



## Enabling S6b for IMS APN

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## Feature Summary and Revision History

### Summary Data

|  |   |
|--|---|
| Applicable Product(s) or Functional Area | <ul style="list-style-type: none"><li>• GGSN</li><li>• P-GW</li><li>• SAEGW</li></ul>   |
| Applicable Platform(s)                   | All   |
| Feature Default                          | Disabled - Configuration Required   |
| Related Changes in This Release          | Not Applicable  |
| Related Documentation                    | <ul style="list-style-type: none"><li>• <i>Command Line Interface Reference</i></li><li>• <i>GGSN Administration Guide</i></li><li>• <i>P-GW Administration Guide</i></li><li>• <i>SAEGW Administration Guide</i></li></ul> |

### Revision History



#### Important

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

| Revision Details   | Release  |
|--|----------|
| In this release, S2a authorization is enabled to separate the authentication request for LTE and Wi-Fi interfaces using <code>authorize-with-hss eGTP</code> configuration. It enables s6b authentication in both APN and P-GW service for S2a interface only. | 21.21    |
| 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. Following two **authorize-with-hss** CLI keywords are added at the APN level to enable S6b authentication for 3G access and GnGp handover.

- **gn-gp-enabled**: Enables the S6b authentication for 3G access during the call connect and gn-gp handover.
- **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.



### Note

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.

**Enhancement to S6b Authentication:** In StarOS 21.21 and later releases, S2a authorization is enabled to separate the authentication request for LTE and Wi-Fi interfaces using **authorize-with-hss egtp** configuration. It enables s6b authentication in both APN and P-GW service for S2a interface only.

## 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.

## Enabling S6b Authentication for Trusted Wi-Fi

### Enabling S6b Authentication for Trusted Wi-Fi

S6b authentication is enabled for all LTE and Wi-Fi interface using HSS authentication process. To separate this authentication request for LTE and Wi-Fi interfaces a new configuration is introduced. The parameter S2a is added to represent the trusted Wi-Fi interface in the configuration part of **authorize-with-hss egtp** and this enables the S6b authentication for S2A interface only and this is done in both APN and P-GW service configuration.

Use the following S2a configuration command to indicate Trusted Wi-Fi at authorize-with-hss egtp:

```

configure
context context_name
  apn apn_name | pgw-service service_name
    authorize-with-hss [ egtp [s2a [gn-gp-enabled [report-ipv6-addr]
] ] ]
      [ default | no ] authorize-with-hss
    exit

```



**Note** Enabling the S6b authentication is allowed with a combination of S2a and S2b, or S2a and S5-S8, or S2b and S5-S8.

Below are the examples to enable the s6b authentication for S2a interface alone in APN and P-GW Service.

#### Example for APN Service

```

apn intershat
  pdp-type ipv4 ipv6
  bearer-control-mode mixed
  selection-mode subscribed sent-by-ms chosen-by-sgsn

```

```

authorize-with-hss egtp s2a
ims-auth-service ims-ggsn-auth
ip access-group acl4-1 in
ip access-group acl4-1 out
ip context-name egress
ipv6 access-group acl6-1 in
ipv6 access-group acl6-1 out
active-charging rulebase prepaid
exit

```

### Example for P-GW Service

```

pgw-service pgw_service
authorize-with-hss egtp s2a
associate ggsn-service ggsn-service
associate egtp-service egtp_service
associate peer-map map_pgw
egtp create-session-rsp apn-ambr-always-include
exit

```

## 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