Service Programming with Segment Routing

draft-xuclad-spring-sr-service-programming
(was draft-xuclad-spring-sr-service-chaining)

Authors :

Francois Clad, Cisco (presenter)

Xiaoahu Xu, Alibaba

Clarence Filsfils, Cisco

Daniel Bernier, Bell Canada

Cheng Li, Huawei

Bruno Decraene, Orange

Shaowen Ma, Juniper

Chaitanya Yadlapalli, AT&T

Wim Henderickx, Nokia

Stefano Salsano, Universita di Roma "Tor Vergata"

IETF102, July 2018

Montreal, Canada

I E T F®

Summary of changes (1)

- Updated sections 4 and 5 to leverage draft-ietf-spring-segment-routing-policy
  - Overall simplification of the proposal
  - Terminology alignment
    (SR policies, candidate paths, SID-lists, etc)

- Clarified that no dependency on RFC7665

SR Policy framework - reminder

- Headend to steer traffic into an SR policy
    - Local policy (e.g., static route)
    - Automated steering with BGP
    - Remote steering using the BSID

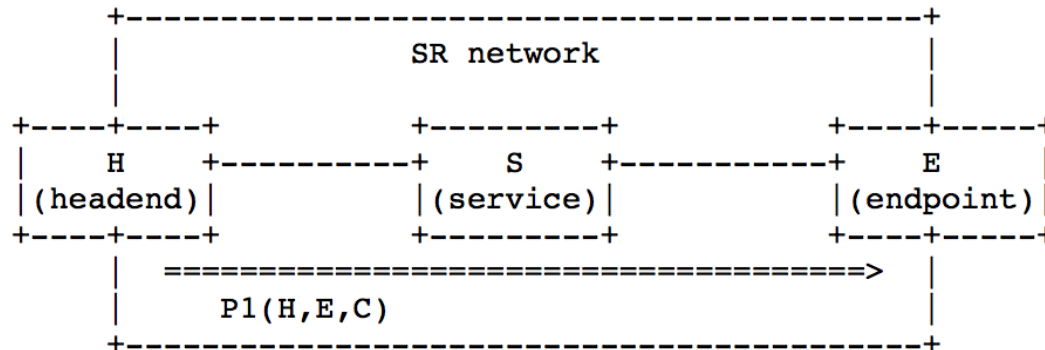- SR policy may contain service segments

- Stateless in the fabric

```
+-------------------------------------------+
|                                           |
|             SR network                    |
|                                           |
+----+----+        +---------+        +----+-----+
|    H    +---------+    S    +---------+    E     |
| (headend)|       |(service)|       |(endpoint)|
+----+----+        +---------+        +----+-----+
     |    ==================================>   |
     |    P1(H,E,C)                             |
     +-------------------------------------------+
```

Figure 1: SR service policy

Summary of changes (2)

- SR-aware services
  - Advanced network programming capabilities (sec. 4)
  - Open-source SR-aware services (sec. 8)

```
Specific SRv6 support has been implemented for the below open-source
services:

o   Iptables (1.6.2 and later)

o   Nftables (0.8.4 and later)

o   Snort
```

- Metadata carrier TLV for SRH

- Various small fixes and changes

Next steps

- Service failure detection and recovery

- Load balancing over multiple service instances

- Seeking WG input and feedback

- Asking for working group adoption