

## Version 11.0.0.20

Release Date: April 14, 2016

### Component Versions

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1. LTE Load Tester Console: 11.0.0.20
2. eNodeB Emulator: 11.0.0.20
3. IP Traffic Emulator: 11.0.0.20
4. Diameter Emulator: 11.0.0.20
5. Packet Builder: 11.0.0.20

### New in this release

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1. eNodeB Emulator: X2 Reset and X2 Close procedures.

### Resolved Issues

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Issue #	Summary
10254	eNodeB Emulator stops Inter-PLMN Handover procedure after 7 hours.
12501	Multiple consecutive bearer creation followed by bearer deletion procedures fails for more than 100K UEs.
12523	eNodeB Emulator shows more than expected S1-U tunnel count after network-initiated bearer creation for idle UEs.
12524	In time of smooth UDP traffic generation from a UE Group in uplink direction, all traffic is generated from a single UE of the UE Group.
12527	eNodeB sends wrong ENB-UE-S1AP-Id in Attach Request message.
12528	Load Tester shows success even if X2-Handover procedure fails with Home-ENodeB-GW as SUT (System Under Tester).
12544	Bearer Resource Allocation procedure fails around 20 per cent in long duration test.
12552	Attach procedures to IPv6 PDN stops after sometime if they run in multiple test sequences in parallel.

Issue #	Summary
12553	Running emulators from start.sh script produces error message if all emulators are not installed. Installed emulators work properly if error message is ignored.
12602	eNodeB Emulator sends Path Switch Request with wrong MME-UE-S1AP-ID during X2-Handover procedure with Home-ENodeB-GW.

### Known Issues

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Issue #	Summary
10448	IP Traffic Emulator sometimes stops working while generating IPv6 traffic.
12137	FTP traffic generation is not supported.

## Version 11.0.0.18

Release Date: March 11, 2016

### Component Versions

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1. LTE Load Tester Console: 11.0.0.18
2. eNodeB Emulator: 11.0.0.18
3. IP Traffic Emulator: 11.0.0.18
4. Diameter Emulator: 11.0.0.18
5. Packet Builder: 11.0.0.18

### New in this release

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2. eNodeB Emulator: X2 Setup procedure.
3. IP Traffic Emulator: Generation of IP data traffic over IPv6 GTP-U tunnels.
4. Load Tester Console: Display of estimated test execution time before test is run.

### Resolved Issues

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Issue #	Summary
12041	Wrong calculation of throughput with fragmented IP datagrams.
12254	eNodeB Emulator should support optional IE "Additional Update Type" in Attach Request.
12266	Wrong value for TAU counter during S1-based Handover with MME & SGW Relocation.
12283	IP Traffic Emulator becomes unresponsive during Cell Change procedure.
12345	eNodeB Emulator fails to attempt S1 Handover during long duration test.
12352	After executing a test using CLI, Offline Analysis shows wrong counts of S1-MME Setup and Go Idle procedure.
12361	eNodeB Emulator not sending UE Context Release Request after X2 Handover.

## Known Issues

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Issue #	Summary
10254	eNodeB stops sending Handover Request during Inter-PLMN Handover.
10448	IP Traffic Emulator sometimes stops working while generating IPv6 traffic.
12137	FTP traffic generation is not supported.
12553	Running emulators from start.sh script produces error message if all emulators are not installed. Installed emulators work properly if error message is ignored.

## Version 11.0.0.17

**Release Date:** February 16, 2016

### Component Versions

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1. LTE Load Tester Console: 11.0.0.17
2. eNodeB Emulator: 11.0.0.17
3. IP Traffic Emulator: 11.0.0.17
4. Diameter Emulator: 11.0.0.17
5. Packet Builder: 11.0.0.17

### Resolved Issues

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Issue #	Summary
12217	Load Tester Console crashes if Check Point is used in scenario.
12237	eNodeB emulator sends malformed Attach Request after approximately 40 hours of test execution.
12379	eNodeB emulator incorrectly encodes MME-UE-S1AP-ID, having value less than 256, in Uplink NAS Transport message.
12380	eNodeB emulator sends Authentication Response without integrity protection, if authentication is challenged from MME, during Service Request procedure.

### Known Issues

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Issue #	Summary
10254	eNodeB stops sending Handover Request during Inter-PLMN Handover.
10448	IP Traffic Emulator sometimes stops working while generating IPv6 traffic.
12137	FTP traffic generation is not supported.

