



IETF 103 – Bangkok
November 2018

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

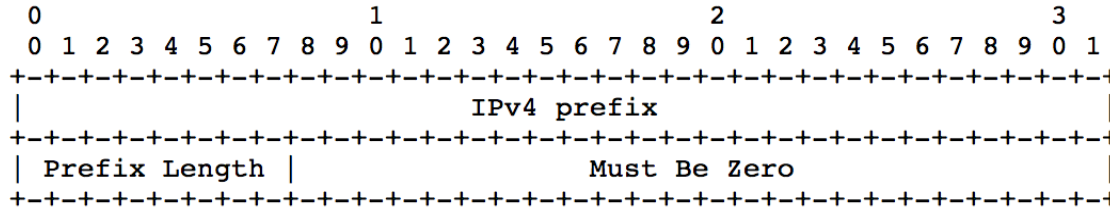
LSP Ping/Trace for SR SIDs on MPLS

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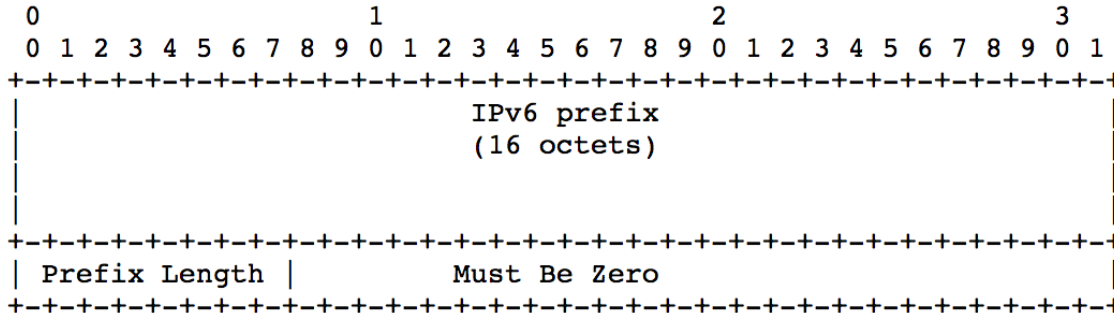
Problem Statement

