Version 10.2.0.9

Release Date: Feb 6, 2015

Components

1. LTE Emulators: MME, SGW, PGW, HSS, PCRF, MBMSGW, ANDSF, eNodeB, UES14
2. LTE Emulators Console

Resolved Issues

<table>
<thead>
<tr>
<th>Issue #</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>10539</td>
<td>Enhancement required in MME to support negative policy setting for dropping Initial Context Setup Response message from eNB.</td>
</tr>
<tr>
<td>10665</td>
<td>Enhancement required in MME to display connected eNBs in MME Neighbors tab.</td>
</tr>
<tr>
<td>10805</td>
<td>Modification of allowed CSG List for a subscriber is not maintained across configuration reload.</td>
</tr>
<tr>
<td>10829</td>
<td>MME sends incorrect QCI in Modify EPS Bearer Context Request NAS message during Bearer Resource Modification procedure when only QoS parameters are modified.</td>
</tr>
<tr>
<td>10831</td>
<td>PGW sends incorrect PCO when a valid secondary DNS IP Address is configured in an APN.</td>
</tr>
<tr>
<td>10852</td>
<td>MME sends incorrect cause in &quot;Deactivate EPS bearer context request&quot; NAS message during UE-initiated PDN disconnection.</td>
</tr>
<tr>
<td>10877</td>
<td>MME does not cleanup UE Contexts properly after detecting S11 Path failure.</td>
</tr>
<tr>
<td>10878</td>
<td>Generation of duplicate M-TMSI across MME restart causes service denial.</td>
</tr>
<tr>
<td>10902</td>
<td>MME crashes after receiving MME Configuration Update Failure message from eNB.</td>
</tr>
<tr>
<td>10918</td>
<td>MME gets segmentation fault when it receives Error Indication message with Criticality Diagnostics IE from eNB.</td>
</tr>
<tr>
<td>10941</td>
<td>MME cannot handle the scenario when UE initiated Service Request and Network Triggered Service Request procedure collides.</td>
</tr>
<tr>
<td>10953</td>
<td>Enhancement required in EPC to display priority level (PL) related to each bearer in Bearers tab of monitored Subscriber.</td>
</tr>
<tr>
<td>10954</td>
<td>Sometimes configuration changes does not work across configuration file reload.</td>
</tr>
<tr>
<td>10967</td>
<td>MME fails to delete UE context when received partial S1-Reset from HeNB-GW and crashes eventually.</td>
</tr>
<tr>
<td>10976</td>
<td>Sometimes MME crashes during S1-Handover.</td>
</tr>
</tbody>
</table>
Version 10.2.0.8 Beta

Release Date: Jan 15, 2015

Components

1. LTE Emulators: MME, SGW, PGW, HSS, PCRF, MBMSGW, ANDSF, eNodeB, UES14
2. LTE Emulators Console

New in this Release


Resolved Issues

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<thead>
<tr>
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<tr>
<td>9401</td>
<td>Simulation of GTP-U Error Indication in SGW/PGW in response to Uplink Data Traffic.</td>
</tr>
<tr>
<td>10242</td>
<td>IPv6 Support required in LTE Core Network Elements.</td>
</tr>
<tr>
<td>10664</td>
<td>MME cannot handle procedure collision scenario between UE initiated Service Request and Downlink Data Notification procedure.</td>
</tr>
<tr>
<td>10714</td>
<td>MME does not send proper rejection cause to Source eNB when Target eNB fails to allocate resource during S1-Handover.</td>
</tr>
<tr>
<td>10744</td>
<td>S1-Handover between HeNBs fails in consecutive runs.</td>
</tr>
<tr>
<td>10789</td>
<td>MME does not include failed bearers in &quot;ERAB to Release list&quot; in Handover Command message.</td>
</tr>
<tr>
<td>10806</td>
<td>MME crashes during S1- Handover when target cell is a Hybrid cell.</td>
</tr>
<tr>
<td>10655</td>
<td>Sometimes MME does not respond to TAU Request message after back to back Handover/TAU procedure with MME relocation.</td>
</tr>
<tr>
<td>10656</td>
<td>MME sends malformed Handover Restriction IE when more than five entries are present in the Forbidden TA / Forbidden LA list.</td>
</tr>
<tr>
<td>10658</td>
<td>Target MME does not release UE context if Handover is terminated after successful resource allocation.</td>
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Known Issues

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<tr>
<td>10902</td>
<td>MME crashes after receiving MME Configuration Update Failure message from eNB.</td>
</tr>
</tbody>
</table>
Version 10.2.0.7 Beta

