Enabling S6b for IMS APN

This chapter describes the following topics:

Feature Summary and Revision History

Summary Data

Applicable Product(s) or Functional Area	• GGSN • P-GW • SAEGW
Applicable Platform(s)	All
Feature Default	Disabled - Configuration Required
Related Changes in This Release	Not Applicable
Related Documentation	• *Command Line Interface Reference* • *GGSN Administration Guide* • *P-GW Administration Guide* • *SAEGW Administration Guide*

Revision History

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Important   Revision history details are not provided for features introduced before releases 21.2 and N5.1.

Revision Details	Release
With this feature, S6b authorization is enabled for 3G access at the APN level to allows P-GW to update the new P-GW ID to HSS.	21.6
First introduced.	Pre 21.2

Feature Changes

Currently, P-GW supports enabling S6b authentication for 3G access on GGSN service level configuration.

For LTE or Wi-Fi access, S6b authentication is supported on both P-GW service level and APN level configuration. If the S6b authentication is enabled for particular APN, when the subscriber joined on LTE transfers to Wi-Fi then 3G, UE does re-registration of the IMS session on 3G. Different P-GW is selected. However, SGSN does not update the new P-GW. HSS has the history of the old P-GW. When the subscriber transfers back to LTE and then to Wi-Fi, it hands over to the old P-GW. However, the old P-GW does not have the new IMS session and this result in the handover failure. With this feature, S6b authorization is enabled for 3G access at the APN level to let P-GW update the new P-GW ID to HSS. This addresses the inconsistency. Two new CLI keywords have been added at the APN level to enable S6b authentication for 3G access and GnGp handover.

Previous Behavior: During a call when S6b communication happened, the same connection state was maintained across to-and-fro in 3G to 4G handover, although GGSN service did not have explicit configuration present.

New Behavior: Two new CLI keywords **gn-gp-enabled** and **gn-gp-disabled** have been added to the CLI command **authorize-with-hss** at the APN level. The keyword **gn-gp-enabled** enables the S6b authentication for 3G access during the call connect and gn-gp handover. The keyword **gn-gp-disabled** terminates S6b connection when the subscriber moves to 3G access. This is used to override the legacy handover behavior where the session was continued irrespective of the configuration.

Customer Impact: These new keywords are not configured by default when **authorize-with-hss** or **authorize-with-hss egtp** are configured. You have to explicitly enable this customized behavior by configuring the CLI commands introduced for this feature.

Configuring Commands for Enabling S6b for IMS APN

S6b authentication can be enables at the APN level, two new keywords have been added to the **authorize-with-hss** CLI command.

To enable or disable S6b, execute the following command:

```
configure
  context context_name
    apn apn_name
      authorize-with-hss [ egtp [ gn-gp-enabled ] [ s2b [ gn-gp-enabled
[ report-ipv6-addr ] ] ] [ s5-s8 [ gn-gp-disabled | gn-gp-enabled ] ] [
report-ipv6-addr ] | lma [ s6b-aaa-group aaa-group-name | report-ipv6-addr
] | report-ipv6-addr ]
```

```
                    [ default | no ] authorize-with-hss
                    exit
```

NOTES:

- **gn-gp-disabled:** Disables S6b authorization for 3G initial attach and GNGP handover.

- **gn-gp-enabled:** Enables S6b authorization for 3G initial attach and GNGP handover.

- **s2b:** Enable S6b authorization for egtp-S2b.

- **s5-s8:** Enable S6b authorization for egtp-S5S8.

- **report-ipv6-addr:** Enables IPv6 reporting through AAR toward the S6b interface.

Show Commands and Outputs

This section provides information regarding show commands and their outputs in support of the feature.

show apn name

This CLI command is modified to include the gn-gp enabled or disabled status:

- Authorization with S6b : HSS-EGTP-S5S8 GN-GP-Disabled

- Authorization with S6b : HSS-EGTP-S5S8 GN-GP-Enabled

show config apn intershat

The following new fields are added to the show command to indicate the gn-gp enabled or disabled status:

- authorize-with-hss egtp s5-s8 gn-gp-enabled
- authorize-with-hss egtp s5-s8 gn-gp-disabled