draft-lee-teas-actn-poi-applicability-00

Applicability of ACTN
to support Packet and Optical Integration

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Agenda

- Scope of the draft:
  - Applicability of ACTN to Packet Optical Integration (POI)
  - POI in the context of L2/L3VPN service provisioning
  - Service and network orchestration
- Definition of POI reference architecture including ACTN components as well as non-ACTN components that are necessary for the end-to-end service fulfilment.
- TE & Service mapping function:
  - "One of the important functions the MDSC performs is to identify which TE Tunnels should carry the L3VPN traffic and to relay this information to the domain SDN controllers to ensure proper VRF table be populated according to the TE binding requirement for the L3VPN. This function is referred to as TE & service mapping function."
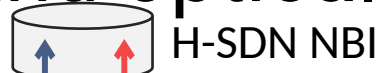
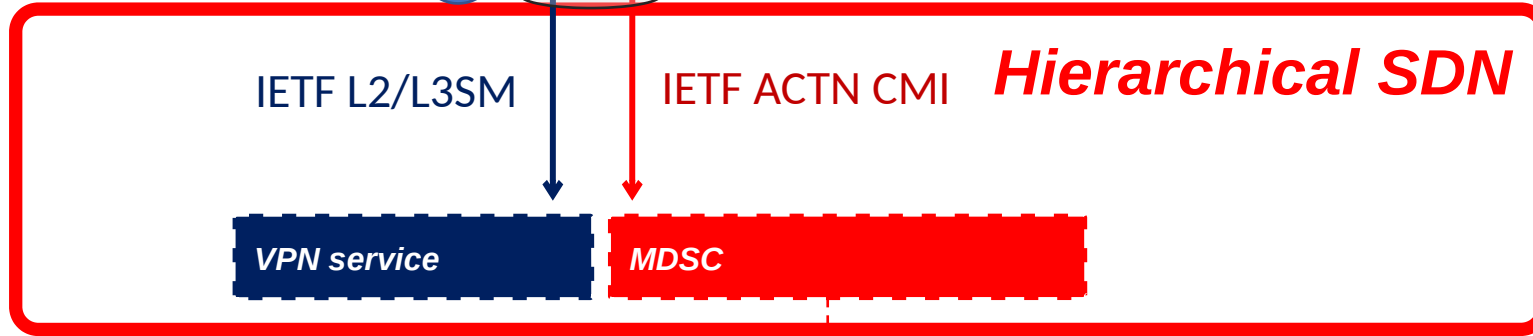# Recap of ACTN and L2/L3VPN services
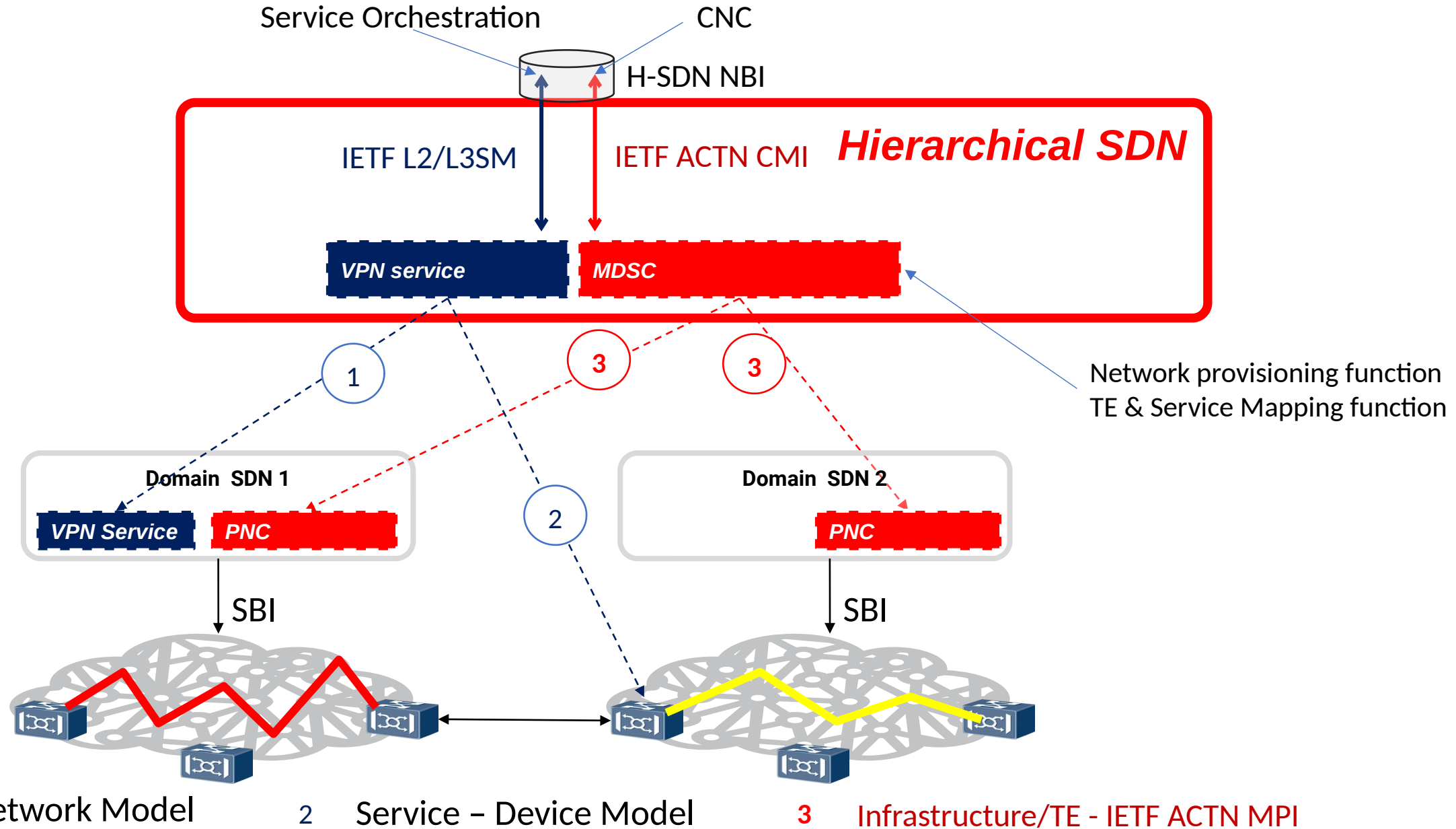
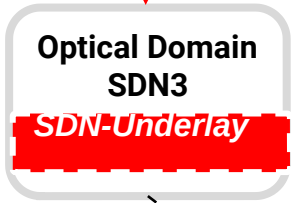# POI with multiple packet and optical domains - workflow
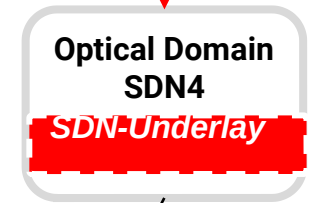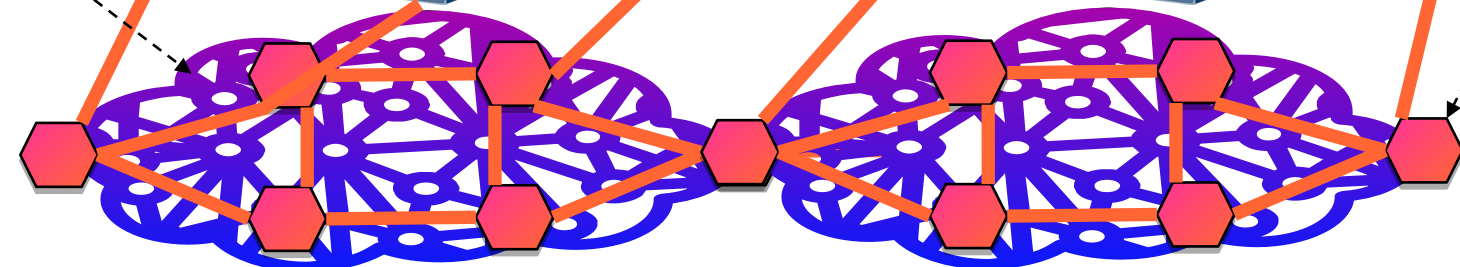
POI with multiple packet and optical domains - workflow
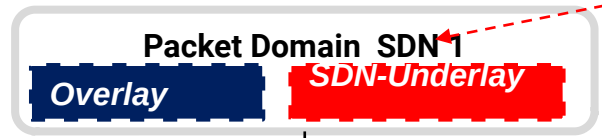
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Optical tunnel creation/reuse (hard isolation vs sharing). Reporting to MDSC

