

Change Note Forms

Product Family: Base Stations
 Product: Flexi Multiradio BTS LTE
 Release: FL16 2.0

Approval date: 29-Apr-2016

Summary of changes:

| | | |
|-------------|-----|------------------|
| 29-Apr-2016 | 1.0 | Approved version |
|-------------|-----|------------------|



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CN-id: FL16_00255

Title:

System module failure happened after 'IMS emergency call' plan activation

Valid for Product(s):

Flexi LTE Base Station

References:

Reason for the Change Note:

Summary of the original problem:

System doesn't startup, because some applications and/or addons are not extracted, because the archive is corrupted.

How end user/operator could detect the problem:

System doesn't come up. If logs are available, there is an information about a corrupted archive.

Description of the fault:

Corrupted archives are caused by unstable bits in the flash. They are introduced when a flash operation is interrupted by a power outage.

Faulty component and version:

There is no clearly responsible component for this, as it's not clear if the problem should be addressed by HW, the SW shall be able to cope with it or to try to avoid it.

Faulty component first delivered in(e.g. release, CD):

The problem always existed.

Workaround:

System startup can be repeated, the visibility of the problem is not permanent.

Description of the correction:

Problem will be mitigated by examining CRC of data read from the flash and the reading will be repeated if the CRC check fails up to 10 times.

Risk analysis of the correction:

Minor risk, mounting time will be slower (roughly by ~1s, which is negligible). Reading performance will be affected by performing the CRC check and possible rereading of the data.

Corrected Fault Reports:

NA05895596

System module failure happened after 'IMS emergency call' plan activation

NA05895607

SW fallback(FID-4082) happened after 'IMS emergency call' plan activation.

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| FB1503.- | r505782 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05895596, NA05895607)

Stability

Testing Instructions for the change

Pre-requirements:

No particular Pre-requirement.

Test execution:

Site reset or parameter change causing eNB reset.

Expected results:

No system module failure/SW fall back alarm after eNB reset

Unexpected results:

System module failure or SW fall back alarm visible after eNB reset

CN-id: FL16_00259**Title:**

The base station upgrade from rl60 to rl70, TRS disconnection(All Link).

Valid for Product(s):

Flexi LTE Base Station

References:**Reason for the Change Note:**

Summary of the original problem:
TRS disconnection when upgraded

Description of the fault:
There were rules added to arp table to drop packets with source mac as multicast

Description of the correction:
The ARP rules are not needed and was added by mistake and hence will be removed

Effect on operator:
All the ARP packets with destination MAC address used as Multicast address will get dropped, and hence no ARP resolution will be done for those MAC addresses. Applications using the services from Multicast MAC addresses will not work since IP packets cannot be sent out.

Corrected Fault Reports:

NA05870195

Tom rl60 to rl70he base station upgrade fr, TRS disconnection(All Link).

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------------------------------|---|--------------|----------|-------|
| na05870195_fl15 a_tl151a_fix.- | FTM_R3_FL 15A_TL15A_ W16_MP1_4 65.00 | | | |

Change effects:

Effects on end-user
N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05870195)

Testing Instructions for the change

Pre-requirements:

eNB running, default gateway has Multi-cast MAC address.

Test execution:

Upgrade the eNB to upper SW build.

Expected results:

ARP should get resolved for the default gateway router, and the backhaul traffic will flow normally.

Unexpected results:

ARP resolution for Gateway router will get failed and ARP packet will get dropped due to multicast MAC address in ARP reply, and since ARP will not get resolved eNB cannot send any packets outside.

CN-id: FL16_00272**Title:**

LTE1460 doesn't work correctly in FL15A

Valid for Product(s):

Flexi LTE Base Station

References:**Reason for the Change Note:**

Summary of the original problem:

LTE1460 does not work correctly

How end user/operator could detect the problem:

By starting traffic mirroring and downloading the PCAP file with test scenario to file transfer.

Description of the correction:

Increased the time limit for Token. libzip function delay is due to the busy RAM access.

Effects on operator:

Operator would get Token Invalid issue.

Corrected Fault Reports:

NA05882048

LTE1460 doesn't work correctly in FL15A

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|---|--|--------------|----------|-------|
| knights_pkodihal _na05882048_to ken_invalid_fl15a _mp1.- | FTM_R3_FL 15A_TL15A_ W16_MP1_4 67.00.01 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05882048)

Testing Instructions for the change

Pre-requirements:

N/A

Test execution:

The correction has been tested internally and proved to be fully functional

Expected results:

N/A

Unexpected results:

N/A

CN-id: FL16_00274

Title:

Site with FL15 0.1 doesn't recognize RET modules after upgrade from FL7.0

Valid for Product(s):

Flexi LTE Base Station

References:

Reason for the Change Note:

Description of the fault:

When filling internal parameters map wrong data was taken - code wasn't aware of logical antennaLines which caused taking their names as real ones.

Workaround:

As this was occasional issue - couple of reboots should do the job.

Description of the correction:

Find antennaName in TX resource first. If not found then search for RX resource. As there are only RX logical resources this will resolve problem.

Effects on operator:

MHA/RET were not detected as parameters were sent on wrong antennaLine.

Corrected Fault Reports:

NA05905464

Site with FL15 0.1 doesn't recognize RET modules after upgrade from FL7.0 (LN7.0_ENB_1407_572_04). In this case rollback solves problem

PR140569

Site with FL15 0.1 doesn't recognize RET modules after upgrade from FL7.0

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| MOAM.- | 53209 | | | |

Change effects:

Effects on end-user

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05905464, PR140569)

Testing Instructions for the change

Pre-requirements:

N/A

Test execution:

The correction has been tested internally and proved to be fully functional

Expected results:

N/A

Unexpected results:

N/A

CN-id: FL16_00130

Title:

Increase in RSSI Seen on 4 sites post PCD2.1 upgrade.

Valid for Product(s):

Flexi LTE Base Station

References:

Reason for the Change Note:

Summary of the original problem:

RSSI increase in seen after upgrade from FL15A to FL16

Description of the fault:

Two cablnks connected to the same portNo of RMOD_A caused error in class AntennaLinesInformator which results in error in AntennaRoundTripDelayFinder

Workaround:

No workaround

Description of the correction:

Allow cablnk only when LinkMode is enabled with Data in AntennaLinesInformator's Graph to avoid this issue.

Corrected Fault Reports:

NA05901593

Increase in RSSI Seen on 4 sites post PCD2.1 upgrade.

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| CELLP.- | 31962 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05901593)

Testing Instructions for the change

Pre-requirements:

BTS with MHA configuration and antenna round trip delay set different to default value (>4.5ns).

Test execution:

BTS Upgrade FL15A to FL16

Expected results:

BTS counter RSSI_PUSCH_AVG (M8005C5) is on same level on FL16 as before on FL15A

Unexpected results:

BTS counter RSSI_PUSCH_AVG (M8005C5) is not on same level on FL16 as before on FL15A

CN-id: FL16_00131

Title:

3rd RET in chain not detected from FRIG after SW Update

Valid for Product(s):

Flexi LTE Base Station

References:

Reason for the Change Note:

Summary of the original problem:

In certain cases where responses from ALD's are delayed while the ALD's are being assigned an address, MOAM drops the ALD and will not try to recover them. In the meanwhile the ALD's keep running because the specification does not state what should happen in this case

How end user/operator could detect the problem:

Operator will see Fault 10 for the affected ALD.

Dependency on configuration:

This may affects configurations where multiple ALD's are hanging off a single line.

Faulty component and version:

MOAM - ALMAG. Probably since it was created.

Workaround:

Block and unblock and it should recover.

Description of the correction:

In cases where Address Assignment response is lost/delayed MOAM will perform an XID reset on the assigned address. Correction only invoked in cases of lost/delayed Address Assignment response which is possible only in Antenna Lines with a lot of delays.

Corrected Fault Reports:

NA05905211

3rd RET in chain not detected from FRIG after SW Update

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| MOAM.- | 53332 | | | |

Change effects:

Effects on end-user

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05905211)

Operation & Maintenance

Testing Instructions for the change

Pre-requirements:

eNB on Air

Test execution:

SW update from PCD2.0 (FL16_ENB_0000_001035_100034) to PCD2.1 (FL16_ENB_0000_001035_100074)

Expected results:

After FRIG 1.1.1 Block / Unblock all RETs are detected properly, no faults

Unexpected results:

After update and reset Antenna Line Device failure (0010) fault occurs on RET3 detected from FRIG 1.1.1

CN-id: FL16_00132

Title:

All of metadevices are not synced after reboot iOMS.

Valid for Product(s):

Flexi LTE Base Station

References:

Reason for the Change Note:

Summary of the original problem:

All of metadevices are synced failure during startup the iOMS. And startup time becomes long.

How end user/operator could detect the problem:

Raise an alarm: 70162 RAID ARRAY HAS BEEN DEGRADED

Description of the fault:

Not all devices are synced after restart and restart takes a lot of time. Problem is related to mdadm wrapper which incorrectly has been added to ram disk and causes problem with creating SW raid for sysimg and users partitions.

Workaround:

No workaround

Description of the correction:

Correction removes not needed mdadm wrapper from ram disk.

Effects on operator:

No effects - md devices are synced automatically after a while.

Corrected Fault Reports:

PR132935

All of metadevices are not synced after reboot iOMS.

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|--------------|-----------|--------------|----------|-------|
| SS_BPUTILS.- | 10.82.1.4 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR132935)

Operation & Maintenance

Testing Instructions for the change

Pre-requirements:

R_GOMS7_1.8.1.0.release_oms.corr38

Test execution:

OMS restart (#fshascli -r /CLA-0)

Expected results:

Not all devices are synced after restart and restart takes a lot of time.

Unexpected results:

Not all devices are synced after restart and restart takes a lot of time.

CN-id: FL16_00133

Title:

Site reported Unit autonomous reset alarm with Fault ID 4019- UEC crash

Valid for Product(s):

Flexi LTE Base Station
FlexiZone BTS LTE

References:

Reason for the Change Note:

Summary of the original problem:

Data Radio bearer list inside UecDataBearerMgr was not cleared after being used by one UE that was released and before being used by another UE that was placed in the same UE context. This resulted in access to invalid bearer while handling MME originated UE release.

How end user/operator could detect the problem:

The one particular scenario must occur for this problem to happen:

1. First UE is attached to context.
2. First UE gets new bearers via ERAB Setup
3. First UE is released.
4. Second UE is attached to the same context that First UE was before.
5. Second UE receives ERAB Setup.
6. ERAB Setup is interrupted by Reestablishment for Second UE
7. Reestablishment is interrupted due to signal loss for Second UE.
8. Internal UE Release is starting for Second UE.
9. In the meantime Ue Context Release Request comes from MME for Second UE.
10. Crash occurs due to invalid bearer list.

