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# Classes

## VlanFdCapability

Applied stereotypes:

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

Attributes for VlanFdCapability

Table 1: Attributes for VlanFdCapability

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **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. |
| componentId | Integer  ./. | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_32\_BIT  Reference  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Unique identifier for a particular Bridge component within the system. Name in ieee802-dot1q-bridge.yang: id. |
| extendedFilteringIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  Reference  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | true = Component can perform filtering on individual multicast addresses controlled by MMRP (Multiple MAC Registration Protocol). Name in ieee802-dot1q-bridge.yang: extended-filtering. |
| trafficClassesIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  Reference  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | true = Component can map the Priority values into multiple traffic classes (there is more than one traffic class at the device). Name in ieee802-dot1q-bridge.yang: traffic-classes. |
| staticEntriesOnIndividualPortsIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  Reference  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | true = Static entries per port are available. Name in ieee802-dot1q-bridge.yang: static-entry-individual-port. |
| independentVlanLearningIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  Reference  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | true = Component supports Independent VLAN Learning (IVL). Name in ieee802-dot1q-bridge.yang: ivl-capable. |
| sharedVlanLearningIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  Reference  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | true = Component supports Shared VLAN Learning (SVL). Name in ieee802-dot1q-bridge.yang: svl-capable. |
| hybridVlanLearningIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  Reference  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | true = Component supports both Independent and Shared VLAN Learning simultaneously. Name in ieee802-dot1q-bridge.yang: hybrid-capable. |
| configurablePortVlanIdTaggingIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  Reference  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | true = Component supports setting the egress status (VLAN-tagged or Untagged) on each port. Name in ieee802-dot1q-bridge.yang: configurable-pvid-tagging. |
| multipleLocalBridgesIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  Reference  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | true = Can support multiple local Bridges, outside the scope of 802.1Q defined VLANs. Name in ieee802-dot1q-bridge.yang: local-vlan-capable. |
| supportedVersion | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_16\_BIT  Reference  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | The version number supported. Name in ieee802-dot1q-bridge.yang: version. |
| maximumNumberOfVlanIds | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_16\_BIT  Reference  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | The maximum number of VLAN IDs supported. Name in ieee802-dot1q-bridge.yang: max-vids. |
| overridingDefaultPortVlanIdIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  Reference  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | true = Component supports overridding the default PVID on each port. Name in ieee802-dot1q-bridge.yang: override-default-pvid. |
| protocolFrameFormat | ProtocolFrameFormatType  NOT\_YET\_DEFINED | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  Reference  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | The data-link encapsulation format or the detagged\_frame\_type in a Protocol Template. Name in ieee802-dot1q-bridge.yang: protocol-template. |
| maximumNumberOfMsti | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: LENGTH\_16\_BIT  Reference  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Maximum number of Multiple Spanning Tree Instances (MSTIs) supported within an MST region (i.e., the number of spanning tree instances that can be supported in addition to the CIST), for MST Bridges. For SST Bridges, this parameter may be either omitted or reported as 0. Name in ieee802-dot1q-bridge.yang: max-msti. |
| portAndProtocolBasedVlanIsAvail | Boolean  false | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  Reference  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | true = Restricting forwarding of frames of specific VLANs on specific protocols is available on this VLAN Bridge. Name in ieee802-dot1q-bridge.yang: protocol-based-vlan-classification. |

## VlanFdConfiguration

Applied stereotypes:

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

Attributes for VlanFdConfiguration

Table 1: Attributes for VlanFdConfiguration

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| fdName | String  Forwarding Domain name not yet defined. | 1 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  Reference  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | The name of the Component. Free text field to be filled by the operator. Name in ieee802-dot1q-bridge.yang: name. |
| subLayerProtocolName | SubLayerProtocolNameType  NOT\_YET\_DEFINED | 1 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  Reference  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: true  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | The type of Component used to classify a particular Bridge component within a Bridge system comprising multiple components. Name in ieee802-dot1q-bridge.yang: type. |
| macAddress | MacAddress  00:00:00:00:00:00 | 1 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  Reference  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Unique EUI-48 Universally Administered MAC address configured on a Bridge Component. Name in ieee802-dot1q-bridge.yang: address. |
| trafficClassesIsOn | Boolean  false | 1 | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  Reference  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Only effective if (trafficClassesIsAvail==true). true = Traffic Classes are enabled on this Bridge Component. false = Bridge Component operates with a single priority level for all traffic. Name in ieee802-dot1q-bridge.yang: traffic-class-enabled. |
| protocolGroupList | protocolGroupType  ./. | 0..\* | RW | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: NA  Reference  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Only effective if (portAndProtocolBasedVlanIsAvail==true). List of the protocol group database entries. Name in ieee802-dot1q-bridge.yang: protocol-group-database. |

