

YANG data model for Flexi-Grid Optical Networks

draft-vergara-ccamp-flexigrid-yang-05

draft-vergara-ccamp-flexigrid-media-channel-yang-00

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Motivation

- Existing YANG models are either technology-agnostic or technology-specific
 - draft-ietf-i2rs-yang-network-topo and draft-ietf-teas-yang-te-topo are generic: they have to be extended for each specific technology
 - draft-ietf-ccamp-wson-yang is specific for WSON technology, extending draft-ietf-teas-yang-te-topo
- We propose a pair of YANG models related to a Flexi-Grid Traffic Engineering Database and Media Channel
 - Based on the ideas presented at RFC 7698: “Framework and Requirements for GMPLS-Based Control of Flexi-Grid Dense Wavelength Division Multiplexing (DWDM) Networks”
 - They also extend from existing generic YANG models

Main changes from prior version (I)

- From comments and requests at CCAMP WG
- Split in two drafts
 - draft-vergara-ccamp-flexigrid-yang-05 (Flexi-grid-TED)
 - Model has been updated to be compatible with last changes on TE Topology model.
 - Proprietary transponder attributes (e.g. sliceable transponders) are not part of this model any longer.
 - Operational modes are used instead.
 - These modes are compliant with ITU-T G.698.2 (11/2009) (See section 5.3 of the recommendation).
 - Other minor changes in TED model have also been included (e.g. default slot width granularity).
 - More precise explanations in the example of use.

Main changes from prior version (II)

- Split in two drafts
 - draft-vergara-ccamp-flexigrid-media-channel-yang-00
 - Flexi-grid media-channels are now augmenting TE-Tunnel. Therefore, some attributes are not longer necessary, since TE-Tunnel model already contained them.
 - Link-channel (list of the concatenated elements of the media-channel) is now re-using LSP from TE-Tunnel.
 - More precise explanations in the example of use.
- The models changes have been validated with different tools: pyang, confdc and yanglint.
 - Some errors in yanglint are caused by the ietf-te-topology model. We are waiting for a new version of draft-ietf-teas-yang-te-topo to be able to solve this issue.

Future work

- Adoption of these drafts as CCAMP WG documents
- draft-vergara-ccamp-flexigrid-yang
 - Study if ports should be LTP to be more coherent with the TE models.
- draft-vergara-ccamp-flexigrid-media-channel-yang
 - Discuss the terminology (e.g. media-channel, network media-channel, tunnel)
 - Study the use of LTP to model ports so that this model doesn't need to use transponder characteristics.

Thanks!
Any comments?