Unsolicited BFD for Sessionless Applications

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Problem Statement

• Explicit configuration/registration required on both sides by the current BFD implementation & deployment
• Works well for apps with “sessions”, e.g., BGP, OSPF
• But too restrictive & difficult for apps without “sessions”
Examples of “Sessionless” Apps

• Nexthop of a static route
  – Only one side needs BFD tracking
  – Current workaround is to configure/coordinate on both sides

• Third-party nexthop of BGP routes from the Route Server at an IXP
  – No direct session between two BGP speakers
Procedures for Unsolicited BFD

• One side plays the “Active role”, and the other side plays the “Passive role”
• Only the active side initiates BFD control packets
• The passive side accepts connection from the active side
  – feature SHOULD be on per-interface basic
  – BFD parameters can be interface/router based
• “Passive role” may change to “Active role”
Security Considerations

• Limit the feature to specific interfaces, and to single-hop BFD with “TTL=255”
• Deploy the feature only in “trustworthy” environment, e.g., at IXPs or between a provider and its customers
• Apply subnets/hosts based “access control” for BFD packets
• Use BFD authentication
Next Step

• WG adoption?