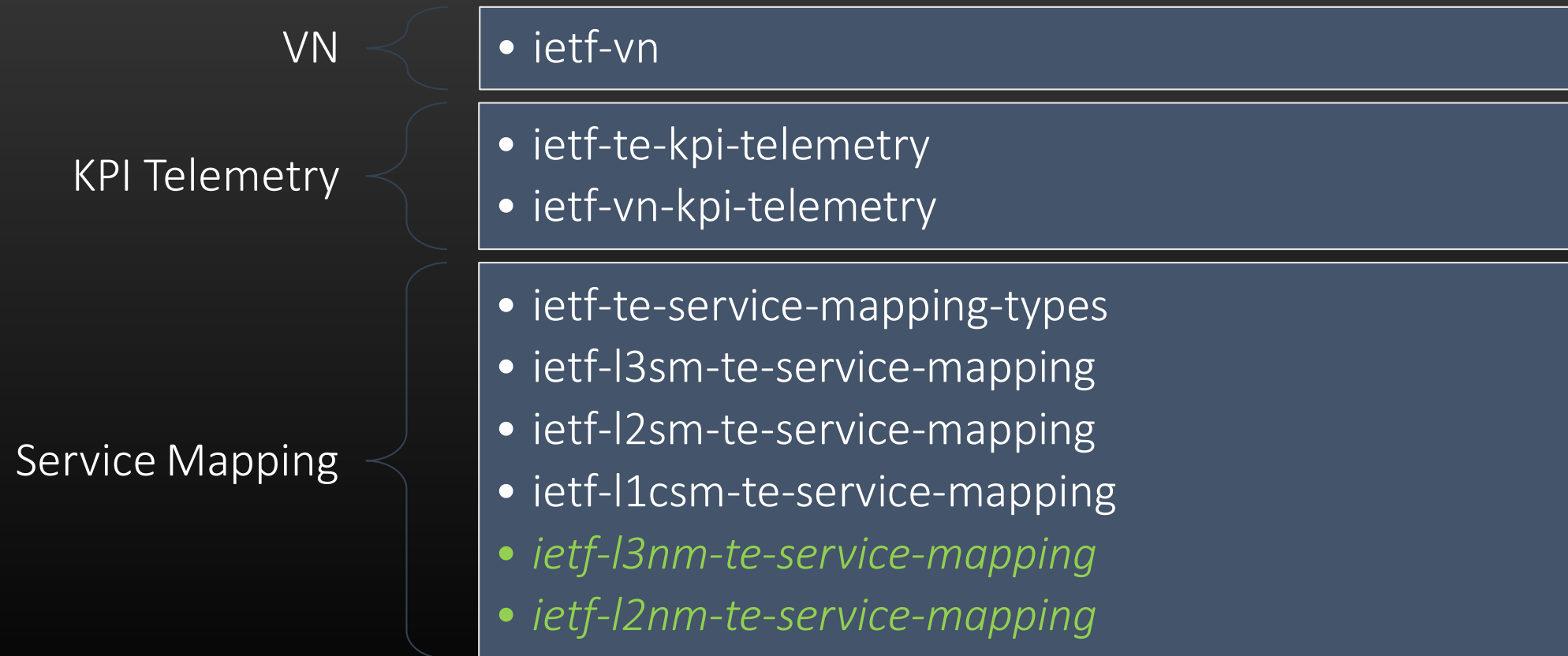


ACTN/VN YANG Models

draft-ietf-teas-actn-vn-yang-09
draft-ietf-teas-actn-pm-telemetry-autonomics-03
draft-ietf-teas-te-service-mapping-yang-04

Dhruv Dhody, Young Lee, Daniele Ceccarelli, Igor Bryskin, Bin Yeong Yoon,
Satish Karunanithi, Ricard Vilalta, Daniel King, Giuseppe Fioccola, Qin Wu,
Jeff Tantsura

