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/Dr3HWPlmP9LyA6NmabWJvx7hW1c/

• 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
-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!