

YANG Models for the Northbound Interface of a Transport Network Controller: Requirements and Gap Analysis

CCAMP WG, IET96, Berlin, Germany

draft-zhang-ccamp-transport-yang-gap-analysis-00.txt

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Draft basic information

- <http://tools.ietf.org/id/draft-zhang-ccamp-transport-ctrlnorth-yang-00.txt>

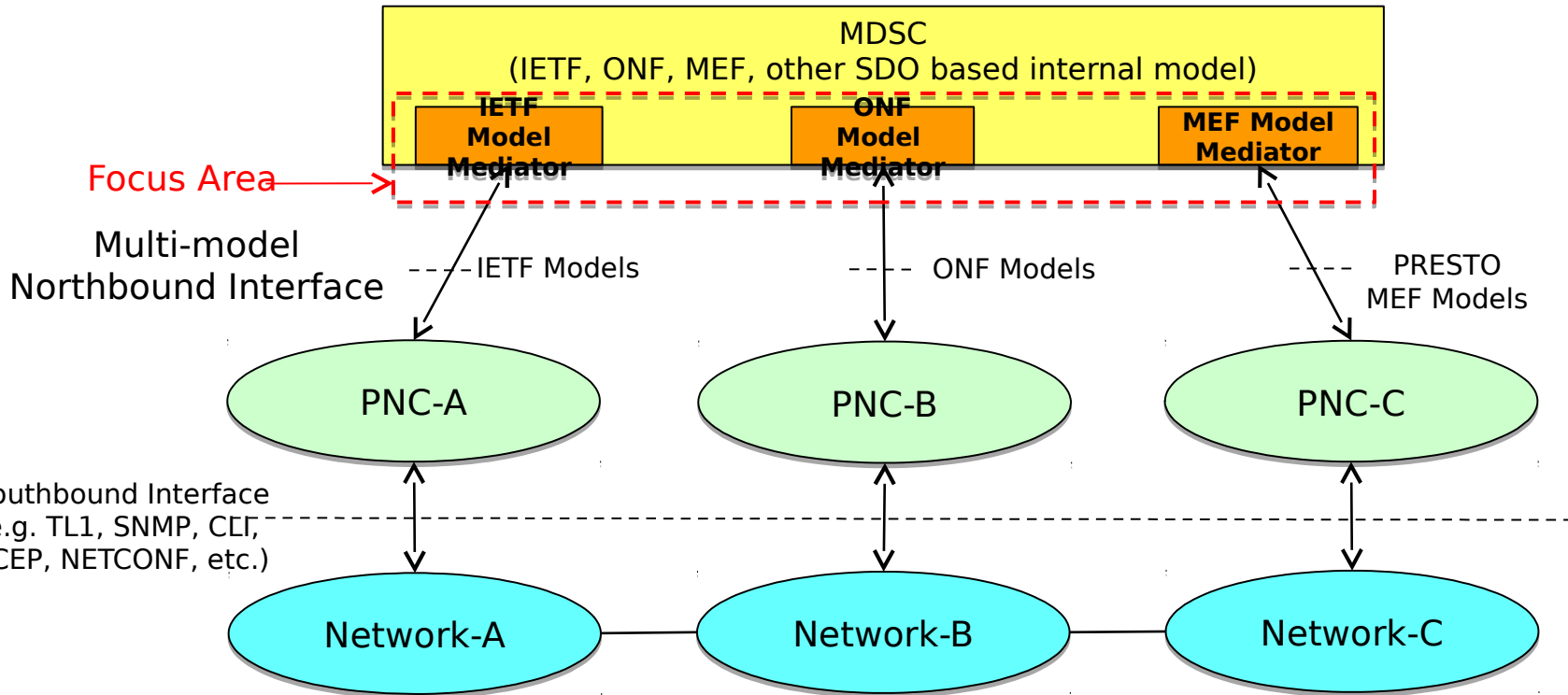
Presented in last IETF

- Agreed to move ietf-transport-service.yang out of this draft and as a separate draft into TEAS WG;
 - Formed an informal group of analyzing the existing models and missing pieces since then
- The rest of text and the offline group efforts are put this draft with a new name:
 - draft-zhang-ccamp-transport-yang-gap-analysis-00

Objective and Scope

- **Goal:**
 - Analyze YANG models that can be used by the domain controller and the orchestrator for various transport use cases:
 - Single domain network,
 - Multi domain network,
 - Multi layer network,
 - Multi model network,
 - etc.
 - Identify any modeling gaps (missing models, constructs, attributes, etc.) in existing models to support above use cases.
- **Non-Goal:**
 - Controller-device interface protocol(s) (PCEP, NETCONF et c.);

Objective and Scope: Cont.