Description of the fault:

UEC crash

Workaround:

The described scenario must be omitted but it is not possible to have influence on it.

Description of the correction:

Adding code to clear the list while resetting the context.

Corrected Fault Reports:

NA05907551

Site reported Unit autonomous reset alarm with Fault ID 4019- UEC crash

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| UEC.- | 432848 | | | |

Change effects:

Effects on end-user

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05907551)

Testing Instructions for the change

Pre-requirements:

N/A

Test execution:

N/A

Expected results:

N/A

Unexpected results:

N/A

CN-id: FL16_00134

Title:

Unit autonomous reset of FSPD while running MP1- L2 crash due to MAC assertion failure

Valid for Product(s):

Flexi LTE Base Station
Flexi Zone BTS LTE

References:

Reason for the Change Note:

Summary of the original problem:

Crash in L2 software level due to MAC PS assertion failure

How end user/operator could detect the problem:

Alarm visible while baseband card is resetting

Description of the fault:

Unit autonomous reset as recovery action

Related feature / functionality:

Legacy

Workaround:

none/autonomous recovery

Description of the correction:

Covered cases in which first non tb mapped pdu was invalid. This debug assertion has been removed but during update this variable added validation whether id is valid. If packetId is invalid first non tb mapped pdu will not be updated and appropriate information will be visible in the syslog. For memory allocation for L2 internal event used method which allow for trying to allocate memory from two another optional pool in situation when we have a starvation in basic pool (em_alloc_safe method instead of l2_em_alloc).

Effects on operator:

Cells assigned to resetting baseband are not operational

Effect on End user:

Worse coverage

Corrected Fault Reports:

NA05907336

Unit autonomous reset of FSPD while running MP1- L2 crash due to MAC assertion failure

PR138722

[FLF16][LTE1858] Traffic Model normal 5UE CA - PCell crash - L2

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| LTEL2.- | 514792 | | | |

Change effects:

Effects on end-user

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05907336, PR138722)

Testing Instructions for the change

Pre-requirements:

Site running FL16 MP1 software

Test execution:

Site in normal working mode

Expected results:

Site working without any additional alarms

Unexpected results:

Unit autonomous reset of baseband card

CN-id: FL15A_00283

Title:

eNB has CMAS issue in RL70 2.2 and FL15A 0.1

Valid for Product(s):

Flexi LTE Base Station

References:

Reason for the Change Note:

Summary of the original problem:

For one round of 24-channel broadcast test, eNB will receive 24 write-replace messages from MME.

Each time when eNB received one write-replace message from MME, eNB will reserve resources and broadcast the message.

After this message broadcast is finished, the reserved resource is released for future usage.

If eNB receive two write-replace message with same ID and Serial number almost at the same time, the resource reservation and release have problem that some resources are hanging until the whole task is finished.

No new resources can be allocated for newly arrived message and the rest messages of the test cannot be broadcast.

How end user/operator could detect the problem:

Operator can detect the problem by sending a lot of WRWR with the same msgId and serialNumber to eNB.

Related feature / functionality:

LTE494

Dependency on configuration:

CMAS enabled with available S1 links

Workaround:

No workaround

Description of the correction:

Resource allocation and release procedure is changed to make sure no hanging resource exist even the gap between write-replace message is small.

Corrected Fault Reports:

NA05894220

eNB has CMAS issue in RL70 2.2 and FL15A 0.1

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|---------------|---------|--------------|----------|-------|
| fb15_03_1_1_1 | 386238 | | | |

Change effects:

Effects on end-user

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05894220)

Testing Instructions for the change

Pre-requirements:

N/A

Test execution:

The correction has been tested internally and proved to be fully functional

Expected results:

N/A

Unexpected results:

N/A

CN-id: CN031373**Title:**

PDCP RoHC misconfigured during Rrc-Reestablishment

Valid for Product(s):

Flexi LTE Base Station

FlexiZone BTS

References:**Reason for the Change Note:**

Summary of the original problem:

Loss of ROHC information during reestablishment with rlf triggered handover, when source and target ENB have different ROHC modes.

How end user/operator could detect the problem:

After rlf triggered handover from ENB which has ROHC OFF to ENB which has ROHC ON, followed by reestablishment and reconfiguration, UE was not reconfigured to use ROHC again, despite ROHC was ON on new ENB.

Dependency on configuration:

One ENB with ROHC ON, one with OFF

Faulty component and version:

UEC - from FL15A or before

Workaround:

No workaround

Description of the correction:

Resource allocation and release procedure is changed to make sure no hanging resource exist even the gap between write-replace message is small.

Corrected Fault Reports:

NA05906783

PDCP RoHC misconfigured during Rrc-Reestablishment

NA05909336

RLF Triggered HO causes VoLTE Call Drop

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| UEC | 435133 | | | |

Change effects:

Effects on end-user

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05906783, NA05909336)

Testing Instructions for the change

Pre-requirements:

One eNB has RoHC enabled and the other eNB has RoHC disabled.

Test execution:

UE dropped from eNB with RoHC enabled and re-establishment to the other eNB with RoHC disabled.

Expected results:

Both DL and UL data transmission resume and service restored after re-establishment successful.

Unexpected results:

Both DL and UL data transmission failure due to the receiver can not work out the data received due to RoHC mismatch.

CN-id: CN031379

Title:

TUD70276: PM034498, PA027297, RL70 MP2.2 upgrade FSME: remote: NE O&M
CONNECTION FAILURE local: many GTP-U Path Failures (6150), T

Valid for Product(s):

Flexi LTE Base Station

References:

Reason for the Change Note:

Summary of the original problem:

After upgrade from RL60 to RL70 MP2.2 FSME enbs loose the connection to the network and onsite visit is needed. Onsite in eNB BTS Sitemanager the following alarms are seen: - eNB is running with RL70 MP2.2 sw load - many GTP-U Path Failures (6150) - Transport layer connection failure in S1 interface (6202). On the enb a POR (Power off/on reset) was done what solved the problem.

Description of the problem:

After upgrade from RL60 to RL70 MP2.2 FSME enbs loses the connection to the network and onsite visit is needed. Onsite in eNB BTS Sitemanager we see following alarms: - eNB is running with RL70 MP2.2 sw load - many GTP-U Path Failures (6150) - Transport layer connection failure in S1 interface (6202)

How end user/operator could detect the problem:

In the octeon linux kernel, OOPS can be seen.

Dependency on configuration:

None

Faulty component and version:

LN70

Workaround:

power off/on; reset

Description of the correction:

This is an improvement fix, which will provide reset recovery whenever kernel OOPS occurs, so that kernel oops wont cause any connectivity issue and FTM/octeon will reset and recover.

Corrected Fault Reports:

NA05897875

TUD70276: PM034498, PA027297, RL70 MP2.2 upgrade FSME: remote: NE O&M
CONNECTION FAILURE local: many GTP-U Path Failures (6150), T

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|---|---------|--------------|----------|-------|
| wipro_nandd_linu x_octeon_oops_n a05897875_trs_fi x FTM_R2_FL15A_ MP1_356.00 | | | | |

Change effects:

Effects on end-user

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05897875)

Testing Instructions for the change

Pre-requirements:

Upgrade the eNB to FL15A 1.2 Software following recommended the upgrade path from RL70 MP 2.2.

Test execution:

Upgrade the eNB to FL15A 1.2 Software following the recommended upgrade path. Octeon Kernel OOPS/Panic cannot be simulated by external influence until it occurs inherently in code.

Expected results:

During Startup/Runtime, if there is any NE OAM communication failure, GTP-U Path Failures, Transport layer connection Failure in S1 Interface alarms, due to Kernel OOPS in Octeon Kernel [very rare event], software should be able to recover the system automatically without the need of onsite visit to trigger Power On Reset, The recovery fix should make the NE online without any manual intervention.

Unexpected results:

Customer will lose the complete access to NE [Remotely & Locally], NE OAM communication failure, GTP-U Path Failures, Transport layer connection Failure in S1 Interface alarms will be active and site visit will be needed to recover the NE by Power On Reset.

CN-id: CN031381**Title:**

RL70 MP2.2 upgrade FSME: remote: NE O&M CONNECTION FAILURE local: many GTP-U Path Failures (6150), T

Valid for Product(s):

Flexi LTE Base Station

References:**Reason for the Change Note:**

Summary of the original problem:
Reset failed

How end user/operator could detect the problem:
Reset failed

Dependency on configuration:
FSMr2

Faulty component and version:
Legacy

Workaround:
N/A

Description of the correction:
If the supervision failed from BTSOM to TRSW in RESET process, BTSOM would request HW reset for FTM first, then BTSOM request site reset.

Corrected Fault Reports:

NA05897909
BFD 1 down alarm. After remote Reset outage of site and cells

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| MOAM | 54095 | | | |

Change effects:

Effects on end-user
N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05897909)

Testing Instructions for the change

Pre-requirements:

N/A

Test execution:

N/A

Expected results:

N/A

Unexpected results:

N/A

CN-id: CN031382

Title:

External alarms are not working in FSME after upgrade from RL70 to FL15A

Valid for Product(s):

Flexi LTE Base Station

References:

Reason for the Change Note:

Summary of the original problem:

External Fault does not activate an alarm, after update from RL70 to FL15A

How end user/operator could detect the problem:

External Fault does not activate an alarm, after update from RL70 to FL15A

How end user/operator could detect the problem:

In the octeon linux kernel, OOPS can be seen.

Description of the fault:

LOM sends MCUHWAPI faults before all OAM instances have been registered due to invalid configuration of LOM FaultManager during eNB build.

Dependency on configuration:

FSMr2

Faulty component and version:

FL15A

Workaround:

N/A

Description of the correction:

LOM sends MCUHWAPI faults before all OAM instances have been registered due to invalid configuration of LOM FaultManager during eNB build - the build configuration has been fixed.

Corrected Fault Reports:

PR140689

External alarms are not working in FSME after upgrade from RL70 to FL15A

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
|-----------|---------|--------------|----------|-------|

| | | | | |
|--|--|--|--|--|
| BTS_SC_LOM FL15A_LOM_000 0_38557 | | | | |
|--|--|--|--|--|

Change effects:

Effects on end-user

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05897909)

Testing Instructions for the change

Pre-requirements:

eNB using FSME up and running with RL70.

External alarms (EAC) configured and at least one external alarm active

Test execution:

upgrade eNB to FL16 /FL15A

check external alarm after upgrade

Expected results:

external alarm which was active before upgrade is shown also after upgrade.

no other faults are shown

SiteManager allows BTS commissioning without validation error and shows correct configuration page for external faults.

