Directed BFD Return Path

draft-mirsky-mpls-bfd-directed-03

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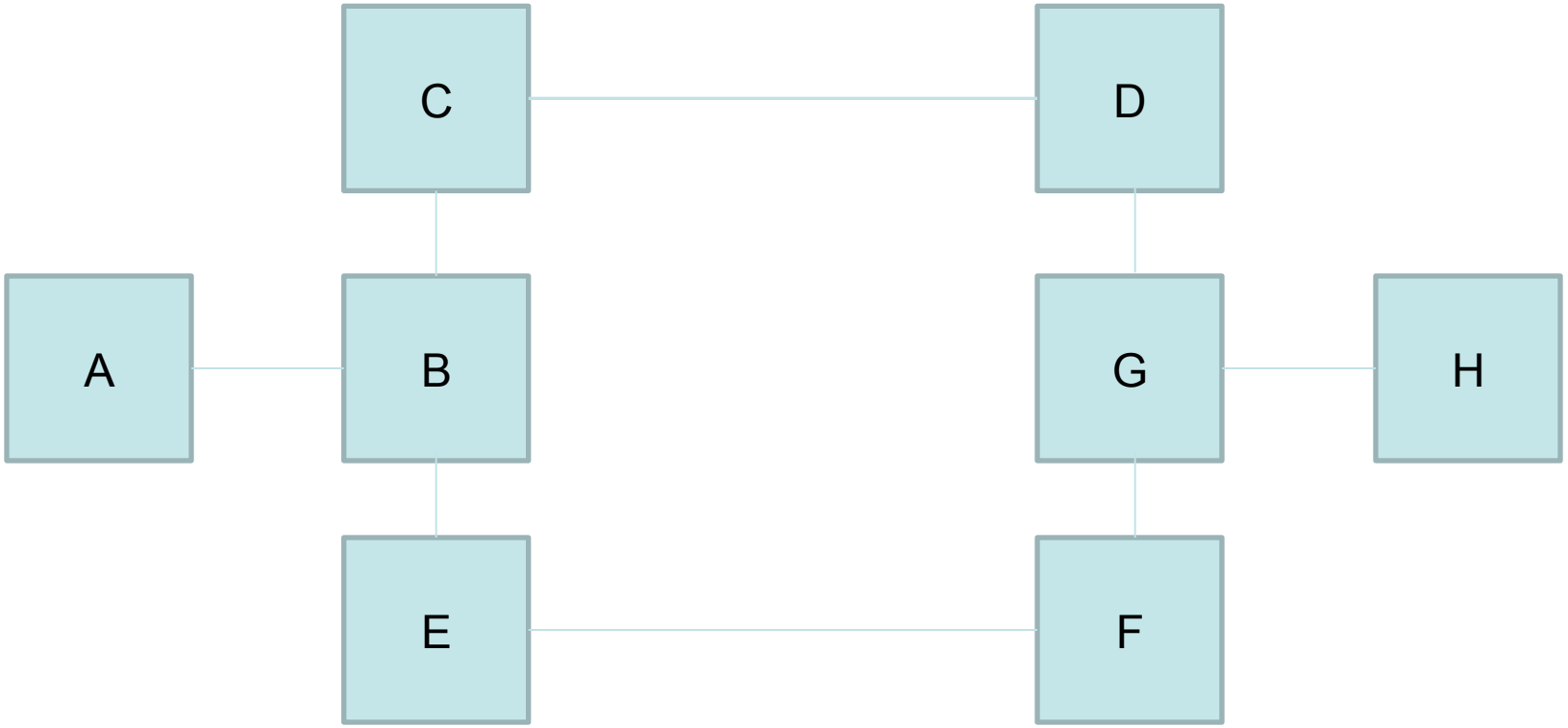
Update

- Welcome Mach Chen as co-author
- much obliged to Loa Andersson for thorough review and thoughtful comments
- From -01 to -03 version:
  - new return code
  - Use Case section
  - changed near-end/far-end to ingress/egress terminology

New Return Code

- If the egress LSR fails to establish the BFD session because path specified in the Reverse Path TLV is not known, the egress MAY establish the BFD session over IP network [RFC5884] and MAY send Echo Reply with the Reverse Path TLV received and the return code set to "Failed to establish the BFD session. The specified reverse path was not found" (TBD4) Section 3.4.
- If the egress LSR cannot find path specified in the Reverse Path TLV and does not establish BFD session per RFC 5884, it MUST send Echo Reply with the Reverse Path TLV received and the return code set to "Failed to establish the BFD session. The specified reverse path was not found".
- The IANA is requested to assign a new Return Code value from the "Multi-Protocol Label Switching (MPLS) Label Switched Paths (LSPs) Ping Parameters" registry, "Return Codes" sub-registry, as follows using a Standards Action value.

Use Case Scenario



Node A:

- to monitor A-B-C-D-G-H allocates discriminator N. Bootstraps BFD session with BFD Discriminator TLV. May use BFD Reverse Path TLV H-G-D-C-B-A.
- to monitor A-B-E-F-G-H allocates discriminator M. Bootstraps BFD session with BFD Discriminator TLV. May use BFD Reverse Path TLV H-G-F-E-B-A.

Next steps

- Comments are always welcome
- Asking MPLS WG to adopt this work