Framework for DWDM interface Management and Control

draft-ietf-ccamp-dwdm-if-mng-ctrl-fwk-02

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Motivation

• State-of-the-art is to interconnect Routers via standard grey interfaces to proprietary transponder equipment as part of the DWDM network.

• The deployment of DWDM interfaces outside the DWDM network leads to the following issues:
  – Transponders and DWDM equipment may be implemented by different vendors, so there is a need for a common parameter set defining the line of the network.
  – The network and the terminal equipment need at least to exchange interface characteristics, operational state and verify the inter-layer connectivity quality.

• A multivendor packet-optical network requires a common network model to ensure an efficient operation and management of the network.
Document Scope

• The document covers management and control/management plane aspects for single channel DWDM interfaces
• This document describes use cases and requirements for the control and management of single channel optical interfaces
• The purpose is to identify the necessary information elements and processes for the given architecture.
• The focus is on automating the network provisioning process irrespective on how it is triggered
• Guidance for the following drafts:
  – draft-dharinigert-ccamp-dwdm-if-lmp
  – draft-dharini-netmod-dwdm-if-yang
  – draft-galikunze-ccamp-dwdm-if-snmp-mib
Solution initially in scope.

EMS – Element Management System
NMS – Network Management System
Diffs in version 02

• New version was submitted beginning of July, mentioned the submission on the list
• Further rephrasing and error correction
• Filling the requirements section describing what is needed from an operational point of view
  – substantiates the use case section
Key Requirements

• Even if network architectures becomes more complex the management and operation as well as the provisioning process should have a higher degree of automation or should be fully automated.

• Simplifying and automating the entire management and provisioning process of the network in combination with a higher link utilization and faster restoration times will be the major requirements that has been addressed in this section.

• Data Plane interoperability as defined for example in [ITU.G698.2] is a precondition to ensure plain solutions and allow the usage of standardized APIs between network and control/management plane.
Next steps

• Discussion on the list, requesting feedback from the WG

• Next update will deliver a further clean up and simplification (removing of text that is not needed)

• Discussion with the chairs started on how to proceed with the LMP, YANG and SNMP drafts