- **Model Translation/Mediation:** In multi-model environment, deployment use case must be fully supported by all models.
 - Model translation / mediation between systems using different models should be seamless.

Objective and Scope

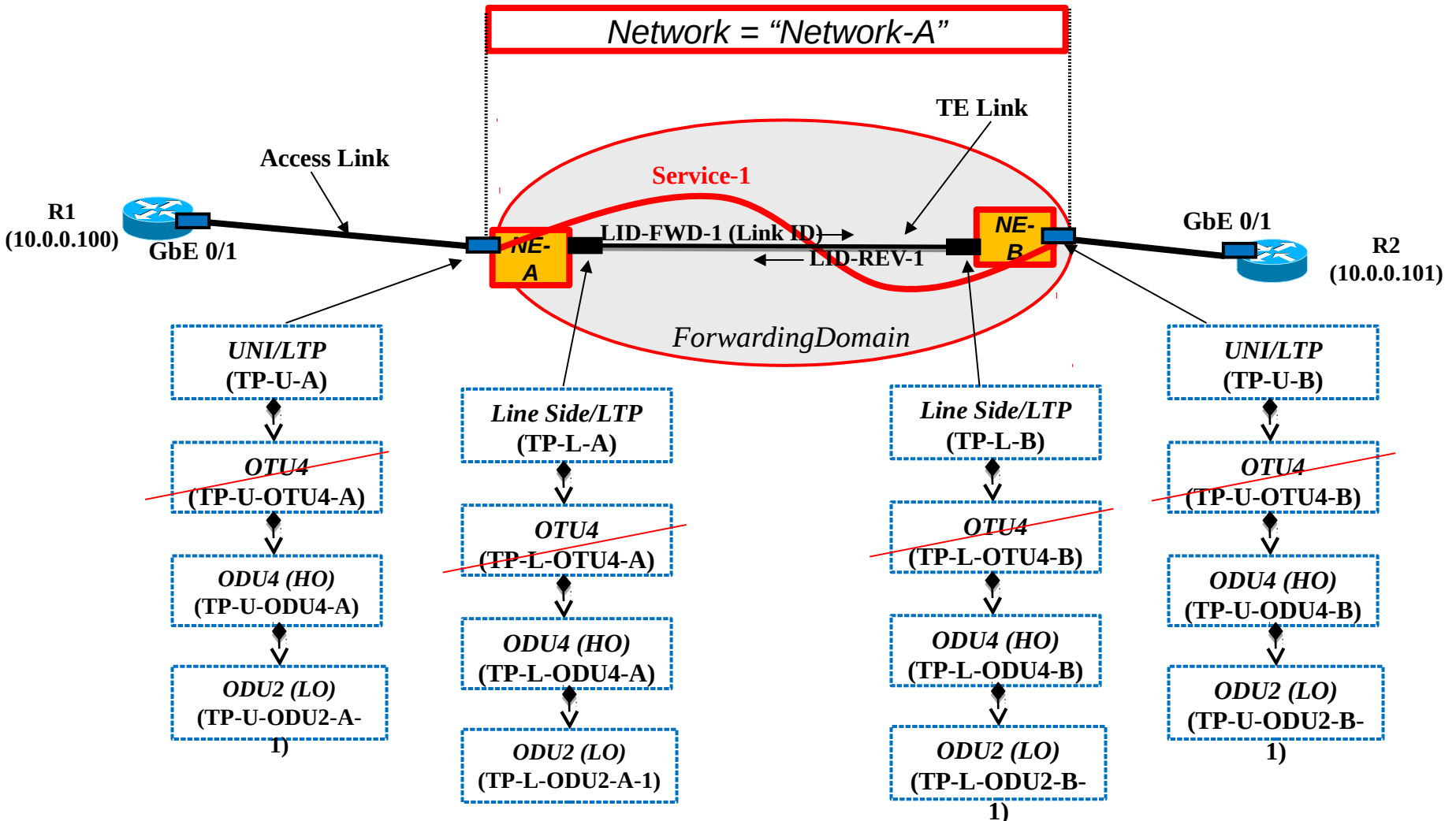
3.	High-level Modeling Requirements	4
3.1.	Generic Requirements	
3.2.	Transport Network and TE Topology Requirements	
3.2.1.	Topological Link Requirements	
3.2.2.	Topology Node Requirements	
3.2.3.	Termination Point Requirements	
3.3.	Transport Service Requirements	
3.4.	Tunnel/LSP Requirements	
4.	Scenarios	
4.1.	Single-domain Scenario	
4.2.	Multi-domain Scenario	
4.3.	Multi-layer Scenario	
4.4.	Function Summary and Related YANG Models	
5.	Function Gap Analysis on YANG Model Level	
5.1.	Topology Related Functions	
5.1.1.	Obtaining Access Point Info	
5.1.2.	Obtaining Topology	
5.1.3.	Virtual Network Operations	
5.2.	Tunnel Operations	
5.3.	Service Requests	