YANG model overview

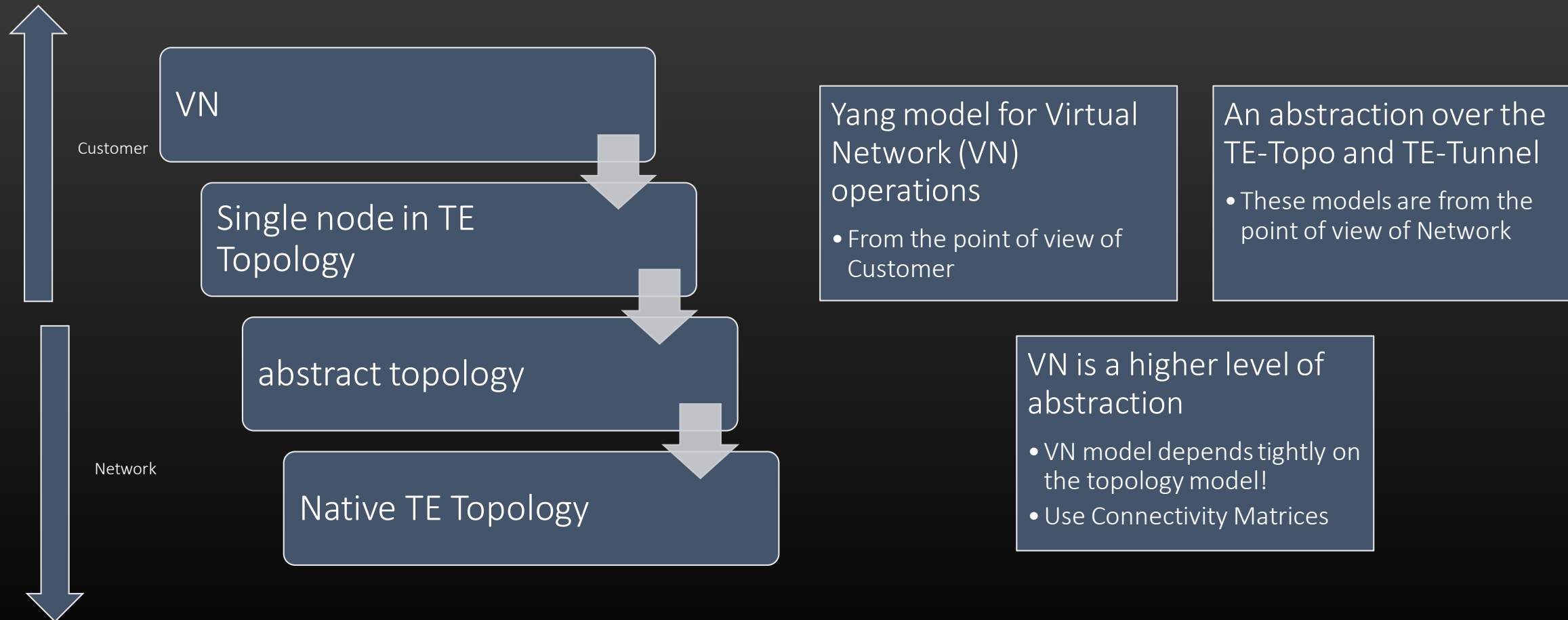


VN YANG

draft-ietf-teas-actn-vn-yang-09

ietf-vn

VN Yang



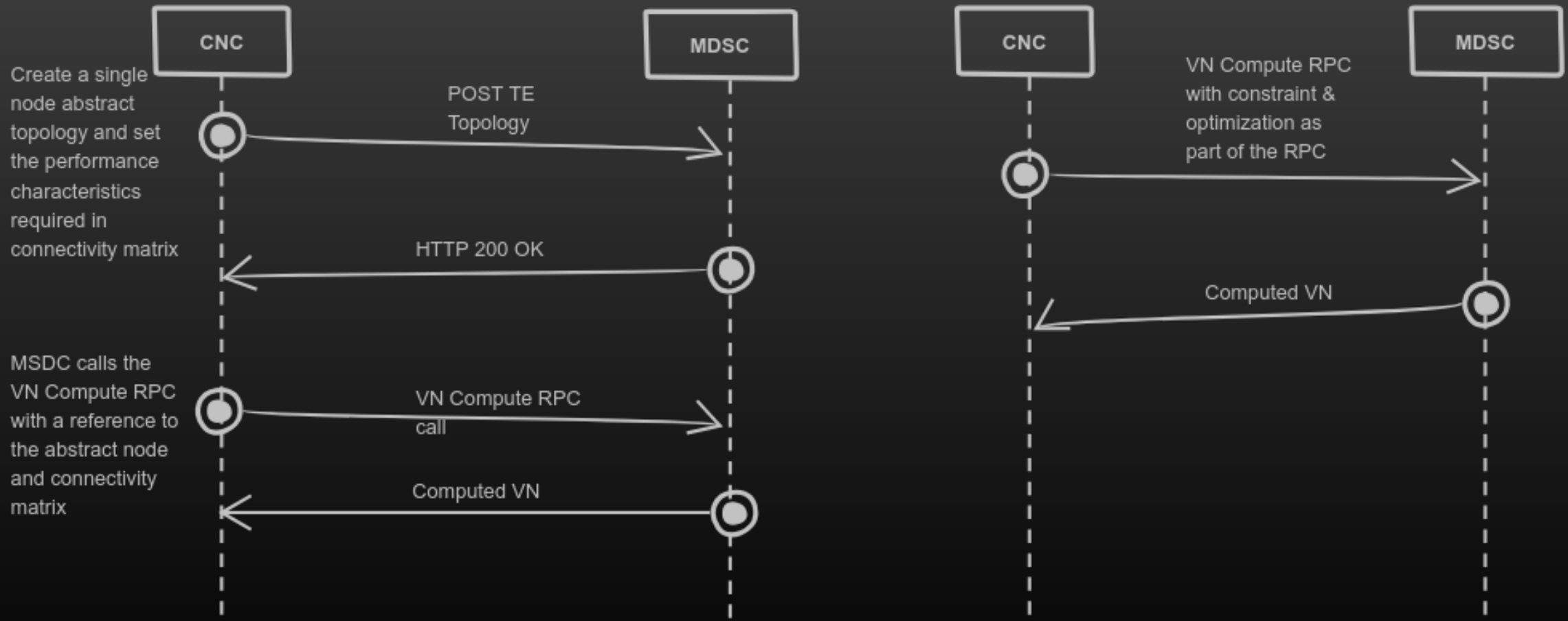
Updates since -07

- Typedef for vn-id, vn-member-id, access-point-id of type inet:uri
 - It was uint32 before
 - The precise structure is up to the implementation
 - In alignment with RFC 8345
- A new leaf max-bandwidth in VNAP
 - Comment from Kenichi Ogaki
 - In alignment with RFC 8453
- Reusing te-types:te-path-disjointness
- Appendix – How to set network performance constraints
- Editorial and YANG changes as per comments from Tom Petch
 - Further comments are pending

Suggested Change

- Operators from KDDI have a requirement for VN-Compute RPC
 - Allow this RPC to be used independently to get result in a single call
 - Currently this is done via two separate transactions
 - Create abstract topology and set constraints in connectivity-matrix
 - Call VN-Compute RPC
- Suggested change to “optionally” include two existing groupings in VN-Compute
 - uses te-types:generic-path-constraints
 - uses te-types:generic-path-optimization
- Authors consider this as a reasonable request and want to make this change in the next update. Any objections?

