Traffic Engineering and Service Mapping Yang Model

draft-lee-teas-te-service-mapping-yang-06

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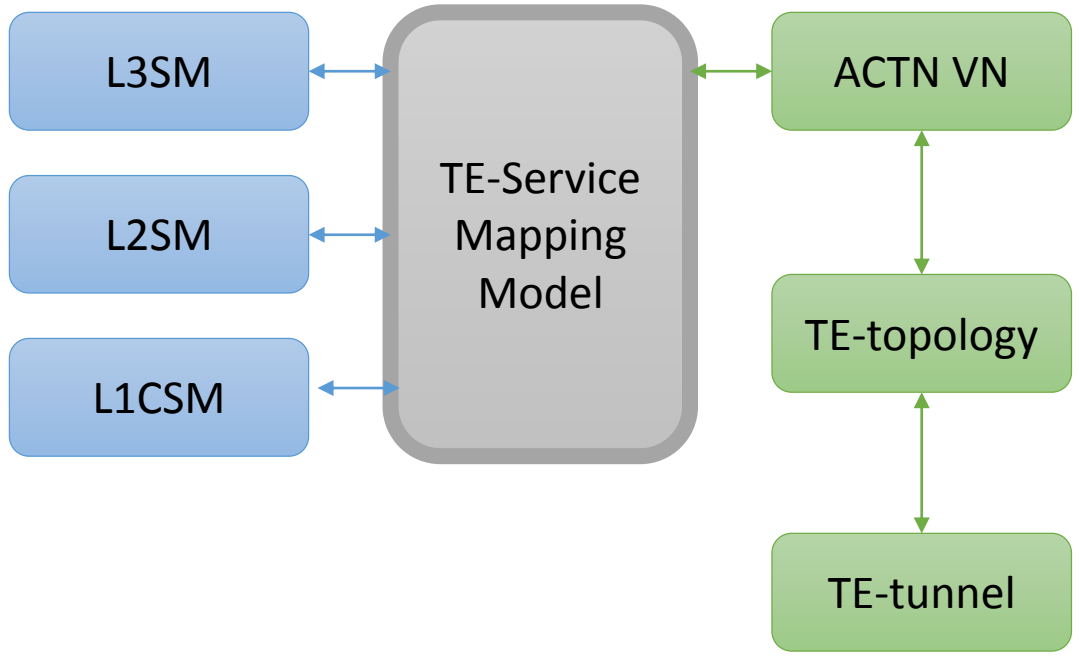
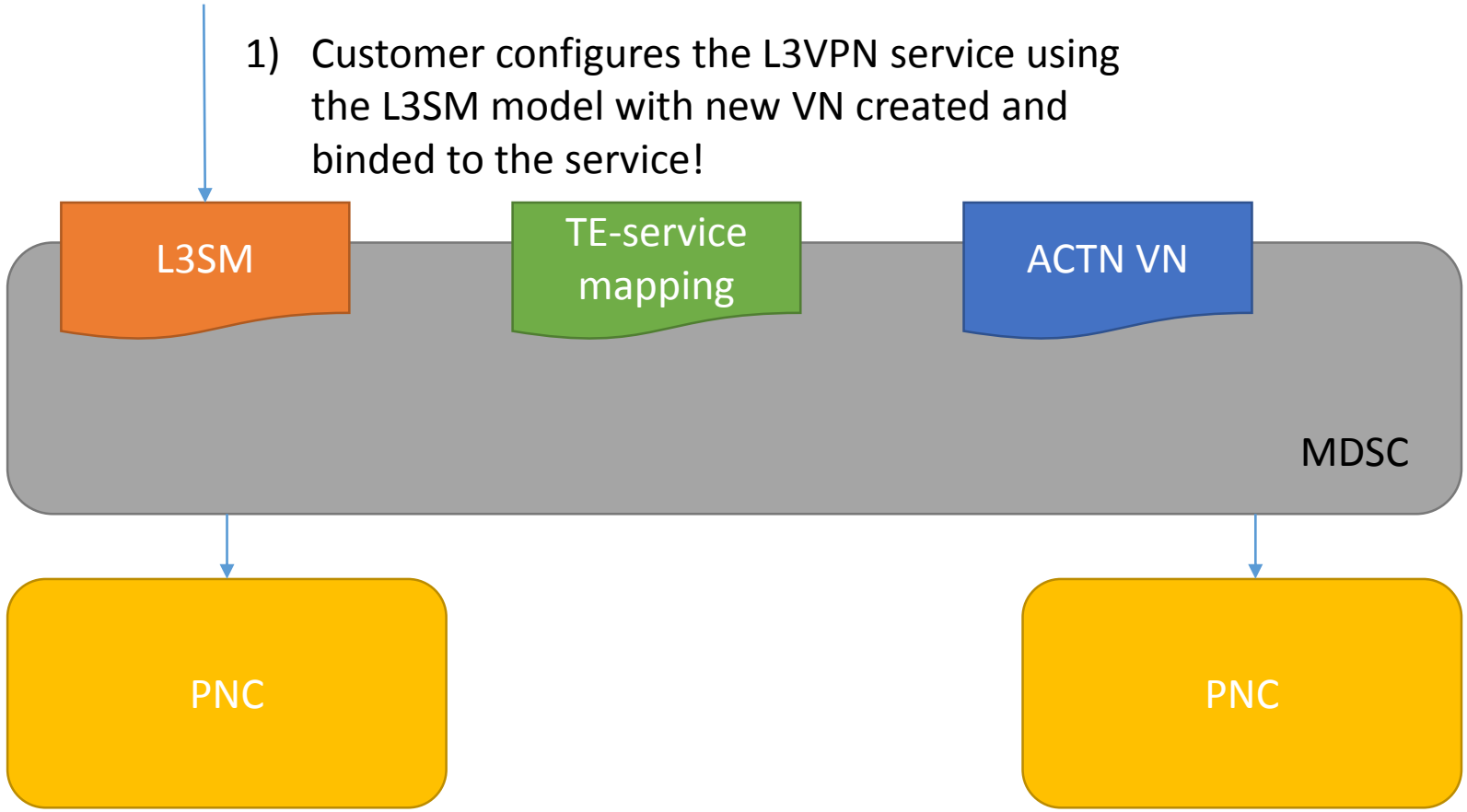
TE-Service Mapping Model

