MCC/MNC Configuration in the SGW Service

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Feature Summary and Revision History

Summary Data

Table 1: Summary Data

Applicable Product(s) or Functional Area	cnSGW-C
Applicable Platform(s)	SMI
Feature Default Setting	Disabled – Configuration required to enable
Related Documentation	Not Applicable

Revision History

Table 2: Revision History

Revision Details	Release
First introduced.	2021.01.0

Feature Description

This feature supports the list of MCC and MNC configuration as a PLMN-list in the SGW profile.

As per the PLMN-list configuration in the SGW profile, the PLMN-type is identified as one of the following:

- Homer
- Roamer
- Visitor

Note If this feature is not enabled, the PLMN-type subscriber is marked as a Visitor, by default.

How it Works

This section describes how the feature works.

Call Flows

This section describes the key call flows for this feature.

PLMN-type Detection Call Flow

This section describes the PLMN-type Detection call flow.

Figure 1: PLMN-type Detection Call Flow

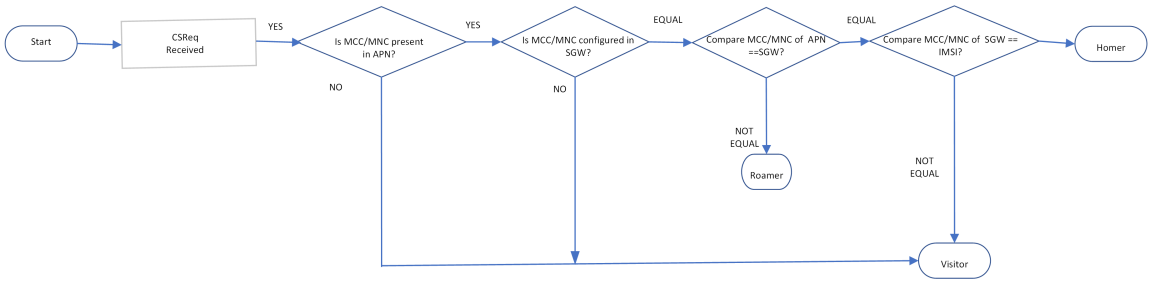

Table 3: PLMN-type Detection Call Flow Description

Step	Description
1	The PLMN-type detection process begins.
2	The Create Session Request is received.
3	The MCC or the MNC presence in the APN is verified: • If YES, the next step is executed. • If NO, the PLMN-type subscriber is concluded as Visitor.

Step	Description
4	The MCC or the MNC presence in the SGW is verified: • If YES, the next step is executed. • If NO, the PLMN-type subscriber is concluded as Visitor.
5	The values of the MCC or the MNC in the APN and the SGW are compared: • If EQUAL, it proceeds to the next step. • If NOT EQUAL, the PLMN-type subscriber is concluded as Roamer.
6	The values of the MCC or the MNC in the SGW and the IMSI are compared: • If EQUAL, the PLMN-type subscriber is concluded as Homer. • If NOT EQUAL, the PLMN-type subscriber is concluded as Visitor.

Configuring the MCC or the MNC in the SGW Service

This section describes how to configure the MCC or the MNC in the SGW service.

Use the following commands to configure the MCC or the MNC in the SGW service.

```
config
   profile sgw sgw_name
      plmn-list
         mcc mcc_value
         mnc mnc_value
         end
```

NOTES:

- **plmn-list**—List of MCC and MNC values.
- **mcc** *mcc_value*—Specify the MCC value. Must be a three-digit number. Example: 123
- **mnc** *mnc_value*—Specify the MNC value. Must be a two or three-digit number. Example: 23 or 456

Configuration Example

The following is an example configuration.

```
config
   profile sgw sgw_1
      plmn-list
         mcc 123
         mnc 456
         end
```

OAM Support

This section describes operations, administration, and maintenance support for this feature.

Bulk Statistics Support

The following statistics are supported for the MCC and MNC Configuration in the SGW Service feature.

Active PDN Counters

```
sgw_pdn_counters{app_name="smf",cluster="cn",data_center="cn",
instance_id="0",pdn_plmn_type="homer",pdn_type="ipv6",rat_type="EUTRAN",
service_name="sgw-service"} 12
```

```
sgw_pdn_counters{app_name="smf",cluster="cn",data_center="cn",
instance_id="0",pdn_plmn_type="roamer",pdn_type="ipv4v6",rat_type="EUTRAN",
service_name="sgw-service"} 3
```

```
sgw_pdn_counters{app_name="smf",cluster="cn",data_center="cn",
instance_id="0",pdn_plmn_type="visitor",pdn_type="ipv4",rat_type="EUTRAN",
service_name="sgw-service"} 2
```

Setup or Released PDN Statistics

```
sgw_pdn_stats{app_name="smf",cluster="cn",data_center="cn",
instance_id="0",pdn_plmn_type="homer",pdn_type="ipv6",rat_type="EUTRAN",
service_name="sgw-service",status="release"} 1
```

```
sgw_pdn_stats{app_name="smf",cluster="cn",data_center="cn",
instance_id="0",pdn_plmn_type="homer",pdn_type="ipv6",rat_type="EUTRAN",
service_name="sgw-service",status="setup"} 13
```

```
sgw_pdn_stats{app_name="smf",cluster="cn",data_center="cn",
instance_id="0",pdn_plmn_type="roamer",pdn_type="ipv4v6"rat_type="EUTRAN",
service_name="sgw-service",status="release"} 1
```

```
sgw_pdn_stats{app_name="smf",cluster="cn",data_center="cn",
instance_id="0",pdn_plmn_type="roamer",pdn_type="ipv4v6",rat_type="EUTRAN",
service_name="sgw-service",status="setup"} 4
```

```
sgw_pdn_stats{app_name="smf",cluster="cn",data_center="cn",
instance_id="0",pdn_plmn_type="visitor",pdn_type="ipv4",rat_type="EUTRAN",
service_name="sgw-service",status="release"} 1
```

```
sgw_pdn_stats{app_name="smf",cluster="cn",data_center="cn",
instance_id="0",pdn_plmn_type="visitor"pdn_type="ipv4",rat_type="EUTRAN",
service_name="sgw-service",status="setup"} 3
```