Bullet points of requirements that used for reviewing existing models

Scenario/use cases that used for drawing model instantiation diagram for gap analysis

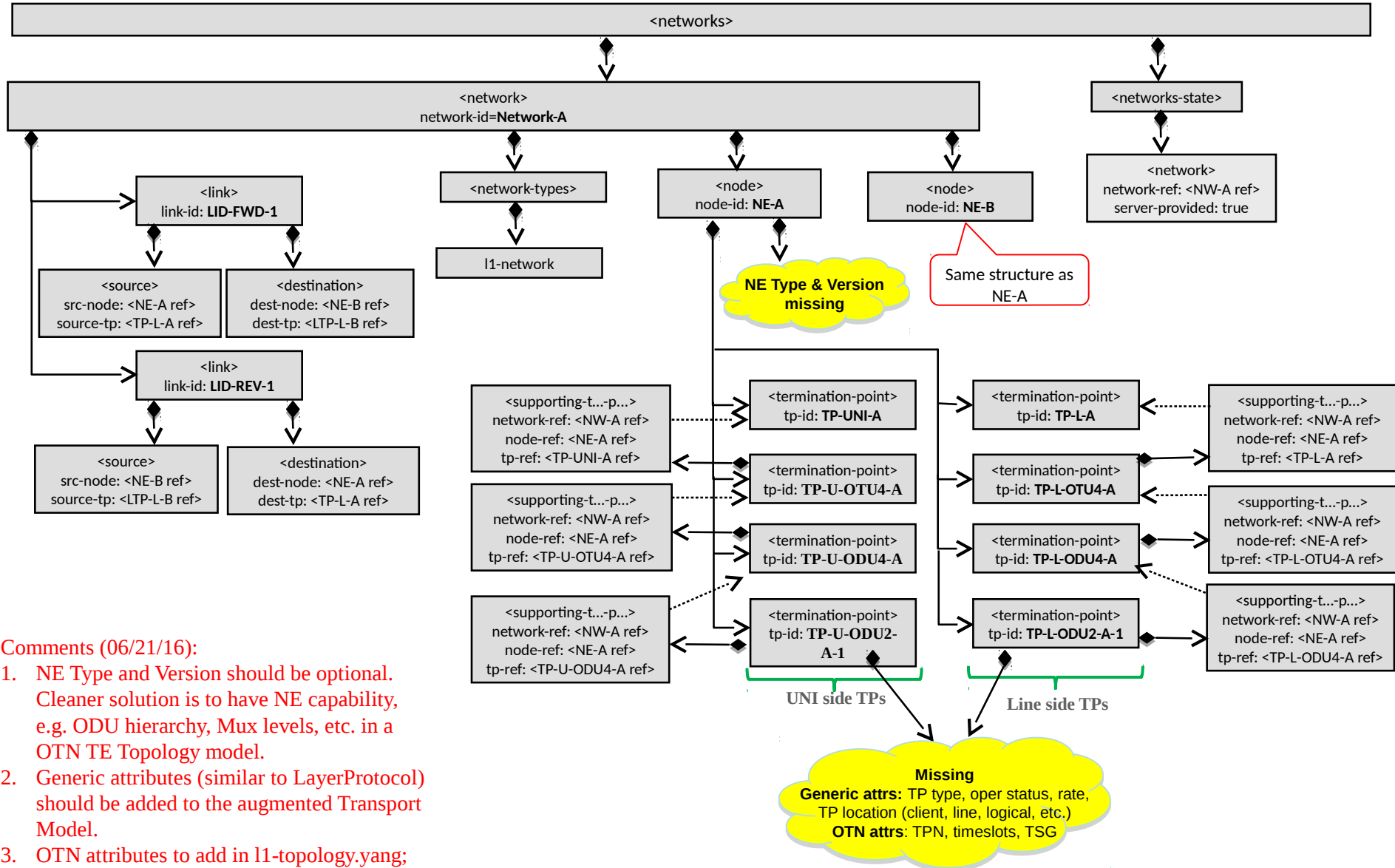
(now) high-level summary of existing model and missing pieces;
(future) a place to keep record of related models.

