YANGster Meeting Week 29 2020 16 July 2020 July 2020 Plenary Session (Electronic)

> Webex Link Meeting number (access code): 129 239 4012 Meeting password: d8hMJysVC64



July 2020 Plenary Session (Electronic) – YANGsters Agenda

- 1. Meeting introduction (5)
 - Admin WG TG Intro Slides
- 2. Approval of agenda
 - Agenda bash
- 3. Introduction to YANGsters (5)
- 4. Issues in Focus(45)
 - Transmission Selection Algorithm YANG design discussion
 - Pretty Printing Discussion
 - IANA YANG Update
 - I2RS Review
- 5. Update on Hot Issues (20)
- 6. Continue Maintenance Discussion (45)
- 7. Any Other Business



YANGsters Introduction

Established in 2017 to:

- Coordinate YANG projects within IEEE 802
- Discuss and agree on guidelines for YANG use in IEEE 802
- Coordinate with other SDOs working on YANG
- YANG education, tooling, and support group



YANGsters wiki

- https://1.ieee802.org/yangsters/
 - Link found on left navigation menu on the <u>https://1.ieee802.org/</u> site
- Weekly meeting agenda and contact details can be found here <u>https://1.ieee802.org/yangsters/yangster</u> <u>s-call-information/</u>
 - New set of weekly calls is requested at each IEEE 802.1 Plenary



YANG Resources

IEEE 802 YANG can be found

- Published: <u>https://1.ieee802.org/yang-modules/</u>
- VANG Catalog's Github repository
 - https://github.com/YangModels/yang/tree/mast er/standard/ieee
 - Has draft directory structure and published directory structure
- Mailing List Info
 - https://1.ieee802.org/yangsters/yangstersmail-list-information/



Transmission Selection Algorithm

- Currently there is no way to set a
 Transmission Selection Algorithm (TSA)
 for a specific traffic class in a YANG
 module.
 - There is a proposal to use a uint8
 - There is a proposal to use Identities



Pretty Printing

ieee802-dot1x-types.yang has some bad formatting

Before

scott@emwp-vm: ~/yang_pretty

File Edit View Search Terminal Help module ieee802-dot1x-types {^M^M namespace "urn:ieee:std:802.1X:yang:ieee802-do t1x-types";^M prefix "dot1x-types";^M^M organization^M "Institute of Electr ical and Electronics Engineers"; MAN contact "WG-URL: http://www.ieee802.o WG-EMail: stds-802-1-L@ieee.org/ Contact: IEEE 802.1 Working Gro rg/1^M up Chair^M Postal: C/O IEEE 802.1 Working Group IEEE Standards A ssociation^{*} 445 Hoes Lane Piscataway NT 08 854 USA⁴ E-mail: STDS-802-1-L@LISTSERV.IEEE.ORG"; de scription "Port-based network access control allows a network administrator to restrict the use of IEEE 802 LAN service access points (ports) to secure communication between authenticated and authorized devices. IEEE Std 802.1X specifies an architecture. functional elements, and protocols that support mutual authentication^ between the clients of ports attached to the same LAN and secure^ communication between the ports. The following control allows a^ port to be reinitialized, terminating (and potentially restar ting) authentication exchanges and MKA operation, based on * a data model des cribed in a set of YANG modules.";^M ^M revision 2020-02-18 {^} descripti "Updated Contact information.";^M }^M on revision 2019-05-28 {* "Updates based upon comment resolution on draft" description^ D1.0 of P802.1X-Rev.";^M reference "IEEE Std 802.1X-2020, Port-Based Networ * Type definitions used by dot1X YANG module typedef pae-nid { type string {^ le "Network Identity, which is a UTFngth "0..100"; description



	scott@emwp-vm: ~/yang_pretty	● 🛛 😣
File Edit View Search Terminal	Help	
prefix dot1x-types; organization	{ 2.1X:yang:ieee802-dot1x-types; l and Electronics Engineers";	
contact	-000 14	
"WG-URL: http://www.iee WG-EMail: stds-802-1-L@	5.	
WG-LHGCC, 3003-002-1-20		
Contact: IEEE 802.1 Wor Postal: C/O IEEE 802.1 IEEE Standards 445 Hoes Lane Piscataway NJ 08854 USA	Working Group	
	STSERV.IEEE.ORG"; ess control allows a network administrato E 802 LAN service access points (ports) t	