## Version 11.0.0.16

Release Date: January 29, 2016

### Component Versions

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1. LTE Load Tester Console: 11.0.0.16
2. eNodeB Emulator: 11.0.0.16
3. IP Traffic Emulator: 11.0.0.16
4. Diameter Emulator: 11.0.0.16
5. Packet Builder: 11.0.0.16

### New in this release

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1. Increased eNodeB simulation capacity up to 25000.

### Resolved Issues

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Issue #	Summary
11665	Load Tester CLI (Command Line Interface) application freezes occasionally on Windows.
11945	Support of 25000 eNodeB simulation.
12259	“Ignore Authentication Failure” feature does not work.
12276	eNodeB emulator sends malformed ERAB Release Response message, if run with Home eNodeB Gateway.

### Known Issues

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Issue #	Summary
10254	eNodeB stops sending Handover Request during Inter-PLMN Handover.
10448	IP Traffic Emulator sometimes stops working while generating IPv6 traffic.

Issue #	Summary
12137	FTP traffic generation is not supported.

## Version 11.0.0.15

Release Date: January 15, 2016

### Component Versions

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1. LTE Load Tester Console: 11.0.0.15
2. eNodeB Emulator: 11.0.0.15
3. IP Traffic Emulator: 11.0.0.15
4. Diameter Emulator: 11.0.0.15
5. Packet Builder: 11.0.0.15

### Resolved Issues

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Issue #	Summary
11862	eNodeB Emulator crashes after 42 hours during long duration testing with higher signaling rates.
12006	eNodeB Emulator crashes for bearer related procedures.
12008	IPTE does not transmit packets in uniform interval for burst size more than 1.
12018	eNodeB sends ciphered Uplink NAS Transport after 9 hours even if ciphering is not enabled.
12065	IPTE transmits double of configured packets per second.
12174	X2-handover fails in second iteration if run with Home eNodeB Gateway.
12175	eNodeB can not handle Bearer Resource Modification with 'No TFT Operation'.
12195	Support of User Plane Data testing across handover.
12213	Load Tester Console continues to attempt signaling events beyond estimated time for multi-sequence Test Scenario.
12238	eNodeB stops sending Initial UE messages in long duration test with Log Error 'Failed to encode Initial UE message'.
12252	Load Tester stops initiating Idle TAU after 1 <sup>st</sup> iteration.



## Known Issues

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Issue #	Summary
10254	eNodeB stops sending Handover Request during Inter-PLMN Handover.
10448	IP Traffic Emulator sometimes stops working while generating IPv6 traffic.
12137	FTP traffic generation is not supported.
12276	eNodeB emulator sends malformed ERAB Release Response message, if run with Home eNodeB Gateway.

## Version 11.0.0.14

**Release Date:** December 18, 2015

### Component Versions

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1. LTE Load Tester Console: 11.0.0.14
2. eNodeB Emulator: 11.0.0.14
3. IP Traffic Emulator: 11.0.0.14
4. Diameter Emulator: 11.0.0.14
5. Packet Builder: 11.0.0.14

### New in this release

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1. Statistics of transmitted and received S1AP and NAS protocol messages.

### Resolved Issues

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Issue #	Summary
11417	Non-admin users can not run Load Tester Console.
11665	Load Tester CLI application crashes while running test batch on Linux.
11684	Load Tester sends malformed detach request if EPS Mobile Identity field changed from GUTI to IMSI in NAS packet template.
11764	Attach and Detach procedures fail if MME-UE-S1AP-ID starts from 65536.
11844	PDN type IPv6 or IPv4v6 not supported in PDN Connection procedure.
11845	Cell Change procedure stops after some iterations if executed in a loop.
11907	X2 Handover procedure fails with Home eNodeB Gateway as load tester uses wrong MME-UE-S1AP-ID.
11934	Load Tester sends wrong global eNodeB Id in Handover Required message during Inter-PLMN Handover.
11992	Load Tester does not support re-synchronization of sequence number during NAS authentication procedure.
12007	Load Tester stops Go Idle and Service Request procedures after 10 hours.
12023	Diameter Emulator does not start from start.sh script.

Issue #	Summary
12033	Packet builder can not be started on Windows 7.
12056	ENodeB Emulator crashes for network initiated S1-Close procedure.
12149	Load Tester sends wrong PPID 46 (Diameter) instead of PPID 18 (S1-AP) in S1-MME setup request message.

