

Introduction

The LTE Emulators emulate a number of 3GPP LTE network elements, including the Evolved NodeB (ENodeB), the Mobile Management Entity (MME), the Serving Gateway (SGW) and the PDN Gateway (PDN-GW). The Emulators are implemented according to the 3GPP Release 8 standards. The Emulators implement the network interfaces and the communication protocols required for the emulated ENodeB, MME, S-GW and PDN-GW to operate in an LTE/SAE network.

New in Release 3.0.0.16 Alpha

1. UE-initiated Bearer Resource Allocation and Modification.
2. Negative testing of S1-MME , S11 and S5/S8 interfaces.
3. Support for portable Emulator configurations. A configuration file saved in one test setup can be used in another test setup.
4. Configuration of multiple neighboring SGW / HSS / MME in MME Emulator.
5. HSS-initiated UE Context modification. (for internal HSS only).
6. GTP-U data classification based on TFT parameters.
7. Intra-LTE Roaming (using GTP-based S8)

To be supported in Release 3.0 GA

1. Multi-homing on S1-MME.
2. Secure transport (IPSec) for S6a and S13 interfaces.
3. HSS-initiated UE Context Modification.
4. HSS-initiated UE Detach.
5. eNodeB-initiated Bearer Deactivation.
6. PGW-Initiated Bearer Modification without QoS update.

Unsupported features (to be supported in future releases)

1. IPv6.
2. Support for interfaces – X2, S7 .
3. S8 using PMIP
4. MME Configuration Update.
5. Trace.
6. Warning.
7. CDMA2000 Tunneling.

Version 3.0.0.16

Release Date: Jan 18, 2011

Component Versions

1. LTE Emulators : 3.0.0.16
2. LTE Emulators Console: 3.0.0.16

Resolved Issues

Issue #	Summary
4985	The MME Emulator may terminate abnormally when several hundreds of UEs attempt to execute an S10-based Handover without SGW Relocation.
4980	An S1-based Handover to a Target eNodeB fails if the Target eNodeB is created after the "UE Attach" and if the Target eNodeB serves a different TAC.
5034	S5-c tunnel count does not decrease in SGW after receiving Create Session Response with "request rejected" cause value.

Known Issues

Issue #	Summary
5197	MME properties pane shows wrong 'Connections (Total)' after UE initiated detach.
5163	Piggybacked Bearer functionality partially broken.
4979	Unable to attach UE after the following sequence: attach-S1 reset(MME/ENB initiated)-attach-reset(MME/ENB)-detach(UE initiated).
4821	If MME emulator is restarted, console does not allow to reestablish S1-MME and/or reattach UE.
5127	Issues found for PGW initiated bearer creation with different TFT Parameters.
5136	MME Emulator crashes for a particular sequence in roaming scenario (Home - Routed traffic).
4969	ENodeB Emulator (Console) is disconnected immediately, if more than 5000 UE is created.
5077	After ENodeB initiated S1-MME Reset from eNodeB for 1000 UE SGW GTP-U tab shows wrong GTP-U tunnel count.
5001	The S1-MME Close or Reset operation does not change the state of the UE.
4988	Console gives an application error when S10 tracking Area update (without SGW relocation) is performed for 5000 UE.
5006	S1AP Protocol Stack can not handle ERROR INDICATION packets.
5058	MME properties pane shows wrong EMM Registered count after performing multiple UE operations.
5124	Negative testing issue - NAS policy in MME for Tracking Area Update Request.
5126	End-to-end ping data (UL / DL) failed for datagram size = 1500 Byte except Ubuntu 9.04
5110	The "Load Configuration" procedure does not load the Neighbor HSS; though it shows under the Properties tab of the MME
5007	MME Emulator is unable to handle QCI and other QoS values received from HSS (external)

Issue #	Summary
5051	Packet analysis of "Create Indirect Data Forwarding Tunnel Request" shows multiple errors during Handover (both MME and SGW relocated)
4973	Different UE operations are not generating the expected result for 5000 UE.
5036	Packet analysis of "Create Indirect Data forwarding Tunnel Response" shows error during Handover (MME relocated, SGW not relocated)
5202	ENodeB initiated internal data traffic on dedicated bearer shows no packets transmitted (TX) at ENodeB or received (RX) at PGW.