SF Aware TE Topology YANG Model

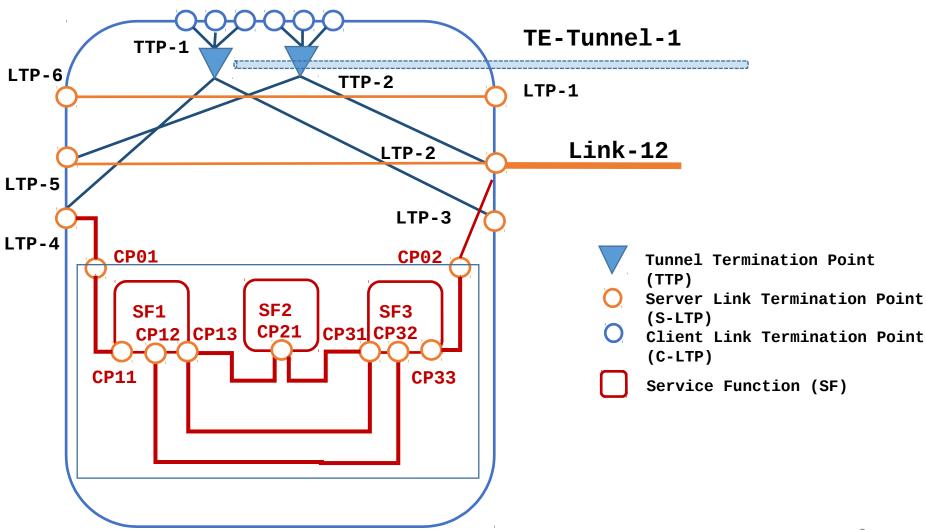
draft-bryskin-teas-sf-aware-topo-model-00

Igor Bryskin (Huawei Technologies)

Xufeng Liu (Jabil)

SFs as TE topology elements

Node-1



Modeling considerations

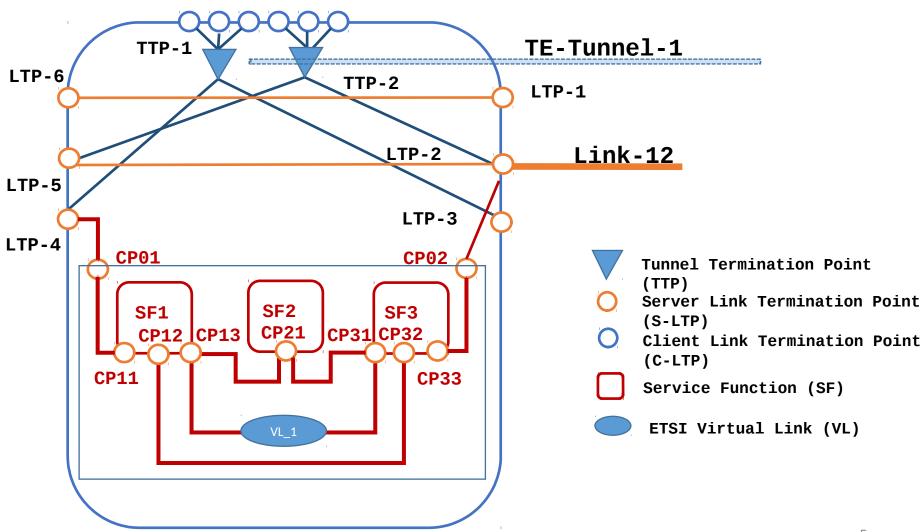
- SFs are modeled as opaque objects identified via globally unique SF_IDs
- SF_IDs could be used to look up SFs in ETSI defined TOSCA/YANG data stores to understand SF details
- Multiple SFs with the same SF_ID could reside on different TE nodes
- Each SF has one or more Connection Points (CPs) identified by SF-unique CP_IDs
- SFs use CPs to inter-connect with each other, as well as with the hosting TE node's LTPs and TTPs

Connectivity matrices introduced by the model

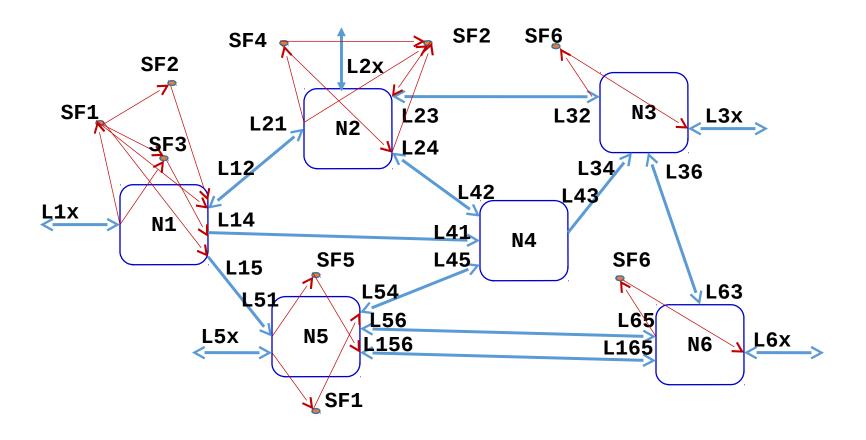
- SF2SF CM describes which SFs could be locally inter-connected, and, if yes, in which direction, via which CPs and at what costs
- SF2LTP CM describes how, in which direction and at what costs a given TE node's SFs could be connected to the TE node's LTPs and hence to SFs residing on neighboring TE nodes that are connected to LTPs at the remote ends of corresponding TE links
- SF2TTP CM describes how, in which direction and at what costs a given TE node's SFs could be connected to the TE node's TTPs and hence to SFs residing on other TE nodes on the topology that could be inter-connected with the TE node via TE tunnels terminated by the corresponding TTPs.

Interconnecting SFs via ETSI VLs



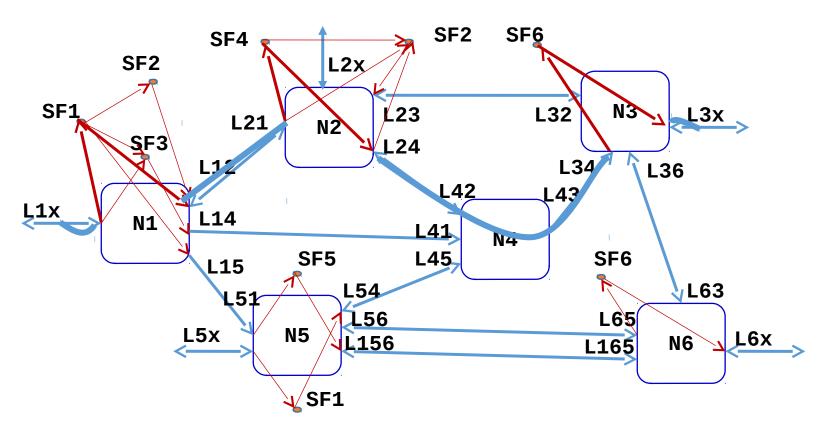


SF Aware TETopology



Graphical representation of the modeled data store

SFC with TE constraints



One use case empowered by the model

Next steps

Solicit feedback from WG

Relate to IETF Network Slicing work