### Known Issues

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Issue #	Summary
10448	IP Traffic Emulator sometimes stops working while generating IPv6 traffic.

## Version 11.0.0.13

**Release Date:** November 27, 2015

### Component Versions

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1. LTE Load Tester Console: 11.0.0.13
2. eNodeB Emulator: 11.0.0.13
3. IP Traffic Emulator: 11.0.0.13
4. Diameter Emulator: 11.0.0.13
5. Packet Builder: 11.0.0.13

### New in this release

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1. Creation of Test Cases using Tcl scripts. Tcl tests can be executed using the Command Line Interface (CLI).

### Resolved Issues

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Issue #	Summary
11680	UE Attach fails in a long duration test if multiple procedures are executed in parallel.
11699	Detach procedure counter is not updated if Detach type is "Switch Off".

### Known Issues

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Issue #	Summary
10448	IP Traffic Emulator sometimes stops working while generating IPv6 traffic.

## Version 11.0.0.11

**Release Date:** October 20, 2015

### Component Versions

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1. LTE Load Tester Console: 11.0.0.11
2. eNodeB Emulator: 11.0.0.11
3. IP Traffic Emulator: 11.0.0.11
4. Diameter Emulator: 11.0.0.11
5. Packet Builder: 11.0.0.11

### New in this release

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1. NAS packet creation using Packet Builder for these procedures - TAU, Bearer Resource Allocation/Modification, UE-initiated Context Release, PDN Connection/Disconnection.

### Resolved Issues

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Issue #	Summary
11555	If multiple sequences are used in test scenario to run multiple procedures simultaneously, procedure failure occurs for internal error.
11661	UE Group with more than one million subscribers cannot be created.
11665	CLI mode test run does not work on Linux without X server running.
11788	Load Tester sends plain Detach Request when ciphering is enabled.

### Known Issues

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Issue #	Summary
10448	IP Traffic Emulator sometimes stops working while generating IPv6 traffic.

## Version 11.0.0.10

**Release Date:** August 27, 2015

### Component Versions

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1. LTE Load Tester Console: 11.0.0.10
2. eNodeB Emulator: 11.0.0.10
3. IP Traffic Emulator: 11.0.0.10
4. Diameter Emulator: 11.0.0.10
5. Packet Builder: 11.0.0.10

### New in this release

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1. Emulation of up to 32 thousand eNodeBs per eNodeB Emulator.
2. Emulation up to 5 million subscribers (UEs) per eNodeB Emulator.
3. Improved signaling rates (see KPI datasheet for details).
4. NAS packet building using Packet Builder.

### Resolved Issues

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Issue #	Summary
11203	CLI mode test execution does not work if LTELoadTester command is executed from any folder other than " <a href="#">C:\LTELoadTester</a> " on Windows.

### Known Issues

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Issue #	Summary
10448	IP Traffic Emulator sometimes stops working while generating IPv6 traffic.
11661	Multiple UE Groups need to be created to simulate more than one million subscribers.

## Version 10.2

Release Date: July 06, 2015

### Component Versions

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1. LTE Load Tester Console: 10.2.0.7
2. IP Traffic Emulator: 10.2.0.7
3. Diameter Emulator: 10.2.0.7
4. Packet Builder: 10.2.0.7

This Version is compatible with LTE Emulator 10.2.0.11

### New in Release 10.2

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1. Compatible with 3GPP specification release version 10.
2. Creation of User Defined Procedures for EPC signaling and user-plane testing.

## Version 10.1

Release Date: September 15, 2014

### Component Versions

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1. LTE Load Tester Console: 10.1.0.3
2. IP Traffic Emulator: 10.1.0.3
3. Diameter Emulator: 10.1.0.3

### New in Release 10.1

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1. Compatible with 3GPP specification release version 10.1.

## Version 4.0

**Release Date:** July 18, 2014

### Component Versions

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1. **LTE Load Tester Console: 4.0.0.4**
2. **ENodeB Emulator: 10.1.0.8**
3. **IP Traffic Emulator: 4.0.0.4**
4. **Diameter Emulator: 4.0.0.4**

### New in Release 4.0

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1. Support of FTP Traffic Generation. The IP Traffic Emulator emulates thousands of FTP clients and multiple FTP servers for file transfer.
2. Testing OCS on Gy Diameter interface.
3. Testing OFCS on Gz Diameter interface.
4. Testing PCRF on Gxc Diameter interface.
5. Offline analysis of test results.