Instantiation Example: Point-to-Point Service for Single Provider, Single Network Topology

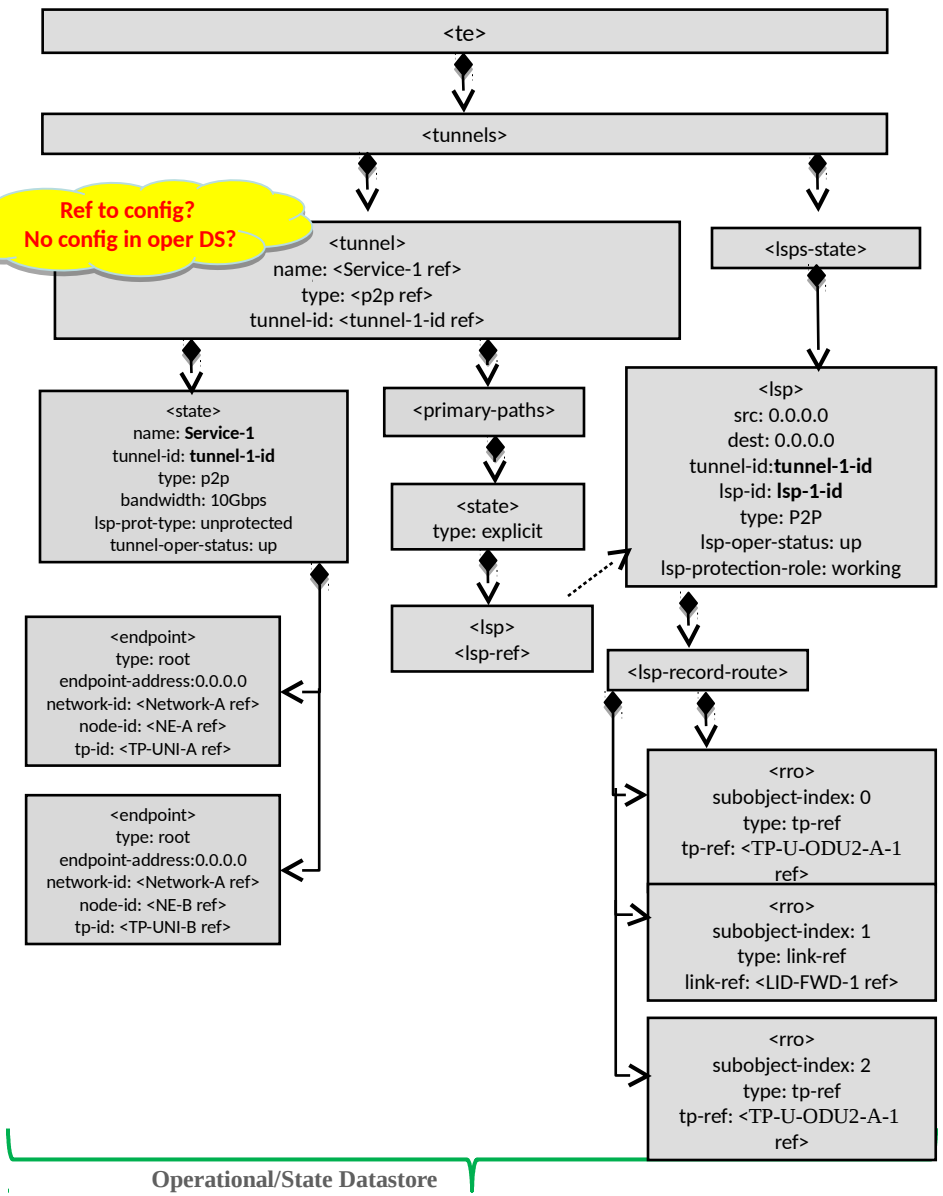
