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

Design Team Members and Authors

Italo Busi
Daniel King
Luis Miguel Contreras Murillo
Oscar González de Dios
Zhangxian
Tara Cummings
Yan Shi
Monali Chakrabarty
Rod Lu
Carlo Perocchio
Gianmarco Bruno
Qilei Wang
Xing Zhao
Yunbin Xu
Zheng Haomian
Dieter Beller
Sergio Belotti
Michael Scharf
Young Lee
Anurag Sharma
Karthik Sethuraman

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

ACTN Control Hiearchy

CMI

MDSC

MPI1   MPI2   MPI3   Scope of the work

PNC
1

PNC
2

PNC
3

Network
Domain 1

Network
Domain 2

Network
domain 3

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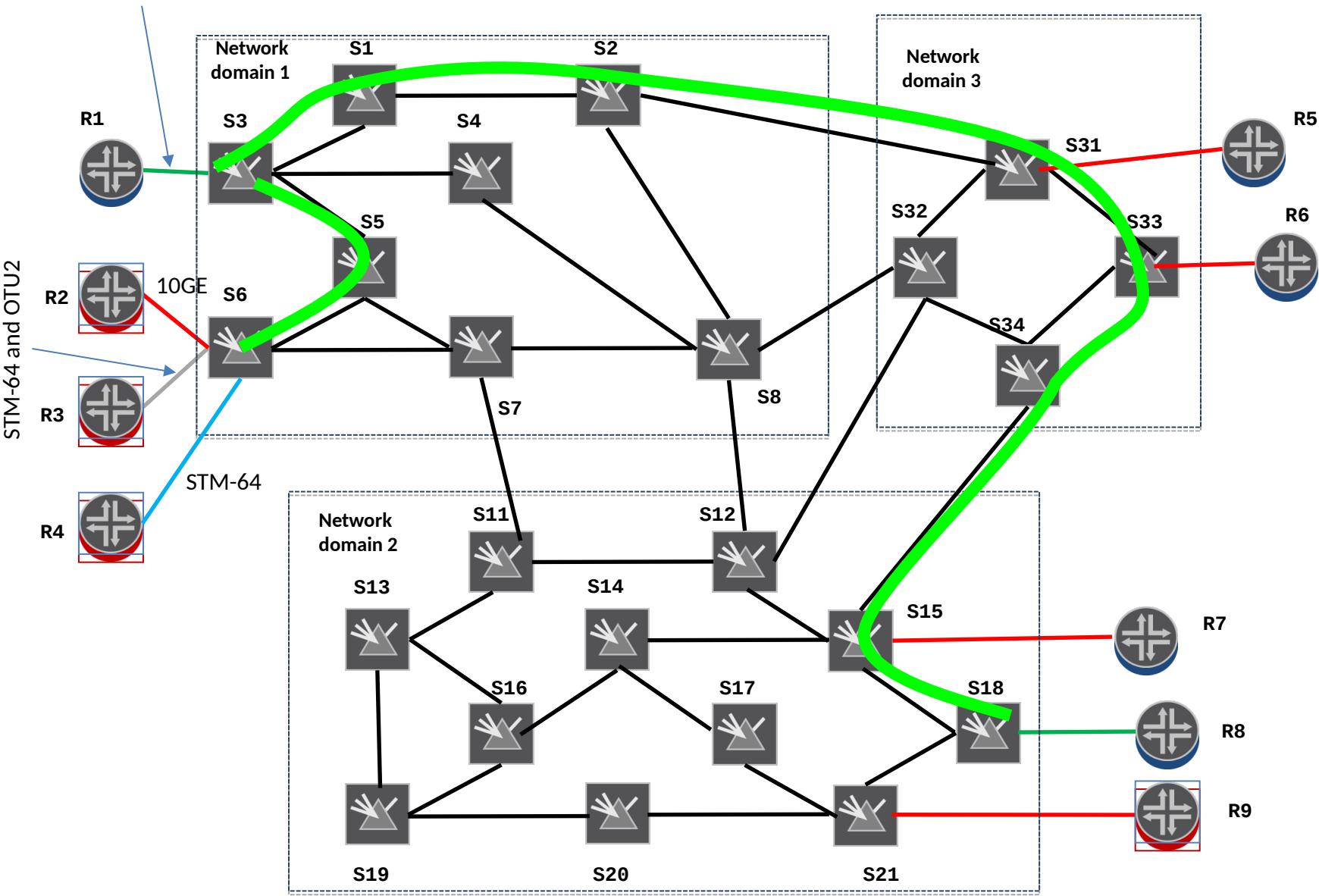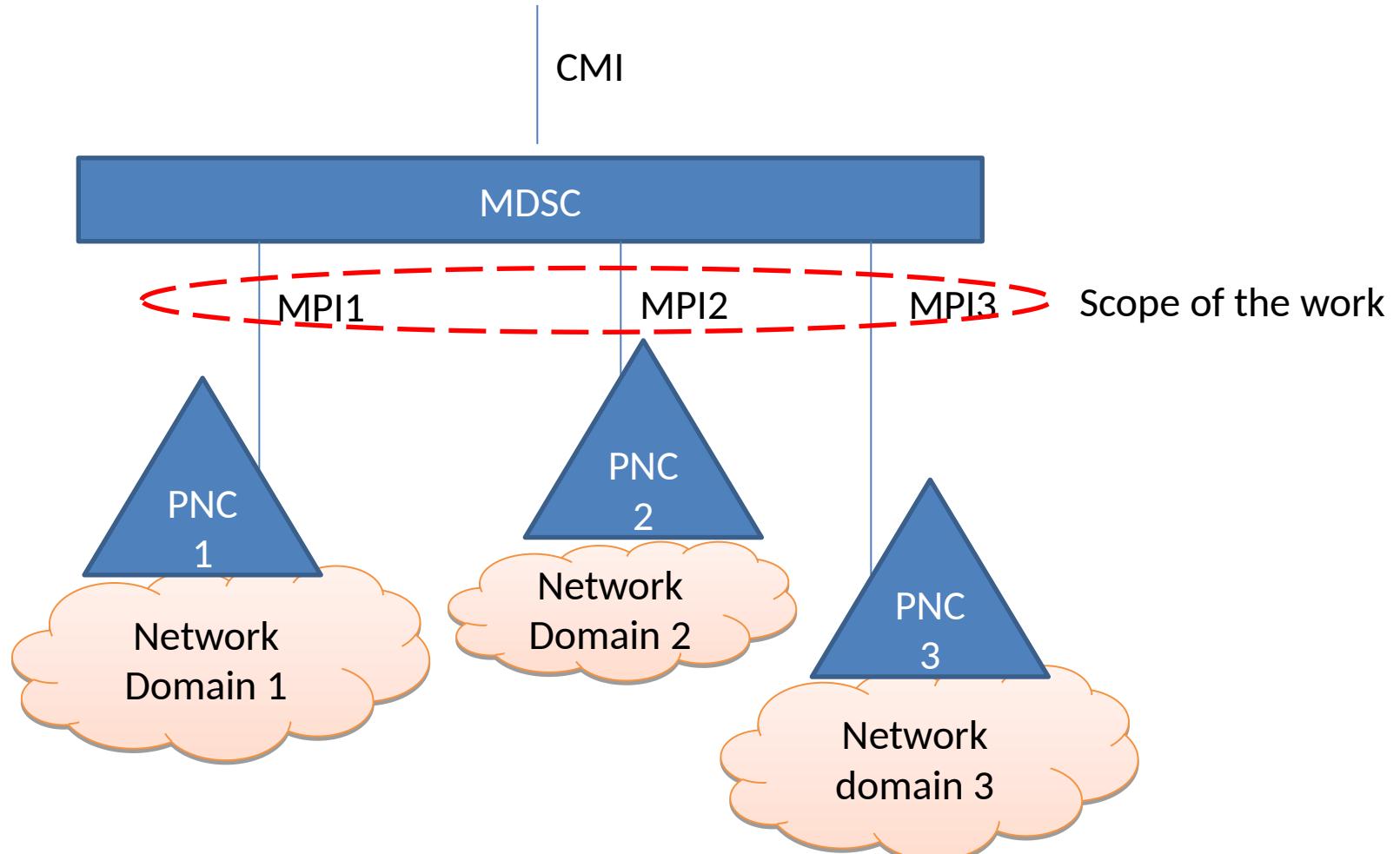
TE Tunnel Setup