Unexpected results:

external alarm is not visible

BTSSEM shows validation error and external alarms cannot be configured. Instead an empty table no data is shown.

CN-id: CN031384**Title:**

Incorrect value RfmMinOutputPwr (not aligned with BPF TOOL)

Valid for Product(s):

Flexi LTE Base Station

References:**Reason for the Change Note:**

Summary of the original problem:

Incorrect value RfmMinOutputPwr (not aligned with BPF TOOL)

How end user/operator could detect the problem:

Invalid value for Cell power reduce can be set for cell

Description of the fault:

Incorrect value RfmMinOutputPwr (not aligned with BPF TOOL)

Description of the fault:

LOM sends MCUHWAPI faults before all OAM instances have been registered due to invalid configuration of LOM FaultManager during eNB build.

Dependency on configuration:

FRMB or FRMD

Faulty component and version:

FL15A

Workaround:

Do not use incorrect value

Description of the correction:

Align BPF2 with BPF TOOL (SPEC)

Corrected Fault Reports:

PR140876

[FL15A 1.1] BTS SM allows to commission invalid value for 'Cell power reduce'

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| MOAM | 53827 | | | |

Change effects:

Effects on end-user

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR140876)

Testing Instructions for the change

Pre-requirements:

eNB SW FL15A onwards

Test execution:

Set invalid value for "Cell power reduce" (dlCellPwrRed) and try send it to eNB

Expected results:

BTS SM does not allow to send invalid parameter value to eNB.

Unexpected results:

Invalid parameter value for "Cell power reduce" (dlCellPwrRed) was sent eNB.
After this cells are in faulty state

CN-id: CN031389**Title:**

[RL70_enodeB] – Reference clock missing in startup and cell down

Valid for Product(s):

Flexi LTE Base Station

References:**Reason for the Change Note:**

Summary of the original problem:

Top master not locking in case of multicast top configuration and tuning mode setting received after received top configuration from TRSW.

How end user/operator could detect the problem:

Top multicast synchronization not in use

Description of the fault:

Incorrect checking of top master ip in case of multicast configuration where ip is empty string.

Dependency on configuration:

Top multicast configuration

Faulty component and version:

maintenance branches FB1405, FB1603 from creation of branches

Workaround:

unknown, problem with low occurrence rate (detected once long after integration)

Description of the correction:

corrected condition in code

Corrected Fault Reports:

NA05901765

[RL70_enodeB] – Reference clock missing in startup and cell down

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------------------|---------|--------------|----------|-------|
| RP_BM_1503_00 1_72 | | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05901765)

Testing Instructions for the change

Pre-requirements:

Configured TOP with phase synchronization Multicast

Test execution:

Stop TOP and wait for while then start top

Expected results:

Cell is on air and there is no alarm "Reference Clock Missing in startup".

Unexpected results:

Cell is not on air or there is an alarm "Reference Clock Missing in startup".

CN-id: CN031392**Title:**

NE O&M Alarm occurred cause by software failure on FTIB

Valid for Product(s):

Flexi LTE Base Station

References:**Reason for the Change Note:**

Summary of the original problem:

NE O&M Alarm occurred cause by software failure on FTIB

How end user/operator could detect the problem:

NE O&M Alarm occurred cause by software failure on FTIB

Dependency on configuration:

None

Faulty component and version:

FTM_R2_FL15A_P8_343.00

Workaround:

NA since automatically recovered

Description of the correction:

Since it is not possible to identify the exact string that is corrupted due to incomplete core some improvement fixes in the area can be given.

Corrected Fault Reports:

NA05908954

NE O&M Alarm occurred cause by software failure on FTIB

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-------------------------|---------|--------------|----------|-------|
| FTM_R2_FL15A_MP1_356.00 | | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05908954)

Testing Instructions for the change

Fault not reproducible manually in the lab. SCT tests passed.

Pre-requirements:

N/A

Test execution:

N/A

Expected results:

N/A

Unexpected results:

N/A

CN-id: CN031393**Title:**

SCell's MCS is not increased and kept almost "0" value even though SCell's CQI is high value

Valid for Product(s):

Flexi LTE Base Station

References:**Reason for the Change Note:**

Summary of the original problem:

Bad throughput on the SCell due to MCS0 being used.

If measGaps were active on the PCell at the time of the SCell configuration, they were not correctly sent to the SCell.

How end user/operator could detect the problem:

Bad throughput on the SCell.

Description of the fault:

Measurement gap parameters were not set in PS_CaUeAddInScellReq msg which configures the UE in SCell MAC PS.

Dependency on configuration:

Only occurs when measurement gaps are active.

Corrected Fault Reports:

PR142758

SCell's MCS is not increased and kept almost "0" value even though SCell's CQI is high value

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|---------------|---------|--------------|----------|-------|
| MAC PS fb15.9 | r385656 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR142758)

Testing Instructions for the change

Pre-requirements:

2CC CA configured.

Each RSRP of PCell and SCell are set to below by attenuator

PCell's RSRP = -125

SCell's RSRP = -102

Test execution:

1. Initiate PS call to PCell and start FTP DL. After that SCell1 is configured and activated.

2. PCell's RSRP is changed to -115

3. PCell's RSRP is changed to -105

Observe SCell's throughput after each step.

Expected results:

The SCell should have normal throughput.

PCell throughput should increase with better radio link.

Unexpected results:

The SCell has very low throughput with MCS0 being used.

CN-id: CN031394

Title:

[FL16] [FSMr2 FSMr3]- ipsek ikev1 Pluto daemon modification

Valid for Product(s):

Flexi LTE Base Station

References:

Reason for the Change Note:

Summary of the original problem:

When eNodeB is having SLCA certificate and SGW is having MLCA certificate signed by same root CA. The ikev1 child SA does not get established.

How end user/operator could detect the problem:

Ikev1 child SA does not get established, if the certificate being used is SLCA on eNodeB and MLCA on SGW signed by same root CA.(Same TA)

Description of the fault:

When SGW is having MLCA Certificate chain, while establishing ipsec ikev1 tunnel the SGW will send all the intermediate CAs in the chain. The Strongswan ikev1 daemon was considering only the first CA cert in the chain, ignoring the other certificates. Public Key authentication was failing and ikev1 Tunnel was not established.

Dependency on configuration:

If the certificate being used is SLCA on eNodeB and MLCA on SGW signed by same root CA.(Same TA) and ikev1 ipsec policy is configured.

Faulty component and version:

Strongswan RPM(3rd Party).

Faulty component first delivered in:

Legacy issue introduced with ipsec support.

List Releases and/or Change-Delivery where Faulty SW components was delivered.

Legacy issue introduced with ipsec support.

Workaround:

Install intermediate CAs on eNodeB.

Description of the correction:

Now Strongswan is made to consider all the certificates for Public key authentication

Corrected Fault Reports:

PR144255
[FL16] [FSMr2 FSMr3]- ipsek ikev1 Pluto daemon modification

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|---------------|---------|--------------|----------|-------|
| MAC PS fb15.9 | r385656 | | | |

Change effects:

Effects on end-user
N/A

Effects on Operator
N/A

Other effects
N/A

New functionality
N/A

Customer Impact
Change 1: (PR144255)

Testing Instructions for the change

Pre-requirements:
N/A

Test execution:
N/A

Expected results:
N/A

Unexpected results:
N/A

CN-id: CN031395

Title:

UL RTP is seen from UE logs, so we know UE is sending it. But it is not seen in UL s1u logs.

Valid for Product(s):

Flexi LTE Base Station

References:

Reason for the Change Note:

Description of the problem:

Uplink data wasn't routed correctly.

How end user/operator could detect the problem:

No uplink data for some bearers or data routed to wrong SGW/DSCP

Description how problem can be detected:

Increase number of rejected packets in TRSW counters or packet rejected by SGW.

Description of the fault:

Data packets weren't routed correctly on enb side.

Dependency on configuration:

N/A

Faulty component and version:

UEC starts from release FL15A

Corrected Fault Reports:

NA05909912

FL15A - Wrong SICAD sent during E-RAB release followed by intra-eNB HO

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| UEC | 435015 | | | |

Change effects:

Effects on end-user

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05909912)

Testing Instructions for the change

Pre-requirements:

1. VoLTE enabled UE/network
2. Additional data radio bearer is configured

Test execution:

1. Establish VoLTE call, additional data bearer is also configured
2. Perform intra eNB handover (A to B)
3. Drop additional data radio bearer with lower bearer ID than QCI 1 bearer.
4. Perform intra eNB handover (B to A)

Expected results:

VoLTE call continues on both directions with clear audio

Unexpected results:

VoLTE call audio is cut uplink, call drops

CN-id: CN031396**Title:**

(Flexi Multiradio BTS LTE) when open the 15 minutes particle size measurement, but it is only one upload 2 in one hour.

Valid for Product(s):

Flexi LTE Base Station

References:**Reason for the Change Note:**

Description of the problem:

when open the 15 minutes particle size measurement, but it is only one upload 2 in one hour.

How end user/operator could detect the problem:

Gather PM counter

Description of the fault:

The first measurement has no counter to fetch. Then PM work stopped even other measurement need to fetch counter.

Dependency on configuration:

N/A

Corrected Fault Reports:

NA05901160

(Flexi Multiradio BTS LTE) when open the 15 minutes particle size measurement, but it is only one upload 2 in one hour.

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| Bstat | 10094 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05901160)

Testing Instructions for the change

Pre-requirements:

At BTSSM BTS PM, to configure LTE MAC measurement interval as 15 mins, and all other measurement types as 1 h.

Test execution:

After more than one hour, to check the results under LTE MAC.

Expected results:

4 values will be reported, respectively for **:00, **:15, **:30, and **:45.

Unexpected results:

Only 2 values will be reported, respectively for **:15 and **:45.

CN-id: CN031397

Title:

VoLTE call forwarding fail due to E-RAB modification failure

Valid for Product(s):

Flexi LTE Base Station

References:

Reason for the Change Note:

Description of the problem:

Call forwarding scenario fails in customer network. In this scenario, QCI1 GBR is increased via multiple e-RAB modifications procedures until finally the supported value range of parameters maxGbrDL and maxGbrUL is exceeded; the e-RAB modification procedure is rejected then leading to the call forwarding to fail.

Supported value range of up to 256kbps is tailored to VoLTE services (3GPP defines profiles for VoLTE services ranging roughly from 30-50kbps). Therefore this case is considered to be an issue with EPC being in use at customer.

Workaround:

No workaround

Description of the modification:

The eNodeB is modified by extending parameter ranges for maxGbrDL and maxGbrUL for QCI1 to reach up to 1024kbps.

Effects on operator:

As long as the configured value for the parameters maxGbrDL and maxGbrUL are not changed, there is not effect of the modification.

