draft-merciaz-idr-bgp-bfd-strict-mode-02

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High Level Updates

• Draft-00 was presented at IETF 104 in Prague
  
  slides-104-idr-sessa-bgp-bfd-strict-mode

• Updates to this document
  • BGP FSM with BFD “strict-mode”
    • BGP BFD Hold Timer proposed
  • Manageability & Security Considerations
Operation Overview

• Defines BGP BFD capability negotiation.
• A BGP speaker which supports capabilities advertisement and has BFD strict-mode enabled MUST include the BGP BFD capability with the "S" Bit set in the BGP capabilities it advertises.
• A BGP speaker which supports BFD capability, examines the list of capabilities present in the Capabilities BFD Parameter that the speaker receives from its peer.
• If both the local and remote BGP speakers have BFD strict-mode enabled, then BGP session will be established after BFD session is UP.
• If either BGP peer has not advertised the BFD Capability with strict-mode enabled, then a BFD session state WILL NOT be required for the BGP session to reach Established state. Note that this does not preclude usage of BFD after BGP session establishment [RFC5882].
BGP FSM with BFD ‘strict-mode’

• If both the local and remote BGP speakers have BFD strict-mode enabled,
  • the BGP finite state machine does not transition to the Established state from OpenSent or OpenConfirm state [RFC4271] until the BFD session is in the Up state. In this state, no KEEPALIVE messages are sent and the KeepaliveTimer is not set.
  • if the BFD session does not transition to the Up state
    • If the negotiated HoldTimer has non-zero value, the BGP FSM will close session appropriately after the BGP HoldTimer expires.
    • If the negotiated HoldTimer value is zero, a BFD HoldTimer with a default value of 30 secs is proposed. After the BFD Holdtimer expires, the BGP FSM will close the session.
  • if the BFD session is in AdminDown state, the BGP FSM will proceed normally without input from BFD.
  • If BFD is disabled/deconfigured from a BGP peer, and the BGP session state is held in OpenSent or OpenConfirm state, then the BGP will close session, and start a new TCP connect.
Manageability & Security Considerations

• A BGP NOTIFICATION message subcode indicating BFD Hold timer expiration may be required for network management. (To be discussed in the next revision of this document.)

• The security considerations of BFD thus become considerations for BGP-4 [RFC4271] so used.

• The use of the BFD Authentication mechanism defined in [RFC5880] is thus RECOMMENDED when used to protect BGP-4 [RFC4271].
Next Steps

• Review and collect input/feedback
• Request IDR WG Adoption