

LTE Emergency Profile Configuration Mode Commands

This mode configures parameters supporting the IP Multimedia Subsystem (IMS) emergency bearer services. Connectivity to an emergency Packet Data Network (PDN) is statically configured in this mode.

Command Modes

Exec > Global Configuration > LTE Policy Configuration > LTE Emergency Profile Configuration

configure > lte-policy > lte-emergency-profile *profile_name*

Entering the above command sequence results in the following prompt:

```
[local]host_name(lte-emergency-profile)#
```

Important The commands or keywords/variables that are available are dependent on platform type, product version, and installed license(s).

Important For information on common commands available in this configuration mode, refer to the Common Commands chapter.

- ambr, on page 1
- apn, on page 2
- associate, on page 3
- lcs-qos, on page 4
- local-emergency-num, on page 5
- local-emergency-num-ie, on page 6
- pgw fqdn, on page 7
- pgw ip-address, on page 8
- qos, on page 9
- ue-validation-level, on page 10

ambr

Configures the aggregated maximum bitrate (AMBR) for uplink and downlink for this emergency profile.

Product MME

Privilege Administrator

Command Modes Exec > Global Configuration > LTE Policy Configuration > LTE Emergency Profile Configuration

configure > lte-policy > lte-emergency-profile *profile_name*

Entering the above command sequence results in the following prompt:

```
[local]host_name(lte-emergency-profile)#
```

Syntax Description

ambr max-ul *bitrate* **max-dl** *bitrate*
no ambr

no

Removes the AMBR configuration for this emergency profile.

max-ul *bitrate*

Configures the maximum aggregated uplink bitrate value. *bitrate* is an integer from 0 to 1410065408.

max-dl *bitrate*

Configures the maximum aggregated downlink bitrate value. *bitrate* is an integer from 0 to 1410065408.

Usage Guidelines Use this command to configure uplink and downlink maximum aggregated bitrate values to be shared across all non-guaranteed bitrate bearers established for the emergency session.

Example

The following command configures the uplink AMBR value to *2000* bps and the downlink AMBR value to *2000* bps:

```
ambr max-ul 2000 max-dl 2000
```

apn

Configures the name and PDN type of the access point name (APN) used for emergency PDN connections.

Product MME

Privilege Administrator

Command Modes Exec > Global Configuration > LTE Policy Configuration > LTE Emergency Profile Configuration

configure > lte-policy > lte-emergency-profile *profile_name*

Entering the above command sequence results in the following prompt:

```
[local]host_name(lte-emergency-profile)#
```

Syntax Description

apn *apn_name* **pdn-type { ipv4 | ipv4v6 | ipv6 } [restoration-priority** *priority_value* **]**
no apn

no

Removes the selected APN from the profile.

apn_name

apn_name specifies the APN name of the emergency bearer services which will be used for emergency sessions. *apn_name* must be an alphanumeric string of 1 to 64 characters.

pdn-type { ipv4 | ipv4v6 | ipv6 }

Configures the packet data network type supported by the APN and this profile.

ipv4: Specifies that the PDN supports IPv4 network traffic.

ipv4v6: Specifies that the PDN supports both IPv4 and IPv6 network traffic.

ipv6: Specifies that the PDN supports IPv6 network traffic.

conf

restoration-priority *priority_value*

Configures the APN restoration priority value for emergency sessions for this APN profile. The reactivation of emergency PDNs after a P-GW restart notification is processed in the order of this priority.

priority_value is an integer from 1 to 16 where "1" is the highest priority and "16" is the lowest priority. Default: 16 (lowest priority).

To define the APN restoration priority for non-emergency sessions, refer to the **apn-restoration** command in the APN Profile Configuration Mode.

Usage Guidelines

Use this command to select the APN to be used for emergency bearer services. APNs are configured through the APN Configuration mode. For more information, see the *APN Configuration Mode Commands* chapter.