If required, the parameter can be set now to values up to 1024kbps allowing to admit QCI1 bearers with such high GBR provided that enough radio resource are available; this is checked in radio admission control dynamically. Note that if the resources are not available, the bearer admission/e-RAB modification is rejected, and the scenario will still fail.

Note also that admitting a QCI1 bearer – which is typically of higher priority than other GBR bearers – may preempt those other bearers, and that the likelihood increases with increasing QCI1 GBR. If a high value is signaled for the QCI1 GBR in UL while the actual transferred data rate is considerably lower, resource assignment in UL is still based on the signalled QCI1 GBR value on S1; this will lead to inefficient resource utilization and to a capacity reduction in UL.

Corrected Fault Reports:

NA05909460

VoLTE call forwarding fail due to E-RAB modification failure

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| CCPM | 26513 | | | |
| CCPM | 26514 | | | |

Change effects:

Effects on end-user

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05909460)

Testing Instructions for the change

Pre-requirements:

Applied instruction from *FL16 2.0 Metadata fix for LNBTS maxGbrDI and maxGbrUI* document.

Test execution:

N/A

Expected results:

High admission rate for QCI1 GBR from 256kbps to 1024kbps

Unexpected results:

Call forwarding scenario fails

CN-id: FL16_00136

Title:

High memory consumption

Valid for Product(s):

Flexi LTE Base Station
FlexiZone BTS LTE

References:

Reason for the Change Note:

Summary of the original problem:

Incremental memory consumption when RSR based features are enabled and RSR sessions are unable to establish.

How end user/operator could detect the problem:

Incremental memory consumption will appear when RSR requesting enb asks neighbouring enb for RSR measurements which are not supported by RSR responding enb (neighbour).

Dependency on configuration:

Problem will appear when neighbouring enbs supports different RSR measurements - different RSR based features are enabled on neighbouring enbs.

Faulty component and version:

Incremental memory consumption comes from ENBC. This problem exist on RL70 onward.

Description of the fault:

When Resource Status Reporting (RSR) session is needed FSM for this session is created. If session is not started successfully (neighbour may not respond to RSR_Start_Req / neighbour may respond with failure)

but session it is still needed, FSM for this session is killed and new one FSM is created over and over.

This not cause leak because old FSM is killed and new one is created, but each time FSM is started weak_ptr with this FSM is stored in queue.

This queue is cleared when session is successfully started. But if session cannot be successfully started this queue grown and grown.

This queue is needed for different case than unsuccessful session startup and can be cleared of expired weak_ptr when session is unsuccessfully started what will prevent memory consumption.

Workaround:

Problem will not appear if all RSR based features will be disabled.

Description of the correction:

Queue with weak_ptr can be cleared of expired weak_ptr when session is unsuccessfully started what will prevent memory consumption.

Corrected Fault Reports:

NA05891425

High memory consumption

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| ENBC.- | 433714 | | | |

Change effects:

Effects on end-user

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05891425)

Testing Instructions for the change

Pre-requirements:

eNB up and running with physical X2 links towards other eNBs

Test execution:

With SW correction installed, operate it normally making calls

Expected results:

The alarm "High memory consumption" alarm (fault 6502) does not appear

Unexpected results:

Alarm "High memory consumption" alarm (fault 6502) is raised

CN-id: CN031527**Title:**

High packet drop due to Ingress Rate limiting.

Valid for Product(s):

Flexi LTE Base Station

Flexi Zone BTS

References:**Reason for the Change Note:**

Description of the problem:

High packet drop due to Ingress Rate limiting. Issue is adding egress counter to drop counters

How end user/operator could detect the problem:

Description how problem can be detected:

Description of the fault:

Internal description of the fault which causes detected problem.

Dependency on configuration:

N/A

Faulty component and version:

TRSW

Corrected Fault Reports:

NA05885845

High packet drop due to Ingress Rate limiting.

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| TRSW | | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05885845)

Testing Instructions for the change

Pre-requirements:

eNB upgraded to FL15A 1.2

Test execution:

Upgrade the eNB to FL15A 1.2 Software following the recommended upgrade path.

Expected results:

Counter ipRmDroppedPacketsRateLimiting is not incremented because of the Egress ICMP packets.

Unexpected results:

Counter ipRmDroppedPacketsRateLimiting will get incremented to high values because of the Egress ICMP packets.

CN-id: FL16_00138

Title:

DL RoHC packet damage

Valid for Product(s):Flexi LTE Base Station
Flexi Zone BTS

References:

Reason for the Change Note:

Summary of the original problem:

UE can not decompress the DL RoHC packet.

How end user/operator could detect the problem:

VoLTE dropped automatically due to RTP time out in DL.

Dependency on configuration:

Due to the packet delay that is introduced by packet discard mechanism, UE RoHC engine can not properly decompress the DL RoHC packet.

Workaround:

Increase PDCP QCI1 tDiscard timer.

Description of the correction:

Disable PDCP SDU functionality.

Effects on operator:

RTP packet lost and VoLTE quality degradation.

Corrected Fault Reports:

NA05902792

DL RoHC packet damage(CID wrong)

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| SC_LTEL2 | 516241 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

RTP packet lost and VoLTE quality degradation.

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05902792)

Operation & Maintenance

Testing Instructions for the change

Pre-requirements:

VoLTE call setup successful.

Test execution:

Trigger Cell overloaded and eNB start to discard PDCP packet after tDiscard timeout

Expected results:

No RTP time out from UE.

Unexpected results:

RTP timeout from UE.

CN-id: CN031493**Title:**

Site reported Configuration error: BTS config error (1868 Not enough HW for LCR), All Cells were down and reported Cell State Audit alarms. FBBCs were in constant configuring state

Valid for Product(s):

Flexi LTE Base Station

References:**Reason for the Change Note:**

Description of the problem:

LTE2060 introduced Configure Only Cablnk which created issues in RMOD MHA Cablnk HwMapping and some times caused issued with MHA HwMapping too. Because of this, Cells can't be on Air and Cell Audit Alarm is raised.

Description of the correction:

LTE2060 Configuration only Cablnk issues related to Cell HW Mapping has been fixed. With this Cells can go On-Air.

Corrected Fault Reports:

NA05906542

FBBC in constant configuring state after upgrade from FL15A to FL16 MP1

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| CELLP | 32036 | | | |
| MOAM | 54414 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05906542)

Operation & Maintenance

Testing Instructions for the change

Pre-requirements:

N/A

Test execution:

N/A

Expected results:

N/A

Unexpected results:

N/A

CN-id: CN031532

Title:

Failure in replaceable BB unit while running FL16 MP1

Valid for Product(s):

Flexi LTE Base Station
Flexi Zone BTS

References:

Reason for the Change Note:

Description of the problem:

LTE L2 received incorrect/invalid length for status pdu, which caused LTE L2 to read memory beyond the end address.

This causes cache coherency problem and eventually corrupted received event and caused LTE L2 to assert.

How end user/operator could detect the problem:

LTE L2 crash.

Description how problem can be detected:

LTE L2 crash.

Description of the fault:

LTE L2 received incorrect/invalid length for status pdu, which caused LTE L2 to read memory beyond the end address.

This causes cache coherency problem and eventually corrupted received event and caused LTE L2 to assert.

Dependency on configuration:

N/A

Faulty component and version:

FL16_LTEL2_0000_000152_000000

Description of the correction:

Added end address checking in order to prevent L2 from reading memory beyond the end address.

Description how problem will solved.

Added end address checking in order to prevent L2 from reading memory beyond the end address.

Corrected Fault Reports:

NA05907736

Failure in replaceable BB unit while running FL16 MP1

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| LTE L2 | 515045 | | | |

Change effects:

Effects on end-user

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05907736)

Testing Instructions for the change

Pre-requirements:

NA

Test execution:

NA

Expected results:

Na

Unexpected results:

NA

CN-id: CN031533

Title:

LTE_5670A RACH Cont based Stp SR degraded after upgrade from FL15A PD2.1 to FL16 MP1.0

Valid for Product(s):

Flexi LTE Base Station
Flexi Zone BTS

References:

Reason for the Change Note:

Description of the problem:

LTE_5670A is decreased on some of 20MHz UL CoMP cells right after SW upgrade.

How end user/operator could detect the problem:

Some delay when call is setup.

Description how problem can be detected:

Monitor KPI

Description of the fault:

In case 3x20MHz cells are connected with UL CoMP, ULPHY has to handle data from 6 antennas in each cell. Incoming IQ data is received with AIF descriptors and then copied to memory for further ULPHY processing. There were too few AIF descriptors available to handle all 6 cells and it could happen that newer IQ data overwrites descriptor from which we have not yet copied the old data. Such mixed up data caused increase of PRACH detection errors. We detected 3 preambles almost every time when just one preamble was sent. All falsely detected preambles later failed. This caused ~3x more detected preambles with the same number of successful attach attempts, leading to attach SR drop from ~90% to ~30%.

Full support of LTE2060 added in FL16_MP1, has raised the number of necessary AIF descriptors in ULPHY. Due to LTE2060 ULPHY needs to support all possible optic link length and in effect sometimes wait longer until all data is delivered, that requires using more AIF descriptors.

Dependency on configuration:

Configurations with bands 15MHz and 20MHz. With more than 4 antennas connected to one DSP on 2em based deployments. I.e. 3x20MHz cells connected with UL CoMP

Faulty component and version:

ULPHY, FL16_MP1

Workaround:

Turn OFF UL CoMP or use UL COMP but only with 5/10MHz cells

Description of the correction:

ULPHY will increase the number of available AIF descriptors to avoid data overwriting within them.

That requires moving descriptors from L2 memory to MSMC memory as there is not enough place for larger number of descriptors in L2 memory.

Corrected Fault Reports:

NA05907804

LTE_5670A RACH Cont based Stp SR degraded after upgrade from FL15A PD2.1 to FL16 MP1.0

NA05907904

RACH SR shows degradation after upgrade to FL16 MP from FI15A

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| ULPHY | | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05907804,NA05907904)

Testing Instructions for the change

Pre-requirements:

Configure 3 X 20 MHz UL CoMP set

NOTE:

Not all 3 X 20MHz UL CoMP had problem. Some other factors(optic lengths etc) seem to be trigger condition.

Test execution:

1. Upgrade SW
2. Mass call generation

Expected results:

Normal level of LTE_5670A

Unexpected results:

Decreased LTE_5670A(about 30~50%)

CN-id: CN031534

Title:

Degradation in VoLTE DCR and AFR post MP1.0 in Dallas sites.

Valid for Product(s):

Flexi LTE Base Station
Flexi Zone BTS

References:

Reason for the Change Note:

Description of the problem:

In FL16 counter M8006C152 got removed and instead counter is split to M8006C278 (EPC initiated) and M8006C280 (eNB initiated).

