Extended message support for BGP

draft-ymbk-bgp-extended-messages-01

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Motivation

- Current BGP message length is restricted to 4096 bytes

  – Processing received messages longer than 4096 bytes results in termination of a BGP session

- Need to extend BGP messages to carry larger payload within BGP

  – BGP Path Validation information

BGP Extended Message Capability

- New capability used to signal BGP speaker's ability of receiving and parsing BGP messages longer than 4096 bytes

- Asymmetric capability – Can be signaled in one direction only

  – BGP Extended messages will flow only in the direction towards a BGP speaker announcing this capability

- BGP speaker announcing this capability can handle maximum message size of 65535 bytes

Handling BGP Notification & Diagnostic messages

- BGP Notification & Diagnostic messages can advertise original BGP message back to the originating BGP speaker in certain conditions

  - Can be an issue if an original message's length is set to the maximum message size

  - Current implementations truncate such maximum length original messages when advertised using BGP Notification messages

- With BGP Extended Messages implementations could:

  - Truncate such maximum length messages whenever possible

  - BGP sending speaker can generate BGP Extended messages leaving enough room for appending header information of BGP Notification and/or Diagnostic messages so as to allow advertisement of such messages. This typically translates into 65535 bytes – Fix length header of BGP Notification Message or a Diagnostic message or some pre-defined implementation limit

Questions?