

# Framework and Data Model for OTN Network Slicing

[draft-zheng-ccamp-yang-otn-slicing-00](#)

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# OTN Slicing Use Cases

- OTN provides hard pipes with deterministic SLA.
- OTN slicing is needed to support OTN-specific use cases like:
  - Leased Line Services with OTN
  - Co-construction and Sharing
  - Wholesale of optical resources
  - Vertical dedicated network with OTN

# OTN Slicing Framework

- An OTN slice is a collection of OTN network resources that is used to establish a logically dedicated OTN virtual network over one or more OTN networks
- Some of the SLOs of an OTN slice are expressed in OTN-specific way. Generic SLOs follow the definition in
  - Bandwidth – number / type of ODU/OSU slots
  - Resources/labels – OTN tributary slots + tributary ports
- Relationship with the IETF network slice YANG model (draft-liu-teas- transport-network-slice-yang-01) is for further investigation
  - Possible to augment the model defined by draft-liu-teas- transport-network-slice-yang-01

# OTN Slicing Interfaces

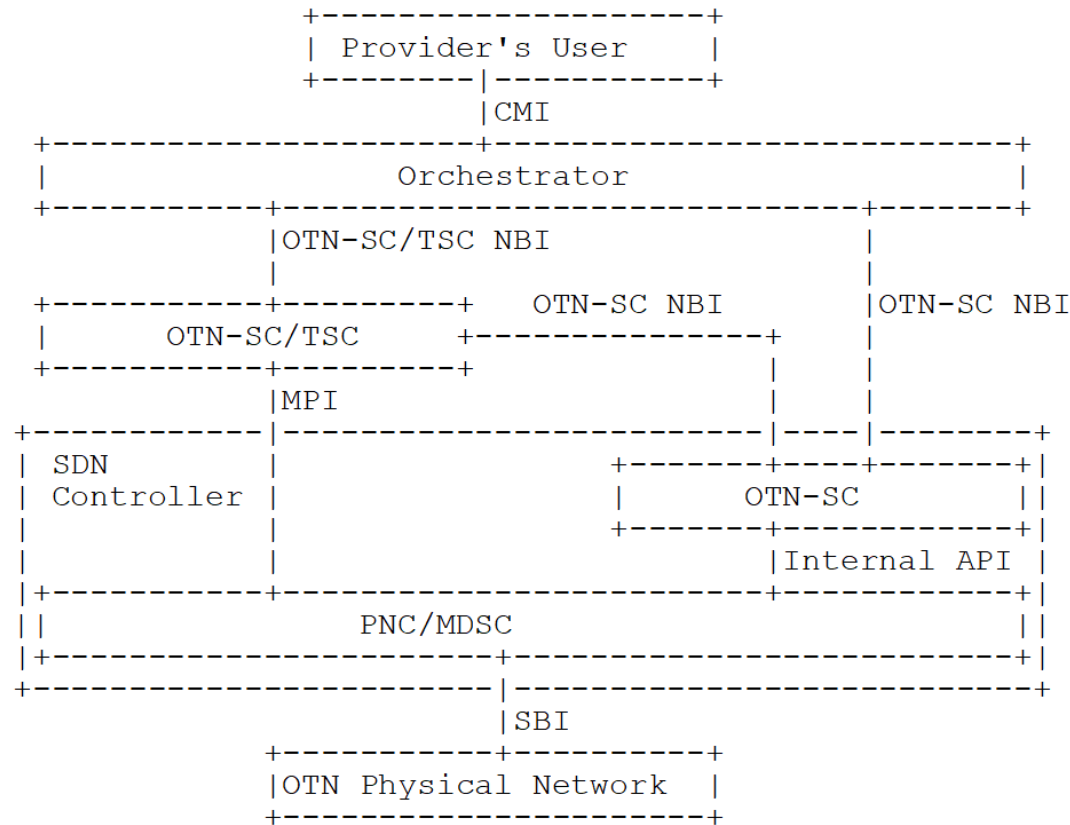


Figure 1 - Positioning of OTN Slicing Interfaces

- OTN slice controller (OTN-SC) may be deployed either outside or within an SDN controller
  - Translating slice configuration into OTN TE topology or TE tunnel requests at the MPI, or
  - Interact with higher- or lower-level slice controller in a recursive manner
- Interaction between OTN-SC and IETF network slice controller is for further study
  - An IETF network slice controller may use an OTN-SC to provision OTN slices to support end-to-end slicing

# OTN Slicing Mode

- Link-based slicing
  - A link is dedicated to a single OTN slice
- Tributary slot-based slicing
  - Multiple OTN slices can share an OTN link but use different time slots

# YANG models

- TBD
- Considering augmenting draft-liu-teas- transport-network-slice-yang-01

# Next Step

- YANG model definitions
- Comments and co-authorship are welcome.

Thanks!