Static Serving PLMN Configuration

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Feature Description

Overview

The static serving PLMN configuration feature enables subscribers connecting from different operator sub-zones to be grouped and treated as a home user instead of a visited user. These subscribers can then be served by one SaMOG/P-GW for offloading traffic. This feature can be enabled using the `serving-plmn id` command under the Call Control Profile Configuration Mode.

How Static Serving PLMN Works

Architecture

When the serving PLMN ID (MNC/MCC) is configured under the Call Control Profile Configuration Mode (typically with the same serving PLMN ID of the serving P-GW), SaMOG provides higher priority to this configuration. The configured PLMN will be then be sent to P-GW in the Serving-Network IE of the Create Session Request (CSR) message. These subscribers will be treated as home users even if they belong to different operator sub-zones, and can be served by one SaMOG/P-GW.

In Release 21.1 and later, the PLMN ID for UICC and non-UICC devices is selected based on the following order of priority:

- The `serving-plmn id` configuration under the Call Control Profile Configuration Mode.
• The plmn id configuration under the SaMOG Service Configuration Mode.

• The User-Name from the EAP-Identity, Authentication, or Accounting messages if the realm (serving PLMN's realm) part of User-Name is in 3GPP format.

In Release 21.0 and earlier, the PLMN ID for UICC and non-UICC devices is selected based on the following order of priority:

• The User-Name from the EAP-Identity, Authentication, or Accounting messages if the realm (serving PLMN's realm) part of User-Name is in 3GPP format.

• The plmn id configuration under the SaMOG Service Configuration Mode.

Limitations

Architectural Limitations

• As there is no serving-plmn field in a PMIPv6 interface, static serving PLMN is not supported on the PMIPv6-based S2a interface.

• Static serving PLMN is not supported with DHCP trigger-based and Accounting-based session creation features as these features require PMIPv6-based S2a interface.

Configuring Static Serving PLMN

Use the following configuration to configure a static serving node PLMN Identifier (MCC and MNC) for a Call Control Profile:

```
configure
    call-control-profile profile_name
        serving-plmn id mcc mcc_value mnc mnc_value
    end
```

Notes:

• Use the remove serving-plmn id command to remove the static serving node PLMN ID configuration from the Call Control Profile.

• mcc_value must be an integer between 100 and 999.

• mnc_value must be an integer between 0 and 999.
Monitoring and Troubleshooting Static Serving PLMN Configuration

Static Serving PLMN Configuration Show Command(s) and/or Outputs

```
show call-control-profile full name
```

The following fields are available to the output of the `show call-control-profile full name profile_name` command in support of this feature:

```
Serving PLMN
MCC : 777
MNC : 109
```

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serving PLMN</td>
<td></td>
</tr>
<tr>
<td>MCC</td>
<td>MCC value of the call control profile.</td>
</tr>
<tr>
<td>MNC</td>
<td>MNC value of the call control profile.</td>
</tr>
</tbody>
</table>