Example

The following command specifies that the APN named *apn-3.com* is to be used for emergency bearer services and that the PDN supports IPv4 traffic only:

```
apn apn-3.com pdn-type ipv4
```

The following command configures the APN Restoration Priority for APN profile named *eap* with restoration priority value *1*:

```
apn eap pdn-type ipv4 restoration-priority 1
```

associate

Associates a location service with this LTE emergency profile.

Product MME

Privilege Administrator

Command Modes Exec > Global Configuration > LTE Policy Configuration > LTE Emergency Profile Configuration

configure > lte-policy > lte-emergency-profile *profile_name*

Entering the above command sequence results in the following prompt:

```
[local]host_name(lte-emergency-profile)#
```

Syntax Description

associate location-service *location_svc_name*
no associate location-service

no

Disassociates a previously associated location service with this LTE emergency profile.

location-service *location_svc_name*

Associates a location service with this LTE emergency profile. Only one location service can be associated with an LTE emergency profile.

location_svc_name specifies the name for a pre-configured location service to associate with the LTE emergency profile as an alphanumeric string of 1 through 63 characters.

Usage Guidelines Use this command to associate a pre-configured location service with an LTE emergency profile. This enables the associated location service to provide location information of emergency calls to the GMLC.

For more information about Location Services (LCS), refer to the **location-service** command in the *Context Configuration Mode Commands I-M* chapter as well as the *Location Services Configuration Mode Commands* chapter.

Further details can be found in the *Location Services* chapter of the *MME Administration Guide*.

lcs-qos

Configures the required Location service (LCS) Quality of Service (QoS) settings for this emergency profile.

Product MME

Privilege Administrator

Command Modes Exec > Global Configuration > LTE Policy Configuration > LTE Emergency Profile Configuration

configure > lte-policy > lte-emergency-profile *profile_name*

Entering the above command sequence results in the following prompt:

```
[local]host_name(lte-emergency-profile)#
```

Syntax Description

lcs-qos horizontal-accuracy *variable* **[vertical-accuracy** *variable* **]**
no lcs-qos

no

Removes the configured LCS QoS settings for this emergency profile.

horizontal-accuracy *variable*

Defines the horizontal (longitude and latitude) accuracy of the LCS request.

variable must be entered as an integer from 0 to 127, where 0 is the most accurate.

vertical-accuracy *variable*

Defines the vertical (altitude) accuracy of the LCS request.

variable must be entered as an integer from 0 to 127, where 0 is the most accurate.

Usage Guidelines

Use this command to define the location service QoS settings to be used for this emergency profile. Configuration of these settings is optional.

For Emergency Services, the MME will always set the Response Time to Low Delay. If QoS is configured, the horizontal accuracy is mandatory. If a vertical accuracy is specified in this command, the MME will set the Vertical Requested flag.

Refer to 3GPP TS 29.171 and 3GPP TS 23.032 for more details about these settings.

Example

The following command sets the LCS QoS horizontal accuracy to **20**, which represents an accuracy of 57.3 meters. No vertical accuracy is specified.

```
lcs-qos horizontal-accuracy 20
```

local-emergency-num

This command configures Local Emergency Numbers to be sent in Attach/TAU responses.

Product

MME

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > LTE Policy Configuration > LTE Emergency Profile Configuration

configure > lte-policy > lte-emergency-profile *profile_name*

Entering the above command sequence results in the following prompt:

```
[local]host_name(lte-emergency-profile)#
```

Syntax Description

`[ no ] local-emergency-num` *`emergency_number`* **`{ ambulance | custom`** *`custom_number`* **`| fire | marinegaurd | mountain-rescue | police }`**

no

Removes the specified Local Emergency Number from the list.

emergency_number

The emergency number is a number assigned to a type of emergency number (ambulance, marine, and so on) with a string of size 1 to 10.

custom_number

Is specific to the **custom** local emergency number. *custom_number* is an hexadecimal number from 0x1 to 0xFF.