MDSC Internal Topology (OTN&ETH)

PNC 3 white topology (OTN&ETH)

S31

S32

S33

S34

PNC1 black topology (OTN&ETH)

AN1

AN2

PNC 2 black topology (OTN&ETH)

PNC1 black topology (OTN)

AN1

PNC 3 white topology (OTN)

S31

S32

S33

S34

PNC 2 black topology (OTN)

AN2
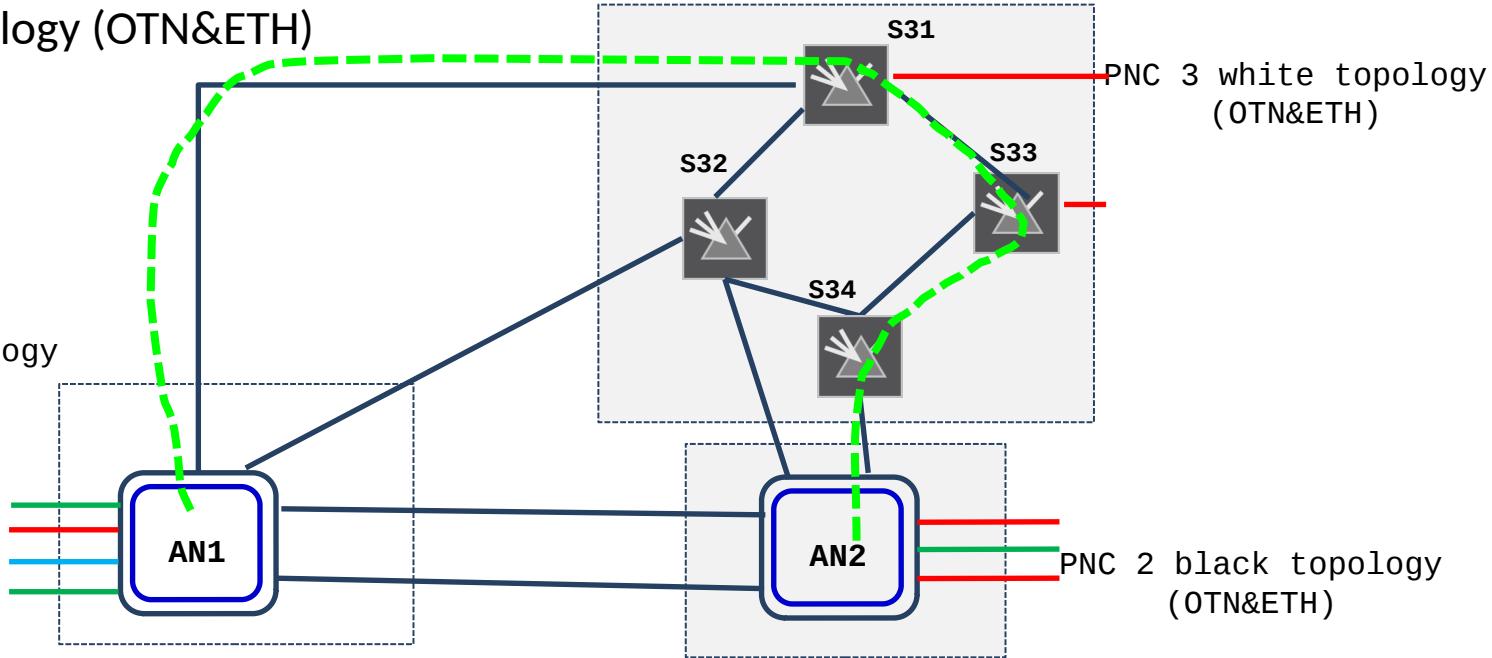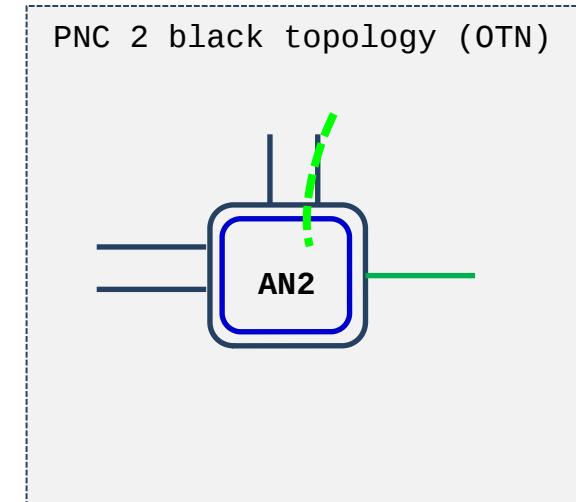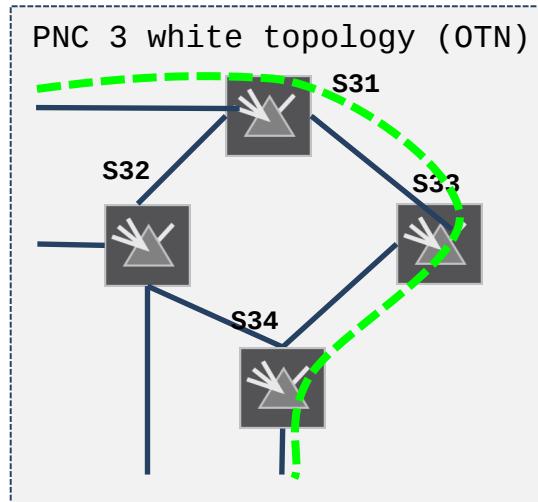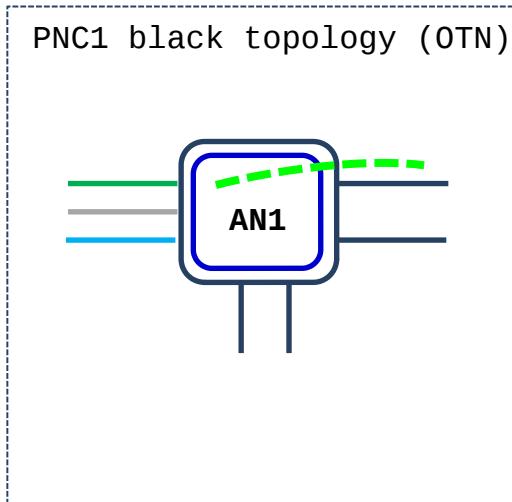
Transparent Client Setup (STM-64 PL)

MDSC Internal Topology (OTN&ETH)

PNC 3 white topology (OTN&ETH)

S31

S32

S33

S34

PNC1 black topology (OTN&ETH)

STM-64

AN1

AN2

STM-64

PNC 2 black topology (OTN&ETH)

PNC1 black topology (OTN)

AN1

PNC 3 white topology (OTN)

S31

S32

S33

S34

PNC 2 black topology (OTN)

