BMP v4: TLV support for BMP Route Monitoring and Peer Down Messages

draft-ietf-grow-bmp-tlv

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24 Jul 2024
IETF GROW WG
Problem statement:
- Not all BMP message types support TLVs

Ideas in the draft:
- Support TLVs in Route Monitoring
- Support TLVs in Peer Down
- Bump version for backwards compatibility
Since IETF119 / draft-ietf-grow-bmp-tlv-14

- No additional drafting work, two open questions:
  - Guess REACH, UNREACH, [ .. ] is part of the same UPDATE message:
    - How does that affect index count? (Luuk)
  - Unlock the possibility of groups of groups?
Status / open issues draft-ietf-grow-bmp-tlv

• All feedback processed
• Keep reflecting, implementing
Logging of routing events in BGP Monitoring Protocol (BMP)
draft-ietf-grow-bmp-rel

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24 Jul 2024
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Intuition

• Add an event-driven message type to BMP:
  o Alerting
  o Reporting
  o On-change analysis

• Complement to:
  o State Synchronization (Route Monitoring)
  o Debugging (Route Mirroring)
  o Session reporting (Peer Up, Peer Down)
  o Stats
Since IETF119 / draft-ietf-grow-bmp-rel-01 (1/2)

- Crossed Warning Bound, Crossed Upper Bound:
  - Added code point in Event Reason TLV;
  - Worked out TLVs (4 bytes integers)

- Further worked out TLVs:
  - Malformed Packet TLV (feedback from Ben)
  - Policy Discard TLV (feedback from Thomas):
    ➢ “On the escort of Section 4 of [RFC9067] and YANG Model for Border Gateway Protocol (BGP-4) [I-D.ietf-idr-bgp-model] it is RECOMMENDED to organize the string as a comma-separated string with the policy definition name being followed by the statement name.”
Since IETF119 / draft-ietf-grow-bmp-rel-01 (2/2)

• Reworked Operational Considerations
• Added due credits in Acknowledgements section
Status / open issues draft-ietf-grow-bmp-rel

- No feedback to process
- Detail still unworked TLVs
- “What does REL want to do as a grown up” – Jeff
  - Enter in Feedback Loop use-cases?
  - Make BGP Update PDU TLV optional to intercept further use-cases?
Filtering Adj-Rib-In and Adj-Rib-Out to BMP receivers

draft-pcm-y-grow-bmp-adj-ribs-filtered

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24 Jul 2024
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Intuition

• Loc-RIB features a F flag for filtered RIB
• Post-Policy Adj-Rib-In, Post-Policy Adj-Rib-Out miss this flag
• It can simply be useful to have this feature available:
  ▪ For completeness of the protocol
  ▪ For use-cases:
    ➢ Limit the fire-hose to data of interest
    ➢ Filter down to Afs of interest
    ➢ ...
draftpcmgrowbmpadjribsfiltered1/2

- Add F Flag to "BMP Peer Flags for Peer Types 0 through 2" registry
- When filtering set flag to one (1)
- Stats messages should reflect numbers post-filter application
- Trigger Peer Down should filter change
• Recommend to set VRF/Table Name TLV to a meaningful value:
  ▪ Either in Peer Up message (optimal for sender, wire encoding)
  ▪ Or in Route Monitoring message (optimal for receiver)
Status draft-pcm-grow-bmp-adj-ribs-filtered

- Receive feedback
- Keep working on text
- WG adoption?