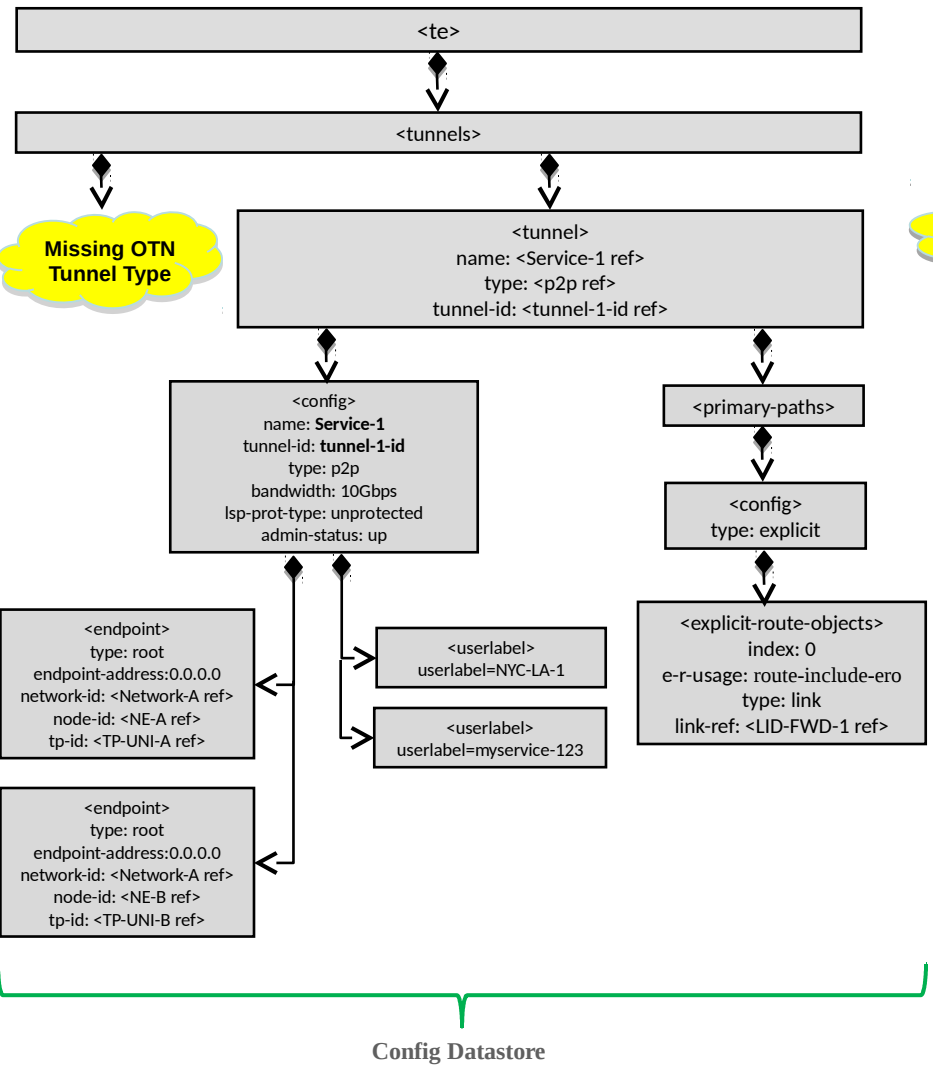


Comments (06/21/16): Remove OTU4. Split ODU4 into ODU4 Edge Point and ODU4. Links associated with ODU4 edge points.