- 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.

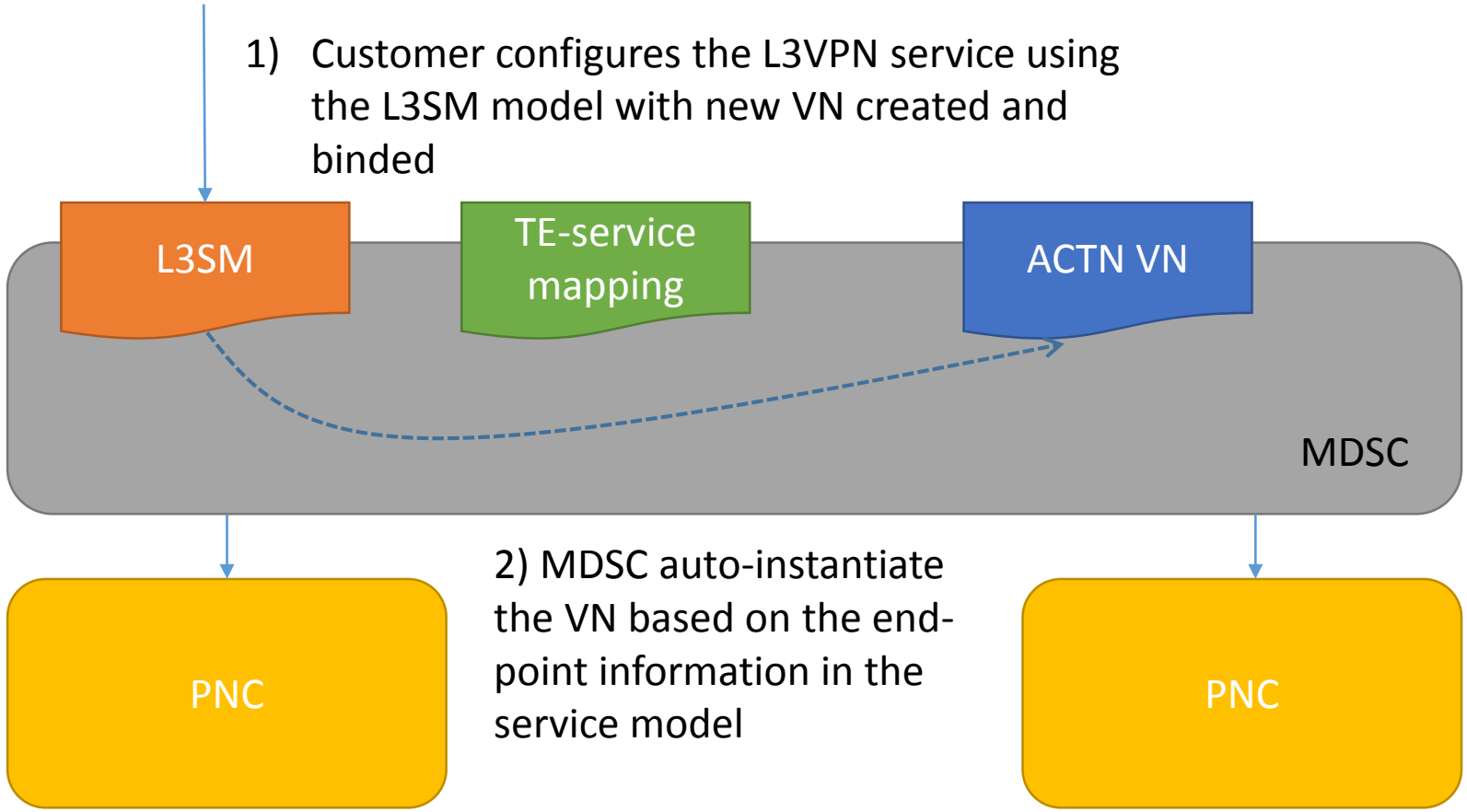


Example – Config (L3SM)

