



# GTPv2 Message Validation

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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                  | Enabled - Always-on |
| Related Documentation                    | Not Applicable      |

### Revision History

**Table 2: Revision History**

| Revision Details  | Release   |
|-------------------|-----------|
| First introduced. | 2021.01.0 |

## Feature Description

cnSGW-C supports basic GTPv2 message validation of IEs (values, mandatory IE, and service-dependent IE), and sends responses from the SGW-Service/GTPC-EP pod.

# How it Works

This section describes how this feature works.

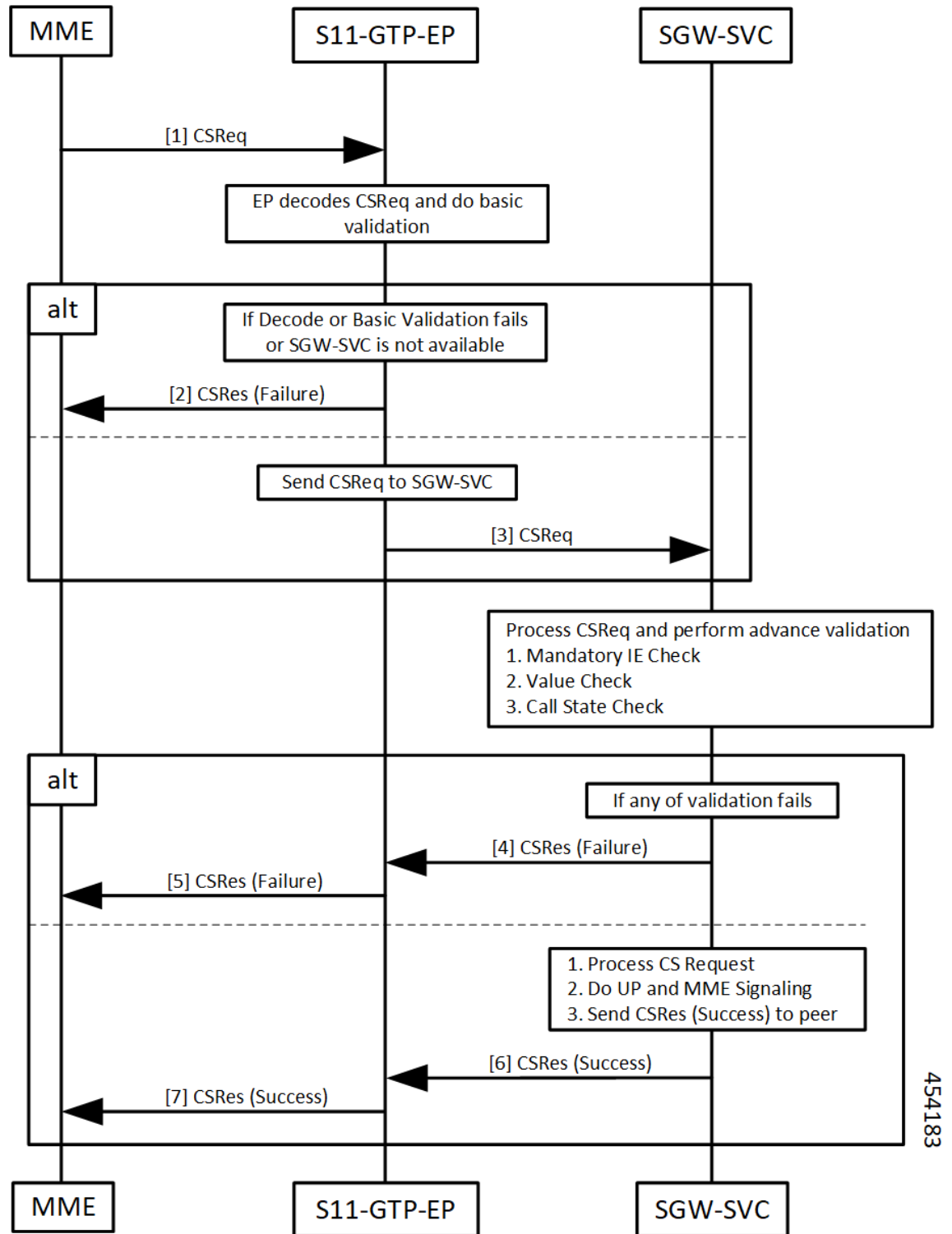
## Call Flows

This section describes the key call flows for this feature.

