IETF Hackathon: 6Tree

IETF 104
23-24 March, 2019
Prague

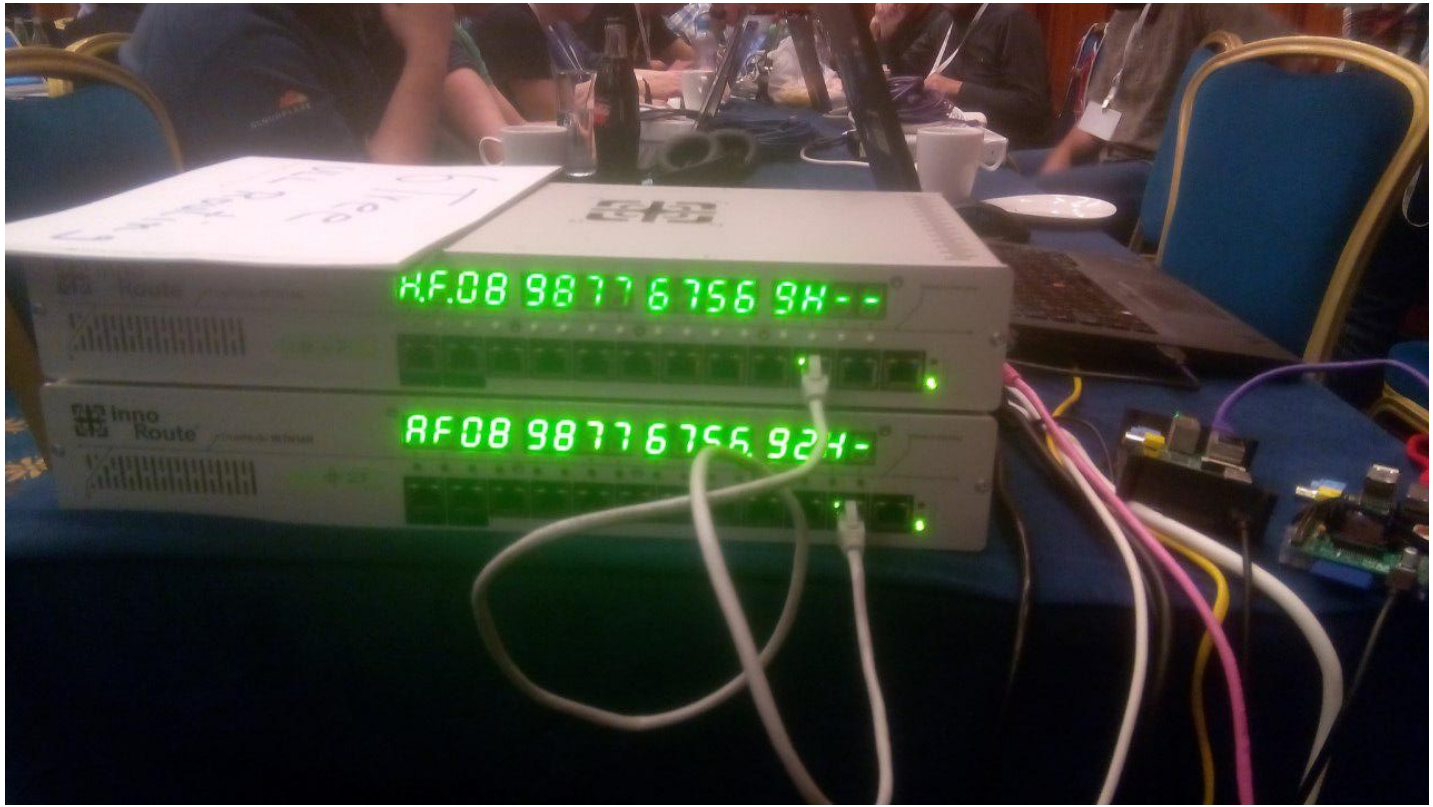
Hackathon Plan

Ultra Low Latency Routing for Industrial Communication

Solution: IPv6 hierarchical Tree Routing

- No lookup, self-routing, cut-through technology
- Layer 2: IEEE 802.1Qxy TSN (Time Sensitive Networking)
- Crazy addressing:
  - ITU-T E.164 phone number as IPv6 address prefix
  - (proposed 1999 by Korea Telecom Authority)
- https://tools.ietf.org/html/draft-foglar-ipv6-ull-routing

What got done: prefix delegation



What we learned

- Valuable feedback from experts
  - RIFT project
  - Behavior in case of failures to be investigated
  - DHCPv6 with prefix delegation
- Expensive HW prohibitive for widespread evaluation
  - 5.000€ for TrustNode prototype router
  - Real HW needed for ultralow latency

Wrap Up

Team members:

Andreas Foglar
Marian Ulbricht
Sohy Shan (remote)

First timers @ IETF/Hackathon: all

Next steps

- Simulation of Routing behavior
- Emulation with low cost switch

More information: