SRv6 YANG Model

draft-raza-spring-srv6-yang-05

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Overview

- YANG data model for Segment Routing IPv6 (SRv6) base
  - base framework for configuring and managing an SRv6 subsystem
  - expected to be augmented by other SRv6 technology models accordingly.

- Additional YANG model for SRv6-Static application.
  - allows a user to specify SRv6 [local] SIDs and program them in the forwarding plane

ref: draft-ietf-spring-srv6-network-programming
Overview (2)

- YANG modules:
  - ietf-srv6-types:
    - defines common and basic types related to SRv6
  - ietf-srv6-base:
    - specifies management model for SRv6 base constructs (locator, SIDs, etc.)
  - ietf-srv6-static:
    - specifies management model for SRv6-static application
History

- Rev -00: Posted around IETF-100 in Singapore
- Rev -02 to -05: Updates, Cleanup
Changes from v1 - v5

- Alignment with SRv6 net-pgm draft / spec
  - Added several new END functions in ietf-srv6-types.yang
  - Added similar changes (containers) to ietf-srv6-static.yang

- Minor Cleanup
The changes include def and static behaviors for:

- **OAM:**
  - End.OP (OAM Operation of punt)

- **SR-policy:**

- **USD variants (USD, PSP_USD, USP_USD, PSP_USP_USD):**
  - END
  - END.T
  - END.X

- **EVPN:**
  - End.DX2, End.DX2V, End.DT2U, End.DT2M
Changes from v1 - v5 (cont’d)

Converted several enums to identity data types in ietf-srv6-types.yang

- srv6-transit-type (parent identity)
  - T.Insert
  - T.Insert.Red
  - T.Encaps
  - T.Encaps.Red
  - T.Encaps.L2
  - T.Encaps.L2.Red

- srv6-security-type (parent identity)
  - SEC-1
  - SEC-2
  - SEC-3

- srv6-counter-type (parent identity)
  - CNT-1
  - CNT-2
  - CNT-3
Changes from v1 - v5 (cont’d)

2 new containers under grouping srv6-encap ietf-srv6-base.yang

- srv6-encap
  - encapsulation
    - hop-limit
    - traffic-class
SRv6-static: EVPN/L2VPN behaviors

module: ietf-srv6-static
    augment /rt:routing/srv6:srv6/srv6:locators/srv6:locator:
        +--rw static
            +--rw end-dx2
                |   +--rw path
                |       +--rw interface if:interface-ref
            +--rw end-dx2v
                |   +--rw lookup-table-vlan srv6-types:table-id
            +--rw end-dt2u
                |   +--rw lookup-table-l2-mac srv6-types:table-id
            +--rw end-dt2m
                |   +--rw flooding-table-l2-mac srv6-types:table-id
                |   +--rw paths
                |       +--rw path* [path-index]
                |           +--rw path-index uint8
                |       +--rw interface? if:interface-ref
Draft: Next Steps

- Asking for WG adoption
- Further updates as per WG feedback and SRv6 net-pgm