Transport Northbound Interface Applicability Statement
draft-ietf-ccamp-transport-nbi-app-statement-12

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IETF 111
Transport NBI DT

• Design Team’s Goals and Deliverables:
  – Develop use cases and gap analysis
    • Identify a set of technologies use cases and providing a gap analysis against existing models
  – Identify missing models or capability
  – Coordinate requirements with appropriate WGs
    • Including TEAS, RTGWG and CCAMP itself
  – Providing guidelines in terms of how all the related models can be used in a step-wise manner
    • Using a couple of well identified transport network use cases

• The First I-D published in February 2018

• Working methods
  – Mailing lists & Conference calls
  – GitHub: https://github.com/danielkinguk/transport-nbi
Reference Network

Network domain 1
S1
S2
S3
S4
S5
S6
S7
S8

Network domain 2
S11
S12
S13
S14
S15
S16
S17
S18
S19
S20
S21

Network domain 3
S31
S32
S33
S34

10GE, STM-64 and OTU2

STM-64 and OTU2

STM-64
ACTN Control Hierarchy

Scope of the work

IETF 111
TE Tunnel Setup

MDSC Internal Topology (OTN&ETH)

PNC1 black topology (OTN&ETH)

PNC 1 white topology (OTN&ETH)

AN1

AN2

PNC 2 black topology (OTN&ETH)

S31

S32

S33

S34

PNC 3 black topology (OTN&ETH)

PNC 1 black topology (OTN)

PNC 3 white topology (OTN)

PNC 2 black topology (OTN)
Transparent Client Setup (STM-64 PL)

MDSC Internal Topology (OTN&ETH)

PNC1 black topology (OTN&ETH)

PNC2 black topology (OTN&ETH)

PNC3 white topology (OTN&ETH)

STM-64

AN1

AN2

PNC1 black topology (OTN)

PNC3 white topology (OTN)

PNC2 black topology (OTN)
ETH Client Setup (EPL/EVPL)

MDSC Internal Topology (OTN&ETH)

PNC1 black topology (OTN&ETH)

PNC2 black topology (OTN&ETH)

PNC3 white topology (OTN&ETH)

EPL: port-classification
EVPL: vlan-classification

AN1
AN2

ETH

S31  S32  S33  S34

EPL Client Setup (EPL/EVPL)
The Applicability Statement Is Almost Complete

• Now on version 12
  – draft-ietf-ccamp-transport-nbi-app-statement
• Thank you to the T-NBI Team, WG Reviews so far, and RTG Dir Review
  – Open issues are listed on
    • https://github.com/danielkinguk/transport-nbi/issues
• We have ASCII, XML and Markdown version the I-D
• Next Steps
  – Address open issues including:
    • #82 Addressing RTG Dir Review (30+ editorial and formatting issues)
    • #86 Check JSON Tool compiles correctly
    • #77 Check Informative and Normative references are correct
  – Dan and Italo to meet (virtually) for review/editing session to address open issues
  – Can we reduce the text, without losing content.
    • I-D is currently at 100 pages
  – Issue new version by end of August and request WG Last Call
    • Should we send a liaison to relevant SDOs for review, before we Last Call?
Applicability of Abstraction and Control of Traffic Engineered Networks (ACTN) to Packet Optical Integration (POI)

draft-ietf-teas-actn-poi-applicability-03

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The Motivation for this Work

• The document provides key use cases for Packet Optical Integration (POI), described both from the point of view of the optical and packet layer, reflecting operator intentions
  • Thanks to contributions from Telecom Italia, Vodafone and TIM Brazil
  • Thanks to contributions from several vendors

• We identified the IETF protocols and data models that may be used for ACTN-based infrastructure to control of POI networks, specially:
  • the MDSC (Multi-Domain Service Coordinator) and
  • underlying Packet and Optical Domain Controllers (P-PNC and O-PNC)

• The intention of the work was to understand the current level of standardization and, highlight gaps, if any:
  – Are the procedural steps clear?
    – If not, what is missing?
  – Are the existing data models suitable?
    – If not, what is missing?
  – Any management issues?
    – Deployment, operational and security
I-D Use Cases

1. Inventory, Service and Topology Discovery
   - Inter-domain link discovery
   - Multi-layer IP Link discovery
   - Inventory discovery
   - SR-TE paths discovery

2. Establishment of L2VPN/L3VPN with TE requirements
   - Optical Path Computation
   - Multi-layer IP Link Setup and Update
   - SR-TE Path Setup and Update

Figure 1 - Reference Scenario
Next steps for the Document

• Issue tracking and current version available on Git
  • Currently we are tracking 23 open issues - https://github.com/FabioPeruzzini/actn-poi/issues

• Just a few active sections now, hot topics/issues include
  • Issue #45, #56 Local protection with TI-LFA
  • Issue #46 Summarization with recursive architecture
  • Issue #39, #41, #42 Security (including LLDP Snooping) and Operational Considerations
  • Issue #38 End-to-end SR-TE multi-layer/multi-domain path computation performed by MDSC
  • Issue #37 Defining scope of optical impairments as path computation performed by the O-PNCs
  • Issue #23 Align with latest version of draft-ietf-teas-te-service-mapping-yang
  • Issue #32 Consider issues associated with inter-provider optical connectivity

• The plan is to complete the open actions/issues shortly after IETF 111, then
  • Ask WG participant to review the latest version of the I-D
  • Prepare for WG Last Call before IETF 112