draft-nainar-mpls-spring-lsp-ping-sids-00

LSP Ping/Trace for SR SIDs on MPLS

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Problem Statement

• Segment Routing define different Segment ID with different associated semantics.

• RFC-8287 defines SR-IGP Prefix SID and Adjacency SID FEC extensions for MPLS LSP Ping and Traceroute.
  – Defines the Target FEC Stack sub-TLVs, their format, and handling procedure.

• This draft defines the Target FEC Stack Sub-TLVs, format and the handling procedure for other Segment IDs:
  – BGP Prefix SID
  – BGP ePE SID
  – Binding Path SID
Target FEC Stack – BGP Prefix SID

- Reuses existing Target FEC Stack defined in RFC 8029.
- No changes required on the procedure.
• Same TLV can be used for both IPv4/IPv6 Peer Nodes.
• Procedure changes are required when the peering node is a non-MPLS node or may not have route back to the source (explained in later slides).
• Same TLV can be used for both IPv4/IPv6 Adjacencies

• Procedure changes are required when the peering node is a non-MPLS node or may not have route back to the source (explained in later slides).
Target FEC Stack – BGP Peer Set SID

- BGP Peer Set ID can be assigned to:
  - Peers in same/different ASN
  - Adjacencies

- Procedure changes are required when the peering node(s) is/are non-MPLS node(s) or may not have route back to the source (explained in later slides).
Target FEC Stack – Path Binding SID

- Binding SID defined in draft-sivabalan-pce-binding-label-sid
- Carries Headend details to perform the FEC validation.
Procedure

• Initiator SHOULD set the TTL to 1 if the bottom most label is Path Binding SID.

• BGP ePE (Node/Adj/Set) SID OAM packet MAY not be leaked out of the domain.
  – When the peering node(s) is/ are non-MPLS node(s) or may not have route back to the source.
  – Initiator MAY set the TTL to 1 if the bottom most label is BGP ePE SID.

• Responder upon TTL expiry will process and perform FEC validation.
Next Steps

• Authors would like to request the WG for the feedback.
• The authors like to request Spring WG for adoption of this work.