BMP Extension for Path Status TLV
draft-cppy-grow-bmp-path-marking-tlv-07

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Overview

- TLV option to convey path status in a BMP update
- Depends on draft-grow-bmp-tlv and draft-lucente-grow-bmp-tlv-ebit
- There is an (optional) reason field, if needed for extra troubleshooting

Changes from latest versions

- Use of an index to identify the prefix

- Implemented E-bit for enterprise specific TLVs
  - draft-lucente-grow-bmp-tlv-ebit

- Reason code now optional if not supported

Implementation and testing

- Develop code to forge BMP packets with the TLV option:
  - https://github.com/jccardonar/bmp_scapy
  - Works with latest version of the pmacct collector
- Path status draft was also tested in the IETF hackathon project presented by Thomas Graf

WG doc?

Encodings

```
 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 (15 bits)     |       Length (2 octets)       |
+-------------------------------+-------------------------------+
|          Index (2 octets)     |
+-------------------------------+-------------------------------+
|                    Path Status (4 octets)                     |
+---------------------------------------------------------------+
|              Reason Code (2 octets, optional)                 |
+---------------------------------------------------------------+
```

```
 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 (15 bits)     |       Length (2 octets)       |
+-------------------------------+-------------------------------+
|                    PEN number (4 octets)                      |
+---------------------------------------------------------------+
|          Index (2 octets)     |
+-------------------------------+-------------------------------+
|                    Path Status (4 octets)                     |
+---------------------------------------------------------------+
|              Reason Code (2 octets, optional)                 |
+---------------------------------------------------------------+
```