Release Date: Nov 19, 2014

Components

1. **LTE Emulators**: MME, SGW, PGW, HSS, PCRF, MBMSGW, ANDSF, eNodeB, UES14
2. **LTE Emulators Console**

New in this Release

1. MBMS-GW Emulator with M1, Sm, SG-mb and SGi-mb interfaces and internal BM-SC Simulator to generate MBMS traffic.
2. eMBMS support in eNodeB and MME Emulator.
3. Inter-working with trusted non-3GPP Access Network with S2a, S6b, STa and Gxa interfaces.
4. AAA Server functionality in HSS Emulator.
5. SMS transmission from MME to UE and UE-to-UE SMS loopback support in MME.
6. Equivalent PLMN and Forbidden TA/LA configuration in MME.
7. Minimization of Drive Test (MDT) configuration and activation.
8. HSS-initiated Trace Activation/Deactivation on S6a.
9. GERAN and UTRAN support in PCRF.
10. AF Session Establishment/Termination/Modification in Visited PLMN.
11. Support for Diameter Redirect Agent and Diameter Proxy Agent in SGW and PCRF.
13. Cx interface in HSS Emulator to test IMS Voice Calls and SMS.
14. Use of OpenIMS Server to test IMS Voice Calls and SMS.
15. Use of DHCP server co-located with PGW for allocation of UE IP addresses.

Known Issues

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<td>Sometimes MME does not respond to TAU Request message after back to back Handover/TAU procedure with MME relocation.</td>
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<td>10656</td>
<td>MME sends malformed Handover Restriction IE when more than five entries are present in the Forbidden TA / Forbidden LA list.</td>
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Resolved Issues

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<td>10401</td>
<td>Support required to include GUMMEI IE in Overload Start/Stop message.</td>
</tr>
<tr>
<td>10402</td>
<td>Support required for &quot;MDT configuration&quot; IE in the Initial Context Setup Request message.</td>
</tr>
<tr>
<td>10413</td>
<td>MME cannot trigger UE Context Release Command with cause “Load Balancing TAU required”.</td>
</tr>
<tr>
<td>10432</td>
<td>Support required for equivalent PLMNs and forbidden TA/LA in Handover Restriction List IE.</td>
</tr>
<tr>
<td>10493</td>
<td>MME should not use same MME UE SIAP ID during back to back Handover when previous S1 association with same id is not terminated.</td>
</tr>
<tr>
<td>10498</td>
<td>Paging priority IE is not present in when paging is triggered from Emulator Console for user having a priority bearer.</td>
</tr>
<tr>
<td>10501</td>
<td>MME does not send Delete Session Request to SGW in case of Handover Cancellation.</td>
</tr>
<tr>
<td>10520</td>
<td>Support required to trigger Path-Switch Request Failure from MME.</td>
</tr>
<tr>
<td>10526</td>
<td>MME does not send Delete Session Request to SGW in case of Handover Failure.</td>
</tr>
<tr>
<td>10532</td>
<td>MME should send Delete Session Request to SGW if the UE Reattaches without explicit Detach.</td>
</tr>
<tr>
<td>10564</td>
<td>MME does not respond to Attach Request containing GUTI or IMSI if MME is restarted and UE arrives with previously allocated GUTI.</td>
</tr>
<tr>
<td>10569</td>
<td>MME does not respond to next attach attempt after eNB sends UE-associated S1-Reset message for that UE.</td>
</tr>
</tbody>
</table>

Version 10.2.0.3 Beta

Release Date: Jul 25, 2014

Components

1. LTE Emulators: MME, SGW, PGW, HSS, PCRF, ANDSF, eNodeB, UES14
2. LTE Emulators Console

New in this Release

1. ANSDF Emulator with S14, Zh and Ub interfaces.
2. UES14 Emulator with S14 interface.
New in Release 10.1

1. Standalone PCRF Emulator with Gx, Rx, S9 and proprietary Sp interfaces.
2. Standalone HSS Emulator with S6a interface.
4. Support for Diameter Redirect Agent and Diameter Proxy Agent in MME and PGW.
6. UE IPv6 Address assignment via DHCPv6 on GTP-based S5/S8.
7. PS Handover during CS Fallback to GERAN and UTRAN.

