

YANG and Digital Data Sheet

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V01

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YANG

- The YANG representation of the IA-station's local database seems to be the preferred solution
- Following this decision, the DDS should be a YANG model, too

Open:

Do we miss any YANG models for the 60802?

YANG and DDS

Many YANG modules for the standards stated in D1.3 are already available:

- `ieee802-ethernet-interface`
IEEE Standard for Ethernet – YANG Data Model Definitions
Reference: IEEE Std802.3.2-2019 Clause 5
- `ieee1588-ptp`
YANG Data Model for the configuration and status of IEEE 1588 clocks
Reference: IEEE P1588e-D0-1
- `ieee802-dot1q-bridge`
Bridges and Bridged Networks - Amendment: YANG Data Model
Reference: IEEE P802.1Qcp/D2.2 Clause 48 and IEEE P802.1Qcw/D1.2 Clause 48
- `ieee802-dot1ab-lldp`
Station and Media Access Control Connectivity Discovery Amendment: YANG Data Model
Reference: IEEE P802.1ABcu/D1.6 Clause 12
- `ieee802-dot1q-sched`
YANG Data Model for scheduled traffic
Reference: IEEE P802.1Qcw/D1.2 Clause 48
- `ieee802-dot1q-preemption`
YANG Data Model for Pre-emption
Reference: IEEE P802.1Qcw/D1.2 Clause 48
- `ieee802-dot1q-lldp-basic-tlv`
Basic set of IEEE 802.1 Organizationally Specific TLVs
Reference: IEEE P802.1Qcz/D2.0
- `ieee802-dot1q-psfp`
YANG Data Model for Per Stream Filtering and Policing
Reference: IEEE P802.1Qcw/D1.2 Clause 48
- `ieee802-dot1cb-stream-identification`
Frame Replication and Elimination for Reliability – Amendment: Information Model, YANG Data Model and Management Information Base Module
Reference: IEEE P802.1CBcv/D1.3 Clause 12
- `ieee802-dot1cb-frer`
Frame Replication and Elimination for Reliability – Amendment: Information Model, YANG Data Model and Management Information Base Module
Reference: IEEE P802.1CBcv/D1.3 Clause 12
- `ieee802-dot1x`
Port-Based Network Access Control
Reference: IEEE Std 802.1X-2020 Clause 14

At least one is missing:

- `ieee802-dot3-lldp-basic-tlv`
Basic set of IEEE 802.3 Organizationally Specific TLVs
Reference: Missing

