariant: false * valueRange: no range constraint * unit: no unit defined * support: MANDATORY   Reference | VID of the egress frame after translating the VID. Name in ieee802-dot1q-bridge.yang: local-vid. |

## PcpBitsToPriorityMappingType

The Priority Code Point decoding mapping describes how to decode the PCP-bits of the ingress VLAN header into Priority value and drop eligibility. If no corresponding pcpBitToPriorityMappingType instance exists, the mapping of the respective pcpBitsValue shall follow the standard, which is defined in Table6-3 on page 143 of IEEE802.1Q-2018. Name in ieee802-dot1q-bridge.yang: priority-map.

Applied Stereotypes:

Attributes for PcpBitsToPriorityMappingType

Table 1: Attributes for PcpBitsToPriorityMappingType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| toBeDecodedPcpBitsValue | Integer  ./. | 1 | RW | OpenInterfaceModelAttribute   * AVC: NO * bitLength: LENGTH\_8\_BIT   OpenModelAttribute   * partOfObjectKey: 1 * isInvariant: true * valueRange: no range constraint * unit: no unit defined * support: MANDATORY   Reference | Value of the 3 Priority Code Point (PCP) bits of the VLAN header, which is to be interpreted into Priority and eligibility. Name in ieee802-dot1q-bridge.yang: priority-code-point. |
| associatedPriorityValue | Integer  -1 | 1 | RW | OpenInterfaceModelAttribute   * AVC: YES * bitLength: LENGTH\_8\_BIT   OpenModelAttribute   * partOfObjectKey: 0 * isInvariant: false * valueRange: no range constraint * unit: no unit defined * support: MANDATORY   Reference | Priority value associated to the value of the 3 Priority Code Point (PCP) bits of the VLAN header. Values from 0 to 7 (inclusive). Name in ieee802-dot1q-bridge.yang: priority. |
| associatedDropEligibility | Boolean  false | 1 | RW | OpenInterfaceModelAttribute   * AVC: YES * bitLength: NA   OpenModelAttribute   * partOfObjectKey: 0 * isInvariant: false * valueRange: no range constraint * unit: no unit defined * support: MANDATORY   Reference | Drop eligibility associated to the value of the 3 Priority Code Point (PCP) bits of the VLAN header. Name in ieee802-dot1q-bridge.yang: drop-eligible. |

## PriorityToPcpBitsMappingType

The Priority Code Point encoding mapping describes how to encode Priority value and drop eligibility into the PCP-bits of the egress VLAN header. If no corresponding PriorityToPcpBitsMappingType instance exists, the mapping of the respective Priority value shall follow the standard, which is defined in Table6-2 on page 143 of IEEE802.1Q-2018. Name in ieee802-dot1q-bridge.yang: priority-map.

Applied Stereotypes:

Attributes for PriorityToPcpBitsMappingType

Table 1: Attributes for PriorityToPcpBitsMappingType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| toBeEncodedPriorityValue | Integer  ./. | 1 | RW | OpenInterfaceModelAttribute   * AVC: NO * bitLength: LENGTH\_8\_BIT   OpenModelAttribute   * partOfObjectKey: 1 * isInvariant: true * valueRange: no range constraint * unit: no unit defined * support: MANDATORY   Reference | Priority value, which is to be encoded into a value of the 3 Priority Code Point (PCP) bits of the egress VLAN header. Name in ieee802-dot1q-bridge.yang: priority. |
| toBeEncodedDropEligibility | Boolean  ./. | 1 | RW | OpenInterfaceModelAttribute   * AVC: NO * bitLength: NA   OpenModelAttribute   * partOfObjectKey: 2 * isInvariant: true * valueRange: no range constraint * unit: no unit defined * support: MANDATORY   Reference | Drop eligibility, which is to be encoded into a value of the 3 Priority Code Point (PCP) bits of the egress VLAN header. Name in ieee802-dot1q-bridge.yang: dei. |
| associatedPcpBitsValue | Integer  -1 | 1 | RW | OpenInterfaceModelAttribute   * AVC: YES * bitLength: LENGTH\_8\_BIT   OpenModelAttribute   * partOfObjectKey: 0 * isInvariant: false * valueRange: no range constraint * unit: no unit defined * support: MANDATORY   Reference | Value of the 3 Priority Code Point (PCP) bits of the egress VLAN header, which is to be associated with the Priority value and eligibility. Name in ieee802-dot1q-bridge.yang: priority-code-point. |

## PriorityToTrafficClassMappingType

If no corresponding PriorityToTrafficClassMappingType instance exists, the mapping of the respective Priority shall follow the standard, which is defined in Table 8-5 on page 198 of IEEE802.1Q-2018. This modeling is shortening the ieee802-dot1q-bridge.yang from a table to a list, because it allows only configuring the values for the number of traffic classes, which is actually available at the device. Name in ieee802-dot1q-bridge.yang: traffic-class-table-grouping.