1 H-SDN NBI

Hierarchical SDN

IETF L2/L3SM

IETF ACTN CMI

VPN service **MDSC**

MPI   MPI

Packet Domain SDN 1
Overlay   **SDN-Underlay**

Packet Domain SDN 2
SDN-Underlay

2

2

Optical Domain SDN3
SDN-Underlay

SBI

SBI

Optical Domain SDN4
SDN-Underlay

CE

CE
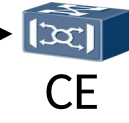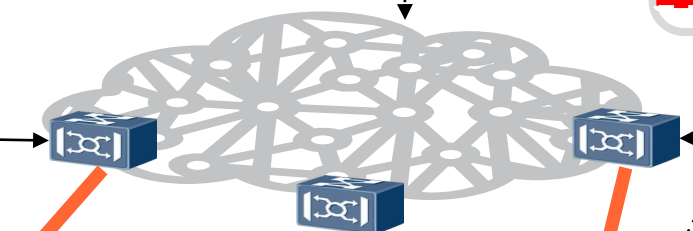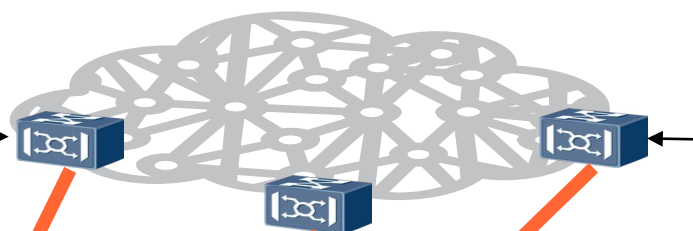
SBI
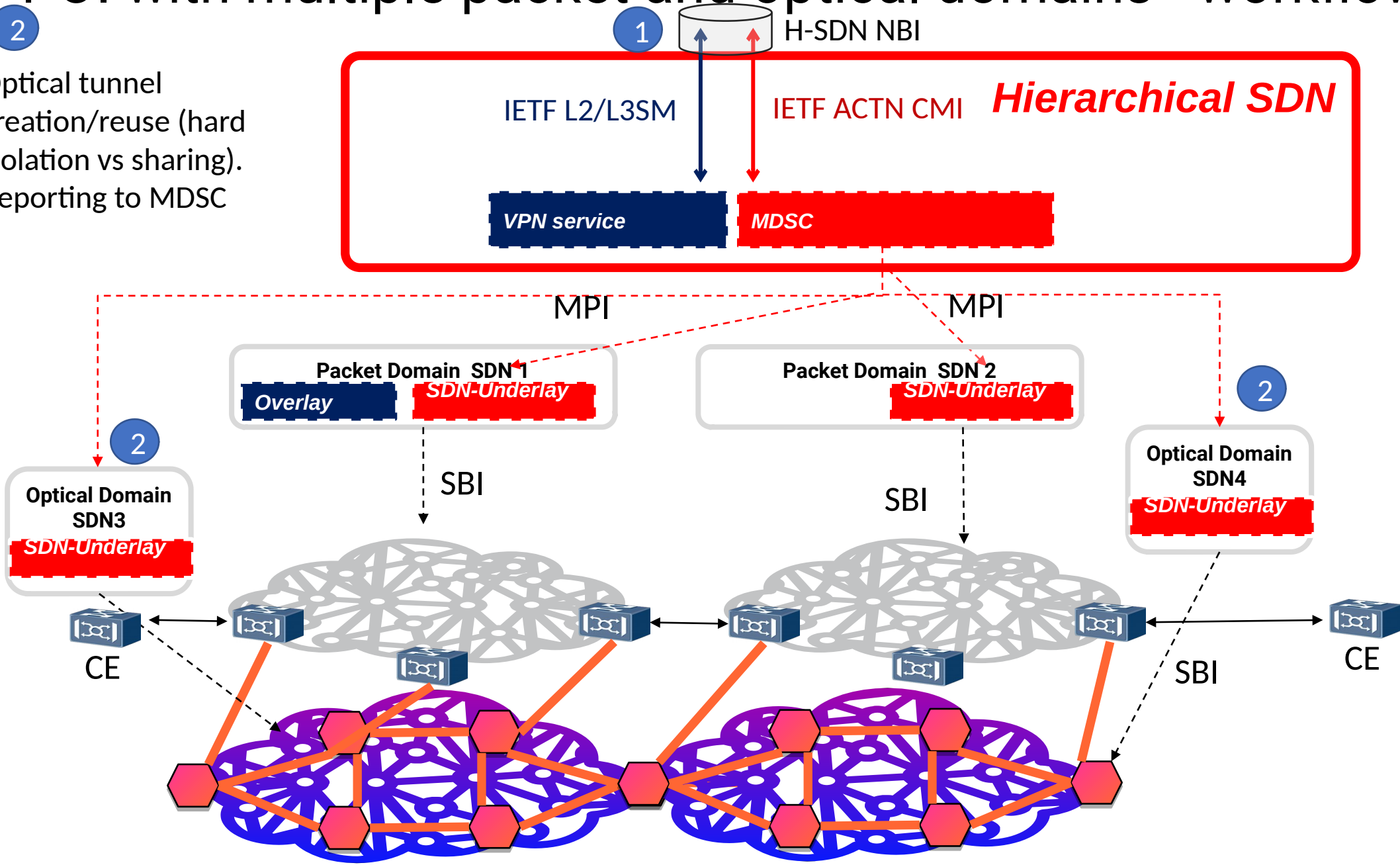
POI with multiple packet and optical domains - workflow