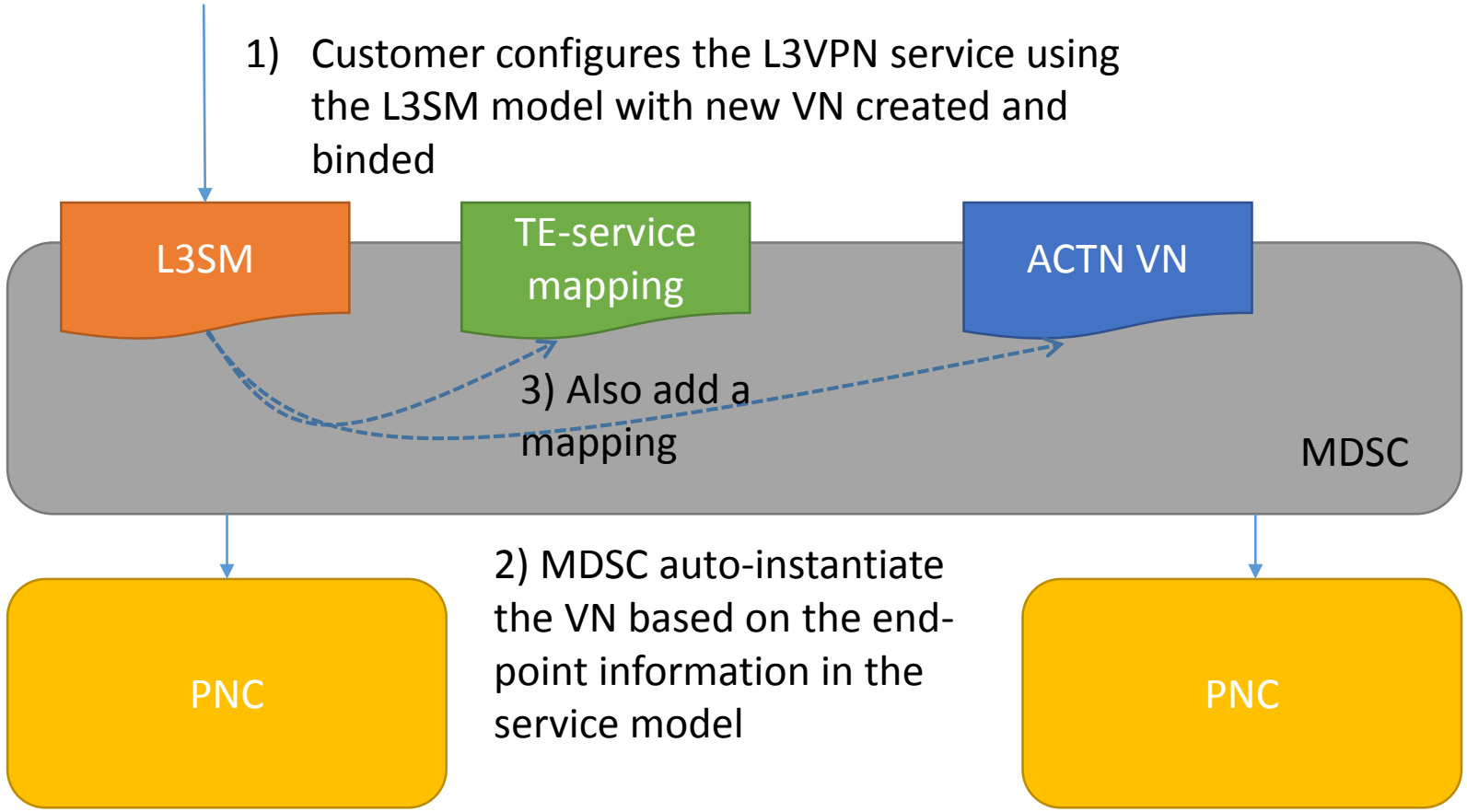
1) Customer configures the L3VPN service using the L3SM model with new VN created and binded to the service!



