ACTN/VN YANG Models

draft-ietf-teas-actn-vn-yang-10
draft-ietf-teas-actn-pm-telemetry-autonomics-04
draft-ietf-teas-te-service-mapping-yang-05

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YANG model overview

- VN
  - ietf-vn

- KPI Telemetry
  - ietf-te-kpi-telemetry
  - ietf-vn-kpi-telemetry

- Service Mapping
  - ietf-te-service-mapping-types
  - ietf-l3sm-te-service-mapping
  - ietf-l2sm-te-service-mapping
  - ietf-l1csm-te-service-mapping
  - ietf-l3nm-te-service-mapping
  - ietf-l2nm-te-service-mapping
VN YANG

draft-ietf-teas-actn-vn-yang-10

ietf-vn
VN Yang

From the point of view of Customer:
- VN is a higher level of abstraction
  - VN model depends tightly on the topology model!
  - Use Connectivity Matrices

An abstraction over the TE-Topo and TE-Tunnel:
- These models are from the point of view of Network

Yang model for Virtual Network (VN) operations:
- From the point of view of Customer

VN is a higher level of abstraction
- VN model depends tightly on the topology model!
- Use Connectivity Matrices

Native TE Topology

abstract topology

Single node in TE Topology

Customer

Network
Recent Changes

• Suggested changes from Kenichi Ogaki incorporated for VN-Compute RPC

• Allow VN-Compute RPC to be used independently to get VN result in a single call
  • by “optionally” including the existing groupings in VN-Compute
    • uses te-types:generic-path-constraints
    • uses te-types:generic-path-optimization
  • they are included at VN as well as VN-member level
Pending Changes

• Add figure for VN Compute
  • Requested by Kenichi

• Some editorial comments are pending
  • From Tom Petch

• Lets get ‘early’ YANG doctor review!
KPI Telemetry Yang

draft-ietf-teas-actn-pm-telemetry-autonomics-04
ietf-te-kpi-telemetry
ietf-vn-kpi-telemetry
YANG models for VN/TE Telemetry & Network Autonomics

• YANG data models that support: Performance Monitoring (PM) Telemetry and scaling intent mechanism for TE-Tunnels and VNs to allow customers to subscribe to certain KPI PM.
  • ietf-te-kpi-telemetry
  • ietf-vn-te-kpi-telemetry

• Customer to subscribe and monitor KPI of interest on a particular TE tunnel or a VN.

• Customer could also program autonomic scaling intent
Recent Changes

• YANG Module cleanup
  • References Updated

• VN Level performance metric details
  • Added description for how to compute the metric value at the VN Level
    • Max of the VN-Members
TE Service mapping YANG

draft-ietf-teas-te-service-mapping-yang-05

ietf-te-service-mapping-types
ietf-l3sm-te-service-mapping
ietf-l2sm-te-service-mapping
ietf-l1csm-te-service-mapping
ietf-l3nm-te-service-mapping
ietf-l2nm-te-service-mapping
TE Service Mapping Model

• The role of TE-service Mapping model is to create a mapping relationship between
  o Services
    o L3SM, L2SM, L1CSM, etc.
  o Or, Network
    o L3NM, L2NM, with
    o TE topo, TE tunnel, or VN

• This mapping facilitates a seamless service operation with underlay-TE network visibility and control

• Allow monitoring and diagnostics on how the service request are mapped to underlying TE resources

• Support for various map-types
Recent Changes

• In the last update,
  • support for L3NM and L2NM was added
  • support for TE Mapping template and SR Policy was added

• In this update,
  • comments from Kenichi incorporated for 1 VPN to N VNs
    • allow mapping of a L3SM model to more than one VN
      • Changed to VN-List in the YANG
  • YANG Update
    • XPATH fixes
Pending Changes

• Mapping between L3SM Sites to VNAP
  • It is a mistake to map to AP
• Request from Kenichi to augment the custom qos-profile as well

```plaintext
augment "/l3vpn-svc:l3vpn-svc/l3vpn-svc/sites/l3vpn-svc:site"
  + "/l3vpn-svc:service/l3vpn-svc:qos/l3vpn-svc:qos-profile"
  + "/l3vpn-svc:qos-profile/l3vpn-svc:custom"
  + "/l3vpn-svc:classes/l3vpn-svc:class" {
    description
    "Augment of class with VNAP reference for the custom qos-profile";
    uses tsm-types:te-endpoint-ref-vnap;
  }
augment "/l3vpn-svc:l3vpn-svc/l3vpn-svc/sites/l3vpn-svc:site"
  + "/l3vpn-svc:site-network-accesses/l3vpn-svc:site-network-access"
  + "/l3vpn-svc:service/l3vpn-svc:qos/l3vpn-svc:qos-profile"
  + "/l3vpn-svc:qos-profile/l3vpn-svc:custom"
  + "/l3vpn-svc:classes/l3vpn-svc:class" {
    description
    "Augment of class with VNAP reference for the custom qos-profile";
    uses tsm-types:te-endpoint-ref-vnap;
  }
```
Thank You!