A Yang Data Model for WSON Optical Networks

draft-ietf-ccamp-wson-yang-15

Y. LEE, D. DHODY, A. GUO (HUAWEI)
V. LOPEZ (TELEFONICA)
D. KING (U. OF LANCASTER)
B. YOON (ETRI)
R. VILALTA (CTTC)
Updates Since IETF 100

- Created Github to manage all L0 models across WSON & Flexi-grid: https://github.com/younglee-ietf/actn-wson-flexi-grid
- Introduced a new ietf-layer0-types module (https://github.com/younglee-ietf/actn-wson-flexi-grid/blob/master/ietf-layer0-types%402018-10-22.yang) to define groupings that are used to both WSON and Flex-grid modules, e.g.,
  - Node types,
  - Application code based on ITU-T G.698.2,
  - Wavelength Assignment Policy.
  - Client types, etc.
- Complete augmentation of TE-topology model is now available; in particular, on all modules that require WSON specific labels and bandwidth types.
IETF-WSON-TOPOLOGY Model


module: ietf-wson-topology
  augment /nw:networks/nw:network/nw:network-types/tet:te-topology:
    +--rw wson-topology!
  augment /nw:networks/nw:network/nt:link/tet:te/tet:te-link-attributes:
  augment /nw:networks/nw:network/nw:node/nt:termination-point/tet:te:
    +--rw supported-payload-types* [index]
      |  +--rw index       uint16
      |  +--rw payload-type? string
      +--rw client-facing? boolean
  augment /nw:networks/nw:network/nw:node/tet:te/tet:te-node-attributes:
    +--rw wson-node
    +--rw node-type?    identityref
  augment /nw:networks/nw:network/nw:node/tet:te/tet:tunnel-termination-point:
    +--rw supported-operational-modes*  te-wson-types:operational-mode
    +--rw configured-operational-modes? te-wson-types:operational-mode
    +--rw supported-fec-types*    identityref
    +--rw supported-termination-types* identityref
    +--rw supports-bit-stuffing?    boolean
    +--(wson)
      +--rw bandwidth-type?    identityref
    +--(wson)
      +--rw supported-bandwidth-list* identityref
Current Status & Next Steps

- The draft is stable and ready for YANG doctor’s review and WG LC.
A Yang Data Model for WSON Tunnel

draft-ietf-ccamp-wson-tunnel-model-02

Y. LEE, D. DHODY, A. GUO (HUAWEI)
V. LOPEZ (TELEFONICA)
D. KING (U. OF LANCASTER)
B. YOON (ETRI)
R. VILALTA (CTTC)
Overview

- WSON TE Tunnel Model (ietf-te-wson)
- Augments ietf-te.
- Imports ietf-otn-types for source and destination client signal.
- Imports ietf-layer0-types for layer 0 specific groupings.
- NMDA Compliant Model
Updates Since IETF 100

- Created Github to manage all L0 models across WSON & Flexi-grid: https://github.com/younglee-ietf/actn-wson-flexi-grid
- Introduced a new ietf-layer0-types module (https://github.com/younglee-ietf/actn-wson-flexi-grid/blob/master/ietf-layer0-types%402018-10-22.yang) to define groupings that are used to both WSON and Flex-grid modules, e.g.,
  - Node types,
  - Application code based on ITU-T G.698.2
  - Wavelength Assignment Policy.
  - Client types, etc.
- Complete augmentation of TE-tunnel model is now available; in particular, on all modules that require WSON specific labels and bandwidth.
module: ietf-wson-tunnel
augment /te:te/tunnels/te:tunnel:
  +--rw src-client-signal? identityref
  +--rw dst-client-signal? identityref
  +--rw fec-type? identityref
  +--rw termination-type? identityref
  +--rw bit-stuffing? boolean
augment /te:te/te:globals/te:named-path-constraints/te:named-path-constraint/te:te-bandwidth/te:technology:
  +--:(wson)
  +--rw bandwidth-type? identityref
augment /te:te/te:tunnels/te:tunnel/te:te-bandwidth/te:technology:
  +--:(wson)
  +--rw bandwidth-type? identityref
augment /te:te/te:tunnels/te:tunnel/te:p2p-primary-paths/te:p2p-primary-path/te:te-bandwidth/te:technology:
  +--:(wson)
  +--rw bandwidth-type? identityref
  +--:(wson)
  +--rw bandwidth-type? identityref
  +--:(wson)
  +--rw bandwidth-type? identityref
  +--:(wson)
  +--rw (grid-type)?
    +--:(dwdm)
      |  +--rw (single-or-super-channel)?
      |     +--:(single)
      |     |  +--rw channel-freq? frequency-thz
      |     |     +--:(super)
      |     |     |  +--rw subcarrier-channels* frequency-thz
      |     |     |     +--:(cwdm)
      +--rw channel-wavelength? uint32
Current Status & Next Steps

- The draft depends on te-tunnel model stability, which should be soon attained.
- Other than the dependency of te-tunnel model, the model is ready for YANG doctor’s review and WG LC.
Thank You!