

# Export of GTP-U Information in IPFIX

draft-ietf-opsawg-ipfix-gtpu-00

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

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# GTP-U @ IPFIX

Draft Status since last review @ IETF119

## Highlights since IETF119

- Draft is adopted by OPSAWG
- Many thanks Paul Aitken for the IPFIX doctor review.
- IANA assigned IE numbers for GTP fields are available; IE 505-510.
- Added a new section named 'Operational Considerations'
- Shared with DMM WG
- Review and adding Mohamed's comments

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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**

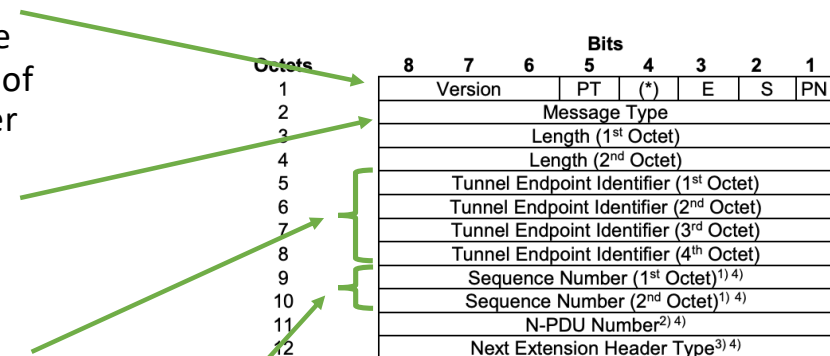
8-bit message type field defined in the GTP-U which indicates the type of GTP-U message.

- **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



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..

Bits								Number of Octets
7	6	5	4	3	2	1	0	
PDU Type (=0)				QMP	SNP	MSNP	Spare	1
PPP	RQI	QoS Flow Identifier						1
PPI			Spare					0 or 1
DL Sending Time Stamp								0 or 8
DL QFI Sequence Number								0 or 3
DL MBS QFI Sequence Number								0 or 4
Padding								0-3

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## Next Steps

Request for comments and feedback

Thank you