④

Service configuration function to identify interfaces/labels on PE nodes and convey the info to SDN controllers for VPN configuration (BGP and VRF)
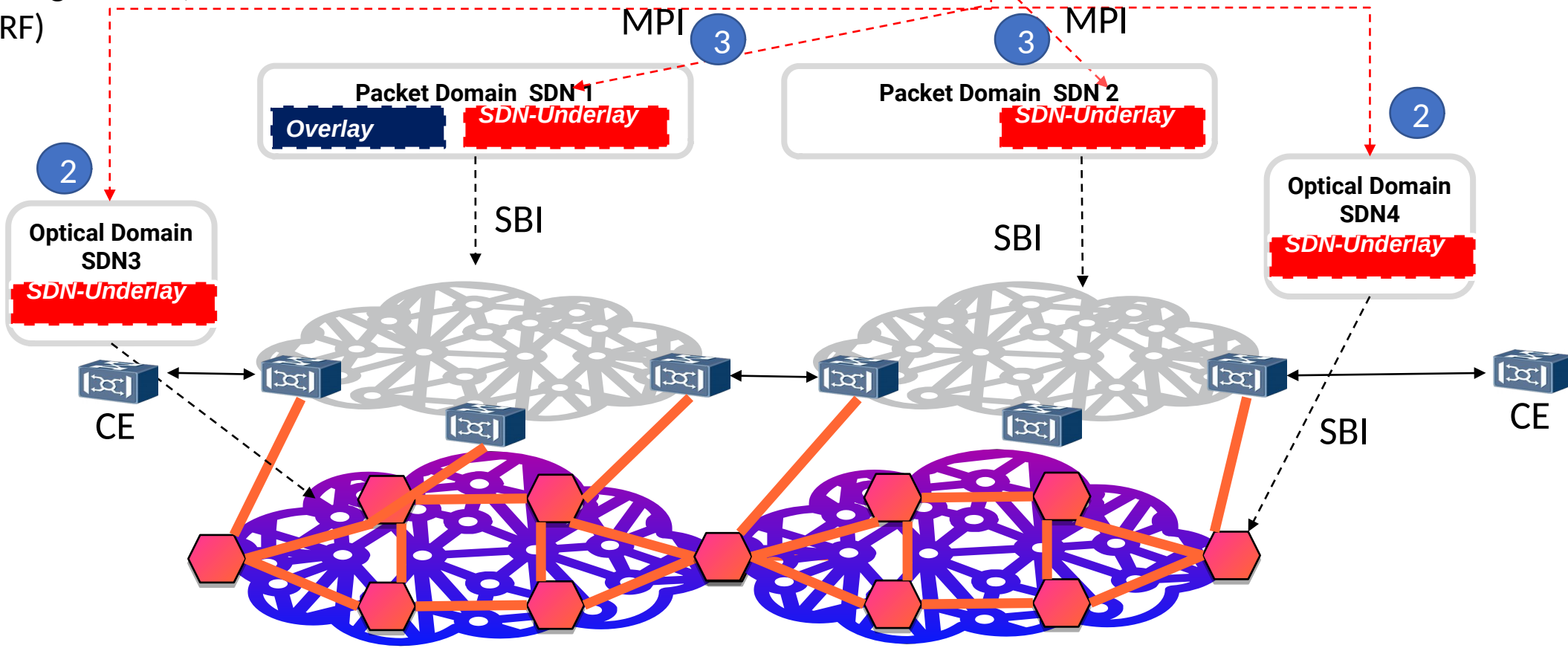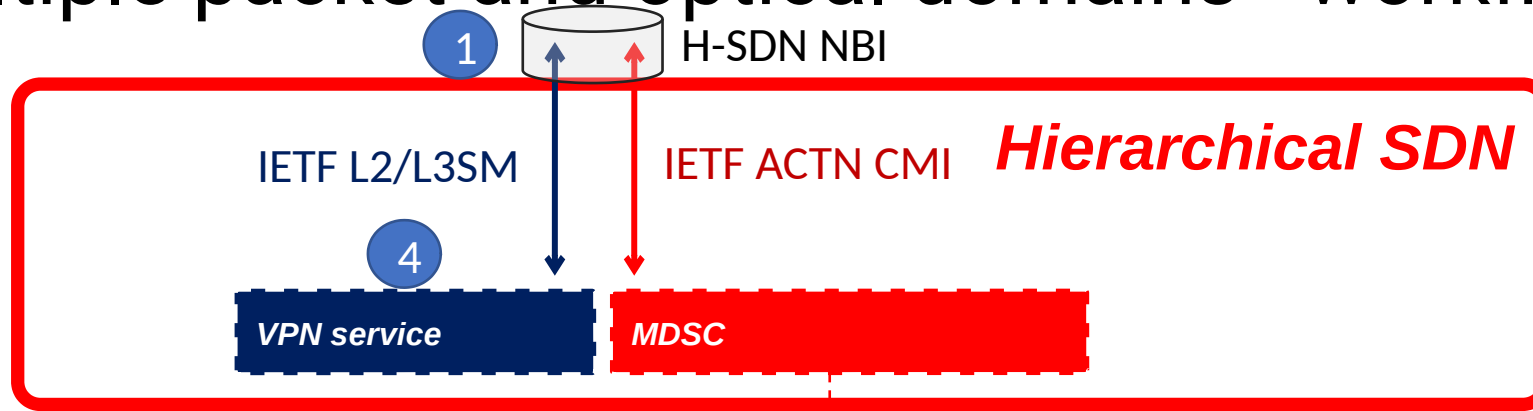
① H-SDN NBI

Hierarchical SDN

IETF L2/L3SM

IETF ACTN CMI

④ **VPN service**

MDSC

MPI ③ MPI ③

Packet Domain SDN 1

Overlay **SDN-Underlay**

Packet Domain SDN 2

SDN-Underlay

②

Optical Domain SDN4

SDN-Underlay

②

Optical Domain SDN3

SDN-Underlay

SBI

SBI

SBI

CE

CE

Conclusion & Next steps

- Issues addressed:
  - Applicability of ACTN to VPN with Packet Optical Integration
  - Role of POI in hard and soft isolation scenarios
- Open points:
  - Split VPN applicability from POI? VPN could be moved to TE & Service Mapping draft?
  - Add more POI use cases?
- Further topics that need to be addressed/expanded?