draft-filsfils-spring-segment-routing-policy-05

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Scope of the Document

- SR Architecture document specifies various Segment Types.

- This document is a companion of the SR Architecture that introduces the notion of SR Policy as a stack of segments encoded in the packet

- This document architecturally defines the SR Policies construct that applies to the following:
  - MPLS and SRv6 data-planes
  - Traffic Engineering
  - Network Function Virtualization
  - Layer 2 networks
  - Optical networks
  - Multicast (TreeSID)

- It defines the various flavors of Steering into SR Policies

- It specifies traffic accounting for SR Polices

Key Attributes of SR Policies

- Applicable to both SR-MPLS and SRv6 data planes.

- State is only at the head-end not all over the fabric.

- Leverages ECMP; not "hop-by-hop" or "circuit-oriented".

- Includes topological and service segments (TE+NFC).

- Supports automated instantiation of policies (locally and via controllers).

- Enables steering mechanism for the overlay service integrated with the underlay SLA guarantees

- Integrates IP/MPLS, Layer 2 and Optical.

Binding SID (BSID)

- Provides scaling, network opacity and service independence
- BSID-keyed entry in the forwarding plane for SR Policy is vital for the steering use-cases.

Steering into SR Policies

- Incoming packets have an active SID matching a local BSID at the head-end.
- Per-destination steering: incoming packets match a BGP/Service route which recurses on an SR policy
  - Automated Steering for BGP services
  - On-demand SR Policies and steering for BGP services
- Per-flow Steering: incoming packets match or recurse on a forwarding array where some of the entries are SR Policies.
- Policy-based Steering: incoming packets match a routing policy which directs them on an SR policy.

These mechanisms are defined since 00 version; later versions addresses comments received and provides more details

Status

- Version 00 was presented a year ago @ IETF 98
- Since then document has matured with contributions from multiple vendors and operators
    - Document has been updated to address comments, provide clarifications and details.
- The document have multiple existing implementations
- The document have ongoing deployments/trials

Next Steps …

- Solicit WG review and comments/inputs/feedback.
- The authors would like to request the WG adoption for this draft.