

# Logical eNode Configuration Mode Commands

**Important** In Release 20, 21.0 and 21.1, HeNBGW is not supported. Commands in this configuration mode must not be used in these releases. For more information, contact your Cisco account representative.

The Logical eNodeB configuration option enables the configuration of one or more logical eNodeBs within the HeNB-GW. The Logical eNodeB configuration can be used to support load balancing within a pool of TAIs.

**Command Modes** Exec > Global Configuration > Context Configuration > HENBGW-NETWORK Service Configuration > Logical eNodeB Configuration

**configure > context** *context_name* **> henbgw-network-service** *service_name* **> logical-enb global-enb-id plmn id mcc** *mcc_id* **mnc** *mnc_id* { **home-enb-id** *henb_id* **| macro-enb-id** *menb_id* }

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(logical-enb)#
```

**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.


- associate mme-pool, on page 2
- associate tai-list-db, on page 2
- bind s1-mme, on page 3
- s1-mme ip qos-dscp, on page 4
- s1-mme sctp port, on page 6

# associate mme-pool

Associates a previously configured MME pool to this logical eNodeB. An MME pool must be configured in LTE Policy Configuration mode before using this configuration.

**Product**

HeNB-GW

**Privilege**

Security Administrator, Administrator

**Command Modes**

Exec > Global Configuration > Context Configuration > HENBGW-NETWORK Service Configuration > Logical eNodeB Configuration

**configure > context** *context_name* **> henbgw-network-service** *service_name* **> logical-enb global-enb-id plmn id mcc** *mcc_id* **mnc** *mnc_id* { **home-enb-id** *henb_id* **| macro-enb-id** *menb_id* }

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(logical-enb)#
```

**Syntax Description**

```
associate mme-pool pool_name
no associate mme-pool
```

**no**

Removes the associated MME pool from this logical eNodeB configuration.

***pool_name***

Identifies the name of the pre-configured MME pool to associate with this logical eNodeB.

*pool_name* is an alphanumeric string of 1 through 63 characters.

**Usage Guidelines**

Use this command to bind/associate a pre-configured MME pool to this logical eNodeB. The MME pool can be configured in LTE Policy configuration mode. The associate configuration is used to establish associations with other helper services in general.

Each logical eNodeB can connect up to 8 MMEs. Since 8 logical eNodeBs can be configured per HeNB-GW Network service, a total of 64 associations can be established between HeNB-GW and MME.

**Example**

The following command associates an MME pool named *pool1* with specific logical eNodeB:

```
associate mme-pool pool1
```

# associate tai-list-db

Associates a previously configured TAI database name to this logical eNodeB. A TAI database name for TAI configuration must be configured in LTE Policy Configuration mode before using this configuration.

**Product**

HeNB-GW

**Privilege**

Security Administrator, Administrator

**Command Modes**

Exec > Global Configuration > Context Configuration > HENBGW-NETWORK Service Configuration > Logical eNodeB Configuration

**configure > context** *context_name* **> henbgw-network-service** *service_name* **> logical-enb global-enb-id plmn id mcc** *mcc_id* **mnc** *mnc_id* { **home-enb-id** *henb_id* **|** **macro-enb-id** *menb_id* }

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(logical-enb)#
```

**Syntax Description**

**associate tai-list-db** *tai_db_name*
**no associate tai-list-db**

**no**

Removes the associated TAI database from this logical eNodeB configuration.

***tai_db_name***

Identifies the name of the pre-configured TAI database to associate with this logical eNodeB.

*tai_db_name* is an alphanumeric string of 1 through 63 characters.

**Usage Guidelines**

Use this command to bind/associate a pre-configured TAI database to this logical eNodeB. The MME pool can be configured in LTE Policy configuration mode. The associate configuration is used to establish associations with other helper services in general.

A maximum number of 8 TAI databases are supported. Each TAI database can accommodate up to 256 configurations of Tracking Area Codes (TACs). Therefore a total of 2048 TACs are supported.

**Example**

The following command associates a TAI database named *henbtai1* with specific logical eNodeB:

**associate tai-list-db henbtai1**

# bind s1-mme

Binds the pre configured Local SCTP IP Address for S1 association to MME.

**Product**

HeNB-GW

**Privilege**

Security Administrator, Administrator

**Command Modes**

Exec > Global Configuration > Context Configuration > HENBGW-NETWORK Service Configuration > Logical eNodeB Configuration

**configure > context** *context_name* **> henbgw-network-service** *service_name* **> logical-enb global-enb-id plmn id mcc** *mcc_id* **mnc** *mnc_id* { **home-enb-id** *henb_id* **|** **macro-enb-id** *menb_id* }

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(logical-enb)#
```

**Syntax Description**

```
bind s1-mme { ipv4-address | ipv6-address } ip_addr
no bind s1-mme
```

**no**

Removes the binding of S1-MME interface from this logical eNodeB configuration.

