

UE Relocation

This chapter describes how to relocate UEs to a specific MME in an MME pool.

- Feature Description, on page 1
- How it Works, on page 1
- Relocating UE to Specific MME, on page 2
- Monitoring UE Relocation, on page 2

Feature Description

This feature enables operators to move a UE between different MME nodes within a MME pool area. This functionality can be useful for maintenance of equipment, to allow testing on all components, verifying functionality on new nodes that are not in service yet (when expanding the pool), and for establishing a particular call scenario for troubleshooting.

How it Works

UE Relocation

Using this command, the MME can release a UE (based on the UE"s IMSI), and cause it to attach to another particular MME within an MME Pool Area.

The UE must be in the EMM-REGISTERED or ECM-CONNECTED state in order to be relocated. If the UE is not in either of these states, the command will be rejected.

If the UE is in ECM-CONNECTED state, the MME uses the GUTI relocation command with a GUTI constructed from the parameters of the **mme relocate-ue** command. Once confirmation is received from the UE, the UE is detached with detach type "re-attach required". If the GUTI relocation procedure fails, the UE is still detached from the network.

Relocating UE to Specific MME

Issuing the mme relocate-ue Command

Use this exec mode command to trigger the specified UE (IMSI) to detach from the current MME and to reattach to the target MME.

You must know the mme-group-id and mme-code of the target MME. You must also know the IMSI of the UE to be relocated and provide a new GUTI MME-TMSI for this UE.

This is a one-time executable command. The MME does not retain a record of UEs which have been targeted for relocation. There is no restriction on the number of UEs that can be relocated.

mme relocate-ue imsi *imsi* **new-guti mme-group-id** *grp_id* **mme-code** *mme_code* **m-tmsi** *mtmsi*

Notes:

- If the UE is not in EMM-REGISTERED or ECM-CONNECTED mode, the command is rejected.
- **new-guti mme-group-id** *grp_id* identifies the group to which the target MME belongs. Enter an integer from 0 through 65536.
- **mme-code** *mme_code* identifies the target MME to which the UE should be attached. Enter an integer from 0 through 255.
- **m-tmsi** *mtmsi* identifies the new GUTI MME-TMSI for the UE. Enter an integer from 0 through 4294967295.
- If the UE is not in EMM-REGISTERED or ECM-CONNECTED mode, the command is rejected.
- If the mme-group-id and mme-code correspond to the MME where the UE is currently registered, the command is rejected.

Monitoring UE Relocation

This section lists the bulk statistics and show commands that display UE relocation statistics for a given MME.

UE Relocation Bulk Statistics

The following statistics are included in the **MME** Schema to track UE Relocations:

emm-msgtx-guti-reloc	The total number of EMM control messages sent - GUTI relocations. **Type:** Counter	Int32
emm-msgtx-guti-reloc-retx	The total number of EMM control messages sent - retransmitted GUTI relocations. **Type:** Counter	Int32
emm-msgrx-guti-reloc-complete	The total number of EMM control messages received - GUTI relocation complete. **Type:** Counter	Int32

UE Relocation Show Commands

The following counters are included in the **show mme-service statistics** output in support of the UE Relocation feature:

Total EMM Control Messages	
GUTI Relocation	The total number of EMM GUTI Relocation messages sent for a specific event associated with all MME services on the system.
Retransmissions	The total number of retransmitted EMM GUTI Relocation messages sent specific ECM event associated with all MME services on the system.
GUTI Reloc Complete	The total number of EMM GUTI Reloc Complete messages received for a ECM event associated with all MME services on the system.
EMM (Evolved Mobility Management) Statistics	
GUTI Relocation	This sub-group displays all GUTI relocation event attempts/successes/fail associated with all MME services on the system.