Transport NBI Design Team Update

Italo Busi
Daniel King
Luis Miguel Contreras Murillo
Oscar González de Dios
Zhangxian
Tara Cummings
Yan Shi
Monali Chakrabarty
Rod Lu
Carlo Perocchio
Gianmarco Bruno
Qilei Wang
Xing Zhao
Yunbin Xu
Zheng Haomian
Dieter Beller
Sergio Belotti
Michael Scharf
Young Lee
Anurag Sharma
Karthik Sethuraman

IETF 101
Transport NBI DT

• Design Team’s Goals and Deliverables:
  – Develop use cases and gap analysis
    • Identify a set of technologies use cases and providing a gap analysis against existing models
  – Identify missing models or capability
  – Coordinate requirements with appropriate WGs
    • Including TEAS, RTGWG and CCAMP itself
  – Providing guidelines in terms of how all the related models can be used in a step-wise manner
    • Using a couple of well identified transport network use cases

• Working methods
  – Mailing lists & Conference calls
  – GitHub: [https://github.com/danielkinguk/transport-nbi](https://github.com/danielkinguk/transport-nbi)
Transport NBI Applicability Statement

• I-D Reference: draft-ietf-ccamp-transport-nbi-app-statement
  – Analyse applicability of IETF YANG models for controlling multi-domain OTN network
    • Scenario description is generic and agonistic to the YANG model definitions
  – Analyses applicability of the IETF YANG models
  – Provides JSON code examples
  – Covering MPI between MDSC and multiple PNCs
    • Topology Abstraction
    • Service Configuration
    • Protection and Restoration Configuration
    • Service Modification
Reference Network
Control Hierarchy

Scope of the draft

Covered in v02:
ODU Topology
ODU2 Service
EPL over ODU2 Service

Network Domain 1

Network Domain 2

Network domain 3
YANG models analysed in v02

• TEAS WG
  – TE Topology (draft-ietf-teas-yang-te-topo-15)
  – TE Tunnel (draft-ietf-teas-yang-te-15)

• CCAMP WG
  – OTN Topology (draft-ietf-ccamp-otn-topo-yang-02)
  – OTN Tunnel (draft-ietf-ccamp-otn-tunnel-model-02)

• Individual (CCAMP WG)
  – ETH Client (draft-zheng-ccamp-otn-client-signal-yang-02)
JSON Code Validation

- JSON code examples in the draft are validated for compliance with the referenced YANG models:
  
  ![Diagram](https://github.com/mbj4668/pyang/wiki/XmlJson)

  - JSON code folded to fix I-D width requirements
    - Need to synch-up with Netmod WG draft: xxx
  
  - Details in appendix B
    - Should we move it into a Netmod WG draft?
Open Issues

• Prioritize the next example(s)
  – EVPL and/or multipoint Ethernet services?
  – Multi-function access links?
  – Protection/restoration?
  – Service modification?

• Identifiers for Topology Elements (I2RS and TE)
  – Different proposals under discussions: need to meet both TEAS and I2RS requirements
  – Should we propose a Best Practice for TNBI?
  – Need to register a URN/URI to indicate the semantics of the structure used by a topology identifier?
  – [https://github.com/danielkinguk/transport-nbi/pull/10](https://github.com/danielkinguk/transport-nbi/pull/10)
Next Steps

• Publish v03 of  
draft-ietf-ccamp-transport-nbi-app-statement
  – Address open technical issues
  – Align text with the TE tutorial
  – Complete examples for ODU2, EPL and other client service configuration
  – Add other examples (based on priority)

• Face-to-face T-NBI team planned during IETF 102