## VlanFdSpec

The set of components associated with a given Bridge. For example, - A TPMR is associated with a single VLAN unaware component. - A Customer VLAN Bridge is associated with a single VLAN aware component. - A Provider Bridge is associated with a single S-VLAN component and zero or more C-VLAN components. Name in ieee802-dot1q-bridge.yang: component.

Applied stereotypes:

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

Attributes for VlanFdSpec

Table 1: Attributes for VlanFdSpec

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| \_vlanFd\_Pac | VlanFd\_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 |

## VlanFdStatus

Applied stereotypes:

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

Attributes for VlanFdStatus

Table 1: Attributes for VlanFdStatus

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| macAddressCur | MacAddress  00:00:00:00:00:00 | 1 | R | OpenInterfaceModelAttribute  • AVC: NO  • bitLength: NA  Reference  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Unique EUI-48 Universally Administered MAC address assigned to a Bridge Component. Name in ieee802-dot1q-bridge.yang: address. |
| numberOfPortsCur | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: LENGTH\_16\_BIT  Reference  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | Number of Bridge Ports associated with the Bridge Component. Values between 1 and 4095. Name in ieee802-dot1q-bridge.yang: ports. |
| numberOfStaticVlanRegistrationsCur | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: LENGTH\_32\_BIT  Reference  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | The number of Static VLAN Registration entries currently in the FDB. Name in ieee802-dot1q-bridge.yang: static-vlan-registration-entries. |
| numberOfDynamicVlanRegistrationsCur | Integer  -1 | 1 | R | OpenInterfaceModelAttribute  • AVC: YES  • bitLength: LENGTH\_32\_BIT  Reference  OpenModelAttribute  • partOfObjectKey: 0  • isInvariant: false  • valueRange: no range constraint  • unit: no unit defined  • support: MANDATORY | The number of Dynamic VLAN Registration entries currently in the FDB. Name in ieee802-dot1q-bridge.yang: static-vlan-registration-entries. |
| fdStatus | FdStatusType  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 forwarding domain. |

## VlanFd\_Pac

Applied stereotypes:

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

Attributes for VlanFd\_Pac

Table 1: Attributes for VlanFd\_Pac

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| \_vlanFdCapability | VlanFdCapability  ./. | 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 |
| \_vlanFdConfiguration | VlanFdConfiguration  ./. | 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 |
| \_vlanFdStatus | VlanFdStatus  ./. | 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

## protocolGroupType

Applied Stereotypes:

