60802 Contribution: YANG node selection for IA-stations

Author:

Josef Dorr (Siemens AG)

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This contribution is intended to assist the resolution of IEC/IEEE 60802 D2.1 comments related to subclause 6.4.9.2.5.10 Bridge component:

#571: “Mandatory values in End Stations: it is unclear why the bridge YANG module is needed …”

A reworked subclause 6.4.9.2.5.10 is provided as proposed resolution of the comments.

…

6.4.9.2.5.8 Hardware management

6.4.9.2.5.9 Interface management

6.4.9.2.5.10 Bridge and end station component management

IA-stations shall support the ieee802-dot1q-bridge YANG module according to IEEE Std 802.1Q-2022-2018, Clause 48, as amended by IEEE Std 802.1Qcw-2023 with the following feature: ingress-filtering.

IA-stations shall support the ieee802-dot1q-bridge YANG module according to IEEE Std 802.1Q-2022-2018, Clause 48, as amended by IEEE Std 802.1Qcw-2023 with the following nodes. A distinction is made between nodes that shall be supported by bridge and end station components, or by bridge components only.

6.4.9.2.5.10.1 Bridge nodes to be supported by bridge and end station components

- [m] /ieee802-dot1q-bridge/bridges/bridge/name
- [o] /ieee802-dot1q-bridge/bridges/bridge/address
- [m] /ieee802-dot1q-bridge/bridges/bridge/bridge-type
- [m] /ieee802-dot1q-bridge/bridges/bridge/ports
- [m] /ieee802-dot1q-bridge/bridges/bridge/components
- [m] /ieee802-dot1q-bridge/bridges/bridge/component/name
- [o] /ieee802-dot1q-bridge/bridges/bridge/component/id
- [m] /ieee802-dot1q-bridge/bridges/bridge/component/type
- [o] /ieee802-dot1q-bridge/bridges/bridge/component/traffic-class-enabled
- [m] /ieee802-dot1q-bridge/bridges/bridge/component/ports
- [o] /ieee802-dot1q-bridge/bridges/bridge/component/bridge-port
- [m] /ieee802-dot1q-bridge/bridges/bridge/component/capabilities
- [m] /ieee802-dot1q-bridge/bridges/bridge/component/filtering-database/size

- [o] /ieee802-dot1q-bridge/bridges/bridge/component/filtering-database/static-vlan-registration-entries
- [o] /ieee802-dot1q-bridge/bridges/bridge/component/filtering-database/vlan-registration-entry

6.4.9.2.5.10.2 Filtering-database nodes to be supported by bridge components

- [o] /ieee802-dot1q-bridge/bridges/bridge/component/filtering-database/aging-time
- [o] /ieee802-dot1q-bridge/bridges/bridge/component/filtering-database/static-entries
- [o] /ieee802-dot1q-bridge/bridges/bridge/component/filtering-database/dynamic-entries
- [o] /ieee802-dot1q-bridge/bridges/bridge/component/filtering-database/dynamic-vlan-registration-entries
- [o] /ieee802-dot1q-bridge/bridges/bridge/component/filtering-database/mac-address-registration-entries
- [o] /ieee802-dot1q-bridge/bridges/bridge/component/filtering-database/filtering-entry

6.4.9.2.5.10.3 Permanent-database nodes to be supported by bridge components

- [m] /ieee802-dot1q-bridge/bridges/bridge/component/permanent-database/size
- [o] /ieee802-dot1q-bridge/bridges/bridge/component/permanent-database/static-entries
- [o] /ieee802-dot1q-bridge/bridges/bridge/component/permanent-database/static-vlan-registration-entries
- [o] /ieee802-dot1q-bridge/bridges/bridge/component/permanent-database/filtering-entry

6.4.9.2.5.10.4 Bridge-vlan nodes to be supported by bridge and end station components

- [m] /ieee802-dot1q-bridge/bridges/bridge/component/bridge-vlan/version
- [m] /ieee802-dot1q-bridge/bridges/bridge/component/bridge-vlan/max-vids
- [o] /ieee802-dot1q-bridge/bridges/bridge/component/bridge-vlan/override-default-pvid
- [o] /ieee802-dot1q-bridge/bridges/bridge/component/bridge-vlan/vlan

6.4.9.2.5.10.5 Bridge-vlan nodes to be supported by bridge components

- [m] /ieee802-dot1q-bridge/bridges/bridge/component/bridge-vlan/max-msti
- [o] /ieee802-dot1q-bridge/bridges/bridge/component/bridge-vlan/vid-to-fid-allocation
- [o] /ieee802-dot1q-bridge/bridges/bridge/component/bridge-vlan/fid-to-vid-allocation
- [o] /ieee802-dot1q-bridge/bridges/bridge/component/bridge-vlan/vid-to-fid

6.4.9.2.5.10.6 Bridge-mst nodes to be supported by bridge components

- [o] /ieee802-dot1q-bridge/bridges/bridge/component/bridge-mst

Various nodes which are mandatory for bridge-ports are missing in the Bridge-YANG node selection (subclause 6.4.9.2.5.10)

Suggested remedy: add the bridge-port nodes

`capabilities, type-capabilties, transmission-selection-algorithm-table, priority-regeneration, acceptable-frame, enable-ingress-filtering, enable-vid-translation-table, vid-translations, enable-egress-vid-translation-table, egress-vid-translations`

as described in this contribution.

