

Limited Service Mode Emergency Call Support

Feature Description

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1 Limited Service Mode Emergency Call Support Overview

Access Type:	LTE
Feature Identity:	FAJ 121 1743
Value Package Name:	VoLTE
Value Package Identity:	FAJ 801 0443
Node Type:	Baseband Radio Node DU Radio Node
Licensing:	Licensed feature. One license per node.

Summary

Limited Service Mode Emergency Call Support introduces the functionality to support handling of emergency calls in an LTE network for UEs in limited service mode. It enables the UE user to setup and maintain emergency calls even when out of home network coverage or without a SIM card inserted.

This comprises:

- Broadcast in SIB1 of an indicator of the core network support of emergency calls for UEs in limited service mode, for example UEs without a SIM card. With this indication UEs are allowed to set up emergency calls when in limited service mode.
- Support of the EIA0 (null) integrity protection algorithm expected to be (implicitly) signaled by the MME for UEs in limited service mode.
- Support of mobility of emergency calls for UEs in limited service mode.



2 Dependencies of Limited Service Mode Emergency Call Support

Table 1 Feature Dependencies

Feature	Relationship	Description
Admission Control(FAJ 121 1857)	Related	Limited Service Mode Emergency Call Support can be seen as an add-on to the feature Admission Control, which is part of LTE Basic.

Hardware

No special hardware requirement is expected for this feature.

Limitations

No limitations for this feature.

Network Requirements

This is a licensed feature. This means that for the feature to be operational, a valid license key must be installed and the feature must be explicitly activated by setting a MOM attribute.

This feature has no prerequisite network configuration requirements.



3 Parameters

This section describes parameters introduced by the Limited Service Mode Emergency Call Support feature and parameters affected by activating the feature.

3.1 Introduced Parameters

This feature introduces no new parameters.

3.2 Affected Parameters

The implementation of this feature affects no parameters.



4 Network Impact

This section describes how the Limited Service Mode Emergency Call Support feature impacts the network functions and capabilities.

4.1 Capacity

There is a minor negative impact on network capacity from the implementation of this feature due to the fact that UEs normally served by other networks will be allowed to make emergency call in this network.

4.2 Mobility

There is a minor impact on mobility from the implementation of this feature due to the fact that UEs in limited service mode will be granted access when trying to do handover into this network.



5 Performance

This section describes performance indicators, counters, and events associated with the Limited Service Mode Emergency Call Support feature.

5.1 KPIs

This feature has no associated Key Performance Indicators (KPIs).

5.2 Counters

This feature has no directly associated RBS counters. There are however counters generated by OSS based on the events described below.

5.3 Events

[Table 2](#) lists the important events associated with the Limited Service Mode Emergency Call Support feature.

Table 2 Events

Event	Event Parameter	Description
INTERNAL_PROC_ERAB_SETUP	EVENT_ARRAY_ERAB_SETUP_ATT_ACC_TYPE	Array indicating the access type for each requested ERAB. Position 0 indicates access type for ERAB Id 0 etc. Other ERAB Id are marked "unavailable".
INTERNAL_PROC_ERAB_SETUP	EVENT_ARRAY_ERAB_SETUP_SUCC_ACC_TYP	Array indicating successful setup for the access type for each set up ERAB. Position 0 indicates access type for ERAB Id 0 etc. For unsuccessful setups, the ACC_TYPE must be set to "unavailable".
INTERNAL_PROC_ERAB_SETUP	EVENT_PARAM_ACC_TYPE	The access type that triggered the ERAB setup.
INTERNAL_PROC_INITIAL_CTXT_SETUP	EVENT_ARRAY_ERAB_SETUP_ATT_ACC_TYPE	Array indicating the access type for each requested ERAB. Position 0 indicates access type for ERAB Id 0 etc. Other ERAB Id are marked "unavailable".
INTERNAL_PROC_INITIAL_CTXT_SETUP	EVENT_ARRAY_ERAB_SETUP_SUCC_ACC_TYP	Array indicating successful setup for the access type for each set up ERAB. Position 0 indicates access type for ERAB Id 0 etc. For unsuccessful setups, the ACC_TYPE must be set to "unavailable".
INTERNAL_PROC_INITIAL_CTXT_SETUP	EVENT_PARAM_ACC_TYPE	The access type that triggered the ERAB setup.

More information about events can be found in [Manage Lists](#).



6 Activate Limited Service Mode Emergency Call Support

Prerequisites

- The license key is installed in the node.
- Continuous Cell Trace Recording (CCTR) is activated since at least one week. This ensures there is troubleshooting data available if something goes wrong.

Steps

1. Set the attribute `featureState` to `ACTIVATED` in the applicable MO instance, depending on node type:

Node Type	License Control MO
DU Radio Node	<code>OptionalFeatureLicense=LsmEcs</code>
Baseband-based Node	<code>FeatureState=CXC4011055</code>

After This Task

Let the CCTR be active for one week, for continued collection of troubleshooting data.



7 Deactivate Limited Service Mode Emergency Call Support

Prerequisites

Continuous Cell Trace Recording (CCTR) is activated since at least one week. This ensures there is troubleshooting data available if something goes wrong.

Steps

1. Set the attribute `featureState` to `DEACTIVATED` in the applicable MO instance, depending on node type:

Node Type	License Control MO
DU Radio Node	<code>OptionalFeatureLicense=LsmEcs</code>
Baseband-based	<code>FeatureState=CXC4011055</code>

After This Task

Let the CCTR be active for one week, for continued collection of troubleshooting data.