

Clarifications to RFC 5884

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Problem statement

- BFD for MPLS LSPs [[RFC5884](#)] describes usage of MPLS Echo Request to bootstrap BFD session on LSP egress.
- However the mechanism to bootstrap and maintain concurrent BFD sessions per <MPLS FEC, LSP> needs clarifications.
- There is a need to bootstrap multiple BFD sessions per <MPLS FEC, LSP> concurrently:
 - LSPs using ECMP path (e.g. EVPN BFD)
 - Segment Routing based LSPs
 - Multiple BFD sessions for local redundancy purpose
- This work started during discussions at IETF-90 on draft-vgovindan-mpls-extended-bfd-disc-tlv-00, which will be discontinued.
- The proposed work is submitted for Standards Track since there are updates to procedures defined in RFC 5884.

Details

- Procedures defined in RFC5884 are clarified to unambiguously establish and maintain multiple BFD sessions concurrently:
 - Continue using MPLS LSP ping to bootstrap BFD sessions.
 - LSR ingress MUST allocate a unique local discriminator for each new session request.
 - LSR egress MUST use <MPLS FEC, LSP, Remote Discriminator> tuple to index BFD session.
 - LSR egress MUST allocate a new local discriminator if FEC validation succeeds.
 - BFD sessions are maintained using discriminators exchanged out-of-band.

Open Items

- What are the scenarios that cause the LSP egress to delete bootstrapped BFD sessions?
- What procedures, if any are required at the LSP egress after the BFD session(s) transition from UP to DOWN?
- What procedures, if any are required at the LSP egress after the BFD session(s) NEVER go UP?
- Is there value in changing the BFD discriminator during ADMINDOWN state?

Next steps

- Requesting comments from the WG.
- Close off on the open items.
- Submit a new revision if needed and ask for WG adoption.