

Title: Liaison response to LS469: strategy to bind IEEE 802.1Qcx to IETF Alarm Mgmt model supporting BBF reqts
From: IEEE 802.1 Working Group
For: Information
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Dear Colleagues,

The IEEE 802.1 Working Group would like to thank the Broadband Forum for the information provided in liaison statement <https://www.ieee802.org/1/files/public/docs2021/liaison-BBF-strategytobindQcxtoIETFalarmmgmtmodel-0721.pdf> about "the strategy chosen by the BBF to bind the IEEE 802.1Qcx CFM YANG model to the IETF RFC 8632 Alarm Management YANG model to support BBF access node requirements".

In IEEE Std 802.1Q-2018:

- 20.1.2 (Defects and Fault Alarms) describes how defects cause the fault alarm management operation (12.14.7.7) to be triggered. Indication in 20.1.2 that "Only the highest priority defect is reported in the Fault Alarm" results from joint development work with ITU-T where it was considered important to minimize the amount of traffic generated when a defect occurs, considering the network administrator can investigate the root cause once alerted as a result of the fault alarm.
- Annex A (normative) provides the PICS proforma for bridge implementations and A.14 includes MGT-115 which makes implementation per 12.14.7.7 mandatory if CFM is implemented. As such, a device claiming conformance to IEEE Std 802.1Q-2018 as amended by IEEE Std 802.1Qcx-2020 shall transmit a MEP fault alarm per 12.14.7.7. IEEE 802.1 has no plan to change 12.14.7.7 to allow more than the highest defect to be reported.

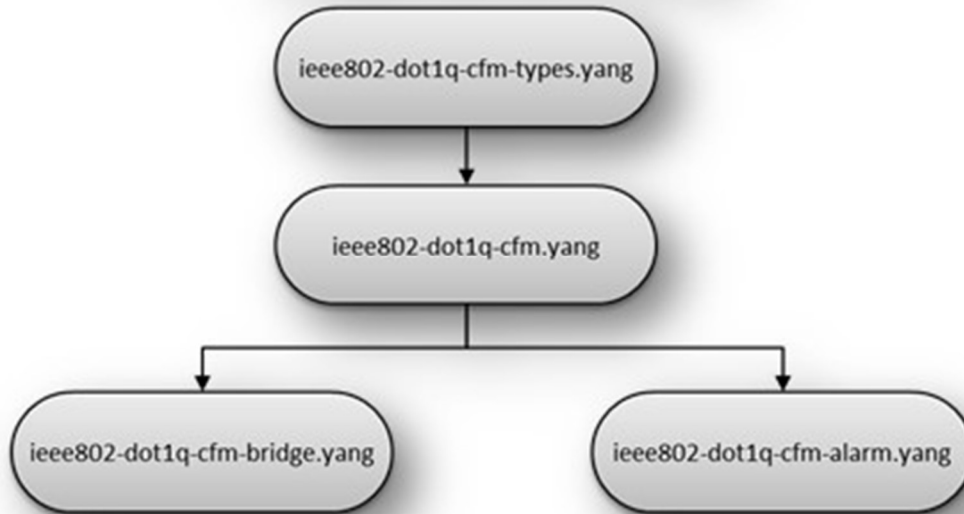
The YANG defined in 48.6.9 of IEEE Std 802.1Qcx-2020 ([ieee802-dot1q-cfm-alarm](#) module) is written as an augmentation of [ieee802-dot1q-cfm-mep](#), so to satisfy MGT-115, the [dot1q-cfm-alarm](#) module shall be implemented; however, the [ieee802-dot1q-cfm](#) module was written with modularity in mind. Another YANG module could augment the [ieee802-dot1q-cfm](#) module to provide a different type of fault alarm notification but doing so may impact device conformance.

Further detail is provided by the following examples and illustrations:

- The YANG module modularity defined by IEEE Std 802.1Qcx-2020 is illustrated below. The [ieee802-dot1q-cfm.yang](#) module definition is the base CFM definition. The Bridge specific