### Basic and Advance Validation on SGW-Ingress (S11) Call Flow

The following section describes the Basic and Advance Validation on SGW-Ingress (S11) call flow.

Figure 1: Basic and Advance Validation - S11 Call Flow



**Table 3: Basic and Advance Validation - S11 Call Flow Description**

| Step | Description                                                                                                                                                                                                                                                                                                                                                                   |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | The MME sends the Create Session Request to the S11-GTP-EP pod.<br>The S11-GTP-EP pod decodes the Create Session Request and performs basic validation.                                                                                                                                                                                                                       |
| 2    | If decoding or basic validation fails, or if SGW-SVC is not available, the S11-GTP-EP pod sends Create Session Response failure message to the MME.                                                                                                                                                                                                                           |
| 3    | If Create Session Request basic validation is successful, the S11-GTP-EP pod forwards the Create Session Request to the SGW-SVC pod.<br>SGW-SVC processes the Create Session Request and performs the following: <ul style="list-style-type: none"> <li>• Mandatory IE check</li> <li>• Value check</li> <li>• Call State check</li> </ul>                                    |
| 4, 5 | If validation from Step 3 fails: <ul style="list-style-type: none"> <li>• The SGW-SVC sends the Create Session Response failure message to the S11-GTP-EP pod.</li> <li>• The S11-GTP-EP pod forwards the Create Session Response failure message to the MME.</li> </ul>                                                                                                      |
| 6, 7 | If validation from Step 3 is successful, the SGW-SVC performs the following: <ul style="list-style-type: none"> <li>• Processes Create Session Request</li> <li>• Performs UP and MME signaling</li> <li>• Sends Create Session Response success message to the S11-GTP-EP pod</li> </ul> The S11-GTP-EP pod forwards the Create Session Response success message to the MME. |

## Basic and Advance Validation on SGW-Egress (S5) Call Flow

The following section describes the Basic and Advance Validation on SGW-Egress (S5) call flow.

