BMP Loc-RIB Extension

`draft-ietf-grow-bmp-loc-rib`

Serpil Bayraktar and Tim Evens, Cisco

Paolo Lucente, NTT

22 Nov 2019

IETF GROW WG

Drafting status

- Drafts first presented in Chicago (March 2017)

- Key draft to expand BMP protocol functionality beyond the existing RFC

- Since IETF 105:
  - Loc-RIB:
    - no changes to the draft!
    - We may have found something minor during the BMP Hackaton

TLV support for BMP Route Monitoring and Peer Down Messages

`draft-ietf-grow-bmp-tlv`

Paolo Lucente, NTT

Yunan Gu, Huawei

Henk Smit

22 Nov 2019

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draft-lucente-grow-bmp-tlv

- 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 IETF 105

- Draft got adopted by the WG

- Minor editorial changes

- Peer Down case got better specified:
  - Reason code 1 and 3, a BGP Notification PDU follows; the PDU MAY be followed by TLV data
  - Reason code 2, a 2-byte field to give additional FSM info follows; this field MAY be followed by TLV data
  - For all other Reason codes, TLV data MAY follow the Reason field

Next steps

- No open questions

- If no objections, shall we start to wrap-up?

Support for Enterprise-specific TLVs in the BGP Monitoring Protocol

`draft-lucente-grow-bmp-tlv-ebit`

Paolo Lucente, NTT

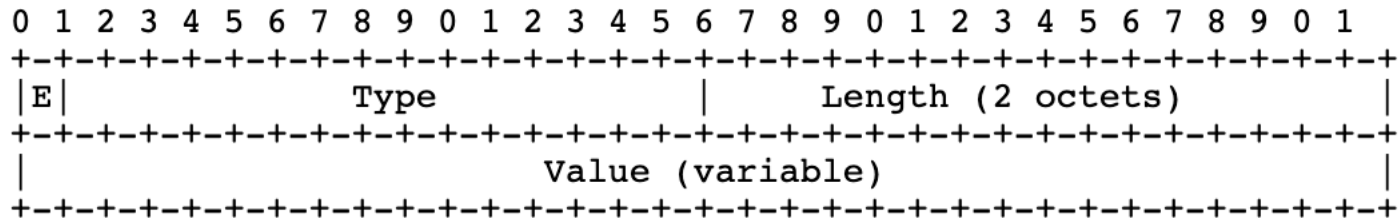Yunan Gu, Huawei

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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"
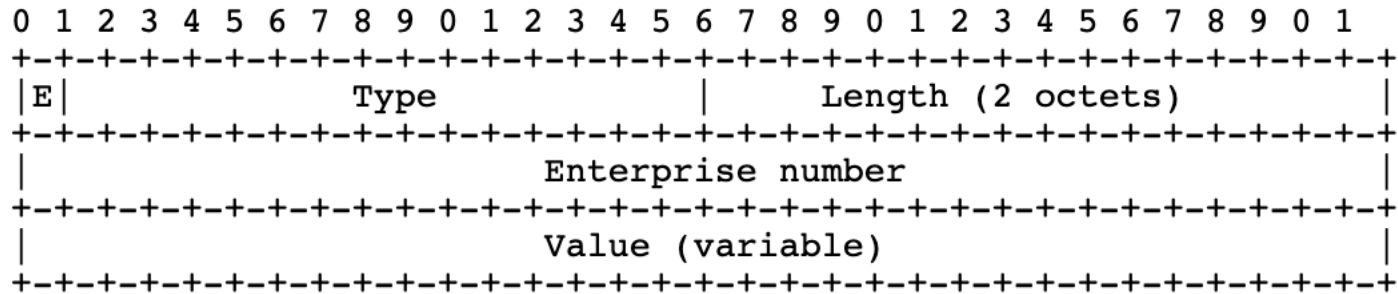
Introduction

- PEN => IANA-assigned Private Enterprise Number
- Goal: By using a PEN in a TLV we can make it enterprise-specific
- Idea borrowed by IPFIX

IANA-governed TLVs encoding

```
 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|E|             Type              |       Length (2 octets)       |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|                          Value (variable)                     |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
```

Enterprise-specific TLVs encoding

```
 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|E|               Type              |        Length (2 octets)    |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|                        Enterprise number                      |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|                        Value (variable)                       |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
```

Next steps

- Open questions:
  - Not much, tbh
  - Perhaps recommend that any sub-TLVs should have E-bit
  - Pehraps E-bit may be applicable to Message Types too
- Feedback & propose WG adoption?

Compression of BMP Route Monitoring messages
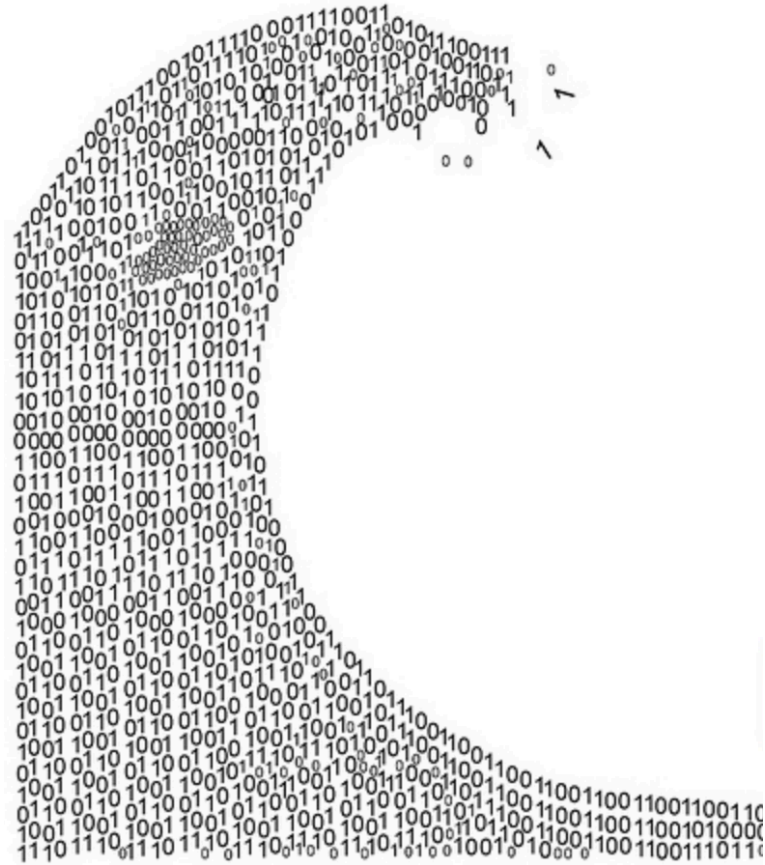
`draft-msri-grow-bmp-compression`

Mukul Srivastava, Juniper

Paolo Lucente, NTT

22 Nov 2019

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Problem statement

Proposal

- Flag compressor info in a TLV in the Init Message
- Have a new Message Type for Compressed Route Monitoring (CRM)
- Essentially apply `draft-przygienda-idr-compressed-updates` to BMP

exit(0)