In NS15 for DBR collisions (which are normal QCI1 releases) MME was sending ERABToBeReleasedList with cause 'radioNetwork : unspecified:' for QCI1 eRAB followed by ERAB release command for same ERAB. This behavior has been changed by MME for these scenarios with ERABToBeReleasedList to 'cause : normal' for QCI1 ERAB and no additional ERAB release command for this ERAB ID is send. Expectation was that with these changes in MME, counter M8006C278 will not peg for 'cause : normal' and will peg only when ERABToBeReleasedList with cause : abnormal.

How end user/operator could detect the problem:

No influence to end user.

BTS counters M8006C277 and M8006C278 may be increased since LTE439 introduces partial path switch functionality with FL16.

Description how problem can be detected:

NA

Description of the fault:

NA

Dependency on configuration:

N/A

Faulty component and version:

UEC

Description of the correction:

After correction M8006C89 and M8006C6 are triggered in case of 'NAS: Normal Release'. M8006C277 and M8006C278 are triggered for any cause except 'NAS: Normal Release'.

Corrected Fault Reports:

NA05908665

Degradation in VoLTE DCR and AFR post MP1.0 in Dallas sites.

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| UEC | | | | |

Change effects:

Effects on end-user

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05908665)

Testing Instructions for the change

Pre-requirements:

Testing partial path switch scenario (LTE439 introduces functionality with FL16) is very difficult. It needs to be triggered E-RAB release send by core during handover where PathSwitchRequestAcknowledge contains E-RAB to be released.

Test execution:

E.g. during VoLTE call mobile subscriber performs handover and 2nd party ends the call exactly in handover phase in between PathSwitchRequest and PathSwitchRequestAcknowledge.

Core sends PathSwitchRequestAcknowledge with E-RAB to be released with cause 'cause : normal'.

Expected results:

With NA05908665 correction in case of partial path switch scenario (E-RAB release by core in PathSwitchRequestAck message) the BTS counters M8006C89/M8006C6 are triggered for E-RAB release 'cause : normal' and M8006C277/M8006C278 are triggered for any release cause except 'cause : normal'.

Unexpected results:

Counters M8006C6, M8006C89, M8006C277 and M8006C278 are triggered in case of partial path switch scenario (E-RAB release by core in PathSwitchRequestAck message) independent from E-RAB release cause.

CN-id: CN031494**Title:**

TRS losing configuration after upgrading to LN7.0 2.2

Valid for Product(s):

Flexi LTE Base Station

References:**Reason for the Change Note:**

Description of the problem:

TRS commission failed when upgrading from LN7.0 1.1 to LN7.0 2.2

Workaround:

Suggested a script to give permission to delete active folder.

Description of the correction:

The issue is with the file system that means at the time of "ModifyStateReq" "stb" partition does not have "write" permission, so that TRS is not able to delete "trs_data\active" folder. After that when "cp -a" command is called to copy all "passive" folder contents to "active" folder, instead of copying "passive" contents it copies "passive" folder itself to "active" folder, which leads to TRS commission fail.

Corrected Fault Reports:

NA05897372

TRS losing configuration after upgrading to LN7.0 2.2

NA05909496

After upgrade to FL15A MP1.0 certificate and TRS configuration lost

NA05911729

Sites lose their commissioning files and certificates post-FL15A 1.0 upgrade resulting in no O&M or service

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|---|---------|--------------|----------|-------|
| FTM_R3_FL16_T L16_MP1_395.00 scrum_pinnacle_ na05897372_fl16 | | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05897372,NA05909496, NA05911729)

Operation & Maintenance

Testing Instructions for the change

Pre-requirements:

Upgrade the eNB to FL15A 1.2 Software following recommended the upgrade path from RL70 MP 2.2.

Test execution:

Upgrade the eNB to FL15A 1.2 Software following the recommended upgrade path.

Expected results:

TRS commissioning file should not be lost due to incorrect destination directory of the backup file after software upgrade, and eNB should be up and running.

Unexpected results:

TRS commissioning file will be lost and hence eNB cannot be reached anymore.

CN-id: CN031536**Title:**

FL16_CRL7676_maxNumCsfbTargets can be set via NetAct to a lower value than the existing LNRELWs with csfbPsHoAllowed=true within a LNCEL

Valid for Product(s):

Flexi LTE Base Station
Flexi Zone BTS

References:**Reason for the Change Note:**

Description of the problem:

maxNumCsfbTargets can be set via NetAct to a lower value than the existing LNRELWs with csfbPsHoAllowed=true within a LNCEL

How end user/operator could detect the problem:

N/A

Description how problem can be detected:

N/A

Description of the fault:

N/A

Dependency on configuration:

N/A

Faulty component and version:

UEC

Description of the correction:

N/A

Corrected Fault Reports:

PR125296

FL16_CRL7676_maxNumCsfbTargets can be set via NetAct to a lower value than the existing LNRELWs with csfbPsHoAllowed=true within a LNCEL

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-------------|---------|--------------|----------|-------|
| sitemgr.jar | 63189 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR125296)

Testing Instructions for the change

Pre-requirements:

NA

Test execution:

NA

Expected results:

NA

Unexpected results:

NA

CN-id: FL16_00139

Title:

[FL16][FSMr3] After recommissioning several parameters, FBBC2 auto resets.

Valid for Product(s):

Flexi LTE Base Station

Flexi Zone BTS

References:

Reason for the Change Note:

Summary of the original problem:

After recommissioning unnecessary FBBC card autonomous recovery reset was executed.

How end user/operator could detect the problem:

After recommissioning operator would see alarm about unit autonomous recovery reset.

Services are enabled later after recommissioning.

Description of the fault:

For some cases, after recommissioning routings in BTS are cleared earlier on switch in extension baseband card than in radio modules and DSPs.

It made fault 2058 was detected and autonomous recovery baseband card reset was executed.

Related feature / functionality:

Recommissioning.

Workaround:

No workaround

Description of the correction:

Additional conditions of fault 2058 detection were introduced in BTS. It protects from false fault 2058 detection and unnecessary autonomous recovery reset after recommissioning.

Effects on operator:

Unnecessary unit reset will not be executed after recommissioning due to the routings cleaning.

Effect on End user:

After recommissioning services will be available earlier.

Corrected Fault Reports:

PR129401

[FL16][FSMr3] After recommissioning several parameters, FBBC2 auto resets.

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
|-----------|---------|--------------|----------|-------|

| | | | | |
|-------|-------|--|--|--|
| cellp | 32005 | | | |
|-------|-------|--|--|--|

Change effects:

Effects on end-user

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR129401)

Testing Instructions for the change

Pre-requirements:

N/A

Test execution:

N/A

Expected results:

N/A

Unexpected results:

N/A

CN-id: FL16_00137**Title:**

Not correct "fileLoadCompleted" response from eNB to NetAct after fileLoadPrepare (LBT2692-A-I/validatePlanAgainstDetectedHW = true)

Valid for Product(s):

Flexi LTE Base Station

References:**Reason for the Change Note:**

Summary of the original problem:

Not correct "fileLoadCompleted" response from eNB to NetAct after fileLoadPrepare (LBT2692-A-I/validatePlanAgainstDetectedHW = true)

How end user/operator could detect the problem:

eNB onair and extra HW (FBBCâ€™s with RF's including wrong RF's) is added and detected correctly but not commissioned.

Commissioning plan is sent from NetAct for extra HW.

Response from eNB is not correct.

Description of the fault:

eNB response containing error reason is not correct. Response "fileLoadCompleted" contains "Status = Error, BTS is not ready due to ongoing RNW plan File activation".

Related feature / functionality:

LBT2692-A-I

Workaround:

No workaround

Effects on operator:

NetAct has wrong information about the eNB status.

Corrected Fault Reports:

PR131173

Not correct "fileLoadCompleted" response from eNB to NetAct after fileLoadPrepare (LBT2692-A-I/validatePlanAgainstDetectedHW = true)

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| CellP | 32002 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR131173)

Testing Instructions for the change

Pre-requirements:

eNB is onair. Extra HW is added including some "wrong" HW.

Test execution:

Commissioning plan is sent from NetAct (for extra HW).

Expected results:

Response "fileLoadCompled" contains "Status = Error, Cell configuration is incompatible with detected RF units".

Unexpected results:

Response "fileLoadCompled" contains "Status = Error, BTS is not ready due to ongoing RNW plan File activation".

CN-id: CN031497**Title:**

[SRAN][FL15A][3G-4G RF Sharing][FSMr2][WL0120]: FRGP unblock with failure in optical interface (10) at LTE- BTS

Valid for Product(s):

Flexi LTE Base Station

References:**Reason for the Change Note:**

Summary of the original problem:
Unexpected Fault 10

How end user/operator could detect the problem:
Raised fault 10

Description of the fault:
Problem with handling LinkMasterNodeLabel message

Dependency on configuration:
RF sharing with multiple link between RMOD and LTE

Faulty component and version:
SW component and version where problem occurred first time, if problem occurred in different branches based on different versions then all first broken versions for each branches shall be listed

Workaround:
How problem can be avoided or effects mitigated before correction is ready

Description of the correction:
Running additional ReadingMasterNodeLabel scenario to avoid choosing wrong scenario selector

Corrected Fault Reports:

PR137109
[SRAN][FL15A][3G-4G RF Sharing][FSMr2]: FRGP unblock with failure in optical interface (10) at LTE- BTS

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| MOAM | 44691 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR137109)

Testing Instructions for the change

Pre-requirements:

N/A

Test execution:

N/A

Expected results:

N/A

Unexpected results:

N/A

CN-id: CN031498

Title:

the DKK ATCV-1-D RET firmware download failed.

Valid for Product(s):

Flexi LTE Base Station

References:

Reason for the Change Note:

Summary of the original problem:

ALD SWDL requests for the Denki (DK) ATCV-1-D multi-RETs fails to complete successfully.

How end user/operator could detect the problem:

When the operator requests the ALD SWDL to the DK ATCV-1-D multi-RETs, the process will eventually fail with an error indication window being presented to the operator at the BTSSM.

Description of the fault:

Denki has manufactured a device which contains 2 multi-RETs that reside in the same physical container and present themselves as 2 physically independent devices. Although the devices appear to be independent, they are actually tightly coupled together as they both share the same controller instead of each having their own. This creates a situation where a single/shared controller is used to manage multiple ALDs. Due to the vendor's implementation, the devices are not able to fully comply with the 3GPP/AISG specifications, particularly when it comes to performing the software download operation. As such, special handling in the software has to be taken for this specific device to accommodate the device's non-compliance.

Dependency on configuration:

N/A

Faulty component and version:

N/A - No components are necessarily faulty in this case. The updates being made are to accommodate a non-compliant device.

