

Annex Z (informative) Gaps

Z.1 Gaps for Release 1:

1. Security

- Device Identity (802.1AR) needs to be clarified, is there a secured device identity and an unsecured device identity? <https://www.ieee802.org/1/files/public/docs2021/60802-Pfaff-et-al-Background-for-802-1AR-Adoption-1121-v01.pdf>
 - Second presentation coming
 - Is a self-signed certificate allowable?
- Device Discovery needs to include both identity and topology to secure a device.
- x509 v3 certificates- Identify and specify the extensions needed from a 60802 point of view. Which mandatory and optional fields are mandatory for 60802?
- UNI access model and access control (working w/ Qdj participants to address)
- Need to obtain an OID for 60802 extensions to x509 v3 certificates. This may be 802.1 centric if the requirements are common. Need to add a placeholder for the OID in the draft.

2. Time Sync

- Clock Status: 60802 needs to define a specific algorithm to determine when an IA-station is in-sync and not in-sync. A contribution is needed.
- The result of this algorithm needs to be available via management and hooks are needed in 802.1AS to allow state machines to make use of this algorithm which may differ from the corresponding algorithm in .1AS. Comments with proposed solutions to this effect are needed during ASdm balloting.
- 60802 YANG modules need to add management variables to report the state of ClockTarget and ClockSource.
<https://www.ieee802.org/1/files/public/docs2021/60802-Steindl-ClockTarget-and-ClockSource-1121-v05.pdf>
- Gap analysis of YANG Module being defined in 802.1ASdn and 802.1ASdm.
- Parameter Selection for time sync through simulation and modeling
<https://www.ieee802.org/1/files/public/docs2021/60802-McCall-Stanton-Time-Sync-Error-Model-and-Analysis-2021-11-v02.pdf>

3. Remote Management (e.g. Discovery)

- YANG model for .3 MAUTypes is a gap
- MSTP YANG Model is a gap
- NETCONF with multiple clients has an issue with locking.
- YANG module selection of optional parameters for alignment (Contribution from Martin)
- Trust/keystore YANG modules RFC will be finalized in 2022

4. Data Sheets

- IA-Device Description
 - What parameters
 - Add Value Ranges
 - Add Quantities
- Add detail to Traffic Patterns (could this be deferred to Edition 2?)
- Complete YANG models augmented by missing quantities and value/range information needs to be able to be exported in a file. This includes for devices (IA-Device Description) and CNC's (Traffic Patterns). Bring this question to YANGSTERS.

5. CNC

- Qdj terms and definitions
 - gap analysis
 - UNI/YANG Module Definition
 - Multiple NETCONF client concurrent connections
 - Network Management Datastore Architecture
 - Network Management Access Control
- Conformance Criteria for a CNC

Z.2 Topics for Edition 2:

- Securing 802.1AS-2020 operation is a known gap that will not be filled for 60802 R1
- Network Access Control? 802.1X? Auto-protection with 802.1Q based blocking? Isolate or deprioritize "untrusted" devices?
- distributed configuration
- Merging outputs from multiple CNC's into one running system