AN2
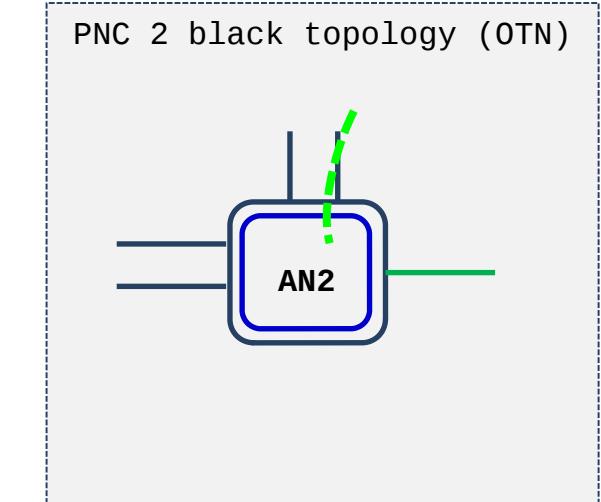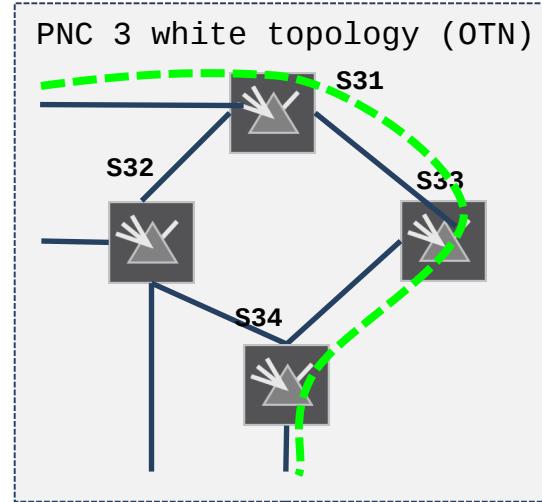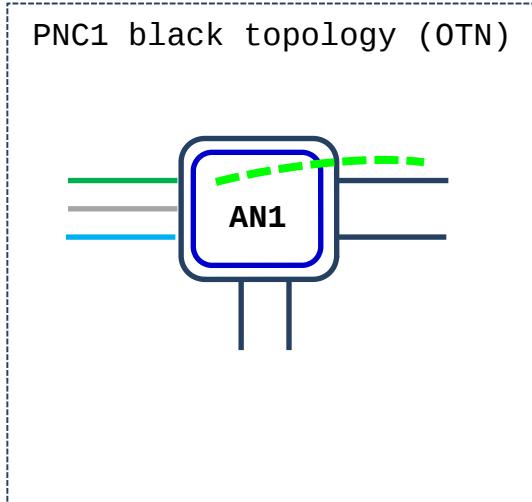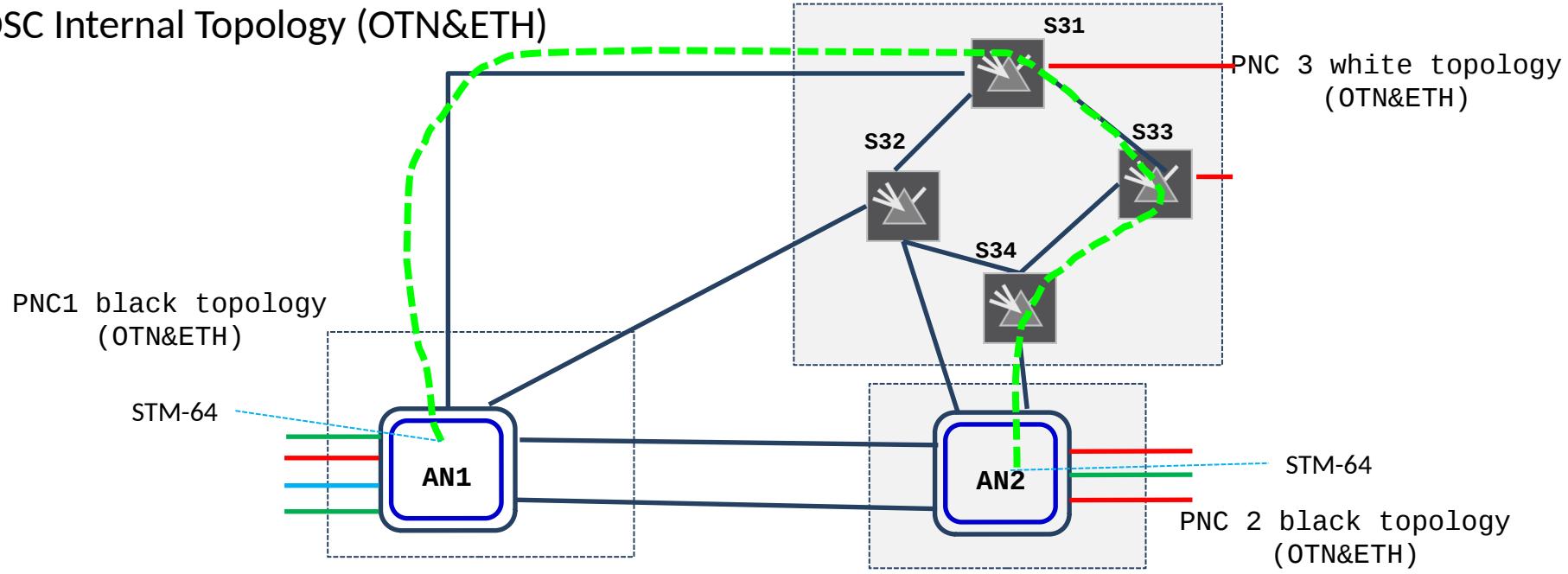
ETH Client Setup (EPL/EVPL)

