

Introduction

Polaris Networks LTE Load Tester is a test-tool to generate traffic load on an LTE EPC Node to measure and analyze the performance of the node. LTE Load Tester Console allows user to configure testbed, create and play test scenarios by creating one or more surrounding nodes of the EPS system under test (SUT).

Version 3.1

Release Date: January 24, 2014

Component Versions

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

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.

Resolved Issues

Issue #	Summary
8682	Load Tester Console needs to be installed as Administrator on Windows.

Known Issues

Issue #	Summary
9330	Load Tester Console sometimes keeps running as background process on Windows after it is closed.
9398	Network Audio System library (nas-libs) is required to run Load Tester Console on Linux 32-bit system.

Version 3.0

Release Date: September 30, 2013

Component Versions

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

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

Resolved Issues

Issue #	Summary
6793	IP Traffic Generator can generate traffic with payload size less than 1455 bytes only.
8173	IP Traffic generation using a UE group works only with single PDN connection per UE and not with multiple PDN connections.

Known Issues

Issue #	Summary
8682	Load Tester Console needs to be installed as Administrator on Windows.

Version 2.4

Release Date: August 02, 2013

Component Versions

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

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.

Known Issues

Issue #	Summary
6793	IP Traffic Generator can generate traffic with payload size less than 1455 bytes only.
8173	IP Traffic generation using a UE group works only with single PDN connection per UE and not with multiple PDN connections.

Version 2.3

Release Date: May 06, 2013

Component Versions

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

1. TCP Traffic generation.

Resolved Issues

Issue #	Summary
6836	IP Traffic Emulator does not always generate GTPu encapsulated traffic over the selected type of bearer. Traffic may be sent over a Dedicated Bearer although user has selected Default Bearer and vice versa.
6816	Throughput measurement may be inaccurate if the transmission data rate exceeds the physical bandwidth of the test interface.
7140	If user installs two IPTE in two systems and uses one for Tx and the other for Rx then the Load Tester does not report traffic metrics properly.
7141	Load Tester does not allow to distribute traffic from multiple sources to multiple destinations.

Known Issues

Issue #	Summary
6793	IP Traffic Generator can generate traffic with payload size less than 1455 bytes only.

Version 2.2

Release Date: October 19, 2012

Component Versions

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

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.

Resolved Issues

Issue #	Summary
6719	The "Bearer Resource Allocation" procedure takes long time to return if all UEs used in the procedures are not in attached state. "Bearer Resource Allocation" procedure fails in this situation.

Known Issues

Issue #	Summary
6836	IP Traffic Emulator does not always generate GTPu encapsulated traffic over the selected type of bearer. Traffic may be sent over a Dedicated Bearer although user has selected Default Bearer and vice versa.
6816	Throughput measurement may be inaccurate if the transmission data rate exceeds the physical bandwidth of the test interface.
6793	IP Traffic Generator can generate traffic with payload size less than 1455 bytes only.
6718	Two packaged test scenarios that include the "Bearer Resource Allocation" procedure do not work. Affected test scenarios: <ol style="list-style-type: none"> 1. Bearer Creation from UE. 2. IPv6 Traffic Generation. Solution: <ol style="list-style-type: none"> 1. Delete the "Bearer Resource Allocation" procedure and recreate it.
6722	The packaged test scenario, "IPV4 Traffic from SGW" fails because the wrong configuration is selected. Solution: <ol style="list-style-type: none"> 1. Select "Basic LTE Network" configuration instead of "LTE Network with Co-located SGW & PGW".
6421	The "Program Compatibility Assistance" dialog may appear with the message "This program might not have installed properly" after installation on Windows 7. Solution: <ol style="list-style-type: none"> 1. Ignore the error by selecting "This program installed correctly". Or 2. Run the installer as Administrator.

Version 2.1

Release Date: September 26, 2012

Component Versions

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

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.

Known Issues

Issue #	Summary
6719	The "Bearer Resource Allocation" procedure takes long time to return if all UEs, used in the procedures, are not in attached state. "Bearer Resource Allocation" procedure fails in this situation.
6718	The packaged test scenarios, that include the "Bearer Resource Allocation" procedure, do not work. Affected test scenarios: <ol style="list-style-type: none"> 1. Bearer Creation from UE. 2. IPv6 Traffic Generation. Solution: <ol style="list-style-type: none"> 1. Delete the "Bearer Resource Allocation" procedure and recreate it.
6722	The packaged test scenario, "IPV4 Traffic from SGW" fails due to wrong configuration is selected. Solution: <ol style="list-style-type: none"> 1. Select "Basic LTE Network" configuration instead of "LTE Network with Co-located SGW & PGW".
6421	The "Program Compatibility Assistance" dialog may appear with the message "This program might not have installed properly" after installation on Windows 7. Solution: <ol style="list-style-type: none"> 1. Ignore the error by selecting "This program installed correctly". Or 2. Run the installer as Administrator.

Version 2.0.0.4

Release Date: June 6, 2012

Component Versions

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

New in Release 2.0

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.

Resolved Issues

Issue #	Summary

Known Issues

Issue #	Summary
6421	The "Program Compatibility Assistance" dialog may appear with the message "This program might not have installed properly" after installation on Windows 7. Solution: <ol style="list-style-type: none"><li data-bbox="331 491 1146 522">1. Ignore the error by selecting "This program installed correctly". Or<li data-bbox="331 522 773 550">2. Run the installer as Administrator.

Version 1.1.0.4

Release Date: February 14, 2012

Component Versions

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

New in Release 1.1

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.

Resolved Issues

Issue #	Summary
6124	No metric is available for piggybacked bearer creation.
6170	User Guide cannot be opened from the Toolbar on Linux.
6177	Cannot import test-bed configurations and test scenarios easily.

Known Issues

Issue #	Summary

Version 1.0.0.2 Beta

Release Date: December 27, 2011

Component Versions

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

New in Release 1.0

1. First Release.

Known Issues

Issue #	Summary
6124	No metric is available for piggybacked bearer creation.
6170	User Guide cannot be opened from the Toolbar on Linux.
6177	Cannot import test-bed configurations and test scenarios easily.