Figure 2: Basic and Advance Validation - S5 Call Flow

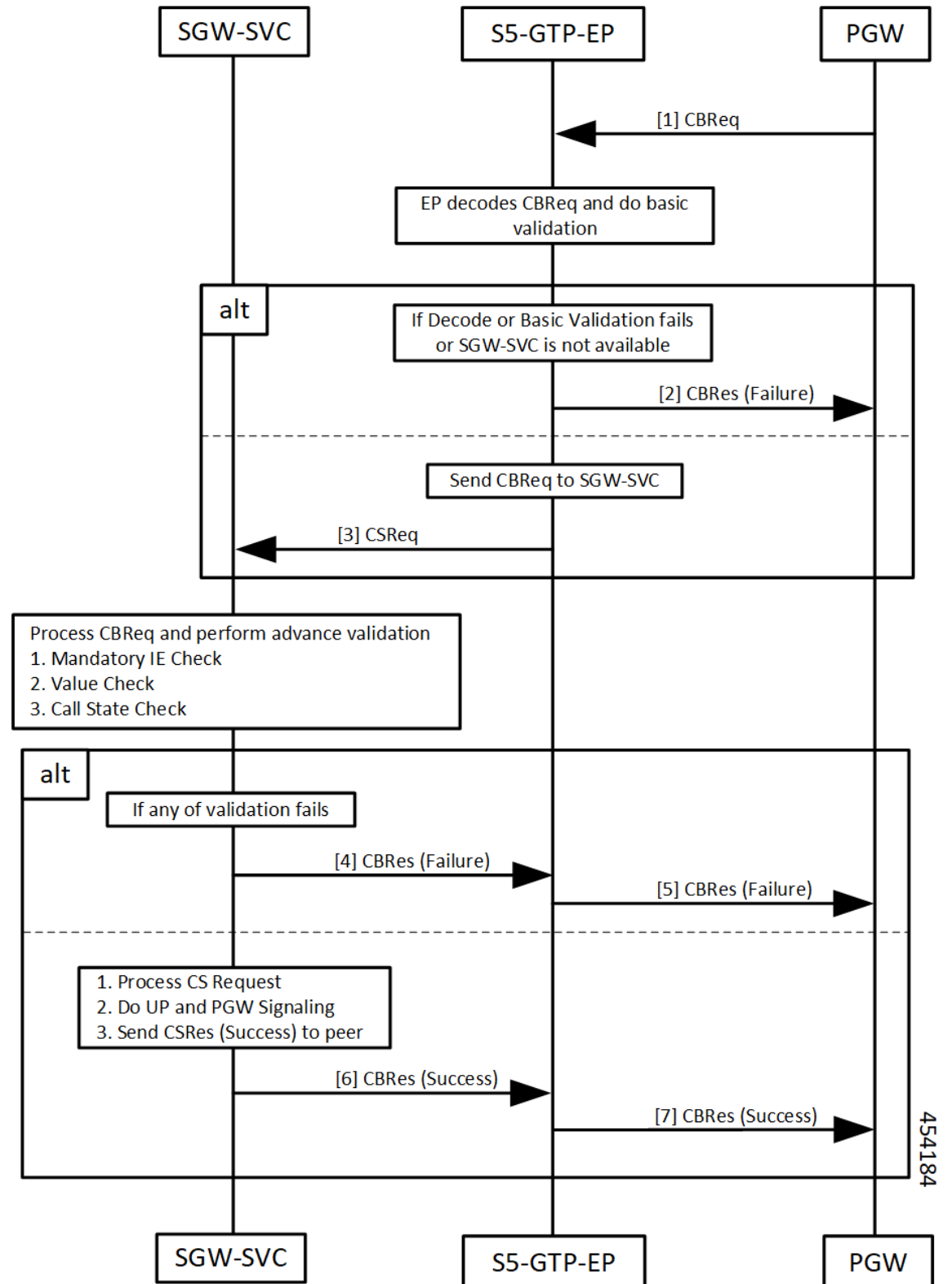


Table 4: Basic and Advance Validation - S5 Call Flow Description

| Step | Description                                                                                                                                                                                                                                                                                                                                                              |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | The PGW sends the Create Bearer Request to the S5-GTPC-EP pod.<br>The S5-GTPC-EP pod decodes the Create Bearer Request and performs basic validation.                                                                                                                                                                                                                    |
| 2    | If decoding or basic validation fails, or if SGW-SVC is not available, the S5-GTP-EP pod sends the Create Bearer Response failure message to the PGW.                                                                                                                                                                                                                    |
| 3    | If Create Bearer Request basic validation is successful, the S5-GTP-EP pod forwards the Create Bearer Request to the SGW-SVC pod.<br>SGW-SVC processes the Create Bearer Request and performs the following: <ul style="list-style-type: none"> <li>• Mandatory IE check</li> <li>• Value check</li> <li>• Call State check</li> </ul>                                   |
| 4, 5 | If validation from Step 3 fails: <ul style="list-style-type: none"> <li>• The SGW-SVC sends the Create Bearer Response failure message to the S5-GTP-EP pod.</li> <li>• The S5-GTP-EP pod forwards the Create Bearer Response failure message to the PGW.</li> </ul>                                                                                                     |
| 6, 7 | If validation from Step 3 is successful, the SGW-SVC performs the following: <ul style="list-style-type: none"> <li>• Processes Create Bearer Request</li> <li>• Performs UP and PGW signaling</li> <li>• Sends Create Bearer Response success message to the S5-GTP-EP pod</li> </ul> The S5-GTP-EP pod forwards the Create Bearer Response success message to the PGW. |