HeNB-GW Network Service 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.

A new service "henbgw-network-service" is defined under the Context configuration mode in order to support HeNB-GW functionality. This service configuration controls the S1-MME interface functionality between HeNB-GW and MME node.

Command Modes Exec > Global Configuration > Context Configuration > HeNBGW-Network Service Configuration

configure > context *context_name* **> henbgw-network-service** *service_name*

Entering the above command sequence results in the following prompt:

`[context_name]host_name(config-henbgw-network-service)#`

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

- anr-info-retrieval, on page 2
- associate sctp-param-template, on page 2
- default-paging-drx, on page 3
- end, on page 4
- exit, on page 4
- logical-enb, on page 5
- paging-rate-control, on page 6
- public-warning-system, on page 7
- pws, on page 7
- s1ap-max-retransmissions, on page 8
- s1ap-retransmission-timeout, on page 9

anr-info-retrieval

This command enables the HeNB-GW to intercept and respond to the Automatic Neighbor Relation (ANR) related SON messages with the requested information.

Product

HeNB-GW

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context Configuration > HeNBGW-Network Service Configuration

configure > context *context_name* **> henbgw-network-service** *service_name*

Entering the above command sequence results in the following prompt:

`[context_name]host_name(config-henbgw-network-service)#`

Syntax Description

`[ no | default ] anr-info-retrieval`

no

Removes the ANR information retrieval related function from this HeNB-GW Network service configuration.

default

Sets/Restores the default value assigned for the ANR information retrieval related function from the configured HeNB-GW Network service.

Usage Guidelines

Use this command to enable the ANR information retrieval function to the HeNB-GW Network Service.

Example

Following command enables the ANR information retrieval function on a specific HeNB-GW Network service.

`anr-info-retieval`

associate sctp-param-template

Associates a previously configured SCTP Parameter Template to the this HeNB-GW Network service. A SCTP Parameter Template must be configured globally before using this configuration.

Product

HeNB-GW

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context Configuration > HeNBGW-Access Service Configuration

configure > context *context_name* **> henbgw-access-service** *service_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-henbgw-access-service)#
```

Syntax Description

associate sctp-param-template *template_name*
no associate sctp-param-template

no

Removes the associated SCTP Parameter Template from this HeNB-GW Network service configuration.

template_name

Identifies the name of the pre-configured SCTP Parameter Template to associate with this HeNB-GW Network service.

template_name is an alphanumeric string of 1 through 63 characters.

Usage Guidelines

Use this command to bind/associate a pre-configured SCTP Parameter Template to the this HeNB-GW Network service. The SCTP Parameter Template can be configured global mode. The associate configuration is used to establish associations with other helper services in general.

Example

Following command associates an SCTP Parameter Template named *sctp_tmpl* with specific HeNB-GW Network service.

```
associate sctp-param-template sctp_tmpl
```

default-paging-drx

This command is used to configure the Default paging DRX value that is sent to the MME(s) in the S1 SETUP request message.

Product

HeNB-GW

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context Configuration > HeNBGW-Network Service Configuration

configure > context *context_name* **> henbgw-network-service** *service_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-henbgw-network-service)#
```

Syntax Description

default-paging-drx { v128 | v256 | v32 | v64 }
default default-paging-drx

default

Sets/Restores the default value assigned for Default-Paging-DRX for the configured HeNB-GW Network service.

default-paging-drx { v128 | v256 | v32 | v64 }

Any one of the following DRX values can be configured :

- v128: Designates use of Paging DRX v128.
- v256: Designates use of Paging DRX v256.
- v32: Designates use of Paging DRX v32.
- v64: Designates use of Paging DRX v64.

Usage Guidelines Use this command to configure the Default Paging DRX value for this HeNB-GW Network service.

Example

Following command configures v256 as the Default Paging DRX value on a specific HeNB-GW Network service.

```
default-paging-drx v256
```

end

Exits the current configuration mode and returns to the Exec mode.