Applied Stereotypes:

* Reference

Attributes for PriorityToTrafficClassMappingType

Table 1: Attributes for PriorityToTrafficClassMappingType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| priorityValue | Integer  ./. | 1 | RW | OpenInterfaceModelAttribute   * AVC: NO * bitLength: LENGTH\_8\_BIT   OpenModelAttribute   * partOfObjectKey: 1 * isInvariant: true * valueRange: no range constraint * unit: no unit defined * support: MANDATORY   Reference | Priority value, which is to be mapped into a Traffic Class (queue). Values from 0 to 7 (inclusive). Name in ieee802-dot1q-bridge.yang: priority. |
| trafficClassValue | Integer  -1 | 1 | RW | OpenInterfaceModelAttribute   * AVC: YES * bitLength: LENGTH\_8\_BIT   OpenModelAttribute   * partOfObjectKey: 0 * isInvariant: false * valueRange: no range constraint * unit: no unit defined * support: MANDATORY   Reference | Index of the Traffic Class (queue), which gets associated with the Priority Value. Values from 0 to 7 (inclusive). Name in ieee802-dot1q-bridge.yang: traffic-class. |

## ReceivedPriorityOverwritingType

The priority regeneration table provides the ability to map incoming priority values on a per-Port basis, under management control. If no corresponding ReceivedPriorityOverwritingType instance exists, the Regenerated Priority value is the same as the Received Priority value.

Applied Stereotypes:

Attributes for ReceivedPriorityOverwritingType

Table 1: Attributes for ReceivedPriorityOverwritingType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| toBeOverwrittenPriorityValue | Integer  ./. | 1 | RW | OpenInterfaceModelAttribute   * AVC: NO * bitLength: LENGTH\_8\_BIT   OpenModelAttribute   * partOfObjectKey: 1 * isInvariant: true * valueRange: no range constraint * unit: no unit defined * support: MANDATORY | Received Priority value, which is to be overwritten by the Regenerated Priority value. ieee802-dot1q-bridge.yang is explicitly listing all values, and has been slightly shortened. |
| newPriorityValue | Integer  -1 | 1 | RW | OpenInterfaceModelAttribute   * AVC: YES * bitLength: LENGTH\_8\_BIT   OpenModelAttribute   * partOfObjectKey: 0 * isInvariant: false * valueRange: no range constraint * unit: no unit defined * support: MANDATORY | Regenerated Priority value, which is substituting the Received Priority value. ieee802-dot1q-bridge.yang is explicitly listing all values, and has been slightly shortened. |

## ServiceAccessPriorityMappingType

service-access-priority-table-grouping. Describes how the PCP-bits of the priority S-VLAN tag (no VID value) get derived from the Priority value. Name in ieee802-dot1q-bridge.yang: service-access-priority-table-grouping.

Applied Stereotypes:

* Reference

Attributes for ServiceAccessPriorityMappingType

Table 1: Attributes for ServiceAccessPriorityMappingType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| cVlanPriorityValue | Integer  ./. | 1 | RW | OpenInterfaceModelAttribute   * AVC: NO * bitLength: LENGTH\_8\_BIT   OpenModelAttribute   * partOfObjectKey: 1 * isInvariant: true * valueRange: no range constraint * unit: no unit defined * support: MANDATORY | C-VLAN Priority, which shall be translated into the associated S-VLAN Priority. ieee802-dot1q-bridge.yang is explicitly listing all values, and has been slightly shortened. |
| sVlanPcpBitsValue | Integer  -1 | 1 | RW | OpenInterfaceModelAttribute   * AVC: YES * bitLength: LENGTH\_8\_BIT   OpenModelAttribute   * partOfObjectKey: 0 * isInvariant: false * valueRange: no range constraint * unit: no unit defined * support: MANDATORY | S-VLAN Priority, which shall be associated with this C-VLAN Priority. ieee802-dot1q-bridge.yang is explicitly listing all values, and has been slightly shortened. |

# Enumeration Types

## AdminPointToPointType

admin-point-to-point

Contains Enumeration Literals:

* FORCE\_TRUE:
  + Indicates that this port should always be treated as if it is connected to a point-to-point link. Name in ieee802-dot1q-bridge.yang: force-true.
* FORCE\_FALSE:
  + Indicates that this port should be treated as having a shared media connection. Name in ieee802-dot1q-bridge.yang: force-false.
* AUTO:
  + Indicates that this port is considered to have a point-to-point link if it is an Aggregator and all of its members are aggregatable, or if the MAC entity is configured for full duplex operation, either through auto-negotiation or by management means. Name in ieee802-dot1q-bridge.yang: auto.
* NOT\_YET\_DEFINED:

## IngressTagFilteringType

Contains Enumeration Literals:

* UNTAGGED\_AND\_PRIORITY\_FRAMES\_ONLY:
  + admit-only-untagged-and-priority-tagged. Priority frames are frames with VLAN header, but VID==0.
* VLAN\_TAGGED\_FRAMES\_ONLY:
  + admit-only-VLAN-tagged-frames
* ALL\_FRAMES:
  + admit-all-frames
* NOT\_YET\_DEFINED:

## InterfaceKindType

The type of feature capabilities supported with port. Indicates the capabilities of this port. Name in ieee802-dot1q-bridge.yang:type-capabilties.

Contains Enumeration Literals:

* D\_BRIDGE\_PORT:
  + Indicates the port can be a VLAN-unaware member of an 802.1Q Bridge.
* C\_VLAN\_BRIDGE\_PORT:
  + Indicates the port can be a C-TAG aware port of an enterprise VLAN aware Bridge.
* CUSTOMER\_EDGE\_PORT:
  + Indicates the port can be a C-TAG aware port of a Provider Bridge used for connections to the exterior of a PBN (Provider Bridged Network) or PBBN (Provider Backbone Bridged Network).
* PROVIDER\_EDGE\_PORT:
* CUSTOMER\_NETWORK\_PORT:
  + Indicates the port can be an S-TAG aware port of a Provider Bridge or Backbone Edge Bridge used for connections to the exterior of a PBN (Provider Bridged Network) or PBBN (Provider Backbone Bridged Network).
* PROVIDER\_NETWORK\_PORT:
  + Indicates the port can be an S-TAG aware port of a Provider Bridge or Backbone Edge Bridge used for connections within a PBN (Provider Bridged Network) or PBBN (Provider Backbone Bridged Network).
* CUSTOMER\_BACKBONE\_PORT:
  + Indicates the port can be a I-TAG aware port of a Backbone Edge Bridge's B-component.
* REMOTE\_CUSTOMER\_ACCESS\_PORT:
  + Indicates the port can be an S-TAG aware port of a Provider Bridge capable of providing Remote Customer Service Interfaces.
* VIRTUAL\_INSTANCE\_PORT:
  + Indicates the port can be a virtual S-TAG aware port within a Backbone Edge Bridge's I-component which is responsible for handling S-tagged traffic for a specific backbone service instance.
* STATION\_FACING\_BRIDGE\_PORT:
  + Indicates the station-facing Bridge Port in a EVB Bridge.
* UPLINK\_ACCESS\_PORT:
  + Indicates the uplink access port in an EVB Bridge or EVB station.
* UPLINK\_RELAY\_PORT:
  + Indicates the uplink relay port in an EVB station.
* NOT\_YET\_DEFINED:

## LayerProtocolNameType

A controlled list of LayerProtocol names.

Contains Enumeration Literals:

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

## PcpBitsInterpretationKindType

Ways of translating the PCP-bit values of the ingress frames into Priority values. Name in ieee802-dot1q-bridge.yang: pcp-selection-type. References: 12.6.2.5.3 of IEEE Std 802.1Q-2018 and 6.9.3 of IEEE Std 802.1Q-2018.

Contains Enumeration Literals:

* 8P0D:
  + The 3 bits of the Priority Code Point (PCP) segment of the VLAN header are used to express 8 Priority values and 0 drop eligibility values.
* 7P1D:
  + The 3 bits of the Priority Code Point (PCP) segment of the VLAN header are used to express 7 Priority values and 1 drop eligibility values.
* 6P2D:
  + The 3 bits of the Priority Code Point (PCP) segment of the VLAN header are used to express 6 Priority values and 2 drop eligibility values.
* 5P3D:
  + The 3 bits of the Priority Code Point (PCP) segment of the VLAN header are used to express 5 Priority values and 3 drop eligibility values.
* NOT\_YET\_DEFINED:

## SubLayerProtocolNameType

Represents the type of Component.

Contains Enumeration Literals:

* D\_BRIDGE\_COMPONENT:
  + VLAN unaware component
* C\_VLAN\_COMPONENT:
  + C-VLAN component
* S\_VLAN\_COMPONENT:
  + S-VLAN component
* EDGE\_RELAY\_COMPONENT:
  + EVB station ER component
* NOT\_YET\_DEFINED:

# Primitive Types