Usage Guidelines

This command allows the subscriber to download a list of local emergency numbers used by the serving network. This list is downloaded by the network to the User Equipment (UE) at successful registration as well as subsequent registration updates.

Example

The following configuration allows the operator to assign an emergency number for ambulance:

```
local-emergency-num 123 ambulance
```

The following configuration allows the operator to remove the emergency number assigned for ambulance:

```
no local-emergency-num 123 ambulance
```

local-emergency-num-ie

This command is used to configure local emergency numbers to be sent only over TAU messages.

Product

MME

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > LTE Policy Configuration > LTE Emergency Profile Configuration

configure > lte-policy > lte-emergency-profile *profile_name*

Entering the above command sequence results in the following prompt:

```
[local]host_name(lte-emergency-profile)#
```

Syntax Description

```
local-emergency-num-ie { inter-mme-tau | tau }
no local-emergency-num-ie
```

inter-mme-tau

The **local-emergency-num-ie** keyword with **inter-mme-tau** option allows the configured local emergency number list to be sent in a TAU Accept during Inter-MME-TAUs, that is, when the UE switches from a 2G network to 4G network, from a 3G network to 4G network or from a 4G network to 4G network handover (for both idle and connected mode).

tau

The **local-emergency-num-ie** keyword with **tau** option allows the configured local emergency number list to be sent in a TAU Accept message during all TAUs (for example, periodic TAUs and so on).

Usage Guidelines

This command configuration of the local emergency numbers is to be sent only over TAU messages.

Example

The following configuration allows the operator to send the emergency number list over Inter-MME-TAU messages:

```
local-emergency-num-ie inter-mme-tau
```

The following configuration allows the operator to send the emergency number list over all TAU messages:

```
local-emergency-num-ie tau
```

The following command removes the configuration of local emergency numbers sent over TAU messages:

```
no local-emergency-num-ie
```

pgw fqdn

This command configures a fully qualified domain name (FQDN) for P-GW to support emergency bearer services.

Product

MME

Privilege

Administrator

Command Modes

Exec > Global Configuration > LTE Policy Configuration > LTE Emergency Profile Configuration

configure > lte-policy > lte-emergency-profile *profile_name*

Entering the above command sequence results in the following prompt:

```
[local]host_name(lte-emergency-profile)#
```

Syntax Description

pgw fqdn *fqdn*
no pgw fqdn

no

Removes the specified P-GW FQDN from this profile.

fqdn

Specifies the domain name of the P-GW as an alphanumeric string of 1 through 256 characters.

Important A maximum of one P-GW FQDN configuration is allowed per profile.

Usage Guidelines Use this command to configure the FQDN for P-GW to support emergency bearer services.

Example

The following command configures the P-GW supporting emergency bearer services for this profile as *pdn-911.gov*:

```
pgw fqdn pdn-911.gov
```

pgw ip-address

This command configures the IPv4 or IPv6 address of the P-GW to support emergency bearer services.

Product MME

Privilege Administrator

Command Modes Exec > Global Configuration > LTE Policy Configuration > LTE Emergency Profile Configuration

configure > lte-policy > lte-emergency-profile *profile_name*

Entering the above command sequence results in the following prompt:

```
[local]host_name(lte-emergency-profile)#
```

Syntax Description

```
pgw ip-address address protocol { both | gtp | pmip } weight value
collocated-nodecollocated_node_name ue-usage-type ue_usage_type_value
no pgw ip-address address
```

no

Removes the specified P-GW IP address from this profile.

ip-address *address*

Specifies the IP address for the P-GW in IPv4 dotted-decimal or IPv6 colon-separated hexadecimal notation.

Important A maximum of four P-GW IP address configurations are allowed per profile.

protocol { both | gtp | pmip }

Specifies the protocol that P-GW supports. Options are:

- **both**: Specifies that both GTP and PMIP are supported.
- **gtp**: Specifies that only GTP is supported.