## Version 3.1

**Release Date:** January 24, 2014

### Component Versions

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1. LTE Load Tester Console: 3.1.0.5
2. ENodeB Emulator: 4.2.0.36
3. IP Traffic Emulator: 3.1.0.5
4. Diameter Emulator: 3.1.0.5

### New in Release 3.1

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1. Testing HSS on S6a Diameter interface.
2. Testing DRA on S6a Diameter interface.
3. Testing Home eNodeB Gateway on S1-MME and S1-U interfaces.
4. Testing a system consisting of multiple nodes. For example, an EPC with multiple MMEs, SGWs and PGWs.
5. Command Line Interface (CLI) for test execution.

## Version 3.0

Release Date: September 30, 2013

### Component Versions

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1. LTE Load Tester Console: 3.0.0.3
2. LTE Emulators: 4.2.0.36
3. IP Traffic Emulator: 3.0.0.3
4. Diameter Emulator: 3.0.0.3

### New in Release 3.0

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1. Testing PCRF on Gx, Rx and S9 Diameter interfaces.

## Version 2.4

Release Date: August 02, 2013

### Component Versions

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1. LTE Load Tester Console : 2.4.0.5
2. LTE Emulators: 4.2.0.33
3. IP Traffic Emulator: 2.4.0.5

### New in Release 2.4

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1. IPv6 Traffic generation.
2. User-plane traffic continuation across the handover of UEs.
3. Increased eNodeB simulation capacity up to 4000 eNodeBs.
4. Importing authentication keys (K) from a file while creating a UE group.

## Version 2.3

Release Date: May 06, 2013

### Component Versions

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1. LTE Load Tester Console : 2.3.0.7
2. LTE Emulators: 4.2.0.28
3. IP Traffic Emulator: 2.3.0.7

### New in Release 2.3

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1. TCP Traffic generation.

## Version 2.2

Release Date: October 19, 2012

### Component Versions

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1. LTE Load Tester Console : 2.2.0.4
2. LTE Emulators: 4.2.0.16
3. IP Traffic Emulator: 2.2.0.4

### New in Release 2.2

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1. Support of GTPu encapsulated traffic generation and reception by IP Traffic Emulator to achieve higher user-plane throughput over LTE EPC network. IP Traffic Emulator runs with Polaris Networks eNodeB Emulator on the same machine to generate GTPu encapsulated traffic.
2. Support of run-time modification of dynamic properties like burst interval and burst size for a Traffic Generator.

## Version 2.1

**Release Date:** September 26, 2012

### Component Versions

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1. LTE Load Tester Console : 2.1.0.9
2. LTE Emulators: 4.2.0.14
3. IP Traffic Emulator: 2.1.0.8

### New in Release 2.1

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1. Support of IP traffic generation using IP Traffic Emulator. IP Traffic Emulator emulates an IP traffic endpoint for thousands of sources and also receives traffic to measure latency, throughput and packet loss. It is used for user-plane data testing over an LTE network.
2. Improved User Traffic Metrics. Current, Cumulative and Peak values of the metrics are displayed.

## Version 2.0.0.4

**Release Date:** June 6, 2012

### Component Versions

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1. LTE Load Tester Console : 2.0.0.4
2. LTE Emulators: 4.2.0.9

### New in Release 2.0

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1. Support of OPc operator variant support.
2. Support for IPv6 address for UE and Internal Traffic Generator.
3. Provision to map different 3GPP logical interfaces to different network interfaces.
4. Support of SCTP multi-homing for S1-MME interface of eNodeB.

## Version 1.1.0.4

**Release Date:** February 14, 2012

### Component Versions

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1. LTE Load Tester Console : 1.1.0.4
2. LTE Emulators: 4.1.0.4

### New in Release 1.1

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1. Three new procedures: Default bearer deletion, Trace Activation and Trace Deactivation.
2. Provision to add neighbour HSS, SGW or MME to an emulated MME.
3. New User Metric tab to display current and peak values of Attached UEs, S1-U Connections and PDN Connections.
4. Provision to import testbed configuration and test scenario.
5. Check point to validate certain metrics and take action based on the validation.
6. Final validation to validate certain metrics at the end of a test scenario.
7. Graph to plot metrics.

## Version 1.0.0.2 Beta

**Release Date:** December 27, 2011

### Component Versions

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1. LTE Load Tester Console : 1.0.0.2
2. LTE Emulators: 4.1.0.1

### New in Release 1.0

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1. First Release.