Traffic Engineering and Service Mapping Yang Model

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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 and tunnel model via the ACTN VN Model

• This TE-service mapping model is needed to bind L3VPN, L2VPN, L1CSM specific service model with underlying TE-specific parameters.

• This binding will facilitate a seamless service operation with underlay-TE network visibility.
1) Customer configures the L3VPN service using the L3SM model with new VN created and binded to the service!
1) Customer configures the L3VPN service using the L3SM model with new VN created and binded

2) MDSC auto-instantiate the VN based on the end-point information in the service model
1) Customer configures the L3VPN service using the L3SM model with new VN created and binded

2) MDSC auto-instantiate the VN based on the end-point information in the service model

3) Also add a mapping

**Example – Config (L3SM)**

**L3SM**

**TE-service mapping**

**ACTN VN**

**MDSC**

**PNC**

**PNC**
Example – Operational (L3SM)

Customer finds the VN that maps with the L3SM service

L3SM

TE-service mapping

ACTN VN

MDSC

PNC

PNC
Example – Operational (L3SM)

Customer gets the VN operational state of each VN-member
Yang Model

- **Service Mapping**
  - L3SM, L2SM, L1CSM with ACTN VN Ref.
  - Map-type expresses VN requirement wrt. Tunnel binding/selection preference.

- **Site Mapping**
  - L3/2/1 VPN Site with ACTN AP Ref.

- Once te-service-mapping model is activated over CMI, actn-vn-yang and te-topology models will be used for instantiation of VNs over the TE networks.
Map Type

New VN/Tunnel Binding
• Create a new VN based on the service Qos
• This is binded to the service (and no other can use it – hard isolation)

VN/Tunnel Selection
• Select existing VN/tunnel at the controller or device
• Customer can view the VN used for its service

VN/Tunnel Modify
• Controller can make changes to existing VN/tunnel
• Cannot create new VN
Next Step

• The authors believe that this draft is a good base for WG adoption.
Thank you!