- 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



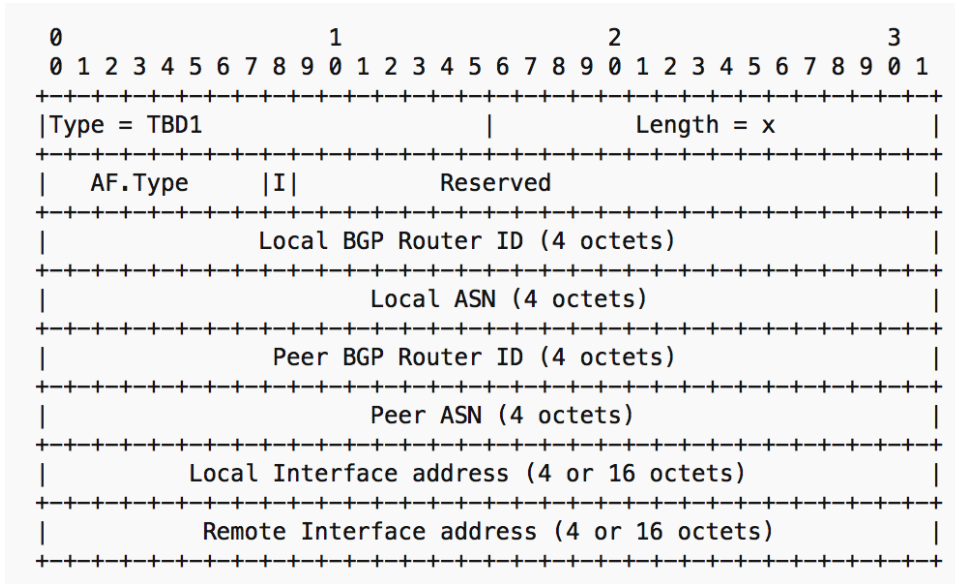
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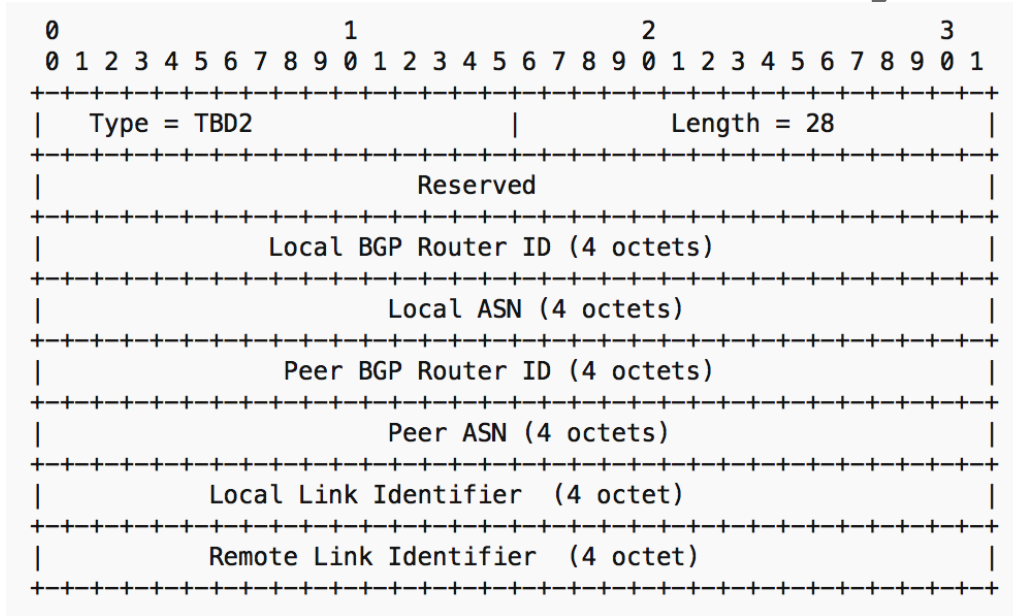
- Reuses existing Target FEC Stack defined in RFC 8029.
- No changes required on the procedure.

Target FEC Stack – BGP Peer Node SID



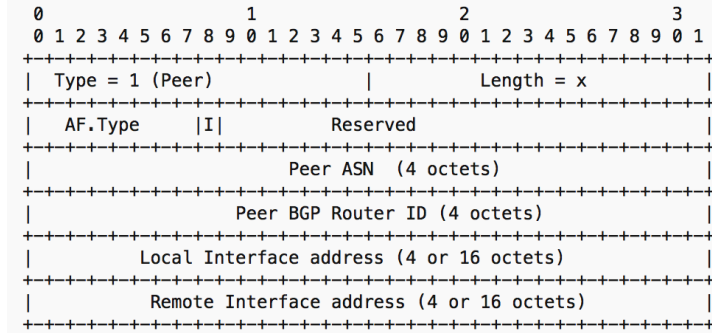
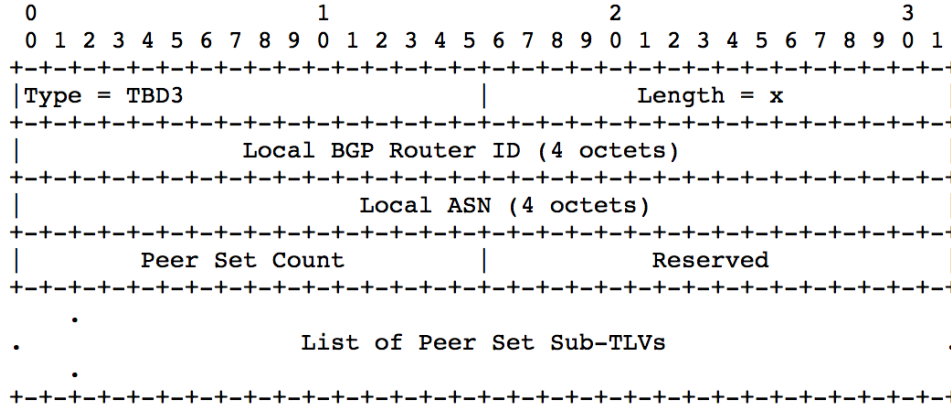
- Same TLV can be used for both IPv4/IPv6 Peer Nodes.
- Procedure changes are required when the peering node is a non-MPLS node or may not have route back to the source (explained in later slides).

