Yang Data Model for Value Added Service (VAS)

draft-gu-l3sm-vas-service-model-00
Service Model Usage

• Why do we want a service model?
  ✓ Shield differences among network segments, as well as specific protocol configurations.
  ✓ Provide service users a more abstract way to express their requirements, while leaving the detailed configuration and management onto networks.

• How to use a service model?
  ✓ A service model from customer applications is mapped into specific data models, which are further deployed onto network elements and be used for protocol configurations over the network infrastructure.
  ✓ The mapping process and network architecture of the service model usage on the left is discussed in [draft-wang-l3sm-service-automation-architecture].
VAS Service Model Usage

• What is VAS for?
  • A Value Added Service (VAS) can be created and managed by operators to configure and manage L3VPN networks and other Cloud VPN networks for customers.

• What is the VAS service model for?
  • Provide a common structure to configure and operate VAS service components.
  • Can be applied to L3VPN network in conjunction with L3VPN service model defined in [draft-ietf-l3sm-l3vpn-service-model].

• How to use the VAS model?
  • Customers specify requested value added service for their networks from application layer.
  • The specified VAS service model is distributed to orchestrator to create, configure and manage the requested functions on involved network elements.

Figure from draft-gu-l3sm-vas-service-model-00
The YANG module defines the vas service components to configure and manage virtual function.

**Part 1: Admin info. of the VAS service component**

- **rw vas-service-component**
  - **rw service-component**
    - **rw name** string
    - **rw id** uint32
    - **rw admin-status?** enumeration
    - **rw enable?** boolean
    - **rw isvirtual?** boolean
    - **rw tenant-id?** string
    - **rw provider?** string

**Part 2: type of the VAS component**

- **rw service-component-type?** identityref

**Part 3: VAS policy configuration**

- **rw vas-classification-policy**
  - **rw rules**
    - **rw id** uint16
    - **rw match-flow**
      - *(ipv) *
        - **rw (ip-version)?**
          - *(ipv4) *
            - **rw src-ipv4-network?** inet:ipv4-prefix
            - **rw dst-ipv4-network?** inet:ipv4-prefix
          - *(ipv6) *
            - **rw src-ipv6-network?** inet:ipv6-prefix
            - **rw dst-ipv6-network?** inet:ipv6-prefix
        - **rw flow-label?** inet:ipv6-flow-label
        - **rw dscp?** inet:dscp
        - **rw protocol?** uint8

**Part 4: VAS availability configuration**

- **rw service-component-redundancy?** boolean
- **rw availability**
  - **rw service-type?** identityref

**Part 5: management info.**

- **rw management**
  - **rw management-url** string
  - **rw vas-instance-id?** uint32
  - **rw vlan-id?** uint32
The YANG module also defines and provides two rpc commands for VAS component and policy management.
Trial: Service model in cloud datacenter

Service A: FW or LB only (realized)
Service B: FW and LB (on doing)
Service C: VPN, FW and LB (plan)
Service D: VPN and FW (plan)
Service E: VPN and LB (plan)

Physical topology

Step 1:
Service A realized

Step 2:
Standard service function chain of Service B to Service E

Questions

• Is the VAS service model a direction to go?

• Would you like to participate and contribute to this work?

• How can the VAS service model work with other VPN service models, such as the L3 VPN service model?
Next Step…

this banana wants you to be happy.

look, it is even smiling at you.

Solicit comments and suggestions…
MANY THANKS

Rong Gu
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