Product All

Privilege Security Administrator, Administrator

Command Modes Exec > Global Configuration > Context Configuration > HeNBGW-Network Service Configuration

configure > context *context_name* **> henbgw-network-service** *service_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-henbgw-network-service)#
```

Syntax Description **end**

Usage Guidelines Use this command to return to the Exec mode.

exit

Exits the current mode and returns to the parent configuration mode.

Product All

Privilege Security Administrator, Administrator

Command Modes Exec > Global Configuration > Context Configuration > HeNBGW-Network Service Configuration

configure > context *context_name* **> henbgw-network-service** *service_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-henbgw-network-service)#
```

Syntax Description **exit**

Usage Guidelines Use this command to return to the parent configuration mode.

logical-enb

This command enables the configuration of one or more logical eNodeBs within the HeNB-GW.

Product HeNB-GW

Privilege Security Administrator, Administrator

Command Modes Exec > Global Configuration > Context Configuration > HeNBGW-Network Service Configuration

configure > context *context_name* **> henbgw-network-service** *service_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-henbgw-network-service)#
```

Syntax Description

```
logical-enb global-enb-id plmn id mcc mcc_val mnc  mnc_val { home-enb-id
henb_id | macro-enb-id menb_id [ -noconfirm ] }
 no logical-enb global-enb-id plmn id mcc mcc_val mnc  mnc_val { home-enb-id
 henb_id | macro-enb-id menb_id }
```

no

Removes the configured logical eNodeB from this HeNB-GW Network service configuration.

mcc *mcc_val*

Identifies the mobile country code for the IMSI which must be entered between 100 and 999, as a string of size 3.

mnc *mnc_val*

Identifies the Mobile Network Code which is a value between 00 and 999, as a string of size 2 to 3.

home-enb-id *henb_id*

Identifies the Home eNodeB ID which is an integer from 1 to 268435455.

macro-enb-id *menb_id*

Identifies the Macro eNodeB ID which is again an integer value between 1 and 1048575.

-noconfirm

Creates a new HeNB-GW network service without prompting for confirmation.

Usage Guidelines

Use this command for 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 (i.e. Multiple logical eNodeBs can service calls connecting from a specific set of TAIs). It can also be used to create and support disjoint serving areas, that is each logical eNodeB will serve a different set of TAIs.

At least one logical eNodeB configuration is required to START an HeNB-GW Network service.

Caution Deleting or modifying any of the parameters for a fully configured logical eNodeB is a disruptive operation. It will result in the termination of SCTP connections to MMEs from that logical eNodeb.

Example

Following command configures a logical eNodeB having Home eNodeB ID as 1000 on a specific HeNB-GW Network service.

logical-enb global-enb-id plmn id mcc *123* **mnc** *456* **home-enb-id** *1000*

paging-rate-control

This command is used to configure the Paging-Rate-Control which determines the maximum number of paging messages per second which an HeNB-GW can handle received from the MME(s).

Product

HeNB-GW

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context Configuration > HeNBGW-Network Service Configuration

configure > context *context_name* **> henbgw-network-service** *service_name*

Entering the above command sequence results in the following prompt:

[context_name]host_name(**config-henbgw-network-service**)#

Syntax Description

paging-rate-control *number_of_msg*
no paging-rate-control

no

Removes the configured rate of paging messages from this HeNB-GW Network service configuration.

number_of_msg

Identifies the number of paging messages to be handled by the HeNBGW service per second. This number must be entered as an integer between 1 and 65535 (min 1 and max 65535) .

Usage Guidelines

Use this command to configure the number of paging messages per second to be handled by this HeNB-GW Network service. MME ID configuration is required, because it is the same ID which HeNB-GW sends in response messages to HeNBs.

This parameter is not part of logical-enb configuration and therefore it would include paging messages received from all the MMEs to which tis HeNB-GW is connected on the network side.

Important Paging messages exceeding the configured rate are dropped. Total Paging and Dropped Statistics is updated in the logs.

Example

Following command configures 32770 as the number of paging messages per second to be handled on a specific HeNB-GW Network service.

paging-rate-control *32770*

public-warning-system

This command enables / disables the Public warning system.

Product HeNB-GW

Privilege Security Administrator, Administrator

Command Modes Exec > Global Configuration > Context Configuration > HeNBGW-Network Service Configuration

configure > context *context_name* **> henbgw-network-service** *service_name*

Entering the above command sequence results in the following prompt:

[context_name]host_name(**config-henbgw-network-service**)#

Syntax Description **[no] public-warning-system**

no

Disables the Public warning system.

Usage Guidelines Use this command to enable / disable the Public warning system.

Example

Following command disables the Public warning system:

no public-warning-system

pws

This command sets values for parameters related to public warning system feature.

Product HeNB-GW

Privilege Security Administrator, Administrator

Command Modes Exec > Global Configuration > Context Configuration > HeNBGW-Network Service Configuration

configure > context *context_name* **> henbgw-network-service** *service_name*

Entering the above command sequence results in the following prompt:

`[context_name]host_name(config-henbgw-network-service)#`

Syntax Description

