IETF Network Slice Controller and its associated data models

draft-contreras-teas-slice-controller-models-04

Luis M. Contreras (Telefonica), R. Rokui (Ciena), J. Tantsura (Microsoft), B. Wu (Huawei), X. Liu (IBM), D. Dhody (Huawei), S. Belotti (Nokia)
Proposal

Goal: identify major NSC components and how associated data models apply

Structure

- **Mapper** - processes the customer request, putting it into the context of the overall IETF Network Slices in the network

- **Realizer** - processes the complete view of all the slices in the network, decides the proper technologies for realizing the IETF Network Slice and triggers its realization

Models

- **(a)** -> customer’s view, e.g. [I-D.ietf-teas-ietf-network-slice-definition]

- **(b)** -> provider's view, including more detailed but yet technology-agnostic resource view as e.g. [I-D.liu-teas-transport-network-slice-yang], and/or alternative technology-specific augmentations as e.g. [I-D.ietf-ccamp-yang-otn-slicing]

- **(c)** -> models per network controller, out of scope. An example of applicability of existing models is in [I-D.barguil-teas-network-slices-instantation]
Updates from -01

• -02 (March 2022)
  o Reference to additional models (e.g., OTN slicing)

• -03 (July 2022)
  o More functional details added on Mapper and Realizer descriptions
    ▪ Mapper: generation of NRPs, mapping of slices to NRPs, aggregation of performance information from the distinct NRPs
    ▪ Realizer: generation of filtered topologies, exposition of telemetry information from the filtered topologies
  o Reference to additional models (e.g., IETF Network Slice Instantiation)
  o Security considerations

• -04 (October 2022)
  o General alignment with terminology in framework document, and text refinement
Next steps

• Collect feedback / comments from the WG
• Use as reference structure for potential NSC architectures (e.g., ACTN as in draft-ietf-teas-applicability-actn-slicing)

• Request call for adoption and prepare a new version for IETF#115