MDSC Internal Topology (OTN&ETH)

S31

PNC 3 white topology
(OTN&ETH)

S32

S33

S34

PNC1 black topology
(OTN&ETH)

ETH

EPL: port-classification
EVPL: vlan-classification

AN1

AN2

ETH

PNC 2 black topology
(OTN&ETH)

PNC1 black topology (OTN)

AN1

PNC 3 white topology (OTN)

S31

S32

S33

S34

PNC 2 black topology (OTN)

AN2
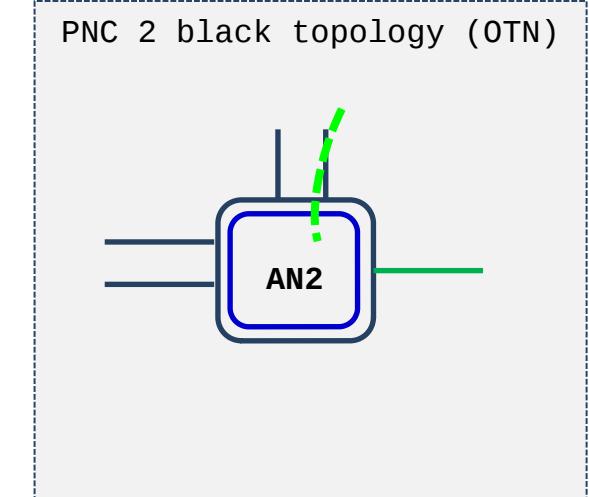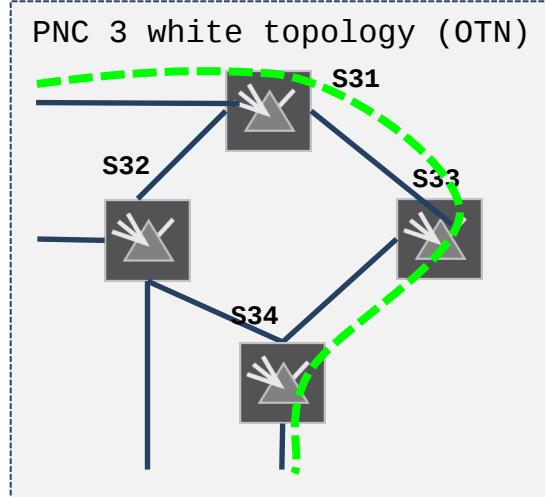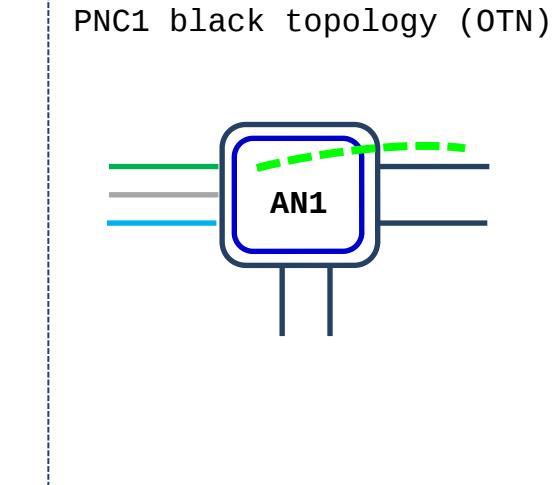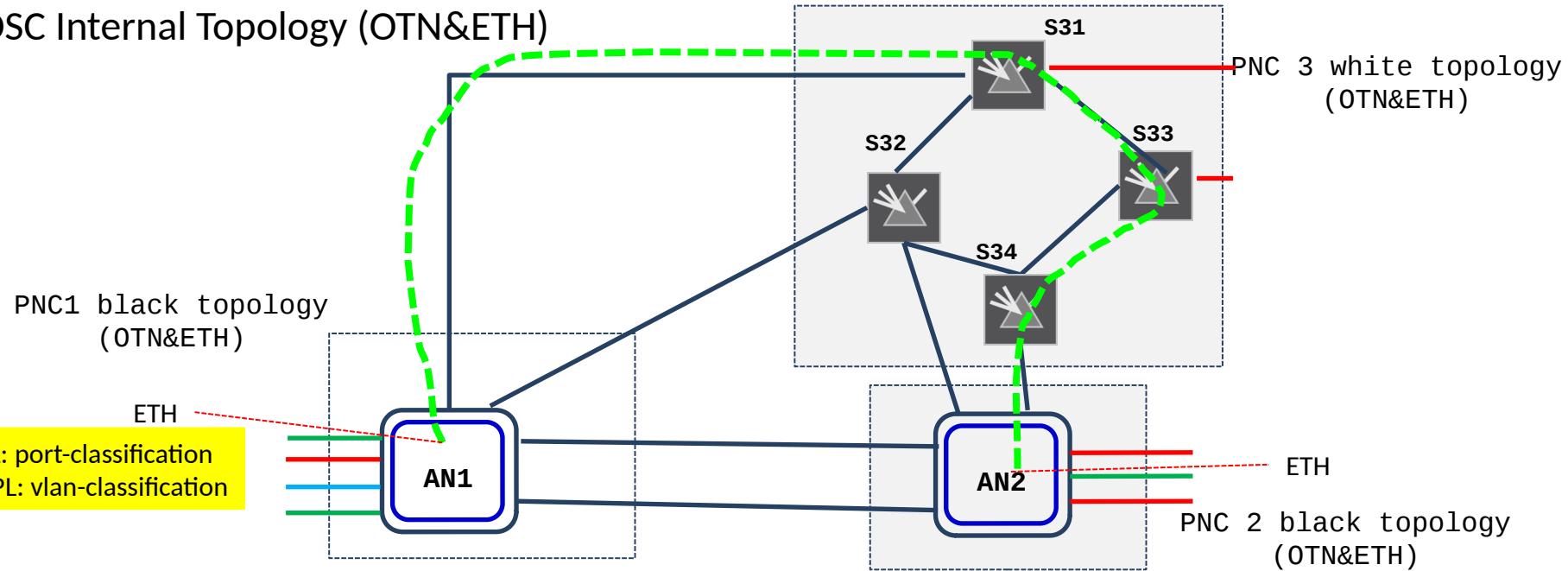
The Applicability Statement
Is Almost Complete

- 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?

