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

draft-ietf-grow-bmp-tlv

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20 Mar 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
• Stateless Parsing TLV re-worked (Colin, Luuk feedback)
  ▪ One TLV, defined a Stateless Parsing registry
  ▪ If TLV is absent revert to classic behavior (look to Peer Up)
• Group TLV indexing re-worked (Dhananjay, self feedback):
  ▪ G bit set to 1, independent indexing from NLRIs
  ▪ Removed need for Index + Group Index
Since IETF118 / draft-ietf-grow-bmp-tlv-13 (2)

• Note on TLV ordering (Colin feedback):
  ▪ Define groups (Group TLV recommended value 0)
  ▪ Define parsing (SP TLV recommended value 1)

• Updated wire-format example (Shunwan feedback)
Status / open issues draft-ietf-grow-bmp-tlv

• No open issues at the moment
• All feedback processed
• Pause, reflect, implement
Support for Enterprise-specific TLVs in the BGP Monitoring Protocol

draft-ietf-grow-bmp-tlv-ebit

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Problem statement

“Vendors need the ability to define proprietary Information Elements, because, for example, they are delivering a pre-standards product, or the Information Element is in some way commercially sensitive”
Since IETF118 / draft-ietf-grown-bmp-tlv-ebit-04

- Inverted PEN and Index fields for RM messages
  - Rationale: index is not included in length; PEN instead is
  - Luuk feedback
Status / open issues draft-ietf-grow-bmp-tlv-ebit

• No open issues at the moment
• Some feedback to process
• Dependency on draft-ietf-grow-tlv for WGLC
Logging of routing events in BGP Monitoring Protocol (BMP)

draft-ietf-grow-bmp-rel

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20 Mar 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 IETF118 / draft-lucente-grow-bmp-rel-03

- Reworked Policy TLV (Jeff, Ruediger feedback):
  - It’s a string, implementors are free to organize it as they prefer
  - Removed length limitation
- A hint to REL vs Route Mirroring in Operational Considerations:
  - Feedback by Ahmed Elhassany
  - More later
- Added Group TLV and Stateless Parsing TLV
- Document adopted!
Route Mirroring vs Route Event Logging (1)

Route Mirroring
- Verbatim copy of routes
  - Sample erroneous packets

Route Event Logging
- Alerting
- Reporting
- On-change analysis
- Feedback Loop
  - Sample erroneous packets
Route Mirroring vs Route Event Logging (2)

• Current approach:
  ▪ Note in Operational Considerations

• Thoughts?
  ▪ Shall we leave like that?
  ▪ Shall we remove the use-case from REL?
  ▪ Shall we remove the use-case from Route Mirroring?
Status / open issues draft-ietf-grow-bmp-rel

- Detail all other TLVs
- Feedback to process
- “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?