BMP Sequence Number, Timestamp and Flags TLVs

draft-younsi-grow-bmp-snts(f)-00

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Agenda

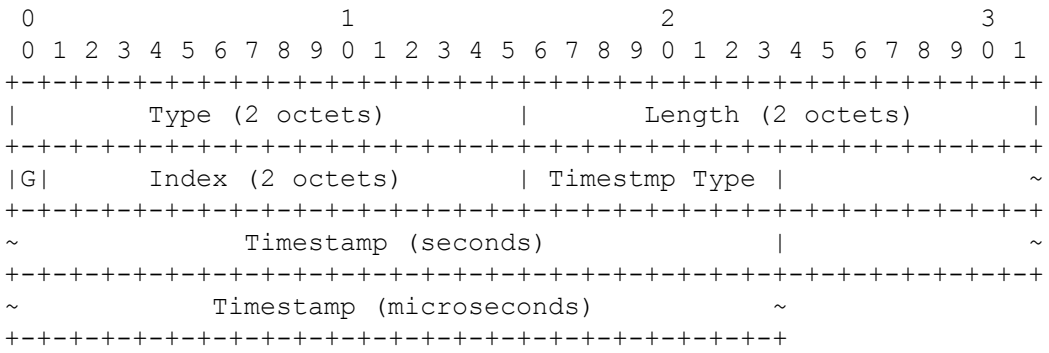
- Why ?
- TLVs
  - Timestamp TLV
  - Flags TLV
  - Sequence Number TLV

Timestamp TLV

- Current timestamp in Per-Peer Header is overloaded
  - Adj-In-*X* [RFC7854] : time of route installation in adj-rib-in (pre/post)
  - Local-RIB [RFC9069] : time of route installation in local-rib
  - Adj-Out-X [RFC8671] : time of route installation in adj-rib-out (pre/post)
- Not explicitly defined for messages other than RM
- Might be NULL (0) if the timestamp is not available, while other timestamps for the route are known
- Is frequently **abused** by putting the BMP message export time instead, **misleading operators**

Timestamp TLV

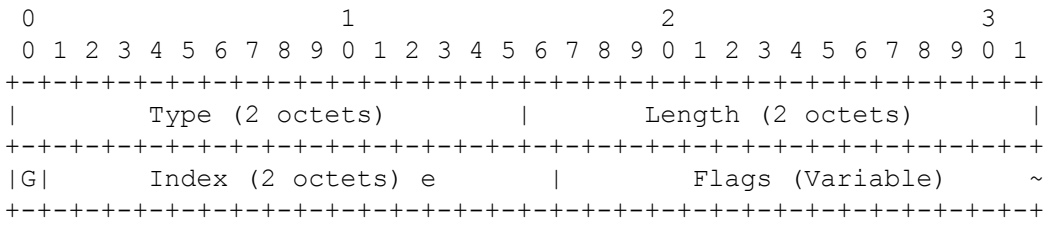
- Timestamp Type and Value
  - Clear meaning for the timestamp
  - Multiple Timestamps can be carried



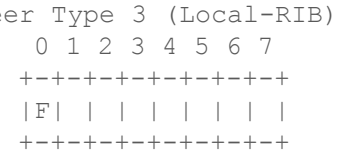
Code	Name	Section
0x00	Trigger Time	Section 2.1.1
0x01	Message Export Time	Section 2.1.2
0x02	Adj-In Time	Section 2.1.3
0x03	Local-RIB Time	Section 2.1.4
0x04	Adj-Out Time	Section 2.1.5

Flags

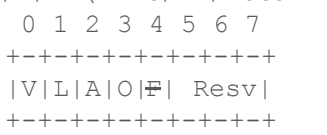
- Running out of space for flags…
- Trick was to re-define the flag space as a function of Peer Type
- Led to misalignment of common flags,
  e.g. for “Filtered Flag”, now deprecated (?)
- ⇒ “Extended Flags” flag, X



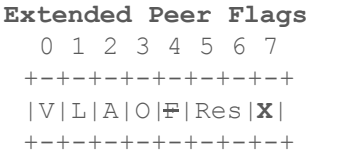
Peer Type 3 (Local-RIB)



Peer Type 0/1/2 (Dflt/RD/Local Instance)

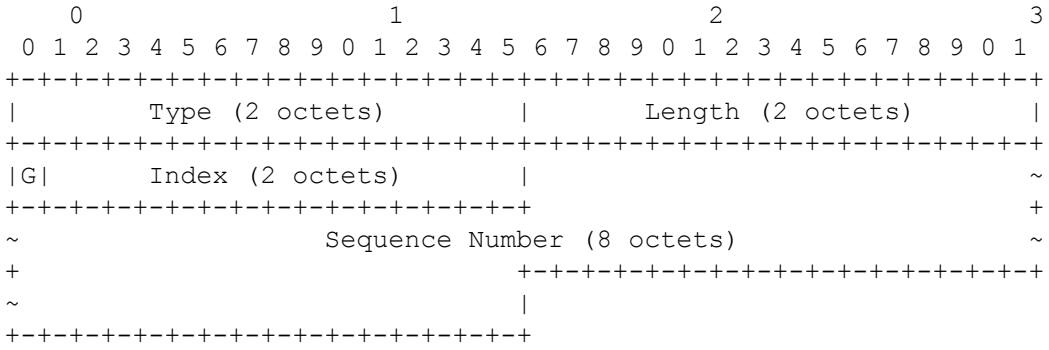


Extended Peer Flags



Sequence Number TLV

- Needed for BMP over QUIC
- Timestamps not a valid criterion for message ordering (c.f. Timestamp TLV)
- No SeqNum makes it more difficult for collectors



BMP Loc-RIB Peer Address

draft-ietf-grow-bmp-loc-peer-01

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Questions

1. Should we use IPv6-mapped IPv4 addresses [rfc4921] for the RX Peer Address TLV?
2. IPV6
    a. Can the Zone ID be used as easily as interface ID and interface name to correlate with IP traffic reports from IPFIX?
    b. If so, should we have "IPv6 with Zone ID" [rfc4007] replace the "IPv6 with Interface Name" and "IPv6 with Interface Id" peer address types?
    c. Which encoding should be preferred:
        - IPv6 (16 bytes) + Zone_ID (String)
        - Full string "IPv6 % Zone_ID" [rfc6874]
3. Should we remove the Peer Address Type code and base this "IPv4/IPv6" distinction on the length of the TLV?

Thank you

Questions?