Lot 3 - Développements

MNGT to LTE-CM Interface

Version 1

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Generic Information

- For all the packets defined herein,
  - Byte-order is Big Endian
  - Packet exchange is done through a UDP socket
  - Unless stated otherwise there is padding for variable-size fields to make entire packet's size multiples of DWORD
  - Reserved fields should be zeroed

Socket Interface

- MGMT listens to the port number 1402 (by default) for incoming UDP data

- This port number may be altered through the configuration file of MGMT (see SCOREF-MGMT_Configuration.pdf)

- LTE-CM shall bind() to a certain port throughout the data exchange, i.e. all the packets should be sent from the same port number

Message Header

- Bit 0: *vendor specific* or *extended message* flag (E)
  - Used to indicate that a custom message format is used
  - For vendor specific extension capabilities
- Bit 1: Validity flag (used to indicate of non-existent data)
- Version information (4 bits)
- Priority (Optional, 3 bits)
- Event Type (8 bits)
- Event Subtype (8 bits)

0								1								2								3							
0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
E	V	R	R	Version				Priority			R	R	R	R	R	Event Type								Event Subtype							

Message type & subtype

Event Type (ET)	Event Sub-type (EST)	Direction	Encoding	Description
ANY			0	Unspecified
	UNSPECIFIED	Unspecified	0	Unspecified
STATE			4	State Event
	WIRELESS_STATE_REQ	GN-CM←MGMT	2	Wireless State Event Request
	WIRELESS_STATE_RES	GN-CM→MGMT	23	Wireless State Event Response

State

Wireless State Request

- It contains only the Header.

0								1								2								3							
0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
E	V	R	R	Version				Priority			R	R	R	R	R	Event Type								Event Subtype							

Wireless State Response

- The response contains all the Wireless Interfaces
- The message can be unsolicited if major change
- **Abbreviations**

  RSRP: Reference Signal Received Power

  RSRQ: Reference Signal Received Quality

  QCI: Channel Quality Indication

0								1								2								3							
0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
E	V	R	R	\multicolumn{4}{c}{Version}	Priority			R	R	R	R	R	Event Type								Event Subtype							
Interface ID																Reserved								Reserved							
Reference Signal Received Power																Reference Signal Received Quality															
Channel Quality Indication								Status								Reserved								Reserved							
Packet Loss Rate																															