PCE BASED CENTRAL CONTROL

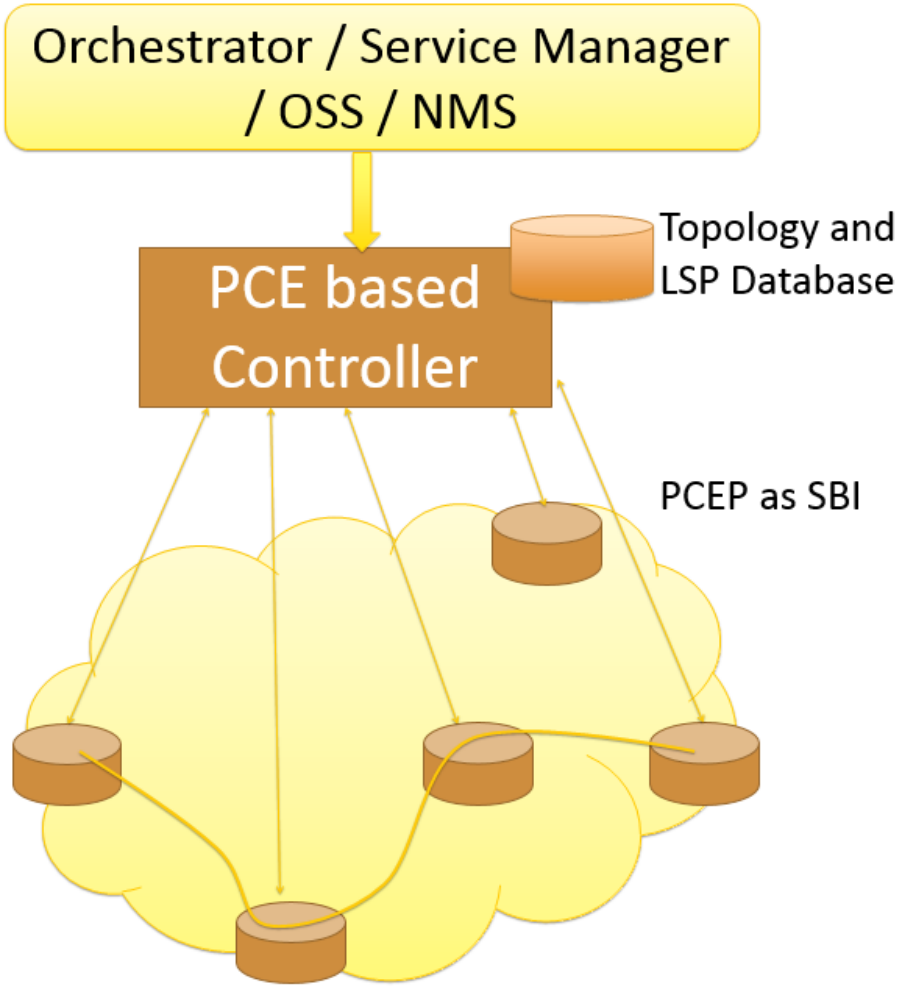
IETF 96 Hackathon Results

PCE BASED CENTRAL CONTROL

- PCE in SDN
  - PCE function is an integral part of any network controller
  - The controller can communicate with a conventional router using PCEP and can also use the same protocol to program individual routers
  - Each router along the path is told what label forwarding instruction to program and what resources to reserve
  - PCE-based controller is responsible to manage some part of label space
- TEAS WG
  - draft-zhao-teas-pce-control-function (candidate for WG Adoption)
- PCE WG
  - draft-zhao-pce-pcep-extension-for-pce-controller

- Participation – Dhruv, Oscar, Diego, Andrea, Boris, Satish
- Remote – Hari, Rama, Mahesh

- Basic Demo
  - https://www.youtube.com/watch?v=MeW0DiWeAJM
  - https://www.youtube.com/watch?v=6dnf1imHQYY



FOR THE HACKATHON

Label DB Sync

- Support Label-DB synchronization procedures with optimization
  - Avoidance and incremental sync
- Implement – draft-palle-pce-controller-labeldb-sync
- Tested via wireshark –
  - With Huawei Development Sandbox environment
  - When session flaps and no change in labels, the label synchronization can be skipped

PCEPS – PCEP over TLS

- Added TLS security over PCEP
- Implement – draft-ietf-pce-pceps-09 (partially)
- Testing on going…
- Moving from experimentation to standards strack!

