

IEC/IEEE 60802 constrained devices

Analysis

Mark Hantel – Rockwell Automation

Marcel Kiessling - Beckhoff

Christophe Mangin – Mitsubishi

Johannes Specht - Self

Marius Stanica – ABB

Günter Steindl – Siemens

Goal

- Promote as many industrial automation devices as conformant members of a TSN configuration domain as possible, considering the timeline of the IEC/IEEE 60802
- Issue: constrained devices may not have enough hardware resources to support a Netconf server next to the needed application layer software

- Netconf server hosting & responsibility concept (allow splitting between Netconf hosting and the constrained device)
 - Netconf server of an IA-station can be located in that IA-station or in another IA-station of the same TSN configuration domain
 - Protocol(s) of communication between the Netconf server and the constrained devices is out of scope
 - Constrained devices need to be able to communicate with their proxy, irrespectively of whether on-boarding already happened

Solution details

- Secure onboarding: the secure onboarding conformant to the 60802 is related to the Netconf server; the way the secure onboarding is done by the management entity of the constrained devices is out of scope
 - Protocol(s) of communication between the Netconf server and the constrained devices are secured by means equivalent to 6.3.
 - Note: In this context, the Netconf client (potentially collocated with the CNC) is not able to verify the security relationship between Netconf server and constrained device(s).