- **pmip**: Specifies that only PMIP is supported.

weight *value*

Assigns a weight to the P-GW IP address to use as a preferred P-GW.

value is an integer from 1 to 100. Lowest value has the least preference.

collocated-node

Configures the collocation name to select the collocated S/PGW node IP addresses for MME.

collocated_node_name must be a string of size 1 to 255.

ue-usage-type

Configures the ue-usage-type for the gateway. *ue_usage_type_value* must be an integer between 1 through 255.

Usage Guidelines

Use this command to configure the IPv4 or IPv6 address for P-GW to support emergency bearer services through this profile.

Example

The following command configures the P-GW with an IPv4 address of *209.165.200.228*, supporting GTP only, and having a weight of *10*:

```
pgw ip-address 209.165.200.228 protocol gtp weight 10
```

qos

Configures the quality of service (QoS) parameters for the emergency bearer service.

Product

MME

Privilege

Administrator

Command Modes

Exec > Global Configuration > LTE Policy Configuration > LTE Emergency Profile Configuration

configure > lte-policy > lte-emergency-profile *profile_name*

Entering the above command sequence results in the following prompt:

```
[local]host_name(lte-emergency-profile)#
```

Syntax Description

```
qos qci qci arp arp_value preemption-capability { may | shall-not }
vulnerability { not-preemptable | preemtable }
no qos
```

qci *qci*

Specifies the QoS Class Identifier (QCI) for the emergency bearer profile as an integer from 0 through 255.

arp *arp_value*

Defines the address retention priority value as an integer from 1 through 15.

preemption-capability { may | shall-not }

Specifies the preemption capability flag. Options are:

- **may**: Emergency bearer may have Preemption Capability.
- **shall-not**: Emergency bearer shall not have Preemption Capability.

vulnerability { not-preemptable | preemptable }

Specifies the vulnerability flag. Options are:

- **not-preemptable**: Bearer cannot be preempted.
- **preemptable**: Bearer can be preempted.

Usage Guidelines

Use this command to set the QoS ARP and QCI parameters for the emergency bearer configuration.

Example

The following command sets the QCI number to *7*, the ARP value to *2* the preemption capability to *may*, and the vulnerability flag to *preemptable*:

```
qos qci 7 arp 2 preemption-capability may vulnerability preemptable
```

ue-validation-level

Configures the type of user equipment (UE) that can use the emergency bearer service through the profile.

Product

MME

Privilege

Administrator

Command Modes

Exec > Global Configuration > LTE Policy Configuration > LTE Emergency Profile Configuration

configure > lte-policy > lte-emergency-profile *profile_name*

Entering the above command sequence results in the following prompt:

```
[local]host_name(lte-emergency-profile)#
```

Syntax Description

```
ue-validation-level { auth-only | full | imsi | none }
default ue-validation-level
```

default

Returns the command to its default setting.

Default: **none**

{ auth-only | full | imsi | none }

Specifies the type of UE allowed to use the emergency bearer service. Options are:

- **auth-only**: Specifies that UEs that have been authenticated are allowed to use the emergency bearer service. These UEs may be in a limited service state, they may be in an area with restricted service or where they are restricted from services. Enabling this option also causes subscription and location validation to be bypassed.
- **full**: Specifies that only UEs that have been authenticated and have successfully passed subscription and location validation are allowed to use the emergency bearer service. Enabling this option indicates that only UEs that are capable of normal attach procedures will be allowed to use the emergency bearer service.
- **imsi**: Specifies that UEs with an International Mobile Subscriber Identity (IMSI) are allowed to use the emergency bearer service regardless of authentication. Even if authentication fails, the UE is granted access.
- **none**: Specifies that all UEs are allowed to use the service. This is the default value for the command.

Usage Guidelines

Use this command to indicate which UEs can use the emergency bearer service through this profile.

Example

The following command configures the **imsi** type of UE to use the emergency bearer service to "IMSI required, authentication optional":

```
ue-validation-level imsi
```