```
pws { kill-request-timeout kill_req_timeout_seconds |
restart-indication-timeout restart_ind_timeout_seconds |
warning-request-timeout warn_req_timeout_seconds }
default pws { kill-request-timeout | restart-indication-timeout |
warning-request-timeout }
```

default

Configures the default value to kill request timeout and warning request timeout of public warning system feature.

kill-request-timeout *kill_req_timeout_seconds*

Configures the Kill Request timeout value in seconds.

kill_req_timeout_seconds is an integer from 1 through 65535.

restart-indication-timeout *restart_ind_timeout_seconds*

Configures Restart Indication timeout value in seconds.

restart_ind_timeout_seconds is an integer from 1 through 65535.

warning-request-timeout *warn_req_timeout_seconds*

Configures the Warning request timeout value in seconds.

warn_req_timeout_seconds is an integer from 1 through 65535.

Usage Guidelines Use this command to set the values for parameters related to public warning system feature for this HeNB-GW Network service.

Example

Following command configures the Warning request timeout value to 100 seconds.

```
pws warning-request-timeout 100
```

s1ap-max-retransmissions

This command configures the number of times node level S1AP message is retransmitted towards MME.

Product HeNB-GW

Privilege Security Administrator, Administrator

Command Modes Exec > Global Configuration > Context Configuration > HeNBGW-Network Service Configuration

configure > context *context_name* **> henbgw-network-service** *service_name*

Entering the above command sequence results in the following prompt:

`[context_name]host_name(config-henbgw-network-service)#`

Syntax Description

s1ap-max-retransmissions *number_of_retries*
default s1ap-max-retransmissions

default

Configures the default number of S1AP retransmissions for this HeNB-GW Network service configuration. Default number of retransmissions is 4.

number_of_retries

Identifies the number of S1AP retransmissions to be configured. This number must be entered as an integer between 1 and 5.

Usage Guidelines Use this command to configure the maximum number of Node level S1AP retransmissions for this HeNB-GW Network service.

Caution Configuring s1ap-max-retransmissions to 0 will disable the S1AP retransmission support.

Example

Following command configures default (which is also 4) S1AP retransmission on a specific HeNB-GW Network service.

default s1ap-max-retransmissions

s1ap-retransmission-timeout

This command configures the timeout interval to support Node Level S1AP retransmissions if there in no response received from the peer (MME).

Product HeNB-GW

Privilege Security Administrator, Administrator

Command Modes Exec > Global Configuration > Context Configuration > HeNBGW-Network Service Configuration

configure > context *context_name* **> henbgw-network-service** *service_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-henbgw-network-service)#
```

Syntax Description

```
s1ap-retransmission-timeout number_of_secs
default s1ap-retransmission-timeout
```

default

Configures the default S1AP retransmission timeout for this HeNB-GW Network service configuration. Default retransmission timeout is 60 seconds.

number_of_secs

Identifies the number seconds as the S1AP retransmission timeout to be configured. This number must be entered as an integer between 1 and 600.

Usage Guidelines

Use this command to configure the timeout interval to support Node Level S1ap retransmissions for this HeNB-GW Network service.

Example

Following command configures 100 as the S1AP retransmission timeout on a specific HeNB-GW Network service.

```
s1ap-retransmission-timeout 100
```