YANG Data Models for TE and RSVP

draft-ietf-teas-yang-te-21
draft-ietf-teas-yang-rsvp-11
draft-ietf-teas-yang-rsvp-te-07

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Agenda

• Updates to I-Ds (since IETF-104)

• Open issues and next steps
I-D: <draft-ietf-teas-yang-te-21>

• I-D contains following YANG modules
  – ietf-te.yang
  – ietf-te-device.yang

• Models cover:
  – TE tunnel(s), TE path(s), LSP(s) constructs and attributes
  – On device and on controller specific attributes
Open Issue # 1

YANGDOCTORS Comments

• Received feedback from YANG Dr. review (On the Right Track) and comments
• Authors are working on addressing those
Open Issue # 2
Tunnel Name Collisions

• Tunnel List:
  – Currently keyed by tunnel name (string)

• Tunnels can be:
  – Configured on the device
  – Configured on the controller
  – Learnt (state) on controller (ephemeral)
  – Learnt (state) on device (ephemeral or auto-created)

• A solution was discussed on the list
Open Issue # 2

Tunnel Name Collisions – Solution

• Tunnel name collision can occur:
  – On controller: controller learns tunnels from different devices with same name
    • Proposed solution:
      Ephemeral learnt tunnels on controller are implicitly prepended with the tunnel ingress identity (e.g. R1-foo, R2-foo, etc.)
  – Operator configures a tunnel name matching an auto-created tunnel on device
    • Proposed solution:
      Introduce a configurable prefix “e.g. auto” for auto created tunnels
      Example: Tunnel=auto-bypass-Link1, vs. Tunnel=bypass-Link1
  – Controller learns of a tunnel on a device whose name matches a locally configured one on controller
    • Proposed solution:
      Use the configurable prefix (e.g. “remote-”) to distinguish locally configured from remote learnt Tunnels.
      For example: remote tunnels learnt on controller appear like: remote-R1-foo, remote-R2-foo
I-D: <draft-ietf-teas-yang-rsvp-11>

• I-D contains following YANG modules
  – ietf-rsvp.yang
  – ietf-rsvp-extended.yang

• Model covers:
  – RSVP protocol base and extended attributes: signaling parameters, timers, counters, feature enablement (authentication, bundling, Srefresh, Hello) etc.
  – Per session, neighbor and interface RSVP attributes
Update # 1

Addressed YANG Dr. Review Comments

• Edit nits
• NMDA and use of “state” container
• Expansion of leaf names (e.g. packet-len)
• Pluralization of counters names: e.g. 'in-error' vs. 'in-errors'
• Added normative references for imported modules
Update # 2
RSVP Sessions list

I-D: <draft-ietf-teas-yang-rsvp-11>
I-D: <draft-ietf-teas-yang-rsvp-te-05>

- RSVP sessions list:
  - RSVP base model covers RSVP IP sessions as defined in RFC 2205
  - RSVP-TE model covers RSVP-TE sessions as defined in RFC 3209

- Before update:
  - Single list that includes both keyed by a locally generated unique index
  - Makes looking up a matching session tedious (walk is needed)
  - Does not perform well under scale

- After update:
  - Split RSVP IP sessions and RSVP-TE sessions into separate lists
    - RSVP-IP sessions list keyed by “destination protocol-id destination-port”
    - RSVP-TE sessions list keyed by “tunnel-endpoint tunnel-id extended-tunnel-id”
Update # 3

New RPCs and notifications

RPCs: added two new RPCs:
- clear rsvp session:
  - Match single session or all
- clear rsvp neighbor
  - Match single session or all

Notifications:
- Added section describing leveraging [I-D.ietf-netconf-subscribed-notifications] and [I-D.ietf-netconf-yang-push] to subscribe on specific data nodes
Next Steps

• I-D: <draft-ietf-teas-yang-rsvp-11>:
  – YANGDOCTORS Review comments addressed
  – Another round of internal review and progress to WGLC

• I-D <draft-ietf-teas-yang-te>:
  – Address YANGDOCTORS review comments
  – Progress to WGLC

• I-D: <draft-ietf-teas-yang-rsvp-te-05> and
  I-D: <draft-ietf-teas-yang-te-mpls-01>
  – Another round of review calling for YANGDOCTORS review
Thank You