Workaround:

Only known workaround is to attach the device to the BCU3 eNB and perform the ALD SWDL using its interface.

Description of the correction:

The code changes for this correction have been confined to the MOAM (ALMAG) SW component. For KDDI, the ALD SWDL requests will be purely serialized and when a DK ATCV-1-D multi-RET is detected, once the download is complete to the first DK ATCV-1-D device, ALMAG will identify it's mate DK ATCV-1-D device and report the same SWDL status for it as the first device had without actually performing a software download to the mate device since it's unnecessary and will cause the SWDL to fail. Similarly, it was discovered that

there is also a Dengyo (ND) TCS63N multi-RET which appears to also be a single/shared controller device and support has been added for it as well.

Corrected Fault Reports:

PR138362
the DKK ATCV-1-D RET firmware download failed.

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| MOAM | 52991 | | | |

Change effects:

Effects on end-user

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR138362)

Testing Instructions for the change

Pre-requirements:

N/A

Test execution:

N/A

Expected results:

N/A

Unexpected results:

N/A

CN-id: CN031537**Title:**

[LTE2026] Harq Ack for SRB1 not excluded from Link Adaptation

Valid for Product(s):

Flexi LTE Base Station

Flexi Zone BTS

References:**Reason for the Change Note:**

Description of the problem:

maxNumCsfbTargets can be set via NetAct to a lower value than the existing LNRELWs with csfbPsHoAllowed=true within a LNCEL

How end user/operator could detect the problem:

enable LTE2026 functionality and check harq ack exclusion for closed loop or open loop scenarios

Description of the fault:

NA

Dependency on configuration:

N/A

Faulty component and version:

UEC

Description of the correction:

NA

Corrected Fault Reports:

PR132082

[LTE2026] Harq Ack for SRB1 not excluded from Link Adaptation

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-------------|---------|--------------|----------|-------|
| sitemgr.jar | 63189 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR132082)

Testing Instructions for the change

Pre-requirements:

Cell is configured with MIMO mode: Dynamic Open Loop Mimo.
SRB1 Robustness is enabled and Downlink SRB1 CQI offset is set below 0
Stable RF conditions, CQI is not changing

Test execution:

Start DL traffic with SRB1 transmissions.

Expected results:

Verify Ack for SRB1 transmission does not increase DeltaCQI in NOKIA internal tool.

Unexpected results:

Ack for SRB1 transmission increases DeltaCQI

CN-id: CN031539**Title:**

LTE1140 LB started with blacklistHoL to neighbor eNB cell

Valid for Product(s):

Flexi LTE Base Station

Flexi Zone BTS

References:**Reason for the Change Note:**

Summary of the original problem:

- LNCEL/blacklistHoL/freqEutra has a 'special value' defined for FDD release. Special values require special implementation, which was missing in this case.
- Align documentation of LTE1140 "Resource Status Reporting Control" to LTE1841 "Resource Status Reporting Control" feature behaviour.
- Handle "Resource Status Reporting Control" in case of existing X2 interface between eNBs and parameter LNCEL/blacklistHoL/blacklistTopo configured to onlyX2 to neighbour cell of target eNB

Description of the correction:

Implementation and documentation correction needed

Effects on operator:

- blacklisting on own cell frequency is not possible without 'special value'
- in case of configured LNCEL/blacklistHoL/blacklistTopo configured to onlyX2 to neighbour eNB end existing X2 interface between eNBs, Intra-frequency load balancing via S1 interface will not start to target eNB.

Effects on end-user:

- UEs can perform handover into blacklisted cell on the same frequency
- Impact on UE data throughput

Corrected Fault Reports:

PR132467

LTE1140 LB started with blacklistHoL to neighbor eNB cell

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-------------|--------------------|--------------|----------|-------|
| RROM / ENBC | 429922 / 429922 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR132467)

Testing Instructions for the change

Pre-requirements:

NA

Test execution:

The correction has been tested internally and proved to be fully functional

Expected results:

NA

Unexpected results:

NA

CN-id: CN031500**Title:**

[SRAN][FL16a][LTE2387] FRMC radio is not visible on Slave side. ETH message received with error status.

Valid for Product(s):

Flexi LTE Base Station

References:**Reason for the Change Note:**

Summary of the original problem:

One of the two slaves connected to Master is not visible to master

Description of the problem:

A configuration with two slaves in a master was never used and was not specified in the interface between TRSW and BTSOM

Description of the fault:

The fault is the interface specification between TRSW and BTSOM, TRSW so far accepted only one peerSystemModule IP address. If the more than one is sent, the most recent configuration was kept. In current configuration more the one slaves is connected to master and master is indicated with two peersystem module IP addresses. Since only recent IP is configured, the first slave goes undetected.

Workaround:

Add the firewall rule manually in Master eNB.

Description of the correction:

TRSW gave a temporary workaround to accept more than on peerSystemModuleIP address in such configuration. Max supported is 2 slaves. More than 2 slaves with one Master will not work.

Corrected Fault Reports:

PR133990

[SRAN][FL16a][LTE2387] FRMC radio is not visible on Slave side. ETH message received with error status.

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|---|---------|--------------|----------|-------|
| mkd_pr133990_fl16a_to_fl16mp1_FTM_R3_FL16_TL16_MP1_387.00 | | | | |

Change effects:

Effects on end-user

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR133990, PR135305)

New feature/functionality

LTE2387

Testing Instructions for the change

Pre-requirements:

NA

Test execution:

NA

Expected results:

NA

Unexpected results:

NA

CN-id: FL15A_00271**Title:**

Increased BER detected on the optical connection to Radio Module (1955).

Valid for Product(s):

Flexi LTE Base Station

References:**Reason for the Change Note:**

Summary of the original problem:

Increased BER detected on the optical connection to Radio Module (1955) alarm raised after upgrade eNB from LN7.0_ENB_1407_570_77 to FL15A_ENB_0107_001533_000000

Workaround:

No workaround

Description of the correction:

Enable sorting bus nodes for TX resources for LTE15 Faraday so that HW will not complain about missing messages and overflow errors and in consequence alarm 1955 will not accure.

Effects on operator:

Alarm 1955 not visible; there might be some KPI degradation.

Corrected Fault Reports:

PR137176

Increased BER detected on the optical connection to Radio Module (1955)

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|---|---------|--------------|----------|-------|
| mkd_pr133990_fl16a_to_fl16mp1_FTM_R3_FL16_TL16_MP1_387.00 | | | | |

Change effects:

Effects on end-user

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR133990, PR135305)

New feature/functionality

LTE2387

Testing Instructions for the change

Pre-requirements:

NA

Test execution:

NA

Expected results:

NA

Unexpected results:

NA

CN-id: FL15A_00271

Title:

Increased BER detected on the optical connection to Radio Module (1955)

Valid for Product(s):

Flexi LTE Base Station

References:

Reason for the Change Note:

Summary of the original problem:

Increased BER detected on the optical connection to Radio Module (1955) alarm raised after upgrade eNB from LN7.0_ENB_1407_570_77 to FL15A_ENB_0107_001533_000000

Workaround:

No workaround

Description of the correction:

Enable sorting bus nodes for TX resources for LTE15 Faraday so that HW will not complain about missing messages and overflow errors and in consequence alarm 1955 will not accure.

Effects on operator:

Alarm 1955 not visible; there might be some KPI degradation.

Corrected Fault Reports:

PR137176

Increased BER detected on the optical connection to Radio Module (1955)

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|----------------|-------------------|--------------|----------|-------|
| BTSRFM-52192.- | MED25.08.R 18L | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR137176)

Testing Instructions for the change

Pre-requirements:

N/A

Test execution:

The correction has been tested internally and proved to be fully functional

Expected results:

N/A

Unexpected results:

N/A

CN-id: CN031540**Title:**

[LTE1905][LTE490] Incorrect parameter error occurred on FL16 BTS SM after moPrMappingList is created

Valid for Product(s):

Flexi LTE Base Station
Flexi Zone BTS

References:**Reason for the Change Note:**

Summary of the original problem:

After SW upgrade, an error message shows saying that moPrMappingList-mnc is out of range even when it's not.

How end user/operator could detect the problem:

eNB SW is upgraded to FL16 via BTS SM. After SW upgrade, there is no error from BTS SM. moPrMappingList was recreated on FL16 BTS SM, Incorrect parameter error occurred from mnc parameter.

Description of the fault:

Incorrect implementation for mnc parameter relationship "The actual range of moPrMappingList-mnc depends on the parameter moPrMappingList-mncLength: if mncLength=2, then range is 00..99"

Dependency on configuration:

NA

Workaround:

By filling up all empty mnc values with values that are within range.

Description of the correction:

Corrected SEM implementation for mnc parameter relationship "The actual range of moPrMappingList-mnc depends on the parameter moPrMappingList-mncLength: if mncLength=2, then range is 00..99"

Corrected Fault Reports:

PR139722

[LTE1905][LTE490] Incorrect parameter error occurred on FL16 BTS SM after moPrMappingList is created

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-------------------|---------|--------------|----------|-------|
| ltebtsmanager.jar | 888881 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR139722)

Testing Instructions for the change

Pre-requirements:

NA

Test execution:

NA

Expected results:

NA

Unexpected results:

NA

CN-id: CN031502**Title:**

[FL16 2.0] BTS wrongly raises warning 'Maximum number of WCDMA neighbor cells is exceeded' (fault id 6268) with an LNADJW moc instance as source

Valid for Product(s):

Flexi LTE Base Station

References:**Reason for the Change Note:**

Summary of the original problem:

Cplane faults had faulty way of mapping alarming object distname.

Description of the correction:

Changed the usage of AlarmingObjectMapper to map LNADJW and other cplane objects according to defined rules. In this case LNADJW will be mapped to LNBTS.

Corrected Fault Reports:

PR139805

[FL16 2.0] BTS wrongly raises warning 'Maximum number of WCDMA neighbor cells is exceeded' (fault id 6268) with an LNADJW moc instance as source

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| FaReco | 14852 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR139805)

Testing Instructions for the change

Pre-requirements:

1. ANR with WCDMA configured.
2. Maximum number of WCDMA neighbors (LNADJW objects) already created.

Test execution:

UE with new WCDMA neighbor information attaches to eNB.

Expected results:

Alarm 7652 is raised Maximum number of WCDMA neighbor cells is exceeded by LNBTS.

Unexpected results:

Alarm 7652 is raised Maximum number of WCDMA neighbor cells is exceeded by LNADJW.