VN Compute Flow



KPI Telemetry Yang

draft-ietf-teas-actn-pm-telemetry-autonomics-03

ietf-te-kpi-telemetry

ietf-vn-kpi-telemetry

YANG models for VN/TE Telemetry & Network Autonomics

- YANG data models that support: Performance Monitoring (PM) Telemetry and scaling intent mechanism for TE-Tunnels and VNs to allow customers to subscribe to certain KPI PM.
 - ietf-te-kpi-telemetry
 - ietf-vn-te-kpi-telemetry
- Customer to subscribe and monitor KPI of interest on a particular TE tunnel or a VN.
- Customer could also program autonomic scaling intent

Update since -01

- Various Editorial things
 - Requirement Language in the draft and the YANG
 - Updated Prefix and References Table
- Pending Comment from Greg Mirsky
 - The performance metrics at the VN level are aggregated values and thus need a reference to the measurement methodology
 - Applicable for latency jitter, and packet loss rate etc.
 - Add description in YANG to explain
 - Help / Suggestions / Thoughts ?

TE Service mapping YANG

draft-ietf-teas-te-service-mapping-yang-04

[ietf-te-service-mapping-types](#)

[ietf-l3sm-te-service-mapping](#)

[ietf-l2sm-te-service-mapping](#)

[ietf-l1csm-te-service-mapping](#)

[ietf-l3nm-te-service-mapping](#)