6.4.9.2.5.10.7 Bridge-port nodes to be supported by bridge and end station components

- [m] /ietf-interfaces/interfaces/interface/bridge-port/bridge-name
- [m] /ietf-interfaces/interfaces/interface/bridge-port/component-name
- [m] /ietf-interfaces/interfaces/interface/bridge-port/port-type
- [o] /ietf-interfaces/interfaces/interface/bridge-port/pvid
- [o] /ietf-interfaces/interfaces/interface/bridge-port/default-priority
- [m] /ietf-interfaces/interfaces/interface/bridge-port/traffic-class
- [o] /ietf-interfaces/interfaces/interface/bridge-port/statistics
- [m] /ietf-interfaces/interfaces/interface/bridge-port/capabilities
- [m] /ietf-interfaces/interfaces/interface/bridge-port/type-capabilties
- [o] /ietf-interfaces/interfaces/interface/bridge-port/transmission-selection-algorithm-table

6.4.9.2.5.10.8 Bridge-port nodes to be supported by bridge component ports

- [o] /ietf-interfaces/interfaces/interface/bridge-port/priority-regeneration
- [o] /ietf-interfaces/interfaces/interface/bridge-port/acceptable-frame
- [o] /ietf-interfaces/interfaces/interface/bridge-port/enable-ingress-filtering
- [o] /ietf-interfaces/interfaces/interface/bridge-port/enable-vid-translation-table
- [o] /ietf-interfaces/interfaces/interface/bridge-port/vid-translations
- [o] /ietf-interfaces/interfaces/interface/bridge-port/enable-egress-vid-translation-table
- [o] /ietf-interfaces/interfaces/interface/bridge-port/egress-vid-translations

6.4.9.2.5.11 IEC/IEEE 60802 YANG module …

6.4.9.2.5.12 NETCONF server

6.4.9.2.5.13 Subscribed Notifications

This contribution is intended to assist the resolution of IEC/IEEE 60802 D2.1 comments related to subclause 6.4.9.2.5.14 Per Stream Filtering and Policing

#130: "… clarify how flow meters can be assigned to ports."

A reworked subclause 6.4.9.2.5.14 is provided as proposed resolution of the comment.

6.4.9.2.5.14 ~~Per Stream Filtering and Policing~~Flow meter management

IA-stations which incorporate a bridge component shall support the ieee802-dot1q-stream-filters-gates YANG module according to IEEE Std 802.1Qcz-2023 as amended by IEEE Std 802.1Qcw-2023 with the following nodes:

- [o] /ieee802-dot1q-bridge/bridges/bridge/component/stream-filters/stream-filter-instance-table/stream-filter-instance-id
- [o] /ieee802-dot1q-bridge/bridges/bridge/component/stream-filters/stream-filter-instance-table/stream-handle
- [o] /ieee802-dot1q-bridge/bridges/bridge/component/stream-filters/stream-filter-instance-table/flow-meter-ref
- [o] /ieee802-dot1q-bridge/bridges/bridge/component/stream-filters/stream-filter-instance-table/flow-meter-enable
- [m] /ieee802-dot1q-bridge/bridges/bridge/component/stream-filters/max-stream-filter-instances

IA-stations which incorporate a bridge component shall support the ieee802-dot1cb-stream-identification YANG module according to IEEE Std 802.1CBcv-2021 as amended by IEEE Std 802.1CBdb-2021 with the following nodes:

- [o] /ieee802-dot1cb-stream-identification/stream-identity/index
- [o] /ieee802-dot1cb-stream-identification/stream-identity/handle
- [o] /ieee802-dot1cb-stream-identification/stream-identity/out-facing/input-port
- [o] /ieee802-dot1cb-stream-identification/stream-identity/parameters/mask-and-match-stream-identification/destination-mac-mask
- [o] /ieee802-dot1cb-stream-identification/stream-identity/parameters/mask-and-match-stream-identification/destination-mac-match

NOTE For example, an implementation could contain per out-facing/input-port one mask and match stream identification for broadcast traffic, one mask and match stream identification for multicast traffic and one mask and match stream identification for unicast traffic.

IA-stations which incorporate a bridge component shall support the ieee802-dot1q-psfp-bridge YANG module according to IEEE Std 802.1Qcw-2023 with the following nodes:

- [o] /ieee802-dot1q-psfp-bridge/bridges/bridge/component/flow-meters/flow-meter-instance-table/flow-meter-instance-id
- [o] /ieee802-dot1q-psfp-bridge/bridges/bridge/component/flow-meters/flow-meter-instance-table/committed-information-rate
- [o] /ieee802-dot1q-psfp-bridge/bridges/bridge/component/flow-meters/flow-meter-instance-table/committed-burst-size
- [o] /ieee802-dot1q-psfp-bridge/bridges/bridge/component/flow-meters/flow-meter-instance-table/excess-information-rate

- [o] /ieee802-dot1q-psfp-bridge/bridges/bridge/component/flow-meters/flow-meter-instance-table/excess-burst-size
- [o] /ieee802-dot1q-psfp-bridge/bridges/bridge/component/flow-meters/flow-meter-instance-table/coupling-flag
- [o] /ieee802-dot1q-psfp-bridge/bridges/bridge/component/flow-meters/flow-meter-instance-table/color-mode
- [o] /ieee802-dot1q-psfp-bridge/bridges/bridge/component/flow-meters/flow-meter-instance-table/drop-on-yellow
- [m] /ieee802-dot1q-psfp-bridge/bridges/bridge/component/flow-meters/max-flow-meter-instances