Export of GTP-U Information in IPFIX

draft-ietf-opsawg-ipfix-gtpu-03

Enabling insights in GTP forwarding plane by adding GTP-U dimensions

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GTP-U @ IPFIX

Draft Status since last review @ IETF121

Highlights since IETF121

- Liaison statement issued with 3GPP and requested 3GPP TSG SA WG5 and 3GPP TSG CT WG4 to review this draft.
- Addressed comments from Mohamed on updating the IE description, Use case section (Sec-4) by giving additional references to slicing related info.
- Updated IE description will be updated with IANA also (should I mentioned this statement??)
- There is a possibility of additional IEs to be added as part of addressing the ongoing comments. Ex: gtpuheadersection, gtputotalheaderlength
- Review and addressing further comments from Mohamed's on version 03 – In progress

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IPFIX entities in context of the GTP-U (1)

- **gtpuFlags IE-505**

  8-bit flags field defined in the GTP-U which indicates the version of GTP-U protocol, protocol type and presence of extension header, sequence number and N-PDU number in the GTP-U header.

- **gtpuMsgType IE-506**

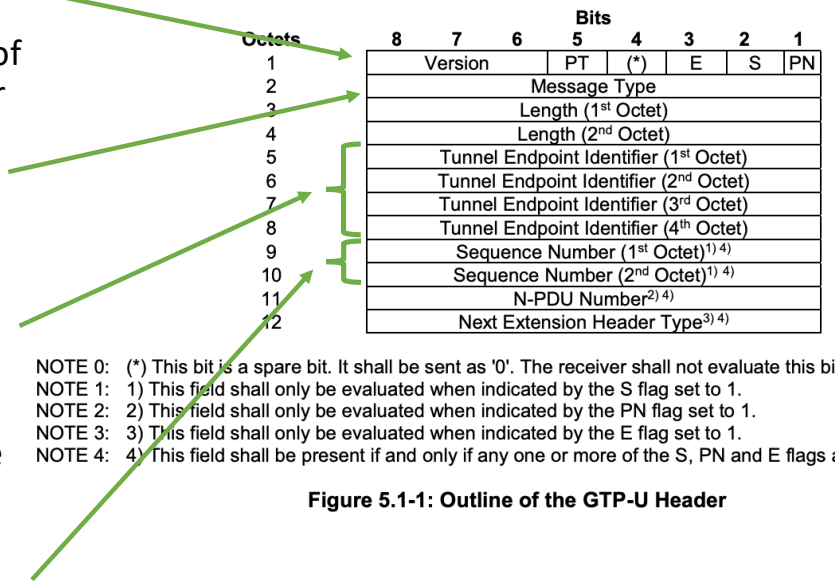
  8-bit message type field defined in the GTP-U which indicates the type of GTP-U message.

- **gtpuTEid IE-507**

  32-bit tunnel endpoint identifier field defined in GTP-U which unambiguously identifies a tunnel endpoint in the receiving GTP-U protocol entity for a given UDP/IP endpoint..

- **gtpuSequenceNum IE-508**

  16-bit sequence number field defined in the GTP-U. This field is interpreted based on the corresponding flag value from gtpuFlags



Octets	Bits 8	7	6	5	4	3	2	1
1	Version			PT	(*)	E	S	PN
2	Message Type							
3	Length (1st Octet)							
4	Length (2nd Octet)							
5	Tunnel Endpoint Identifier (1st Octet)							
6	Tunnel Endpoint Identifier (2nd Octet)							
7	Tunnel Endpoint Identifier (3rd Octet)							
8	Tunnel Endpoint Identifier (4th Octet)							
9	Sequence Number (1st Octet)1) 4)							
10	Sequence Number (2nd Octet)1) 4)							
11	N-PDU Number2) 4)							
12	Next Extension Header Type3) 4)							

NOTE 0: (*) This bit is a spare bit. It shall be sent as '0'. The receiver shall not evaluate this bit.
NOTE 1: 1) This field shall only be evaluated when indicated by the S flag set to 1.
NOTE 2: 2) This field shall only be evaluated when indicated by the PN flag set to 1.
NOTE 3: 3) This field shall only be evaluated when indicated by the E flag set to 1.
NOTE 4: 4) This field shall be present if and only if any one or more of the S, PN and E flags are set.

Figure 5.1-1: Outline of the GTP-U Header

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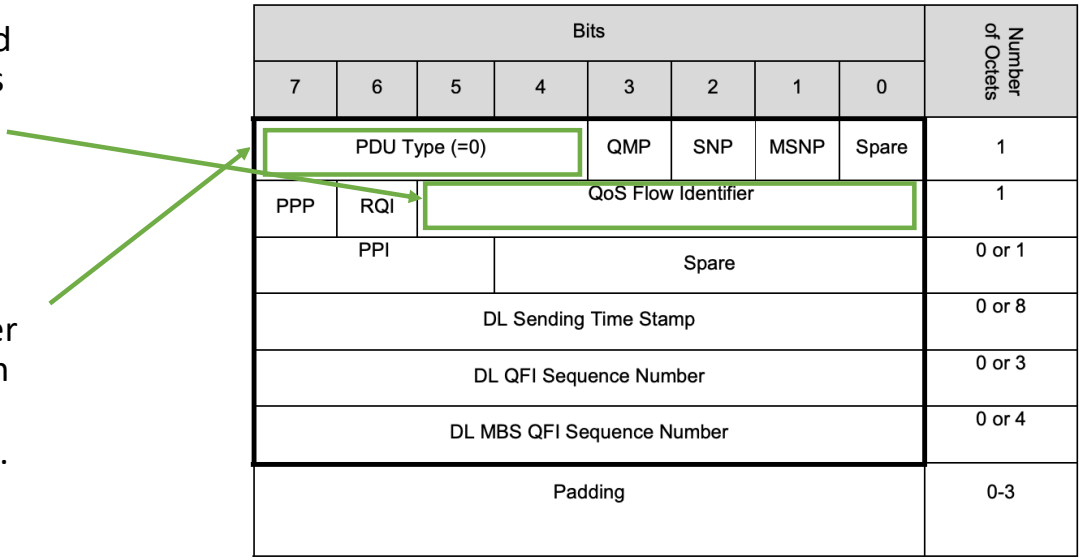
IPFIX entities in context of the GTP-U (2)

- **gtpuQFI IE-509**

  8-bit QoS flow identifier field defined in PDU Session Container extension header of GTP-U. This is defined in section 5.5.3 of PDU session spec [TS.38415]. This is used to determine the QoS flow and QoS profile which are associated with the received packet.

- **gtpuPduType IE-510**

  8-bit PDU type field defined in PDU Session Container extension header of GTP-U. This is defined in section 5.5.3 of PDU session spec [TS.38415]. This field indicates the structure of the PDU session UP frame..



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Next Steps

I would seek inputs from the WG if there is any interest on below comments.

1. *Is it worth to also report the extension header chain?*
   We could think of two options to report the GTP-U extension header chain
   a) Export complete GTP-U header, for example gtpuHeaderPacketSection
   b) Export only the extension headers, for example gtpuExtHeaderPacketSection

2. *As the header length is variable, is it worth to also export the length as a separate IE*