Overview

- 802.1X and 802.1Q YANG modules are now deposited in GitHub (https://github.com/YangModels/yang)
  - The "experimental/ieee" branch is intended for IEEE work that does not yet have a Project Authorization Request (PAR)
  - The "standard/ieee" branch is intended for approved PARs, for drafts as well as published standards
  - Within "experimental/ieee" and "standard/ieee", use a branch name with the number of the IEEE Working Group (e.g. "802.1", "1588")
  - GitHub “committer” for IEEE “standard” branches is an IEEE member (e.g., me for now)
    - The role of the “committer” is to approve changes and content to the respective branch

- Starting to create draft text for the Amendment
Outstanding Areas
Outstanding Areas

1. Namespace definition used by the IEEE 802 YANG module definitions

2. Should IEEE align with the IETF YANG module definition formatting rules?
   - For example, should maximum line length be 70 characters?
   - Full adherence to IETF draft rfc6087bis (e.g., found at https://tools.ietf.org/html/draft-ietf-netmod-rfc6087bis-04)

3. IEEE ownership of the IEEE-TYPES YANG module
   - In addition, both YANG modules ietf-yang-types as well asieee-types define the mac-address type
Outstanding Areas

4 Placement of the YANG modules within GitHub (https://github.com/YangModels/yang)

– Which directory within GitHub should we use for the IEEE 802.1 YANG drafts?
5. General YANG structure: Should the definition of the BRIDGE node be within a generalized YANG hierarchy?
   – That is, should it “augment” a root YANG root node (e.g., system)?
   – Or should we create an IEEE-Bridge (or something similar) root node in the YANG hierarchy?
6. General YANG model “default” settings (assuming there should be a default configuration value)

a) Should traffic class enabled have default of True?
b) Should MMRP enabled status have default of True?
c) Should default priority associated with the BRIDGE PORT be 0?
d) Should default PCP selection be 8P0D?
e) Should use DEI have a default of False?
f) Should drop encoding have a default of False?
g) Should acceptable frames have a default of admit-all-frames?
h) Should enable ingress filtering have a default of False?
i) Should restricted VLAN registration have a default of False?
j) Should VID translation table have a default of False?
k) Should egress VID translation table have a default of False?
l) Etc.
Outstanding Areas

7. Should “BRIDGE PORTS” be an augmentation of the IETF INTERFACE model?

8. Rationalization of YANG model definitions for applications
   a) LAG interfaces
   b) Two-Port MAC Relay Bridges
   c) Customer VLAN Bridges
   d) Provider Edge Bridges
   e) CFM Interactions
   f) Etc.

9. What is the correct association (or ownership relationship) of the BRIDGE VLAN object to the BRIDGE or BRIDGE COMPONENT?
IEEE 802.1Q-2014 BRIDGE Model

- Extended filtering services
- Traffic classes
- Static entry individual port
- IVL capable
- SVL capable
- Hybrid capable
- Configurable PVID tagging
- Local VLAN capable

- i-component
- B-component
- C-VLAN component
- S-VLAN component
- VLAN unaware component
- EVB station edge relay component

BRIDGE

- macAddress address rw
- str name rw
- enum type rw
- int number-of-ports rw
- list* port-list ro
- counter up-time ro

ResetBridge()

COMPONENT

- int32 component-id ro
- enum component-type ro
- macAddress address ro
- int number-of-ports ro
- boolean-array capabilities ro
- boolean traffic-class-enabled rw
- boolean mmp-enabled-status rw

PERMANENT DATABASE

- int size ro
- int static-entries ro
- int static-VLAN-registration-entries ro

FILTERING ENTRY

- int database-id rw
- macAddress address rw
- int vid rw
- map port-map rw

FILTERING DATABASE

- int size ro
- int static-entries, dynamic-entries ro
- int static-VLAN-registration-entries, dynamic-VLAN-registration-entries ro
- int ageing-time rw
- int mac-address-registration-entries ro

FILTERING ENTRY

- int database-id rw
- macAddress address rw
- int vid rw
- map port-map rw

VLAN ID

- int vid rw
- str name rw
- list untagged-ports ro
- list egress-ports ro

VID ↔ FID ALLOCATION

- int* vid rw
- int fid rw
- enum type ro

PROTOCOL GROUP DATABASE

- format frame-format rw
- struct type rw
- int protocol-group-id rw

INTERFACES

• Customer VLAN Bridge
• Provider Bridge
• Provider Edge Bridge
• Backbone Edge Bridge
• Backbone Core Bridge
• Two-Port MAC Relay Bridge

• Undefined
• Fixed
• Dynamic
When configuring a BRIDGE, should the BRIDGE/COMPONENT object point to the INTERFACES (i.e., BRIDGE PORTS) or should the INTERFACES (i.e., BRIDGE PORTS) point to the BRIDGE/COMPONENT or both?