Target FEC Stack – BGP Peer Adj SID

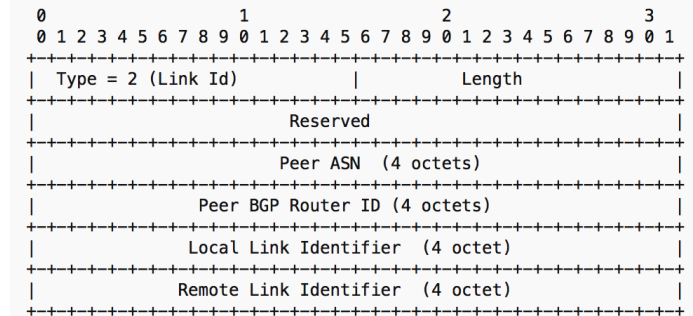


- Same TLV can be used for both IPv4/IPv6 Adjacencies
- Procedure changes are required when the peering node is a non-MPLS node or may not have route back to the source (explained in later slides).

Target FEC Stack – BGP Peer Set SID



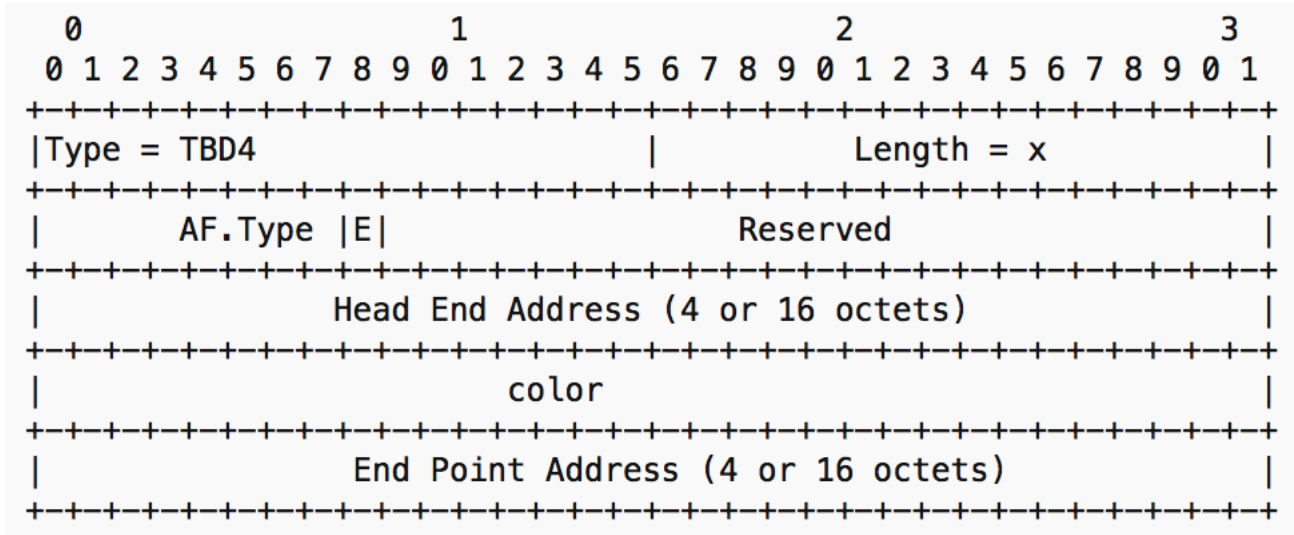
Peer Node Sub-TLV



Link Identifier Sub-TLV

- 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.