

HLR Configuration Mode Commands

The HLR Configuration Mode is a sub-mode derived from the MAP Configuration Mode which controls the MAP service configuration. It is the MAP service that provides the application-layer protocol support used to connect the HLR to other nodes in the network such as the SGSN.

Command Modes

The HLR Configuration Mode provides the commands and parameters to configure the home location register (HLR) node that is the database containing the subscriber profile and connection information for a specific GPRS/UMTS core network.

Exec > Global Configuration > Context Configuration > MAP Service Configuration > HLR Configuration

configure > context *context_name* **> map-service** *service_name* **> hlr**

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-map-service-service_name-hlr)#
```

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

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acn-version-retention

This command configures the ACN version retention method.

Product SGSN

Privilege Security Administrator, Administrator

Command Modes Exec > Global Configuration > Context Configuration > MAP Service Configuration > HLR Configuration

configure > **context** *context_name* > **map-service** *service_name* > **hlr**

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-map-service-service_name-hlr)#
```

Syntax Description

```
acn-version-retention { per-imsi-prefix | per-subscriber }
default acn-version-retention
```

default

Returns the configuration to the default value: retains the version information per IMSI prefix.

per-imsi-prefix

Retain ACN version information, for communication with the HLR, on a per IMSI prefix basis.

per-subscriber

Retain ACN version information, for communication with the HLR, on a per buscriber basis.

Usage Guidelines

By default, the SGSN sends ACN version 3 SAI (service area identity) to the HLR. If the SGSN receives an error message indicating that the HLR does not support that version, then the SGSN tries again with an ACN version 2 SAI. Next time the SGSN communicates with that HLR, it retains that version information and version persists based on the IMSI prefix.

Use this command to enable the SGSN to retain version according to subscriber.

Example

Configure the SGSN to retain version information according to the IMSI prefix:

```
default acn-version-retention
```

do show

Executes all **show** commands while in Configuration mode.

Product

All

Privilege

Security Administrator, Administrator

Syntax Description

```
do show
```

Usage Guidelines

Use this command to run all Exec mode **show** commands while in Configuration mode. It is not necessary to exit the Config mode to run a **show** command.

The pipe character **|** is only available if the command is valid in the Exec mode.

Caution There are some Exec mode **show** commands which are too resource intensive to run from Config mode. These include: **do show support collection**, **do show support details**, **do show support record** and **do show support summary**. If there is a restriction on a specific **show** command, the following error message is displayed:

```
Failure: Cannot execute 'do show support' command from Config mode.
```

end

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

Product SGSN

Privilege Security Administrator, Administrator

Syntax Description **`end`**

Usage Guidelines Return to the Exec mode.

exit

Exits the current configuration mode and returns to the MAP Service configuration mode.

Product SGSN

Privilege Security Administrator, Administrator

Syntax Description **`exit`**

Usage Guidelines Return to the MAP Service configuration mode.

imsi

This command sets up IMSI (International Mobile Subscriber Identity) -based configuration. The IMSI prefix includes the nobile country code (MCC) and the mobile network code (MNC).

Product SGSN

Privilege Security Administrator, Administrator

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Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-map-service-service_name-hlr)#
```

Syntax Description

[no] imsi { any | starts-with *prefix_number* **} { imsi [sgsn-source-address-format point-code-ssn [source-ssn** *ssn* **] | isdn** *isdn_number* **| mobile-global-title** *mgt_number* **[max-gt-address-len** *max_gt_address* **] | point-code** *pt-code* **} }**

no

Removes the imsi-prefix definition from the configuration.

any

Configures acceptance of any IMSI prefix.

start-with *prefix_number*

Selects IMSI prefix-based routing.

prefix_number is a string of up to 15 integers.

imsi

Enables configurable default behavior for routing.

Entering **imsi** with the **any** keyword preserves the default behavior and the E.212 address is used as a destination address and the MAP request will be sent towards the HLR.

If this keyword is not used with the **any** keyword, then the MAP request will be rejected.

isdn *isdn_number*

Defines the E.164 number of the HLR.

isdn_number is a string of integers, up to 15.

mobile-global-title *mgt_number* [max-gt-address-len *max_gt_address_length*]

Defines the mobile global title address that the MCC/MNC portion of the IMSI will be converted to. If the maximum GT address length is specified (optional) and if the length of the MGT string is greater than defined, then the least significant digits will be omitted.

mgt_number is a string of digits, up to 18 digits in length.

max_gt_address is an integer from 1 to 32.

point-code *pt-code* source-ssn *ssn*

Defines the point code for the HLR.

pt-code is a string of digits, up to 11; SS7 format preferred.

sgsn-source-address-format point-code-ssn

Selects HLR call process according to SCCP calling party address of the SGSN. This will be filled at MAP level, including the ITU point code address.

source-ssn *ssn*

Defines the SSN of the source that will be used for the call filtering.

ssn: Must be an integer from 1 to 255.

Usage Guidelines Routing will be done according to IMSI parameters configured with this command or according to the mobile global title address (replacing the MCC/MNC portion of the IMSI) is so specified.

Example

```
imsi starts-with 3 isdn 123456789 sgsn-source-address-form at point-code-ssn
```

policy routing

This command configures the policy for the routing of MAP messages. If this command is not configured or disabled (with the **default** keyword), then routing is done according to the configuration of the IMSI parameters.

Product SGSN

Privilege Security Administrator, Administrator

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configure > **context** *context_name* > **map-service** *service_name* > **hlr**

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-map-service-service_name-hlr)#
```

Syntax Description

```
policy routing { hlr-isdn | ms-isdn }
default policy routing
no policy routing
```

default

Resets the policy routing to the system default, disabled.

no

Removes the policy routing configuration from the system.

hlr-isdn

Selects HLR-ISDN based routing.

ms-isdn

Selects mobile station (MS)-ISDN based routing.

Usage Guidelines Use this command to set the policy for routing MAP messages.

Example

```
policy routing hlr-isdn
```

release-compliance

Enables/disables the sending of EPS information in the Update GPRS Location Request message to the HLR.

Product

SGSN

Privilege

Security Administrator, Administrator

Command Modes

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configure > context *context_name* **> map-service** *service_name* **> hlr**

Entering the above command sequence results in the following prompt:

`[context_name]host_name(config-map-service-service_name-hlr)#`

Syntax Description

```
release-compliance release-8
no release-compliance
```

release-compliance release-8

Enables the sending of EPS information in the UGL Request message to the HLR. This setting sets the 3GPP release compliance to *Release 8 and above*.

no release-compliance

Disables the sending of EPS information in the UGL Request message to the HLR. This command sets the 3GPP release compliance setting to *Pre-release 8*. This is the default setting.

Usage Guidelines

Use this command to enable or disable the sending of EPS information in the UGL Request message to the HLR.

Operators can use the **show map-service all** command to view the current 3GPP release compliance setting.

Example

This command enables the sending of EPS information in the UGL Request message to the HLR.

```
release-compliance release-8
```