Network Topology (i2rs) Model Instantiation



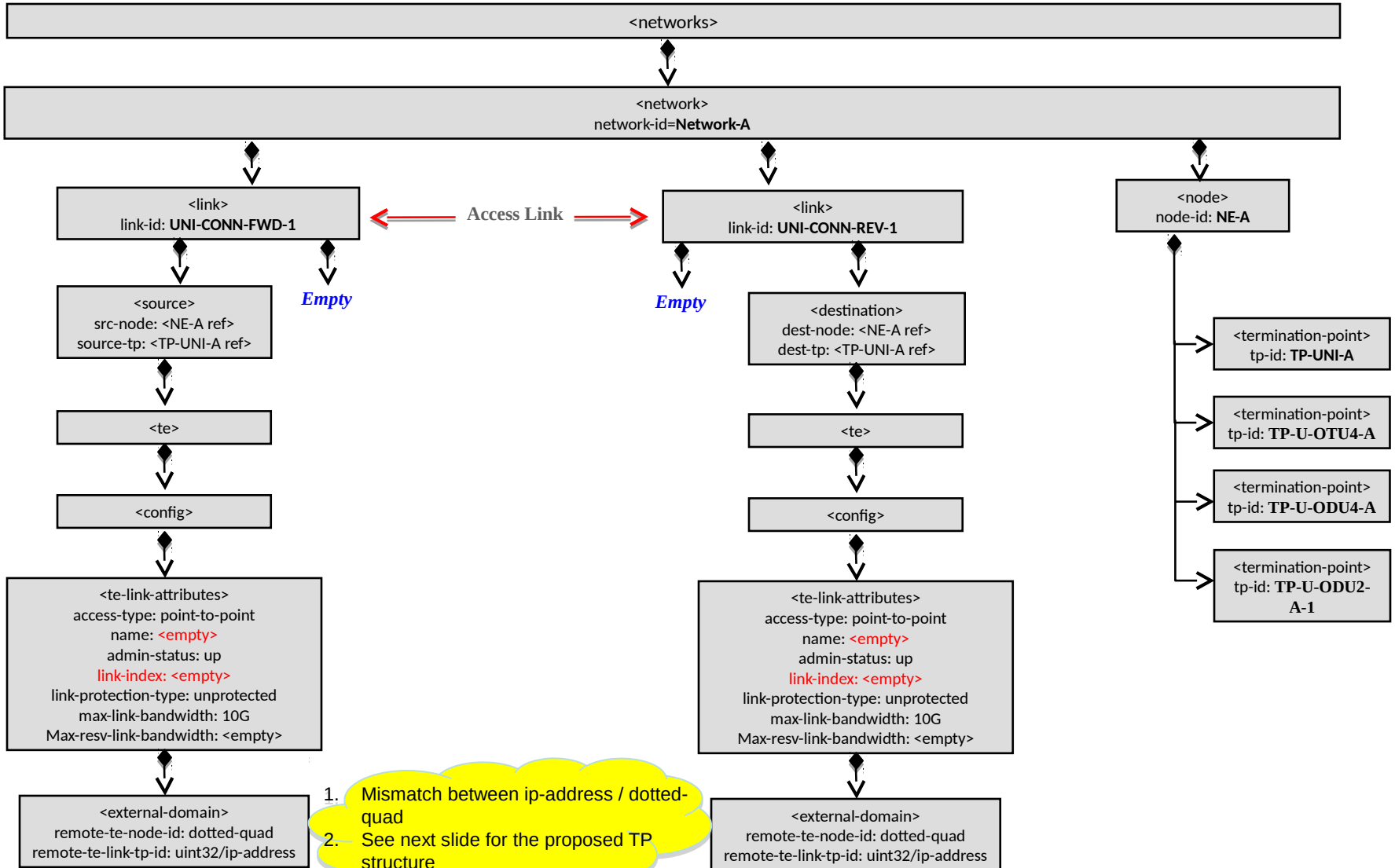
TEAS Tunnel Model Instantiation



Action (06/21/16):
1: to propose an extension to te.yang for otn-tunnel

Access Link Modeling using Remote Link T

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Next Steps

- Request comments on the document and overall exercise
- Committed Next Steps:
 - Fill in empty sections and add more ongoing analysis to the document
 - Provide continuous feedbacks to existing draft/model authors based on the analysis (already doing so for te-topology and te-tunnel drafts)
 - Propose new models to fill gaps found during the model & use case analysis
- Potential Next Steps:
 - *Address Multi-Model environment*: Joint work with other SDOs (ONF, MEF) to provide mapping guidelines between YANG models from various SDOs for various use cases.
- And finally, shorten the name of this document 