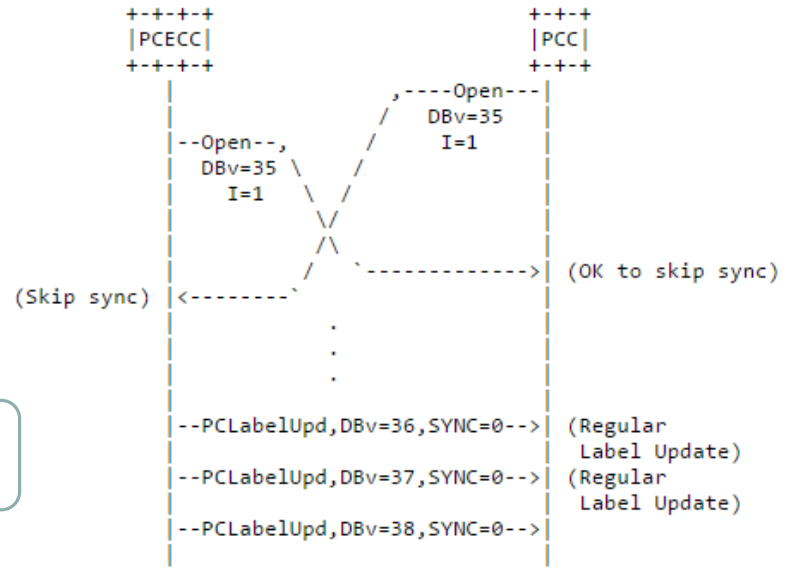


Figure 4: LABEL-DB synchronization Skipped

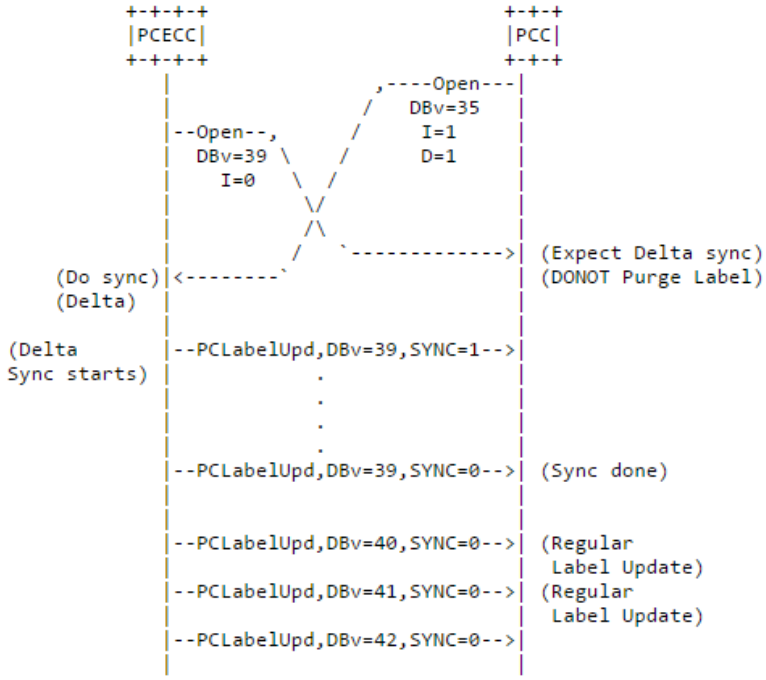
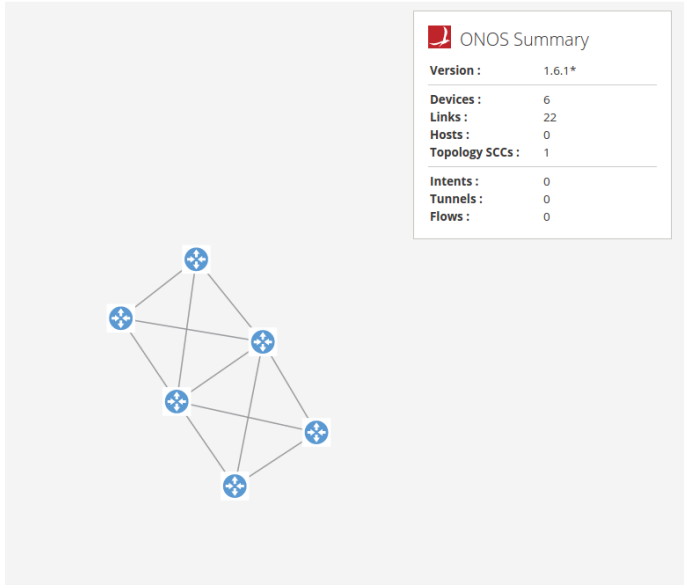
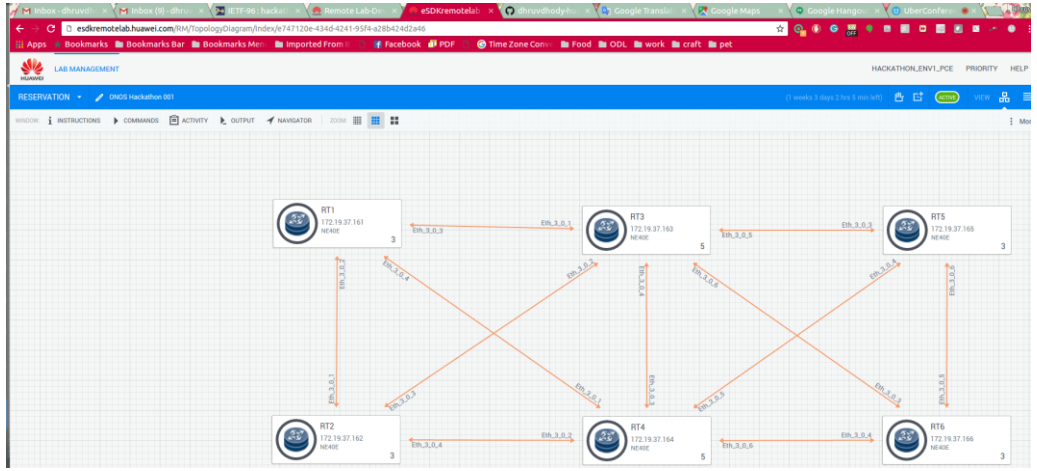


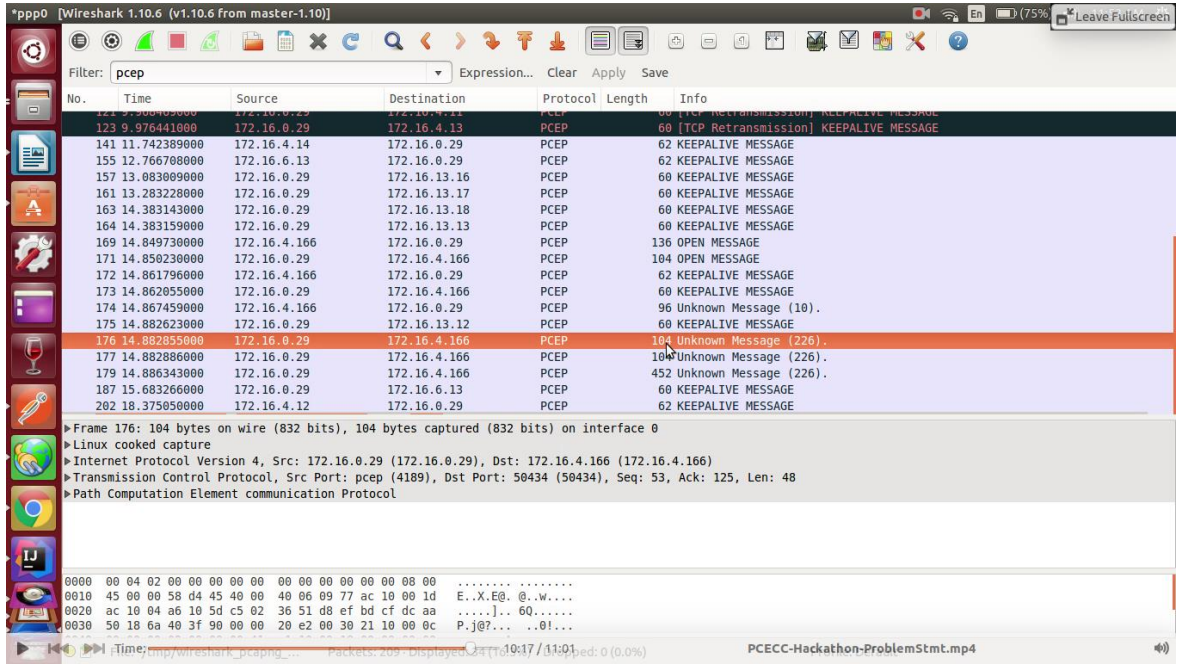
Figure 7: Incremental Synchronization Procedure

DEMO

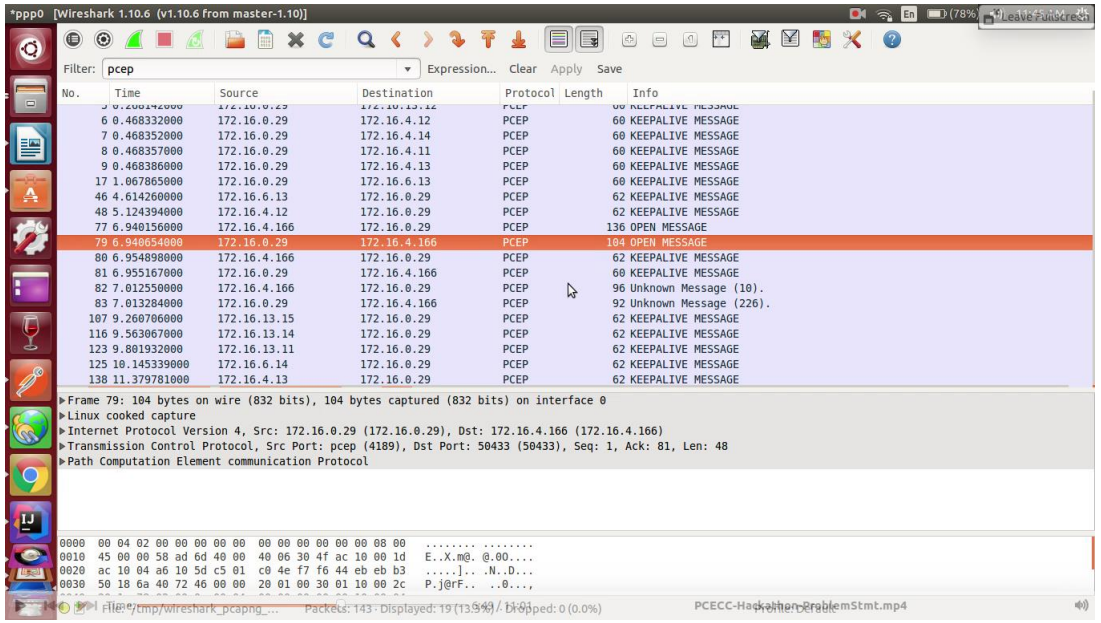




Full sync

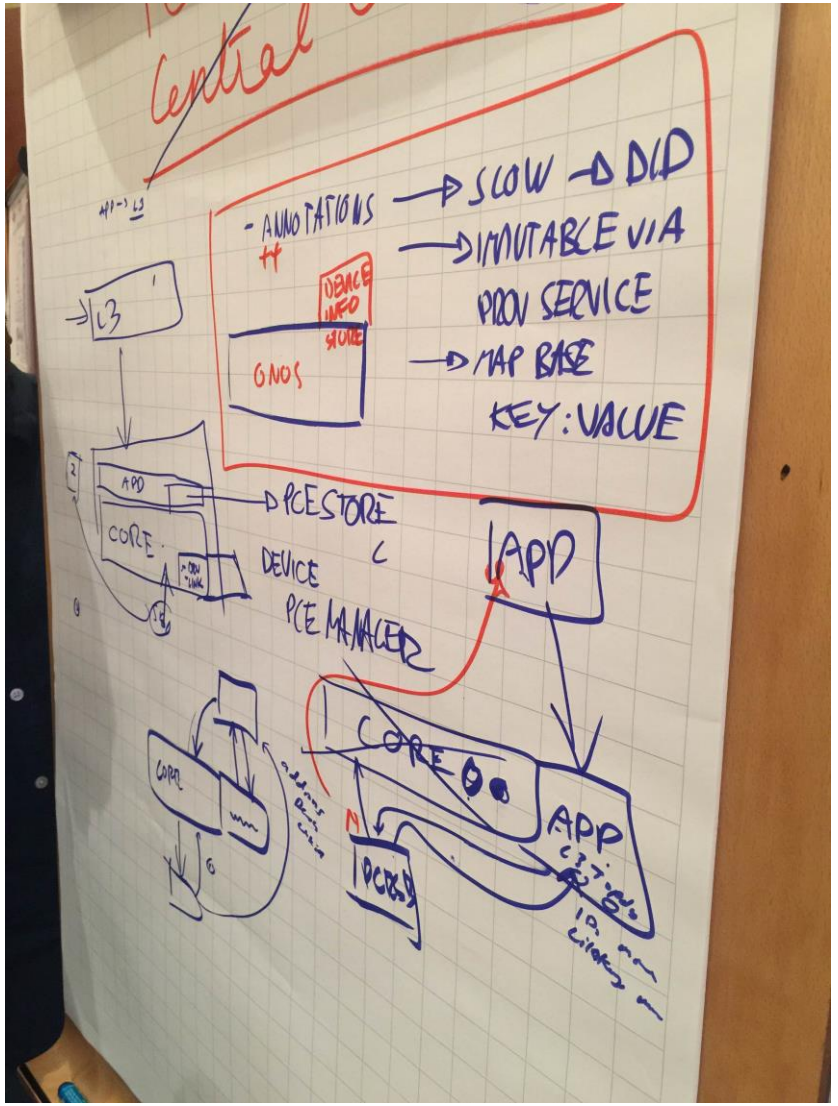


Only end of sync marker



Link: https://www.youtube.com/watch?v=yT_0hJMRZgA

THANKS!



ASK US FOR A DEMO DURING IETF WEEK!