OTN Service YANG Model

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draft-sharma-ccamp-otn-service-model-00

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Motivation

• TE Tunnel model (ietf-te) is an abstract model to create TE Tunnels.

• OTN Service YANG Model augments the TE Tunnel model, to create OTN service.
  – OTN service is created in the OTN Topology that is based on Network Topology (i2rs) and TE Topology (TEAS).
The List of YANG Models for Transport Controller NBI: Overview

Topologies:
- Network model
  - Topology model
    - L2 topo model
    - TE topo model
      - ODU topo model
      - WSON topo model
      - Flexi-grid topo model
  - Augment

Tunnels:
- TE Tunnel YANG model
  - L0-Tunnel YANG
  - OTN-Tunnel-Service YANG
  - L2-Tunnel YANG

Other Key Models:
- Connectivity Service Model
- Advanced service model
- Scheduling
- Fault Model

In WG draft: Network model, TE topo model
In I-D: Connectivity Service Model
Missing: Advanced service model, Scheduling, Fault Model
module: ietf-otn-service

**augment** /te:te:te:tunnels/te:tunnel/te:config: **Augments TE Tunnel (config)**

- **--rw** payload-treatment?  enumeration
- **--rw** src-client-signal?  identityref
- **--rw** src-tpn?  uint16
- **--rw** src-tsg?  identityref
- **--rw** src-timeslot-count?  uint16
- **--rw** src-timeslots
  - **--rw** values*  uint8
- **--rw** dst-client-signal?  identityref
- **--rw** dst-tpn?  uint16
- **--rw** dst-tsg?  identityref
- **--rw** dst-timeslot-count?  uint16
- **--rw** dst-timeslots
  - **--rw** values*  uint8

**augment** /te:te:te:tunnels/te:tunnel/te:state: **Augments TE Tunnel (state)**

- **--ro** payload-treatment?  enumeration
- **--ro** src-client-signal?  identityref
- **--ro** src-tpn?  uint16
- **--ro** src-tsg?  identityref
- **--ro** src-timeslot-count?  uint16
- **--ro** src-timeslots
  - **--ro** values*  uint8
- **--ro** dst-client-signal?  identityref
- **--ro** dst-tpn?  uint16
- **--ro** dst-tsg?  identityref
- **--ro** dst-timeslot-count?  uint16
- **--ro** dst-timeslots
  - **--ro** values*  uint8
Supported Usecases

- OTN Service YANG Model can be used for the following use cases:
  - OTN Mux Service
  - Bookended and Non-Bookended OTN services
  - OTN service between client ports
  - OTN service / tunnel between network ports
OTN Mux Service Example

Same OTN Service Attributes on LO-ODU
1. Tributary Port Number
2. Tributary Slot Numbers
3. Tributary Slot Granularity
4. Client Signal

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Next Steps

• Transport related comments have been given to the TE Tunnel model.
  – Update the OTN service model once TE tunnel incorporates transport comments.

• Received some review comments on the model.
  – Incorporate review comments.

• Evaluate if the current model is suitable for supporting various protected OTN services.