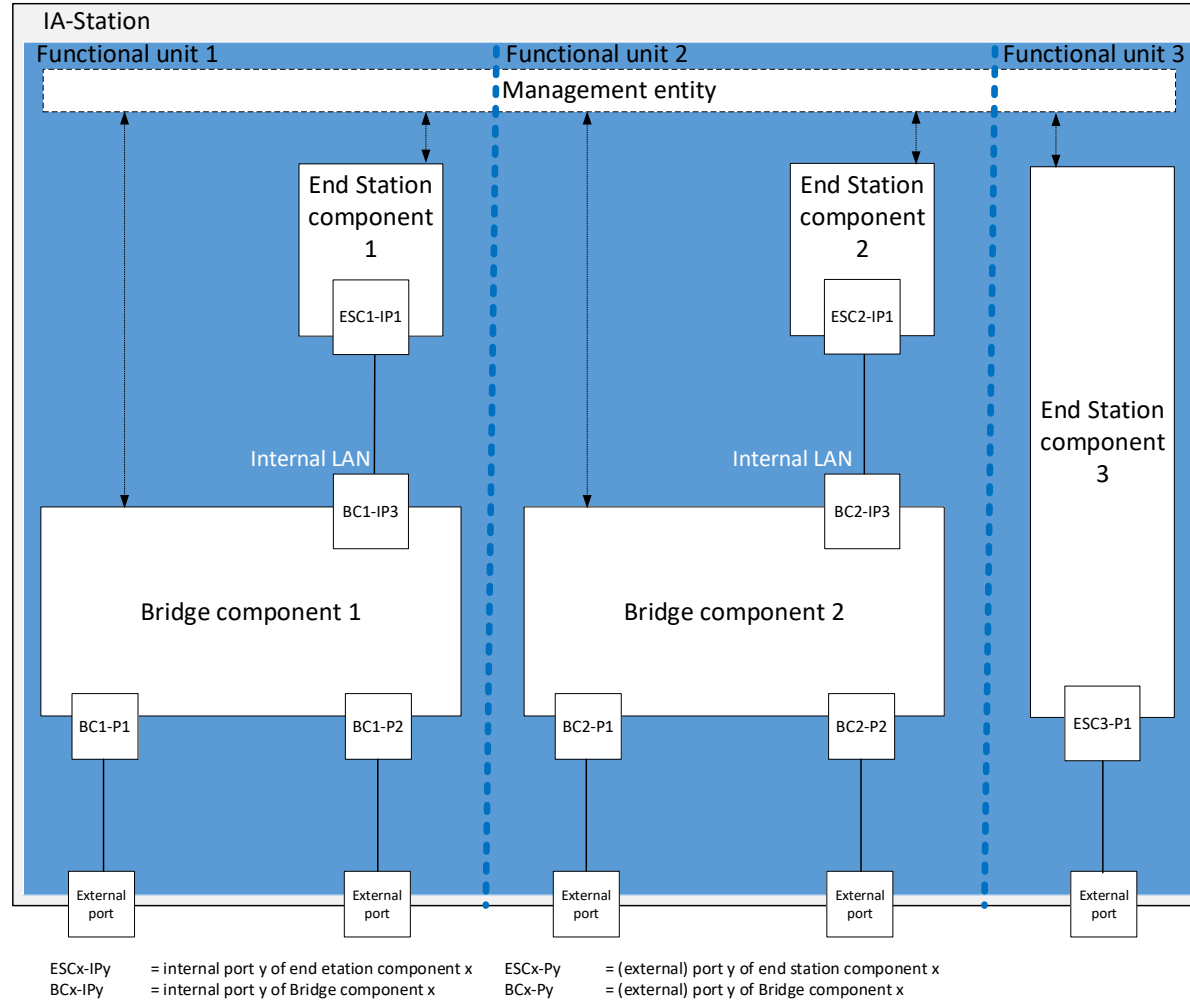
Thus, we do not have MAU type information in YANG!

-> How can we get this YANG modul?

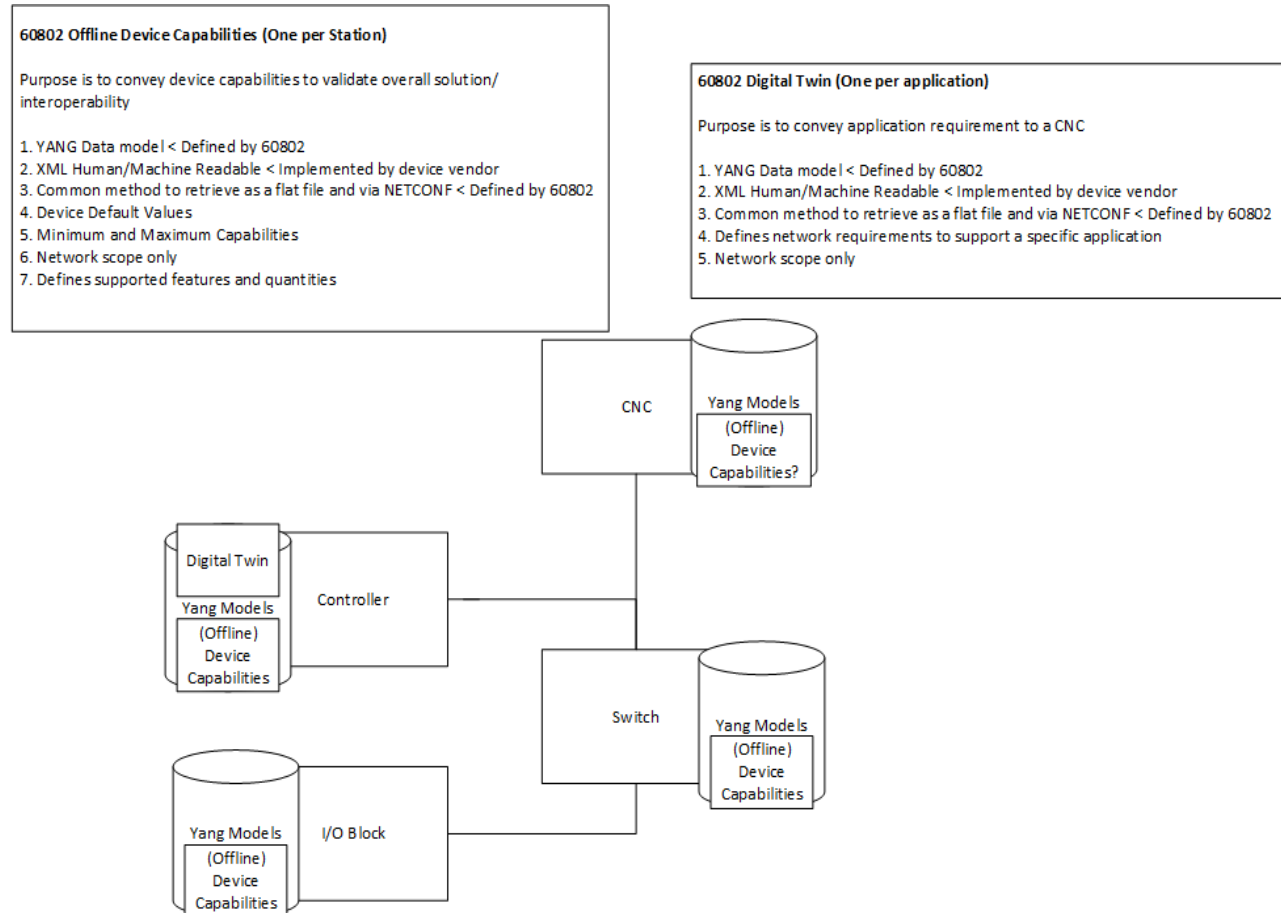
Open:

Do we have a working YANG modul for MSTP with at least one instance in P802.1Qcp/P802.1Qcw?

Recap – IA-station model



Feedback from Wednesday ad-hoc discussions



DDS

- Both, the IA-station model and the YANG models can be used as inputs for the definition of DDS.
- Same definition for offline (e.g. files) and online (e.g. 60802 YANG modul) seams to be preferable

-> Idea:

Use the IA-station to define the structure and the parameters/attributes of existing YANG moduls as content

DDS

IA-station

List of functional units

Name of functional unit

List of end station components

Name of end station

Parameter/attributes with quantities and/or value ranges

List of ports

...

Bridge component (or list of)

Name of bridge

Parameter/attributes with quantities and/or value ranges

List of ports

...

IA-station

Security quantities and value ranges:

- Needs to be part of DDS
- If possible based on the IETF / IEEE 802 defined YANG modules for security

Vendor/organization specific extensions:

- May e.g. be done using the YANG concept of “augmentation”

Integration into existing vendor/organization specific device descriptions:

- May e.g. be done by referring the file (offline)

Securing the file (offline):

- Should be out of scope for 60802

Conclusion

- This model could be a way forward to develop a DDS contribution, which may be discussed during D1.3 comment resolution.

- How can we get a YANG module for the MAU types?

-> Idea:

Port 8023-LLDP-EXT-MIB to YANG as done for 8021-LLDP-EXT-MIB.
Could the YANGsters help with this topic?

- Offline/online description of TDME / CNE is still open

Questions?