SR-MPLS FRR Extension

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Huaimo Chen, Futurewei
Zhibo Hu, Huawei
Aijun Wang, China Telecom
Yisong Liu, China Mobile
Gyan Mishra, Verizon

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Overview

SR-MPLS FRR Extension

by Examples

- SR-MPLS Path without BSID (Binding SID)
  - After IGP Converges on Failure
- SR-MPLS Path with BSID
  - Without any Failure
  - Before IGP Converges on Failure
  - After IGP Converges on Failure

by Procedure

- Procedure on Upstream Node
SR-MPLS Path without BSID

- No failure: Packet (Pkt) is sent to C through 1,2,3,4,5,6
- N failed before IGP converges: Packet (Pkt) is sent to C through 1,2,3,4,5,6
- N failed after IGP converges: Packet (Pkt) dropped at P1 since no route to N (SID-N)

FRR extension:
2. P1 pops SID-N, sends packet to P4 using FIB (along shortest path to) Q1 (SID-Q1),
SR-MPLS Path with BSID

- No failure: Packet (Pkt) is sent to C through 1,2,3,4,5,6
- N failed before IGP converges: Packet (Pkt) is sent to C through 1,2,3,4,5,6

FRR extension:
2. P1 **pops SID-N, replaces BSID-N with** <SID-Q1,SID-C>, **sends** packet to P4 using FIB (along shortest path) to Q1 (SID-Q1),...
After N failed and IGP converges, upstream node (such as P1) of N (no route to SID-N) pops its SID (such as SID-P1) if any,

pops SID-N and does one of the following:

a) **sends** packet **using FIB** to Nx if top SID is a node SID of Nx.

b) **replaces BSID with SID list**, and **does a) or c) if top SID is BSID of N**

c) **replaces adjacency SID with node SID of remote node**, and **sends packet using FIB** if top SID is an adjacency SID of N
Next Steps

● Welcome comments