Pretty Printing Discussion

- Added double quotes around the value associated with bit position clauses.
- Re-wrapped text to create longer text lines. This may be okay if a maximum allowable line length is not exceeded. But it makes unnecessary changes.
- Removed blank links that had provided visual separation between typedef statements.
- Review tool to look for command switches
- Determine the guidelines for use of the options to ensure consistency
- Running the tool and rev-ing the yang in the YANG catalog is not a maintenance issue
 - However the YANG on the github will not match what is in published document



IANA YANG Update

- The YANG Catalog's github repository has an out of date iana-if-type YANG module
- The iana-if-type YANG module should be automatically generated whenever the Interface Types (ifType) table is updated in the IANA registry (<u>https://www.iana.org/assignments/sminumbers/smi-numbers.xhtml</u>)
- This is a known issue with the YANG Catalog maintainers and will be fixed within the month



Interface Type (ifType)

Interface Types (ifType)

Registration Procedure(s)

Expert Review

Expert(s)

Dave Thaler (primary), Dan Romascanu (secondary)

Description

iso.org.dod.internet.mgmt.mib-2.interface.ifTable.ifEntry.ifType (1.3.6.1.2.1.2.2.1.3)
Reference

[RFC1213][RFC2863][RFC7224][RFC-thaler-iftype-reg-07]

Note

For future ifType assignments, an OID-subtree assignment in MIB-II's 'transmission' subtree will be made with the same value. In addition, the [<u>IANAifType-MIB</u>] and [<u>iana-if-type YANG</u>] modules should be updated in accordance with [<u>RFC2863</u>] and [<u>RFC7224</u>], respectively.

Note

For a functional mib language definition please see the following: [IANA registry ianaiftype-mib]

Rules for real mib names:

```
#NAME?
"-if its made of several words."
the second and later word's first letter is uppercase
#NAME?
#NAME?
#NAME?
        Thus by way of example we have:
        traif
                        kosher
        ----
                        ----
        ddn-x25
                        "ddnX25(4),"
        FDDI
                        "fddi(15),"
                        "smdsDxi(43),"
        smds-dxi
                        "ieee80211(71),"
        IEEE802.11
"-Finally, the last item in the list has no comma,"
while all previous items have a comma
```

Note

Note: MIB and YANG formats are available at [IANAifType-MIB] and [iana-if-type].



YANGsters review of draft-ietf-i2rs-yang-l2-network-topology

- IETF <u>draft-ietf-i2rs-yang-l2-network-</u> <u>topology</u> references some IEEE 802.1 standards.
- Long story short:
 - A request has been made from the IETF document shepherd and other interested parties to get a review of the document and the YANG modules, before the document becomes an RFC.



draft-ietf-i2rs-yang-l2-networktopology (cont)

- One example question
 - What MO in the 802.1Q document (Table 48-7) would be mappable to the sysmac-address "System MAC address" leaf in the I2-node-attributes container?
- Some initial reaction for the YANGsters is:
 - There isn't a 'sys-mac-address' in a compliant 802.1Q bridge. Any port of the bridge can be used to reach the 'higher layer entity' that would act as management. The bridge ports are connected to the relay, so any port MAC address, where the port is on the desired VLAN, could be used as the MAC address for a higher-layer entity like SNMP, or whatever. It is possible (optional) to define an internal (management) port for the purposes of management only, but this is a 'may' in the standard. One should read and understand Clause 8, in particular 8.2 and 8.3. Look for how frames are delivered to higher layer entities.
- Request to interested YANGster is to:
 - Please review draft-ietf-i2rs-yang-l2-network-topology
 - Bring issues to YANGsters for discussion
 - Engage in discussion on the <u>i2rs@ietf.org</u> mailing list if you feel comfortable doing so



Hot Issues

Active

- MAC Address Format
 - IEEE 802.3 has agreed to modify 802.3.2 to point to ieee802-types for mac-address datatype
- Semantics of read-write in YANG
- Press Release Discussion
- IEEE P802f Update
- YANG Revisions Update
- Update on Tooling Guidance
 - Add Confd (Mark E's material to be included)
 - Add Yanglint
- Use of Git workflow document created
- Status of meta-data in YANG Catalog
 - All IEEE published YANG has meta-data populated in YANG Catalog github repository
- Splitting functionality out of EVB to support managed objects for ECP
- Transmission Selection Algorithm
- Pretty Printing Discussion
- I IANA YANG
- I I2RS YANG Discussion



Maintenance Discussion

- http://www.ieee802.org/1/files/public/do cs2019/maint-specht-yang-comments-0919-v01.pdf
- Status related to 13 and 14
- Continue with Discussion