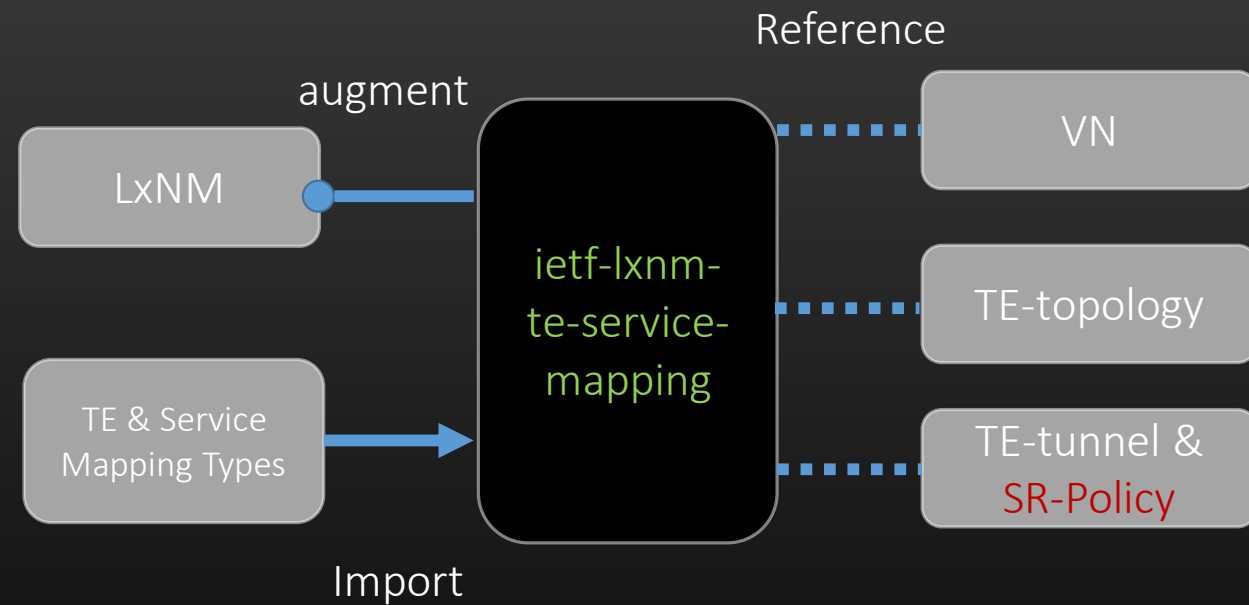
[ietf-l2nm-te-service-mapping](#)

TE Service Mapping Model

- The role of TE-service Mapping model is to create a mapping relationship between
 - Services – L3SM, L2SM, L1CSM, etc.
 - TE topo, TE tunnel and the VN
- This mapping facilitates a seamless service operation with underlay-TE network visibility and control
- Allow monitoring and diagnostics on how the service request are mapped to underlying TE resources
- Support for various map-types

Support for Network Models

- Two new models
 - ietf-l3nm-te-service-mapping
 - ietf-l2nm-te-service-mapping
- Augments
 - L3NM
 - L2NM
 - WG I-Ds in OPSAWG
- Reuse the grouping from common types



TE Mapping Template

- A Template containing TE constraints and optimization criteria
 - Using existing te-types groupings from RFC 8776
 - Added in the ietf-te-service-mapping-types
- This container allows a VPN service to provide TE mapping without first creating and committing TE resources using the TE-Tunnel/VN models.
 - Thus VPN services can be created by providing the TE constraints/criteria first
 - Later when the VN/TE tunnels are actually created, the mapping is changed from the template to the VN/TE tunnels.

Other update since -02

- Added support for mapping to SR-Policy
- Various Editorial things
 - Requirement Language in the draft and the YANG
 - Updated Prefix and References Table
 - YANG guidelines
- Pending
 - References for availability-type
- New contributors – Oscar, Anton, Samier and Carlo

```
+--rw te-service-mapping!  
  +--rw te-mapping  
    +--rw map-type?          identityref  
    +--rw availability-type?  identityref  
    +--rw (te)?  
      +--:(vn)  
        | +--rw vn-ref?  
        |   -> /vn:vn/vn-list/vn-id  
      +--:(te-topo)  
        | +--rw vn-topology-id?  
        | |   te-types:te-topology-id  
        | +--rw abstract-node?  
        |   -> /nw:networks/network/node/node-id  
      +--:(te-tunnel)  
        | +--rw te-tunnel-list*      te:tunnel-ref  
        | +--rw sr-policy*  
        |   [policy-color-ref policy-endpoint-ref]  
        |   {sr-policy}?  
        | +--rw policy-color-ref    leafref  
        | +--rw policy-endpoint-ref leafref  
      +--:(te-mapping-template) {template}?  
        +--rw te-mapping-template-ref? leafref
```

Thank You!