CN-id: CN031542**Title:**

[TL16A] [LTE2316] Both Pcell and Scell DL TPUT to low due to too many logs
"WRN/TDDPS/FID_DL_CA/6243/CPucchOverbook::AllocateSCellPucchRes failed,
actFlexScellSelect=1, pucchRes=255"

Valid for Product(s):

Flexi LTE Base Station
Flexi Zone BTS

References:**Reason for the Change Note:**

Description of the problem

The SCell activator will reset the activation if the buffer levels of the UE fall below the activation threshold while the activation is ongoing. In this case, it will release the PUCCH F3 resource for the UE. But if the MAC CE has already been sent, then the activation will go through even though it was reset later, and the invalid resource will be sent to the SCell.

Corrected Fault Reports:

PR136465

[FL16A] [LTE2316] Both Pcell and Scell DL TPUT to low due to too many logs
"WRN/TDDPS/FID_DL_CA/6243/CPucchOverbook::AllocateSCellPucchRes failed,
actFlexScellSelect=1, pucchRes=255"

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-------------------|---------|--------------|----------|-------|
| ltebtsmanager.jar | 888881 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR136465)

Testing Instructions for the change

Pre-requirements:

TDD+FDD CA HW ENV ready, and InterEnbCA feature should be enabled and related parameter should be configured, all cells should be on air, and no InterEnbCa alarm.

Test execution:

Perform F+T 3CC CA Call, and perform DL TPUT.

Expected results:

DL TPUT should reach peak rate according to TM mode and frame configuration.

Unexpected results:

TPUT lower than expected.

CN-id: CN031546**Title:**

BTS autonomous reset occurs when eNB receive X2Setup

Valid for Product(s):

Flexi LTE Base Station

Flexi Zone BTS

References:**Reason for the Change Note:**

Summary of the original problem:

The problem happens when actlIpv6 (dual stack) flag is on yet only ipv4 local address is provided (no ipv6 local address) - which is a valid configuration for dual stack. There is a function that is used to retrieve the X2 source address, however it only takes into account the flag and not the remote address type. In other words, it attempts to retrieve a non-existent IPv6 address for an IPv4 X2 link. This can occur in two scenarios:

- (1) During ANR X2 link establishment, when the neighbouring eNB sends a message before the link has been registered with TUPc (the scenario caused the current pronto)
- (2) During termination of an ANR X2 association that the eNB is rejecting

How end user/operator could detect the problem:

TUPc would crash if one of the two scenarios happen with the configuration actlIpv6 = TRUE + no local ipv6 address

Dependency on configuration:

The fault can happen only with the configuration: actlIpv6 = TRUE + no local ipv6 address

Description of the correction:

The function retrieving X2 source address now chooses an address matching the remote address of an association. Previously an address matching the actlIpv6 flag was chosen what could cause a crash when actlIpv6 was on and no local ipv6 address was present (which is a valid configuration for dual stack).

Corrected Fault Reports:

PR141228

[SB FL16 Care] BTS autonomous reset occurs when eNB receive X2Setup

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-------------------|---------|--------------|----------|-------|
| ltebtsmanager.jar | 888881 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR141228)

Testing Instructions for the change

Pre-requirements:

TDD+FDD CA HW ENV ready, and InterEnbCA feature should be enabled and related parameter should be configured, all cells should be on air, and no InterEnbCa alarm.

Test execution:

Perform F+T 3CC CA Call, and perform DL TPUT.

Expected results:

DL TPUT should reach peak rate according to TM mode and frame configuration.

Unexpected results:

TPUT lower than expected.

CN-id: CN031547**Title:**

FL16A][AirScale][LTE209-A] Wrong counter updated after 2A transition

Valid for Product(s):

Flexi LTE Base Station

Flexi Zone BTS

References:**Reason for the Change Note:**

Summary of the original problem:

Interworking of LTE2098 and TTI Bundling is not working corectly.

How end user/operator could detect the problem:

counter M8011C174 is updated instead of M8011C173.

Description of the fault:

When TTI Bundling is possible for the UE and is enabled in the cell UE switches into wrong state (sensitiveRegularTxRA instead of sensitiveTtiBundlingRA1).

Description of the correction:

UL Coverage boosting state machine was corrected.

Effect on End user:

mobile-user: sensitiveRegularTxRA state for TTI Bundling users for LTE2098 is no longer possible.

Corrected Fault Reports:

PR140579

[FL16A][AirScale][LTE2098-A] Wrong counter updated after 2A transition

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| MAC PS | 385005 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR140579)

Testing Instructions for the change

Pre-requirements:

NA

Test execution:

NA

Expected results:

NA

Unexpected results:

NA

CN-id: CN031551**Title:**

[LTE1092] CellC Assertion error when LTE1092 and LTE2557 enabled together.

Valid for Product(s):

Flexi LTE Base Station

Flexi Zone BTS

References:**Reason for the Change Note:**

Summary of the original problem:

CELLC crush - get value of an uninitialized boost::optional (introduced in r369892)

How end user/operator could detect the problem:

Enable both LTE1092 and LTE2557 and CELLC debug logs

Description of the fault:

FBBC reset due to CELLC crush.

Dependency on configuration:

LTE1092 and LTE2557 and CELLC debug logs enabled

Faulty component and version:

CELLC revision r369892

Workaround:

Do not enable CELLC debug logs

Corrected Fault Reports:

PR141380

[LTE1092] CellC Assertion error when LTE1092 and LTE2557 enabled together.

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| CELLC | 369892 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR141380)

Testing Instructions for the change

Pre-requirements:

Original problem found in FL16A release with LTE1092 and LTE2557 features activated together (new features in FL16A not available in FL16).

Test execution:

LTE1092 and LTE2557 activated together. CELLC crash after ~10 minutes from BTS on air state.

Expected results:

BTS working without CELLC crash and FBBC recovery reset (fault 4019).

Unexpected results:

CELLC crash and FBBC recovery reset (fault 4019) after ~10 minutes from BTS on air state

CN-id: CN031504**Title:**

[FL16_LTE2379] No BER increased in SFP Monitoring

Valid for Product(s):

Flexi LTE Base Station

References:**Reason for the Change Note:**

Description of the problem:

After increasing BER on link between two RF modules using optic attenuator, BER value is still zero.

Description of the correction:

Change computation of BER to $10^{(\text{value from RFSW})}$.

Corrected Fault Reports:

PR141881

[FL16_LTE2379] No BER increased in SFP Monitoring

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| MOAM | 54093 | | | |
| SYSADAPT | 29832 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR141881)

Testing Instructions for the change

Pre-requirements:

N/A

Test execution:

N/A

Expected results:

N/A

Unexpected results:

N/A

CN-id: CN031505**Title:**

[SRAN][3G-4G RFS] Parameter activation is finished after while eNB is rebooted without any alarm

Valid for Product(s):

Flexi LTE Base Station

References:**Reason for the Change Note:**

Summary of the original problem:

Parameter activation is finished after while eNB is rebooted without any alarm

Description of the fault:

realHandler_ in LimProxyWithTiming might be empty.

Description of the correction:

Added a guard to check if realHandler is empty or not and then exits if it is empty.

Corrected Fault Reports:

PR142145

[SRAN][3G-4G RFS] Parameter activation is finished after while eNB is rebooted without any alarm

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| FARECO | 15130 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR142145)

Testing Instructions for the change

Pre-requirements:

eNB is working correctly. ALL Cells are OnAir.

Test execution:

additional new 2 RF module connect to system module. and then, initiate the parameter activation that is for create cell in each new 2 RF module and making CA configuration to those new cells

Expected results:

Parameter activation is finished without eNB restart.

Unexpected results:

Parameter activation is finished without eNB restart. But after while eNB is rebooted.

CN-id: CN031556**Title:**

[FL16A][LTE433] LTE Cell Trace not containing SIB13 (LTE1117 eMBMS)

Valid for Product(s):

Flexi LTE Base Station
Flexi Zone BTS

References:**Reason for the Change Note:**

Summary of the original problem:
There are no SIB13 in RRC traces

How end user/operator could detect the problem:
Collect RRC traces with enabled eMBMS and found no SIB13 inside

Description if problem based on certain configuration
eMBMS feature (LTE1117) must be enabled. (SIB13 is related to eMBMS)

Corrected Fault Reports:

PR140968

[FL16A][LTE433] LTE Cell Trace not containing SIB13 (LTE1117 eMBMS)

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| CELLC | 432680 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR140968)

Testing Instructions for the change

Pre-requirements:

for LTE1117 eMBMS cable eNBs only

- 1) eNB external Trace Collection Entity tool able to retrieve trace data send via TCP from eNB is available
- 2) Activate LTE433 Basic Cell Trace (actCellTrace =true)
- 3) Configure Cell Trace Session – i.e. create CTRLTS/MTRACE (jobType=TraceOnly) with RRC Protocol chosen to be traced (traceRrcSetting =all)

Test execution:

Perform deactivation/ activation of LTE1117 eMBMS

or

Block/unblock cell (use a cell broadcasting SIB13, I.e a cell broadcasting eMBMS information)

or

Change value of LNMCE/MBSFN – mcchRepetitionPeriod (value change for SIB13)

Expected results:

the Trace message send to external Trace Collection Entity should contain SIB13

- on activation of LTE1117 eMBMS
- on unblock MBMS capable cell
- on change of MBMS MCCH repetition period

Unexpected results:

SIB13 is not visible with in cell trace

- on activation of LTE1117 eMBMS
 - on unblock MBMS capable cell
 - on change of MBMS MCCH repetition period
-

CN-id: CN031558**Title:**

LTE2006: Operator configurable parameter sCellMeasCycle is not taken into use.

Valid for Product(s):

Flexi LTE Base Station

Flexi Zone BTS

References:**Reason for the Change Note:**

Summary of the original problem:

eNB always used fixed value for sCellMeasCycle parameter

Description of the problem:

UEC always configures sCellMeasCycle parameter with fixed value sf320 instead of using operator configurable parameter sCellMeasCycle.

Description how problem can be detected

UE configuration of MeasObject of potential Scell frequency layers in ICS will have sf320 value in sCellMeasCycle IE in RRCConnectionReconfiguration message instead of the configured value (e.g. sf256) in eNB SCF file.

Dependency on configuration:

Carrier Aggregation. LTE2006 feature flag does not have to be activated

Description if problem based on certain configuration

Any configuration different than sf320 won't be seen in measObject

Corrected Fault Reports:

PR136379

LTE2006: Operator configurable parameter sCellMeasCycle is not taken into use.

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| UEC | 434673 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR136379)

Testing Instructions for the change

Pre-requirements:

eNB is on air and Carrier aggregation is configured properly.

Test execution:

Ue, which is able to perform carrier aggregation, so band combination of primary serving cell to in eNB configured secondary cell is contained in Ue capabilities, is attached. scellMeasCycle parameter is configured in eNB to different value with respect to default value sf320, e.g. sf256.