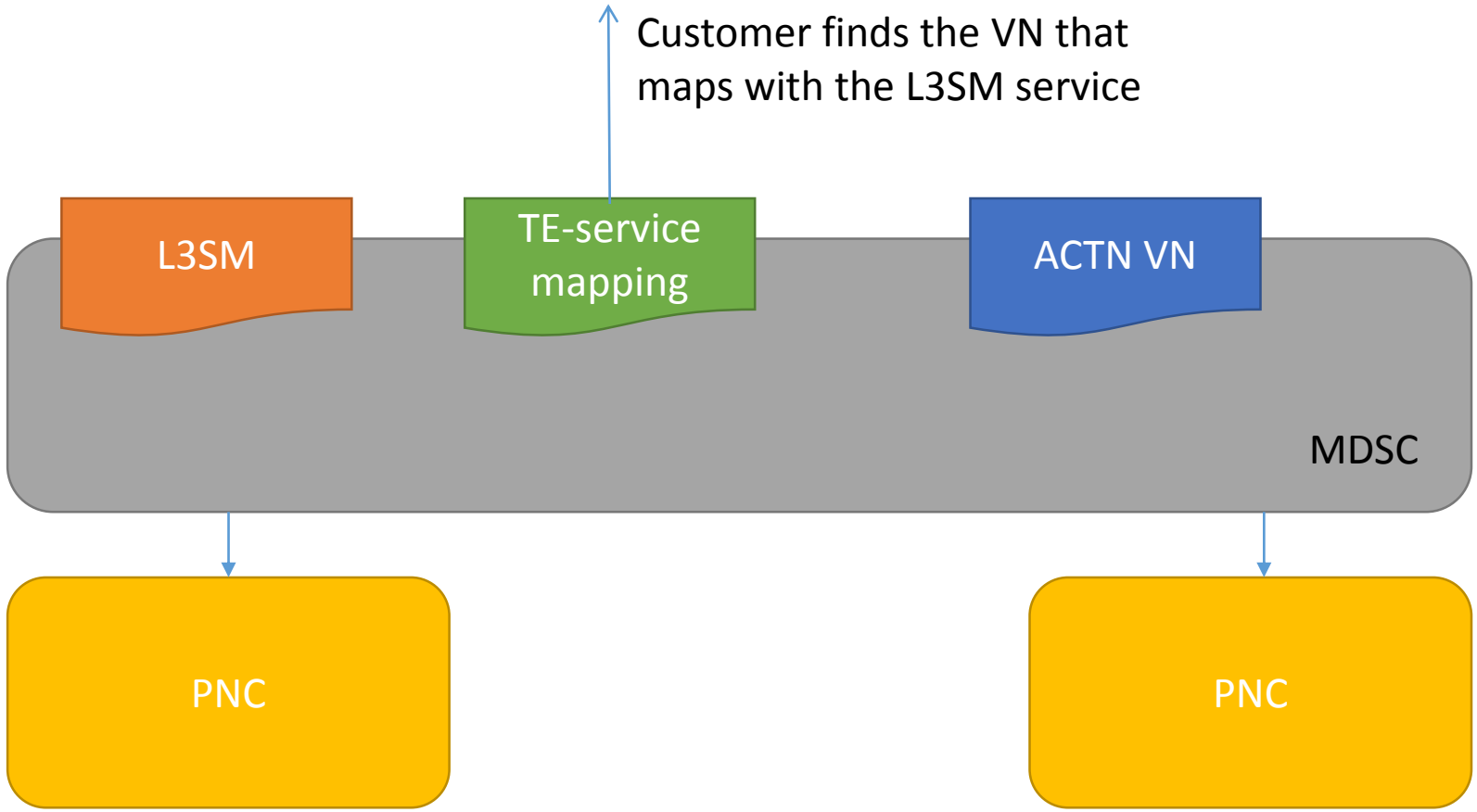
Example – Config (L3SM)



