

# Extended BFD Discriminator TLV for MPLS ping

(draft-vgovindan-mpls-extended-bfd-disc-tlv-00)

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# Problem statement

- Usage of <MPLS FEC, LSP> as the BFD session de-multiplex key at the LSR egress permits only one BFD session to be established.
- Use cases involving more than one session per <MPLS FEC, LSP>:
  - Load balancing using entropy labels.
  - BFD over MPLS LSP session redundancy.

# Details

- Generically extend the BFD Discriminator TLV to track more than one session for <MPLS FEC, LSP>
  - Introduce a new TLV that allows multiple BFD session(s) to be established for a given <MPLS FEC, LSP>.
  - LSR ingress allocated Path identifier added to the TLV.
  - LSR egress can allocate one unique discriminator for every LSP ping with a unique path-identifier received.
- Migration of sessions established from the old to the new TLV.

# Open Items

- Do we introduce a new procedure to allow the LSR egress to acknowledge the BFD session establishment?
  - LSR egress can respond to MPLS ping with CreateAck opcode in the proposed extended TLV.
- Do we introduce an explicit mechanism for deleting BFD session(s) at the LSR egress?
  - Opcode based Delete/ DeleteAck signaled from the LSR ingress using MPLS ping.
  - Purge timer based: Remove the BFD sessions that transition from Up->Down after a timer expiry.
  - Continue with status quo?
- Comments and feedback welcome!

# Next steps

- Discuss open items and re-publish before seeking WG adoption.