

P2MP Policy

draft-hb-pim-p2mp-policy-ping

Authors:

Hooman Bidgoli, Nokia

Daniel Voyer, Bell Canada

Rishabh Parekh, Cisco Systems

Zhaohui Zhang, Juniper



I E T F[®]

Update/Relevant Drafts

Multiple Vendors are in the mist of implementing this draft.

[draft-spring-sr-replication-segment \(adopted\)](#)

[draft-ietf-pim-sr-p2mp-policy \(adopted\)](#)

[draft-hb-spring-sr-p2mp-policy-yang-01](#)

[draft-ietf-bess-mvpn-evpn-sr-p2mp-02 \(adopted\)](#)

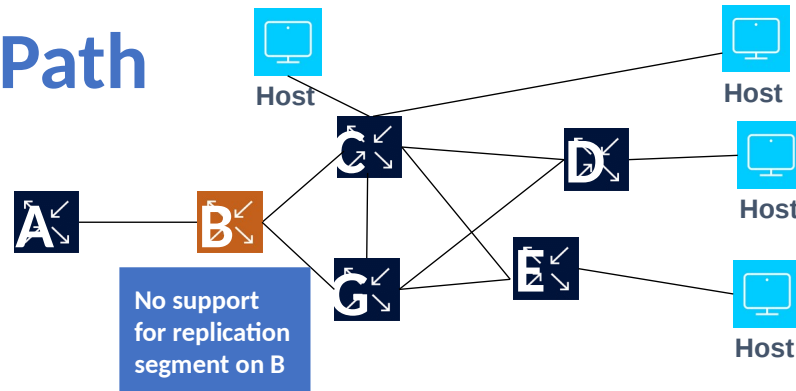
[draft-hsd-pce-sr-p2mp-policy-03 \(Has asked for Adaptation, WG discussions\)](#)

[draft-hb-idr-sr-p2mp-policy-02 \(Will ask for adaptation ietf 111\)](#)

[draft-hb-pim-p2mp-policy-ping-00 \(New\)](#)

Example 1

Single Candidate Path



1. The primary path (candidate path 1) is A to C to LEAF D and LEAF E with C being a BUD node
2. B does not support Replication Segment

SR P2MP Policy

- ROOT Node=A
- Leaf Node=D,E
- Tree-ID=1

Candidate path 1

- Preference = 1000

Instance-1
LSP ID = 1

Replication Policy A

- Tree-ID =1
- Root = A
- Instance ID = 1
- Inc Rep SID

Forwarding Info

- Next-hop-group-id 0
 - Next-hop-add = B
 - Sid-list B,C <C is bottom of Stack>

Replication Policy C

- Tree-ID =1
- Root = A
- Instance ID = 1
- Inc Rep SID = C

Forwarding Info

- Next-hop-group-id 0
 - Next-hop-add = D
 - Sid-list <D>
- Next-hop-group-id 1
 - Next-hop-add = E
 - Sid-list <E>
- Next-hop-group-id 2
 - Next-hop-add = 127.0.0.1 (Bud)

Replication Policy D

- Tree-ID =1
- Root = A
- Instance ID = 1
- Inc Rep SID = D

Forwarding Info

- Next-hop-group-id 0
 - Next-hop-add = 127.0.0.1

Replication Policy E

- Tree-ID =1
- Root = A
- Instance ID = 1
- Inc Rep SID = E

Forwarding Info

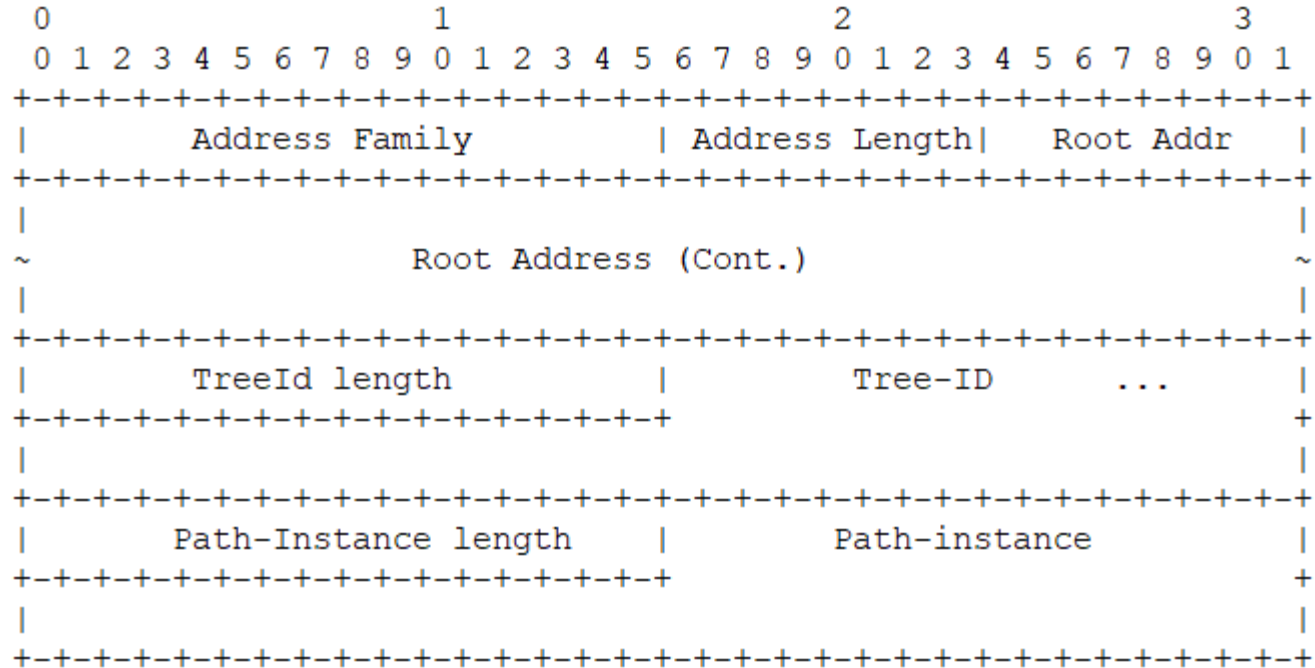
- Next-hop-group-id 0
 - Next-hop-add = 127.0.0.1

Details

- To test every Candidate Path (active or backup) and its corresponding Path Instance.
- Reuses RFC4379 for packet construction
- Reuses RFC6425 P2MP MPLS – Extensions to LSP Ping for most common concepts
- Detecting faults in the SR Unicast domain (SID-LIST) is beyond the scope of this draft. Procedures are only valid between Replication Segments.
- Introduces 2 new sub-TLVs for Target FEC Stack TLV, the following is proposed.

Sub-Type	Length	Value Field
-----	-----	-----
42	xx	P2MP Policy IPv4 CP
43	xx	P2MP Policy IPv6 CP

Proposed P2MP Policy CP FEC Stack Sub-TLVs



Next Steps

- Asking for adoption of this draft

Thank you!