IETF Network Slice Service YANG Model

draft-wd-teas-ietf-network-slice-nbi-yang

TEAS WG

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Bo Wu, Dhruv Dhody Huawei
Reza Rokui Nokia
Tarek Saad Juniper
Liuyan Han China Mobile
Summary of updates since IETF 110

• A new co-author joined
• Change draft name to “IETF Network Slice Service YANG Model” based on Med’s comments
• Align with terms of draft-ietf-teas-ietf-network-slices
  • The term “IETF network slice customer” and “IETF network slice service”
  • Add the container of Service Level Expectation (SLE), to accommodate security, isolation, max-occupancy-level policies, and steering-constraints
• Support for finer-grained policies, including SLO-SLE policies applied to each IETF network slice connection besides global slice policy, and finer rate limiting policies under “ep-network-access-points”
• Clean up the text of whole draft to reflect the wording comments from Med and Kenichi
Overall IETF Network Slice Service YANG Model

An IETF Network slice Between endpoints NSE1 to NSEn

Multipoint-to-multipoint
NSE attributes - customer network peering

**Comments**: NSEs are IETF Network Slice ingress/egress points. In some use cases, when interconnecting with the customer network, the NSE needs to agree protocol attributes to deliver the slice service.

**Proposal**: Since the NS NBI is a technology-agnostic interface, a general node of “ep-peering” is to indicate the peering protocol attributes.

```
+--rw ep-peering
    +--rw protocol* [protocol-type]
        +--rw protocol-type identityref
        +--rw attribute* [index]
            +--rw index uint8
            +--rw attribute-description? string
            +--rw value? string
```
Network Slice attributes beyond connectivity

- **Comments:**
  - Network slice can be defined as a collection of at least three components:
    - Connectivity component
    - Compute component
    - Storage component
  - A slice may require the invocation of service functions (firewall, for example) in a given order

- **Proposal:** NSE could add compute or storage attributes when draft-ietf-teas-ietf-network-slices has the specific definition. And a container of “steering-constraints” is added to “slo-sle-policy” as a place holder.
Open Issue 1: Geographic Restrictions and Diversity Modelling

• List of geo locations to include or exclude
• A list of connections that are required to be diverse from the current connection

```
+-rw geo-sles
   +-rw include-geo*           string
   +-rw exclude-geo*           string
+-rw diverse-connections
   +-rw diverse-connection* [connection]
     +-rw connection        leafref
```
Open issue 2: Shared bandwidth extension

- Guaranteed Minimum Bandwidth: Minimum guaranteed bandwidth between two endpoints at any time.

```
+--rw ns-connection-groups
   +--rw ns-connection-group* [ns-connection-group-name]
      +--rw ns-connection-group-name string
      +--rw ns-connection-group-member* leafref
      +--rw ns-slo-shared-bandwidth? te-types:te-bandwidth
```
Next Step

- Solicit comments and reviews from WG
- Solicit WG adoption
Backup