IETF 111

Applicability of Abstraction and Control of Traffic Engineered Networks (ACTN) to Packet Optical Integration (POI)

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

Authors

Fabio Peruzzini - fabio.peruzzini@telecomitalia.it

Jean-Francois Bouquier - jeff.bouquier@vodafone.com

Italo Busi - Italo.busi@huawei.com

Daniel King - daniel@olddog.co.uk

Daniele Ceccarelli - daniele.ceccarelli@ericsson.com

Contributors

Sergio Belotti - sergio.belotti@nokia.com

Gabriele Galimberti - ggalimbe@cisco.com

Zheng Yanlei - zhengyanlei@chinaunicom.cn

Anton Snitser - antons@sedonasys.com

Washington Costa Pereira Correia - wcorreia@timbrasil.com.br

Michael Scharf - michael.Scharf@hs-esslingen.de

Young Lee - younglee.tx@gmail.com

Paolo Volpato - paolo.volpato@huawei.com

Jeff Tantsura - jefftant.ietf@gmail.com

IETF 111 (Virtual) - TEAS Working Group –
July 2021

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
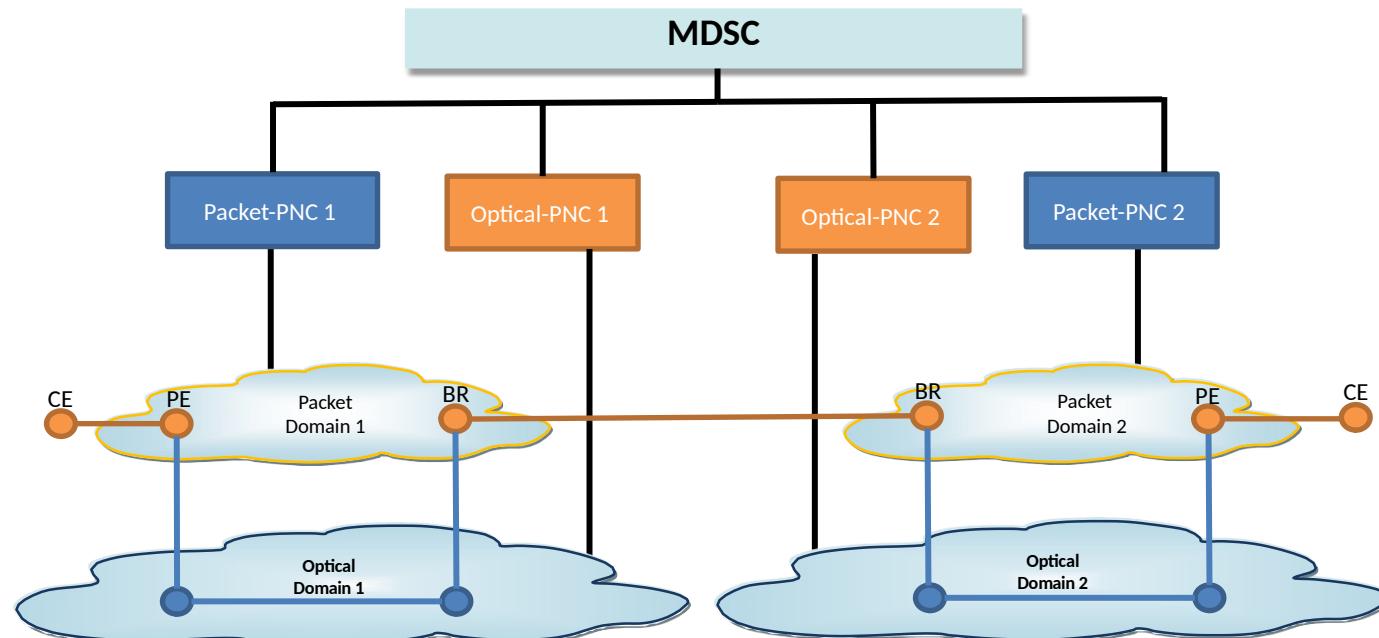
Figure 1 - Reference Scenario

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