***ip_addr***

Identifies the IP address of the S1-MME interface to associate with this HeNB-GW Network service.

*addr_val* must be entered in the IPv4 (dotted decimal notation) or IPv6 (: / :: notation).

**Usage Guidelines**

Use this command to bind the pre-configured IPv4 / IPv6 address of the S1-MME interface to the logical eNodeB.

**Example**

The following command binds the S1-MME interface having *209.165.200.235* IP address with specific logical eNodeB.

```
bind s1-mme ipv6-address 209.165.200.235
```

# s1-mme ip qos-dscp

This command configures the quality of service (Do's) differentiated service code point (DSCP) marking for IP packets sent out on the S1-MME interface, from the HeNB-GW to the MME(s).

**Product**

HeNB-GW

**Privilege**

Security Administrator, Administrator

**Command Modes**

Exec > Global Configuration > Context Configuration > HENBGW-NETWORK Service Configuration > Logical eNodeB Configuration

**configure** > **context** *context_name* > **henbgw-network-service** *service_name* > **logical-enb global-enb-id plmn id mcc** *mcc_id* **mnc** *mnc_id* { **home-enb-id** *henb_id* | **macro-enb-id** *menb_id* }

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(logical-enb)#
```

**Syntax Description**

```
s1-mme ip qos-dscp { af11 | af12 | af13 | af21 | af22 | af23 | af31 |
af32 | af33 | af41 | af42 | af43 | be | cs0 | cs1 | cs2 | cs3 | cs4 | cs5
 | cs6 | cs7 | ef }
default s1-mme ip qos-dscp
```

**qos-dscp { af11 | af12 | af13 | af21 | af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | be | cs0 | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | cs7 | ef }**

Default: **af11**

Specifies the DSCP for the specified QoS traffic pattern. **qos-dscp** can be configured to any one of the following:

**af11**: Assured Forwarding 11 per-hop-behavior (PHB)

**af12**: Assured Forwarding 12 PHB

**af13**: Assured Forwarding 13 PHB

**af21**: Assured Forwarding 21 PHB

**af22**: Assured Forwarding 22 PHB

**af23**: Assured Forwarding 23 PHB

**af31**: Assured Forwarding 31 PHB

**af32**: Assured Forwarding 32 PHB

**af33**: Assured Forwarding 33 PHB

**af41**: Assured Forwarding 41 PHB

**af42**: Assured Forwarding 42 PHB

**af43**: Assured Forwarding 43 PHB

**be**: Best effort forwarding PHB

**cs0**: Designates use of Class Selector 0 PHB.This is same as DSCP Value BE.

**cs1**: Designates use of Class Selector 1 PHB

**cs2**: Designates use of Class Selector 2 PHB

**cs3**: Designates use of Class Selector 3 PHB

**cs4**: Designates use of Class Selector 4 PHB

**cs5**: Designates use of Class Selector 5 PHB

**cs6**: Designates use of Class Selector 6 PHB

**cs7**: Designates use of Class Selector 7 PHB

**ef**: Expedited forwarding PHB

## Usage Guidelines

DSCP levels can be assigned to specific traffic patterns to ensure that data packets are delivered according to the precedence with which they are tagged. The diffserv markings are applied to the IP header of every subscriber data packet transmitted over the S1-MME interface(s).

### Example

The following command sets the DSCP-level for data traffic sent over the S1-MME interface to **af12**:

```
s1-mme ip qos-dscp af12
```

# s1-mme sctp port

This command configures the local Stream Control Transmission Protocol (SCTP) port used for binding the SCTP socket to communicate with the MMEs over S1-MME interface.

**Product**

HeNB-GW

**Privilege**

Security Administrator, Administrator

**Command Modes**

Exec > Global Configuration > Context Configuration > HENBGW-NETWORK Service Configuration > Logical eNodeB Configuration

**configure > context** *context_name* **> henbgw-network-service** *service_name* **> logical-enb global-enb-id plmn id mcc** *mcc_id* **mnc** *mnc_id* { **home-enb-id** *henb_id* **|** **macro-enb-id** *menb_id* }

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(logical-enb)#
```

**Syntax Description**

**s1-mme sctp port** *port_num*
**default s1-mme sctp port**

#### default

Sets the SCTP port to the default value of 36412 to communicate with the MMEs using S1-MME interface.

#### *port_num*

Specifies the SCTP port number to communicate with the HeNBs using S1-MME interface as an integer from 1 through 65535. Default: 36412

**Usage Guidelines**

Use this command to assign the SCTP port with SCTP socket to communicate with the HeNB using S1AP.

Only one SCTP port can be associated with one MME service.

#### Example

The following command sets the SCTP port number **699** to interact with Home eNodeB using S1AP on S1-MME interface:

```
s1-mme sctp port 699
```