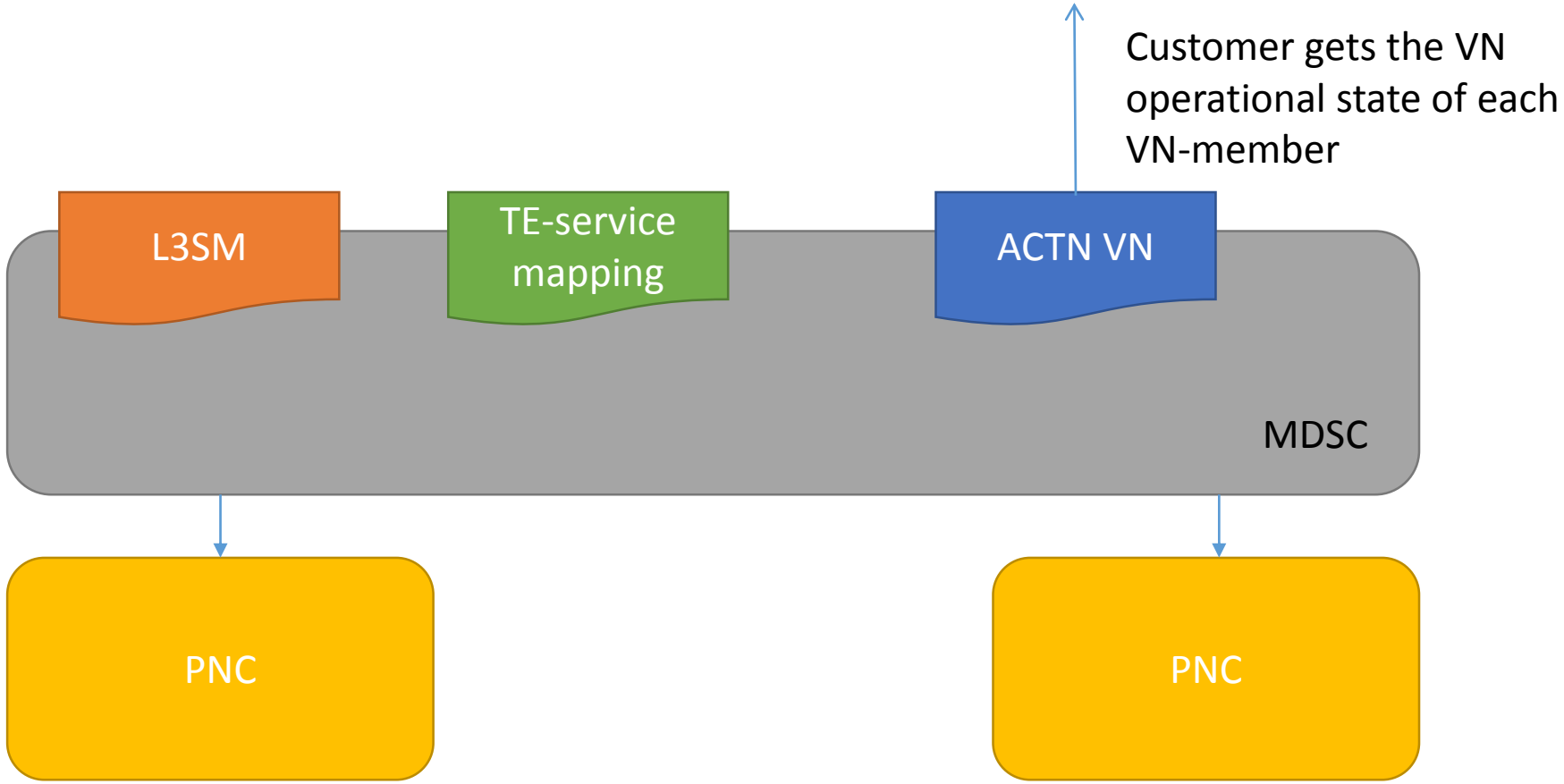
Example – Config (L3SM)



Example – Operational (L3SM)



Example – Operational (L3SM)



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.

```
module: ietf-te-service-mapping
    +--rw te-service-mapping
       +--rw service-mapping
       |  +--rw mapping-list* [map-id]
       |     +--rw map-id         uint32
       |     +--rw map-type?      map-type
       |     +--rw (service)?
       |     |  +--:(l3vpn)
       |     |  |  +--rw l3vpn-ref?     -> /l3:l3vpn-svc/vpn-services/vpn-
service/vpn-id
       |     |  +--:(l2vpn)
       |     |  |  +--rw l2vpn-ref?     -> /l2:l2vpn-svc/vpn-services/vpn-
service/vpn-id
       |     |  +--:(l1vpn)
       |     |     +--rw l1vpn-ref?     -> /l1:l1cs/service/service-
list/subscriber-l1vc-id
       |     +--rw actn-vn-ref?   -> /vn:actn/vn/vn-list/vn-id
       +--rw site-mapping
          +--rw mapping-list* [map-id]
             +--rw map-id         uint32
             +--rw (service)?
             |  +--:(l3vpn)
             |  |  +--rw l3vpn-ref?     -> /l3:l3vpn-svc/sites/site/site-id
             |  +--:(l2vpn)
             |  |  +--rw l2vpn-ref?     -> /l2:l2vpn-svc/sites/site/site-id
             |  +--:(l1vpn)
             |     +--rw l1vpn-ref?     -> /l1:l1cs/access/uni-list/UNI-ID
             +--rw actn-ap-ref?   -> /vn:actn/ap/access-point-list/access-
   point-id
```

Map Type

New VN/Tunnel Binding	VN/Tunnel Selection	VN/Tunnel Modify
• Create a new VN based on the service Qos • This is binded to the service (and no other can use it – hard isolation)	• Select existing VN/tunnel at the controller or device • Customer can view the VN used for its service	• 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