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