8. Support for Relay Node in MME.

9. HSS Identity resolution and SGW selection using DNS in MME.

10. Radio Resource Management and Mobility Restriction in MME.

11. UE Time Zone reporting.

12. APN Restriction.

13. PGW Restart Indication and Modify Access Bearer Request support in MME and SGW.
Version 10.0.0.9
Release Date: May 19, 2014

Version 10.0.0.8
Release Date: Apr 9, 2014

Version 10.0.0.7
Release Date: Feb 24, 2014

Version 10.0.0.6
Release Date: Dec 30, 2013

Components

1. LTE Emulators: MME (with internal HSS), SGW and PGW (with internal PCRF)
2. LTE Emulators Console

New in Release 10.0

1. 3GPP Release 10 Compatibility:
   3GPP Release 10 enhancements in S1AP, GTP, PMIP and Diameter messages.

2. Local Breakout Roaming using GTP-based S5.

3. Inter-working with GERAN and UTRAN:
   Access to LTE Core Network via GERAN/UTRAN and Idle and Connected mode mobility between GERAN/UTRAN and LTE Network.

4. CS Fallback to GERAN and UTRAN:
   Combined Attach to CS+PS network, SMS over SGs and Mobile Originated and Terminating Voice Call with Suspension of PS service during CSFB.

5. CS Fallback to CDMA2000 1xRTT Network:
   Mobile Originated and Terminating Voice Call and SMS without PS Handover.

6. Dedicated Bearers on PMIP-based S5/S8 interface, Gxc interface in SGW.

7. Complete and Partial Path Failure handling.
8. GTP-U Error Indication handling.


10. Subscriber Monitoring using Emulator Console.

11. PGW selection in MME and Charging Server selection in PGW using DNS.

12. Trace Activation and Deactivation from external HSS using S6a interface.
### Version 9.2.0.9
**Release Date:** Dec 4, 2013

### Version 9.2.0.8
**Release Date:** Oct 21, 2013

### Version 9.2.0.7
**Release Date:** July 23, 2013

### Version 9.2.0.6
**Release Date:** June 27, 2013

### Version 9.2.0.4
**Release Date:** May 14, 2013

### New in Release 9.2

1. Emergency Session
2. CMAS - SBC interface between MME and Cell Broadcast Centre (CBC) and simulation of Alerts from MME
3. PMIP-based S5/S8 interface, with support for Default Bearer establishment only
4. Bearer Release initiated by eNB and MME
5. UE requested DHCP-based IPv4 address assignment
6. HSS Initiated APN-AMBR, QCI, ARP Modification
7. PCRF-initiated Location Reporting using the Emulators' Tcl scripting API
8. Support for IPv6 user plane traffic on dedicated bearer
**Version 9.1.0.10**

**Release Date:** April 23, 2013

**Version 9.1.0.9**

**Release Date:** March 06, 2013

**New in this Release**

1. Support for “Network Access Mode” configuration in EPC.

**Version 9.1.0.8**

**Release Date:** February 22, 2013

**Version 9.1.0.7 Beta**

**Release Date:** February 8, 2013

**Version 9.1.0.6 Beta**

**Release Date:** February 1, 2013

**New in Release 9.1**

1. S6a interface in MME to communicate with external HSS
2. S13 interface in MME to communicate with external EIR
3. IPv6 user plane traffic – only on default bearer
4. Trace in SGW and PGW
5. Roaming – Home-Routed

[www.polarisnetworks.net](http://www.polarisnetworks.net)
**Version 9.0.0.10**

**Release Date:** November 27, 2012

**Supported Signaling Procedures (compliant to 3GPP Release 9 standards)**

1. S1 Setup, S1 Close, S1 Flex
2. S1 Reset: eNB Initiated and MME Initiated
3. SCTP Multi-homing on S1-MME
4. UE Attach: Initial Attach with IMSI / old GUTI
5. UE Detach: UE Initiated and Network Initiated
6. UE Context Release
7. Service Request
8. Tracking Area Update
9. Downlink Data Notification / Paging
10. Dedicated Bearer Activation: UE and Network Initiated
11. Bearer Modification: UE and Network Initiated
12. Bearer Deactivation: UE and Network Initiated
13. S1-Based Handover - with or without MME and SGW relocation
14. X2-Based Handover - with or without SGW relocation
15. Multiple PDN Connection and Disconnection
16. Trace support in MME
17. Overload
18. Location Reporting on S1-MME
19. SGW selection in MME based on Tracking Area
20. UE IPv4 address allocation by PGW using DHCP based
21. Closed Subscriber Groups and Open/Closed/Hybrid Access Control to support Home eNB

**Other Features**

1. End-to-end IPv4 traffic on default and dedicated bearers
2. ICMP and UDP traffic generation using internal traffic generator
3. Simulation of abnormal and failure scenarios for negative testing
4. Procedure and Packet statistics for each protocol
5. Protocol timer configuration
6. Separate IP Address for each 3GPP interface