IETF Hackathon

- IETF 110
- March 1-5, 2021
- Online
YANG model and implementation of Network Interconnect Tester

Specification:

* draft-vassilev-bmwg-network-interconnect-tester-05 (YANG)

Repositories:

* Scripting - benchmark code e.g. RFC2544 trial (Python)
* Software - YANG/NETCONF device side code (C)
* Firmware - (Verilog)
* Hardware - (KiCAD)
IETF Hackathon – YANG model and implementation of Network Interconnect Tester
Design and implementation

NETCONF Server (Model (YANG), Implementation Generator module (C), Analyzer module (C))

TRAFFIC-GENERATOR-SW (C)                      TRAFFIC-ANALYZER-SW (C)
|                       |                       |
Socket API             Socket API
|                        |                        |
Kernel                  Kernel
|                        |                        |
DMA                     DMA
|                        |                        |
MAC                     MAC
| [AXI]                  [AXI]
|                       |
TRAFFIC-GENERATOR-HW (C, Verilog)               TRAFFIC-ANALYZER-HW (C, Verilog)
| [GMII]                  | [GMII]                  
|                        |                        |
SFP+ TX                 SFP+ RX
|                        |                        |
GMII_MUX
| [GMII]                  |
|                        |
PHY                     PHY
|                        |                        |
SFP+ TX                 SFP+ RX
|                        |                        |

* - underlined text has links to repositories
What got done

* Implemented new features introduced in -04 and -05 drafts. (**realtime-epoch** feature, **dynamic** testframe-type identity with 10 octet PTP timestamp and 8 octet sequence number) (C,Python).

* Support for 1s PPS synchronization input for the timestamps used in case of dynamic testframe – basic proof of concept (Verilog).

* Granted public NETCONF access to **tester0** and **dut0** nodes for the duration of IETF110 ([link](#)).