Yang Data Model for TE Topologies
draft-ietf-teas-yang-te-topo-13


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Status

- Went through Working Group Last Call.
- Addressed the received review comments.
Summary of Changes

- Draft text clarifications.
  - Terminology clarifications.
  - Added references
  - Introduced a new section on augmentation guidance
- Model fixes
  - Inter-domain plug-id
  - Common augmentation attributes
Draft Text Clarifications

- Terminology clarifications
  - Added references to well-known concepts, like multi-layer, ODUk, OCh, etc.

- Incorporated RFC2119 citation in Sec 1.1. Terminology.

- Aligned with the lasted referenced documents, such as RFC7950, draft-ietf-netmod-yang-tree-diagrams, and draft-ietf-netconf-yang-push.

- Moved the complete tree diagram to an appendix
  - Portions of the simplified trees are still used throughout the document.

- Introduced a new section on augmentation guidance
  - Reviewed by augmentation model writers.
CCAMP Transport NBI Design Team raised an issue for inter-domain link

- Domain 1 advertises the TE link that contains the plug ID 11, but Domain 2 does not have a link to advertise in the opposite direction and hence has no good way to advertise the matching plug ID, unlike in the case of bi-directional link with plug ID 12.
Topological Abstractions for Inter-domain Topology

- Moved Plug ID from TE Link to LTP (Link Termination Point)
- Both domains advertise a LTP that contains the plug ID

Domain 1 abstract TE topology 2

Domain 2 abstract TE topology 1

Client’s merged TE topology 3

- Moved Plug ID from TE Link to LTP (Link Termination Point)
- Both domains advertise a LTP that contains the plug ID
2nd issue for inter-domain Plug ID from CCAMP Transport NBI Design Team

- Request the YANG type of the plug ID to be variable length, because
  - Multiple auto-discovery mechanisms can be used.
  - A variable length type is needed to facilitate these mechanisms to easily have their own ranges.
## Model Changes for Inter-domain Topology

- Adjusted the models as following to improve the support for inter-domain plug ID
  - Moved the plug ID from TE link to LTP
  - Changed the type of plug ID to variable length to fit the auto-discovery mechanisms

```xml
augment /nw:networks/nw:network/nt:link:
  +--rw te!
  +--rw te-link-attributes
    |  +--rw access-type?              te-types:te-link-access-type
    |  +--rw external-domain
    |  |  +--rw network-ref?           leafref
    |  |  +--rw remote-te-node-id?     te-types:te-node-id
    |  |  +--rw remote-te-link-tp-id?  te-types:te-tp-id
    |  |  |  +--rw plug-id?             uint32
    |  +--rw is-abstract?              empty

augment /nw:networks/nw:network/nw:node/nt:termination-point:
  +--rw te-tp-id?   te-types:te-tp-id
  +--rw te!
    +--rw admin-status?              te-types:te-admin-status
    +--rw inter-domain-plug-id?      binary
    +--rw inter-layer-lock-id*       uint32
    +--ro oper-status?               te-types:te-oper-status
```
Common Augmentation Attributes

- Synchronized with model writers who are augmenting this model
  - Putting common attributes to the base model
    - Added two name attributes in this model.
    - Recommended removal of these from augmentations.

```xml
augment /nw:networks/nw:network:
  +-rw provider-id?         te-types:te-global-id
  +-rw client-id?           te-types:te-global-id
  +-rw te-topology-id?      te-types:te-topology-id
  +-rw te!
    +-rw name?             string
    +-rw preference?       uint8
    +-rw optimization-criterion? identityref

augment /nw:networks/nw:network/nw:node:
  +-rw te-node-id?         te-types:te-node-id
  +-rw te!
    |  +-rw domain-id?       uint32
    |  +-rw is-abstract?     Empty
    |  +-rw name?            inet:domain-name
    |  +-rw name?            String
    |  +-rw signaling-address*  inet:ip-address
```
Next Steps

- Address any comments once received.
- Proceed for publication.