Expected results:

Within RRCconnectionReconfiguration message during initial context setup within the measurement object for the Scell frequency layer there should be the IE for scellMeasCycle present with configured value, e.g. sf256 instead of sf320.

Unexpected results:

Within RRCconnectionReconfiguration message during initial context setup within the measurement object for the Scell frequency layer there should be the IE for scellMeasCycle present not with the default value sf320, if in eNB another value like sf256 is configured.

CN-id: CN031560**Title:**

[FL16 FSMF][LTE2316]FDD Pcell Tput=0 after online chagne rcenabledl=true

Valid for Product(s):

Flexi LTE Base Station

Flexi Zone BTS

References:**Reason for the Change Note:**

Description of the problem

Wrong reconfiguration of ue ambr params during cell reconfiguration

How end user/operator could detect the problem:

Problem with TPut

Corrected Fault Reports:

PR144120

[FL16 FSMF][LTE2316]FDD Pcell Tput=0 after online chagne rcenabledl=true

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| fb15_09 | 386467 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR144120)

Testing Instructions for the change**Pre-requirements:**

FDD+TDD ENV is ready,rcenabledl=false

Test execution:

1. Attach 1 CA UE to FDD Pcell.
2. Send DL data to UE.
3. Change rcenabledl=true from BTSSM, and make online change.

Expected results:

The Tput of UE will be ok both for Pcell and Scell.

Unexpected results:

The Tput of Pcell and Scell drop to 0

CN-id: CN031507**Title:**

[FSMr3] Commissioning fails for detected RF if validatePlanAgainstDetectedHW is "true"

Valid for Product(s):

Flexi LTE Base Station

References:**Reason for the Change Note:**

Description of the problem

Baseband calculation failed for new cell connected to bbmod working in transparent mode before.

Description of the correction:

Remove from topology only hwlks locked by DCS calculations instead of hwlks locked by other components.

Corrected Fault Reports:

PR144986

[FSMr3] Commissioning fails for detected RF if validatePlanAgainstDetectedHW is "true"

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| CellP | 32033 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR144986)

Testing Instructions for the change

Pre-requirements:

FSMF, FBBC's and cells are onair.
No RF's are connected to FBBC's.

Test execution:

One FR is added to FBBC port 1 and detected OK.
BTS Site Manager commissioning will be done for the added RF.

Expected results:

Commissioning file sending (only changes) shall be PASSED.

Unexpected results:

Commissioning file sending (only changes) fails with details "There is not enough baseband capacity for configured cells".

CN-id: CN031562**Title:**

[FL16A][LTE1899] QCI1 partial HO counters not incremented properly when e-RAB-ID != drbld

Valid for Product(s):

Flexi LTE Base Station
Flexi Zone BTS

References:**Reason for the Change Note:**

Description of the problem:

QCI1 partial HO counters not incremented properly because e-RAB-ID != drbld

How end user/operator could detect the problem:

KPI statistics for VoLTE calls during handover X2 could be worse

Description how problem can be detected:

KPI analysis of VoLTE calls

Description of the fault:

Wrong method used in the code to search for ERAB ID used in X2 Handover messages

Dependency on configuration:

QCI1 enabled, VoLTE calls allowed

Faulty component and version:

UEC

Corrected Fault Reports:

PR143568

[FL16A][LTE1899] QCI1 partial HO counters not incremented properly when e-RAB-ID != drbld

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| UEC | 434857 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR143568)

Testing Instructions for the change

Pre-requirements:

NA

Test execution:

NA

Expected results:

NA

Unexpected results:

NA

CN-id: CN031508**Title:**

[FL16 PILOT] Connection Unstable At 6Gbps alarm after eNB restart

Valid for Product(s):

Flexi LTE Base Station

References:**Reason for the Change Note:**

Summary of the original problem:
On/Off radio twice, then Fault 4309 is raised.

Description of the problem
4309 is reported prematurely

How end user/operator could detect the problem:
On/Off radio twice

Description how problem can be detected:
On/Off radio twice

Description of the fault:
Internal description of the fault which causes detected problem.

Dependency on configuration:
Description if problem based on certain configuration

Description of the correction:
Code for incrementing unsynchronized 6Gbps counter is moved. Now master port_conf
unsync counter is only incremented when link got unsynchronized.

Corrected Fault Reports:

NA05897814

[FL16 PILOT] Connection Unstable At 6Gbps alarm after eNB restart

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| MOAM | 53283 | | | |

Change effects:

Effects on end-user
N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05897814)

Testing Instructions for the change

Pre-requirements:

NA

Test execution:

On/Off radio twice

Expected results:

No alarm raised.

Unexpected results:

Fault 4309 is raised.

CN-id: CN031509**Title:**

FlexiBTS TRS submodule reconfiguration from FTLB to FTIF is not possible from NetAct

Valid for Product(s):

Flexi LTE Base Station

References:**Reason for the Change Note:**

Summary of the original problem:

user can't reconfigure TRS submodule from FTLB to FTIF from NetAct.

How end user/operator could detect the problem:

when user try to reconfigure a TRS submodule from FTLB to FTIF from NetAct.

Description of the fault:

there are validation errors in metioned reconfiguration case.

Workaround:

manual on-site commissioning

Description of the correction:

remove a validation in SEM validator so SCF validation will pass.

Corrected Fault Reports:

NA05897291

[FL16 PILOT] Connection Unstable At 6Gbps alarm after eNB restart

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| MOAM | 1.0.0 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05897814)

Testing Instructions for the change

Pre-requirements:

N/A

Test execution:

N/A

Expected results:

N/A

Unexpected results:

N/A

CN-id: CN031563**Title:**

FL16A(LTE664)(LTE2414)(FSMr3) : (Memory Leak) FPA Pool drops down to 36k and does not recover back to 42k when Traffic Robustness Test suite is executed.

Valid for Product(s):

Flexi LTE Base Station
Flexi Zone BTS

References:**Reason for the Change Note:**

Summary of the original problem:
Leak of Packet buffers at throughput test cases.

Description of the problem
Packet drops/ Memory leaks during high traffic

How end user/operator could detect the problem:
Degradation in uplane performance.

Description how problem can be detected
Degradation in uplane performance.

Dependency on configuration:
High traffic. No dependency on configuration.

Corrected Fault Reports:

NA05909317
No RTP in DownLink

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|------------------------|--------------------|--------------|----------|-------|
| marines_porting_ pr | 141192_fl16 mp1 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05909317,PR141192)

Testing Instructions for the change

Pre-requirements:

Upgrading SW which has correction for this case.

Test execution:

Make high load traffic in S1-U interface and keep it some duration .

So shaping mode is starting.

And then reduce or stop the sending high load traffic.

Shaping mode is stopped.

Expected results:

During Shaping mode, buffer memory is reduced to around 36K from 42K.

This buffer memory should be returned to origin value as 42K after finishing shaping mode.

Unexpected results:

Not returning to 42K, even though shaping mode is stopped.

CN-id: CN031510

Title:

LTE CELL OUT OF USE not occurred after change the "BTS Reset needed parameter"

Valid for Product(s):

Flexi LTE Base Station

References:

Reason for the Change Note:

Summary of the original problem:

Description of the problem: CCN with "Cell operational state = disabled" was not sent after commissioning with parameter that needs BTS reset

How end user/operator could detect the problem:

alarm 9400 not visible on NetAct

Description how problem can be detected:

no occurrence of "LTE CELL OUT OF USE(9400)" in NetAct's monitor

Dependency on configuration:

any Rf Sharing with LTE and other RAT configuration

Description if problem based on certain configuration:

when checking if there's any need to change IP for SMOD in sharing configuration, BTSOM/CellIP_CM was invoking resets with coverage set to SITE without waiting for response from BTSOM/MOAM_ADET.

Faulty component first delivered in:

This issue was introduced by an oversight in correction for PR046337: [SRAN][WCDMA-LTE RF Sharing]LTE does not change ip after FDSW and FL15A software download; it was 1st delivered in FL15A_ENB_0000_000390_000000

Workaround:

No available way to avoid or mitigate this issue

Description of the correction:

when BTSOM/CellIP executes setting IP for SMOD to ADET, we wait for reply and based on it we decide if we should call site reset or not.

Description how problem will be solved:

correction in BTSOM/CellIP source code

Corrected Fault Reports:

PR145075

LTE CELL OUT OF USE not occurred after change the "BTS Reset needed parameter"

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|-----------|---------|--------------|----------|-------|
| Cellp | 32063 | | | |

Change effects:**Effects on end-user**

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (PR145075)

Testing Instructions for the change

Pre-requirements:

eNB connected to iOMS/NetAct

Test execution:

change value of a parameter which requires eNB reset to modify using BTSSEM or Netact.
E.g. txPathFailureMode from keepCellInService to disableCell.

Expected results:

after eNB reset NetAct will show alarm 9400 CELL OUT OF USE to indicate that cells are not available during eNB reset.
alarm 9400 will be cancelled when cells are on-air.

Unexpected results:

alarm 9400 is not raised at NetAct. Operator does not get any cell related alarm during eNB reset.
Only alarm 'NE O&M CONENCTION FAILURE' is shown.

CN-id: CN031565**Title:**

"M51137C4 topFreqSyncSLS" is not counted correctly.

Valid for Product(s):

Flexi Zone BTS

References:**Reason for the Change Note:**

Summary of the original problem:

The ToP Frequency counter M51137C4 topFreqSyncSLS is not aligned and updated properly. Sometimes counter value is displayed as 0 and sometimes the counter values is displayed less than 900 whereas ToP was locked for the complete time of 900 seconds.

Description of the problem:

Counter calculation by TRSW was improper. It was considering previously stored counter in its map for calculating the difference.

How end user/operator could detect the problem:

The user can check the TRS PM counter tab for counter data there he its visible that the counter is not aligned properly.

Description how problem can be detected:

The problem will be detected whenever system is in sync in with ToP frequency and is in that state for more than an hour.

Description of the fault:

Improper usage of counter Map in TRSW.

Dependency on configuration:

Whenever there are 2 simultaneous request for counters in TRSW internally, sometimes TRSW maps does not flush out the old entries because of which the stray values are considered for calculation.

Corrected Fault Reports:

NA05909084

"M51137C4 topFreqSyncSLS" is not counted correctly.

Modified components:

| Component | Version | *Net element | *SW-type | *Unit |
|--------------------------|---------|--------------|----------|-------|
| FTM_R3_FL16_T L16_MP1 | 399.00 | | | |

Change effects:

Effects on end-user

N/A

Effects on Operator

N/A

Other effects

N/A

New functionality

N/A

Customer Impact

Change 1: (NA05909084)

Testing Instructions for the change

Pre-requirements:

NA

Test execution:

NA

Expected results:

NA

Unexpected results:

NA
