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LSP Ping Support for P2MP PWs

(draft-jain-mpls-p2mp-pw-lsp-ping-00.txt)

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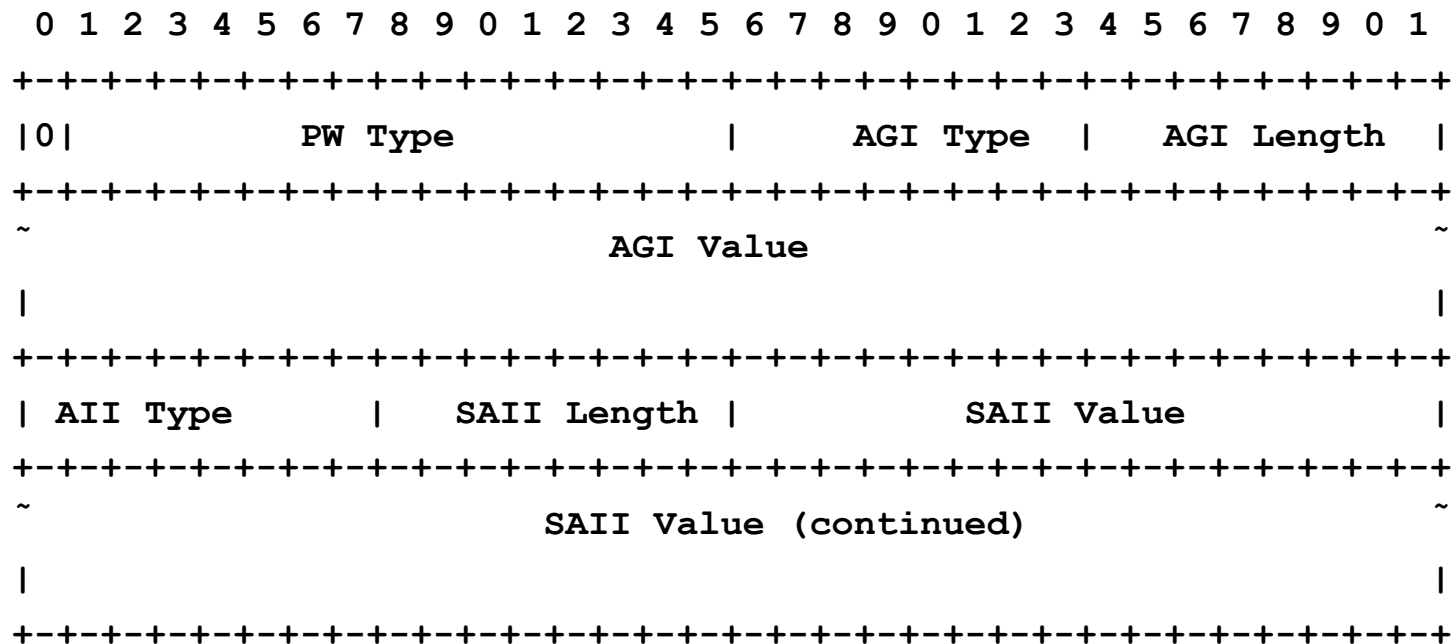
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LSP Ping Support for P2MP PW

- Define LSP Ping procedures for P2MP PW
- P2MP PWs can be signaled using LDP or BGP
- Supports Inclusive and aggregate Inclusive P2MP MPLS P-trees
- Supports MLDP and P2MP TE P2MP MPLS P-trees
- Define a new FEC 130 Pseudowire sub-TLV for Target FEC Stack to identify P2MP PW under test

Proposed FEC 130 Pseudowire Sub TLV Format



IANA is requested to assign a sub-TLV type value of 24 from the "Multiprotocol Label Switching (MPLS) Label Switched Paths (LSPs) Parameters - TLVs" registry, "TLVs and sub- TLVs" sub-registry.

Operations

- For Inclusive P2MP MPLS P-trees, the echo request is sent using the P2MP MPLS P-tree label.
- For Aggregate Inclusive P-trees, the echo request is sent using a label stack of <P2MP MPLS P-tree label, upstream assigned P2MP PW label>. The P2MP MPLS P-tree label is the top label and upstream assigned P2MP PW label is bottom label.
- P routers swap the P2MP MPLS P-tree label
- Bud/Tail PEs, performs the checks for the FEC 130 Pseudowire sub-TLV present in the Target FEC Stack TLV as described in Section 4.4 in [RFC4379] and respond according to [RFC4379] processing rules

Controlling Echo Responses

- Use Echo Jitter TLV defined in draft-ietf-mpls-p2mp-lsp-ping-17 for preventing congestion of Echo Responses.
- Use Node Address P2MP Responder Identifier TLV defined in draft-ietf-mpls-p2mp-lsp-ping-17 for limiting the Echo Reply to a single egress node.

Reply Mode Field

- Reply Mode value of 4 “Reply via application level control channel” should not be used in Reply Mode field described in Section 3 in [RFC4379] in echo request message for P2MP PWs.

Future

- Support LSP Ping on Selective P-trees in Future.

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Next Steps

- Seeking Feedback
- Looking for WG adoption
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