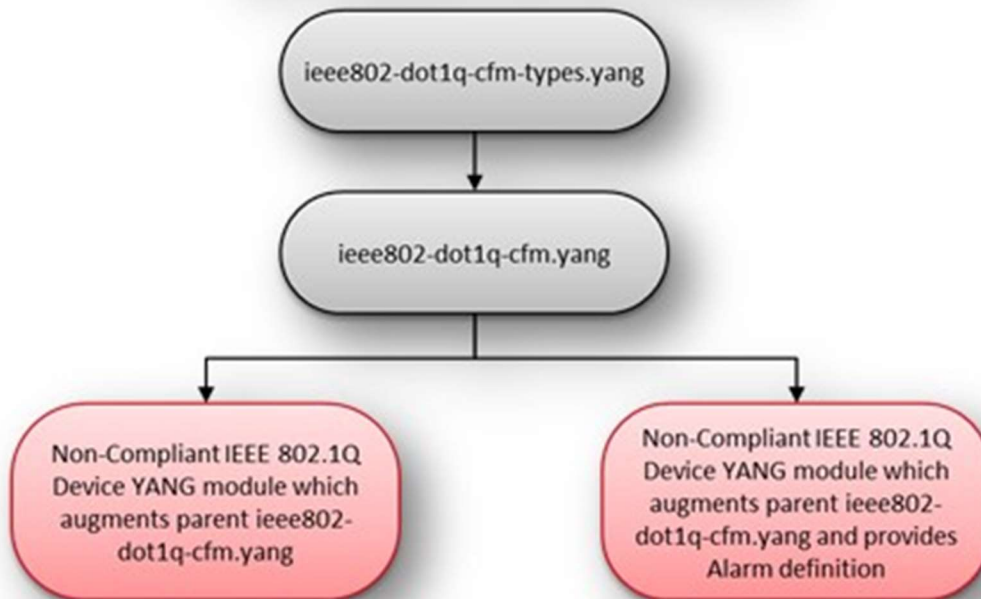
aspects are defined in `ieee802-dot1q-cfm-bridge.yang`, and the Bridge Alarm specific aspects are defined in `ieee802-dot1q-cfm-alarm.yang`.

Compliant IEEE 802.1Q (Bridge)

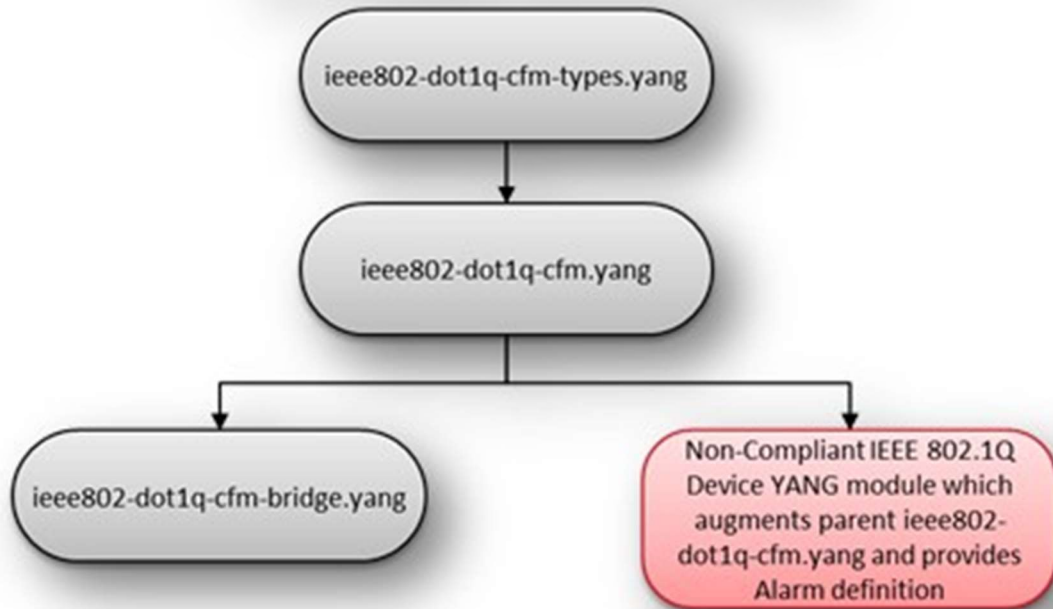


- With the above in mind, due to the modularity provided, a non-compliant IEEE 802.1Q device can “choose” to not use the provided `ieee802-dot1q-cfm-bridge.yang` and/or `ieee802-dot1q-cfm-alarm.yang` module(s). Consequently, the following (conceptual) structures can be accommodated by the overall IEEE Std 802.1Qcx-2020 model.

Non-Compliant IEEE 802.1Q Device



Non-Compliant IEEE 802.1Q Device



Note that the IEEE 802 work is open and contribution driven. Participation is on an individual basis and technical discussion can be conducted based on individual contributions. The YANGsters Subgroup holds regular electronic meetings: details are available at <https://1.ieee802.org/wg-calendar>.

Respectfully submitted,
Glenn Parsons
Chair, IEEE 802.1 Working Group