Attributes for protocolGroupType

Table 1: Attributes for protocolGroupType

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Type** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| dbIndex | 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 | The protocol group database index. Name in ieee802-dot1q-bridge.yang: db-index. |
| protocolGroupId | Integer  -1 | 1 | RW | OpenInterfaceModelAttribute   * AVC: NO * bitLength: LENGTH\_32\_BIT   Reference  OpenModelAttribute   * partOfObjectKey: 0 * isInvariant: true * valueRange: no range constraint * unit: no unit defined * support: MANDATORY | Designates a group of protocols in the Protocol Group Database. Name in ieee802-dot1q-bridge.yang: group-id. |
| protocolFrameFormat | ProtocolFrameFormatType  NOT\_YET\_DEFINED | 1 | RW | OpenInterfaceModelAttribute   * AVC: YES * bitLength: NA   Reference  OpenModelAttribute   * partOfObjectKey: 0 * isInvariant: false * valueRange: no range constraint * unit: no unit defined * support: MANDATORY | The data-link encapsulation format or the detagged\_frame\_type in a Protocol Template. Name in ieee802-dot1q-bridge.yang: frame-format-type. |
| ethertype | String  Ethertype not yet defined. | 1 | RW | OpenInterfaceModelAttribute   * AVC: YES * bitLength: NA   Reference  OpenModelAttribute   * partOfObjectKey: 0 * isInvariant: false * valueRange: no range constraint * unit: no unit defined * support: MANDATORY | ethertype. Only relevant if (protocolFrameFormat==ETHERNET) OR (protocolFrameFormat==RFC1042) OR (protocolFrameFormat==SNAP8021H). Format containing the 16-bit IEEE 802 EtherType field. The EtherType value represented in the canonical order defined by IEEE 802. The canonical representation uses uppercase characters. Pattern '[0-9a-fA-F]{2}-[0-9a-fA-F]{2}'. Name in ieee802-dot1q-bridge.yang: ethertype. |
| protocolId | String  Protocol ID not yet defined. | 1 | RW | OpenInterfaceModelAttribute   * AVC: YES * bitLength: NA   Reference  OpenModelAttribute   * partOfObjectKey: 0 * isInvariant: false * valueRange: no range constraint * unit: no unit defined * support: MANDATORY | Only effective if (protocolFrameFormat==SNAP\_OTHER). Format containing the 40-bit protocol identifier (PID). The canonical representation uses uppercase characters. Pattern '[0-9a-fA-F]{2}(-[0-9a-fA-F]{2}){4}'. Name in ieee802-dot1q-bridge.yang: protocol-id. |
| llcAddressList | String  LLC Address not yet defined. | 0..\* | RW | OpenInterfaceModelAttribute   * AVC: YES * bitLength: NA   Reference  OpenModelAttribute   * partOfObjectKey: 0 * isInvariant: false * valueRange: no range constraint * unit: no unit defined * support: MANDATORY | Only effective if (protocolFrameFormat==LLC\_OTHER). A pair of ISO/IEC 8802-2 DSAP and SSAP address field values, for matching frame formats of LLC\_Other. The canonical representation uses uppercase characters. Pattern '[0-9a-fA-F]{2}-[0-9a-fA-F]{2}'. Name in ieee802-dot1q-bridge.yang: llc-address. |

# Enumeration Types

## FdStatusType

Current Status of the Forwarding Domain

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:

## LayerProtocolNameType

Contains Enumeration Literals:

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

## ProtocolFrameFormatType

A value representing the frame format to be matched. Name in ieee802-dot1q-bridge.yang: protocol-frame-format-type.

Contains Enumeration Literals:

* ETHERNET:
  + Ethernet frame format. Name in ieee802-dot1q-bridge.yang: Ethernet.
* RFC1042:
  + RFC 1042 frame format. Name in ieee802-dot1q-bridge.yang: rfc1042.
* SNAP8021H :
  + SNAP 802.1H frame format. Name in ieee802-dot1q-bridge.yang: snap8021H.
* SNAP\_OTHER:
  + Other SNAP frame format. Name in ieee802-dot1q-bridge.yang: snapOther.
* LLC\_OTHER:
  + Other LLC frame format. Name in ieee802-dot1q-bridge.yang: llcOther.
* NOT\_YET\_DEFINED:

## SubLayerProtocolNameType

Represents the type of Component. Name in ieee802-dot1q-bridge.yang: type-of-component.

Contains Enumeration Literals:

* C\_VLAN\_COMPONENT:
  + c-vlan-component. Base identity for a C-VLAN component. Name in ieee802-dot1q-bridge.yang: c-vlan-component.
* S\_VLAN\_COMPONENT:
  + s-vlan-component. Base identity for a S-VLAN component. Name in ieee802-dot1q-bridge.yang: s-vlan-component.
* D\_BRIDGE\_COMPONENT:
  + d-bridge-component. Base identity for a VLAN unaware component. Name in ieee802-dot1q-bridge.yang: d-bridge-component.
* EDGE\_RELAY\_COMPONENT:
  + edge-relay-component. Base identity for an EVB station ER component. Name in ieee802-dot1q-bridge.yang: edge-relay-component.
* NOT\_YET\_DEFINED:

# Primitive Types