Framework and Data Model for OTN Network Slicing

draft-ietf-ccamp-yang-otn-slicing-01

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Updates Since IETF 112

- Admin
  - WG adopted w/ interim and mailing list discussion on way moving forward
  - GitHub repository was transferred to CCAMP WG
    - https://github.com/ietf-ccamp-wg/ietf-ccamp-yang-otn-slicing
  - Weekly CCAMP call
    - https://mailarchive.ietf.org/arch/msg/ccamp/Dr3HWPlmP9LyA6NmabWJvx7hWIc/

- Draft Updates
  - Text updates to address comments and consensus from the interim and mailing list
  - Alignment with relevant drafts
    - TEAS NS framework
    - TEAS NS YANG NBI
    - TEAS Applicability of ACTN to slicing
    - draft-contreras-teas-slice-controller-models

Conclusions to Move Forward With OTN Slicing

- Aligned with TEAS's view on the framework for IETF network slices (link)
  - Scope must include any use of network slicing
  - The interest is to map the (IETF network slice) service to any IETF network

- IETF network slicing is wider in scope beyond 5G or IP only
  - Technology-specific slicing (e.g. OTN) is in scope for IETF network slicing
  - Use cases for OTN justifies the need for slicing in OTN
- "Slice" and "OTN Slicing" are proper terms for OTN in the context of IETF network slicing
  - An OTN slice is an IETF network slice when the IETF network is OTN
  - OTN-SC is a IETF NS realizer for OTN

- L1VPN, TE topology, TE tunnel etc. are possible realization of an OTN slice
- OTN-SC NBI is an intent-based interface describing what customer needs
  - Top-down configuration
- OTN-SC NBI (technology specific) should augment IETF NSC NBI(technology agnostic)

-01 Text Update

- Added descriptions for three options of configuring and realizing an OTN slice
- Added text to clarify the relationship between OTN slice intent (NBI) and realization
- Added text to indicate that OTN-SC NBI is technology specific and augments the IETF NSC NBI
- Fixed non-technical setting of the document by addressing Tom’s comments
- Other cosmetic updates as per mailing list comments

Updated Diagram

- Option 1: IETF-NSC --> PNC.
- Option 2: IETF-NSC --> OTN-SC --> PNC.
- Option 3: Orchestrator --> OTN-SC --> PNC

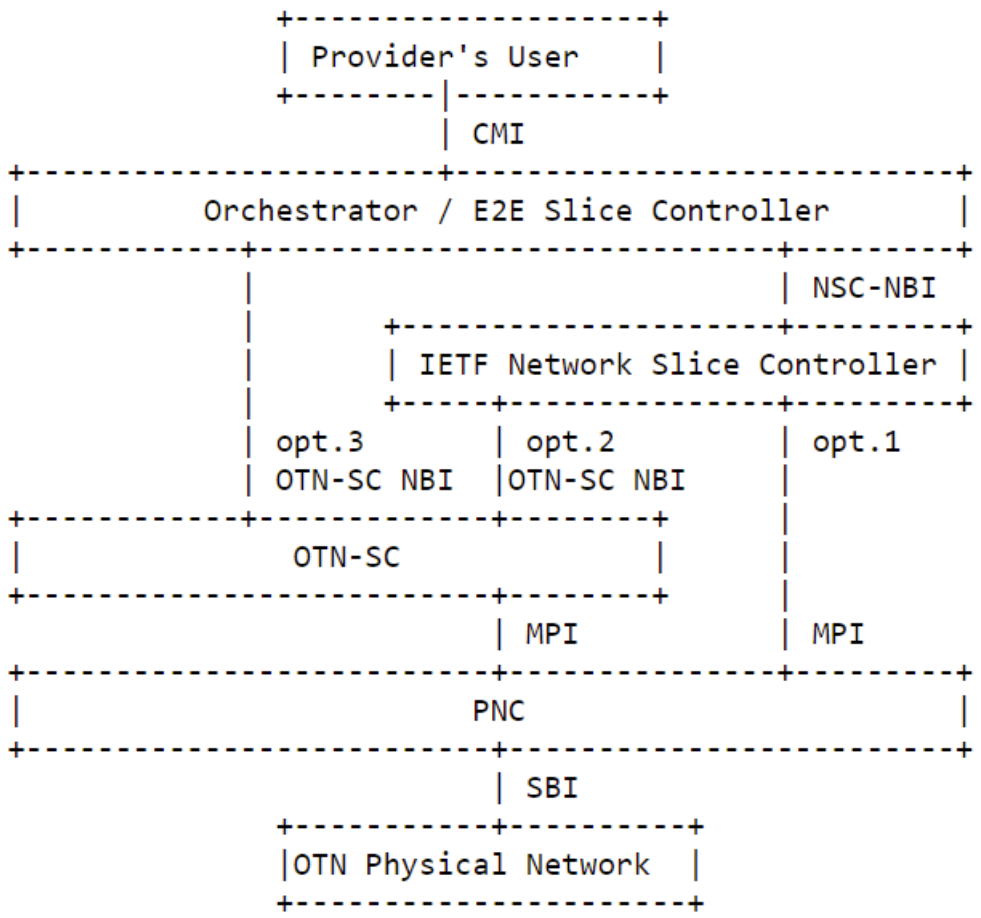

Figure 2: Positioning of OTN Slicing Interfaces

-01 YANG Model Update

- Minor adjustments in formatting to conform with IETF YANG guidelines

Harmonizing w/ draft-ietf-teas-ietf-network-slice-nbi-yang

- Agreed for the OTN-SC NBI model to augment the network-slice-nbi model
- Currently analyzing the model structures of network-slice-nbi
  - Whether it contains required parameters
  - Whether these parameters are technology-agnostic
  - Whether the base model supports resource based slicing by configuring slices with topologies

Harmonizing w/ draft-ietf-teas-applicability-actn-slicing

- Agreed for draft-ietf-teas-applicability-actn-slicing to update the figure that describes the mapping of IETF NSC – ACTN MDSC
  - An MDSC consists of a Service Orchestrator and a Network Orchestrator
  - IETF NSC-NBI / OTN-SC NBI == interface between MDSC SO and NO, e.g. XMI

Next Steps

- Continue to address comments from the WG
- Align and augment ietf-network-slicing-yang
  - Identify and separate technology-specific vs. technology-agnostic constructs
  - Add support for resource-based slicing in the augmented model
- Define OTN technology-specific SLOs

Thank You!