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

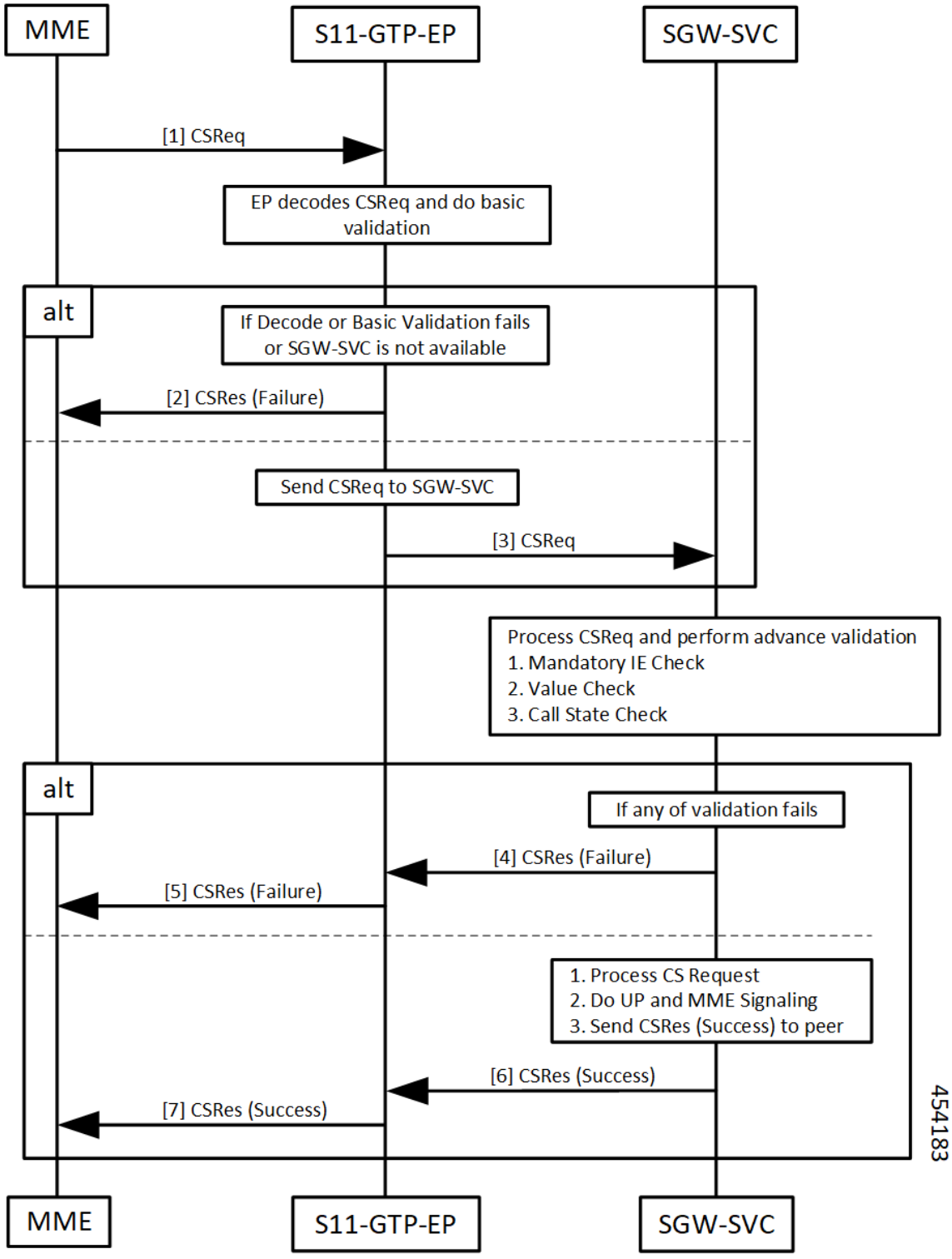

Table 3: Basic and Advance Validation - S11 Call Flow Description

Step	Description
1	The MME sends the Create Session Request to the S11-GTP-EP pod. 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. SGW-SVC processes the Create Session Request and performs the following: • Mandatory IE check • Value check • Call State check
4, 5	If validation from Step 3 fails: • The SGW-SVC sends the Create Session Response failure message to the S11-GTP-EP pod. • The S11-GTP-EP pod forwards the Create Session Response failure message to the MME.
6, 7	If validation from Step 3 is successful, the SGW-SVC performs the following: • Processes Create Session Request • Performs UP and MME signaling • Sends Create Session Response success message to the S11-GTP-EP pod 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

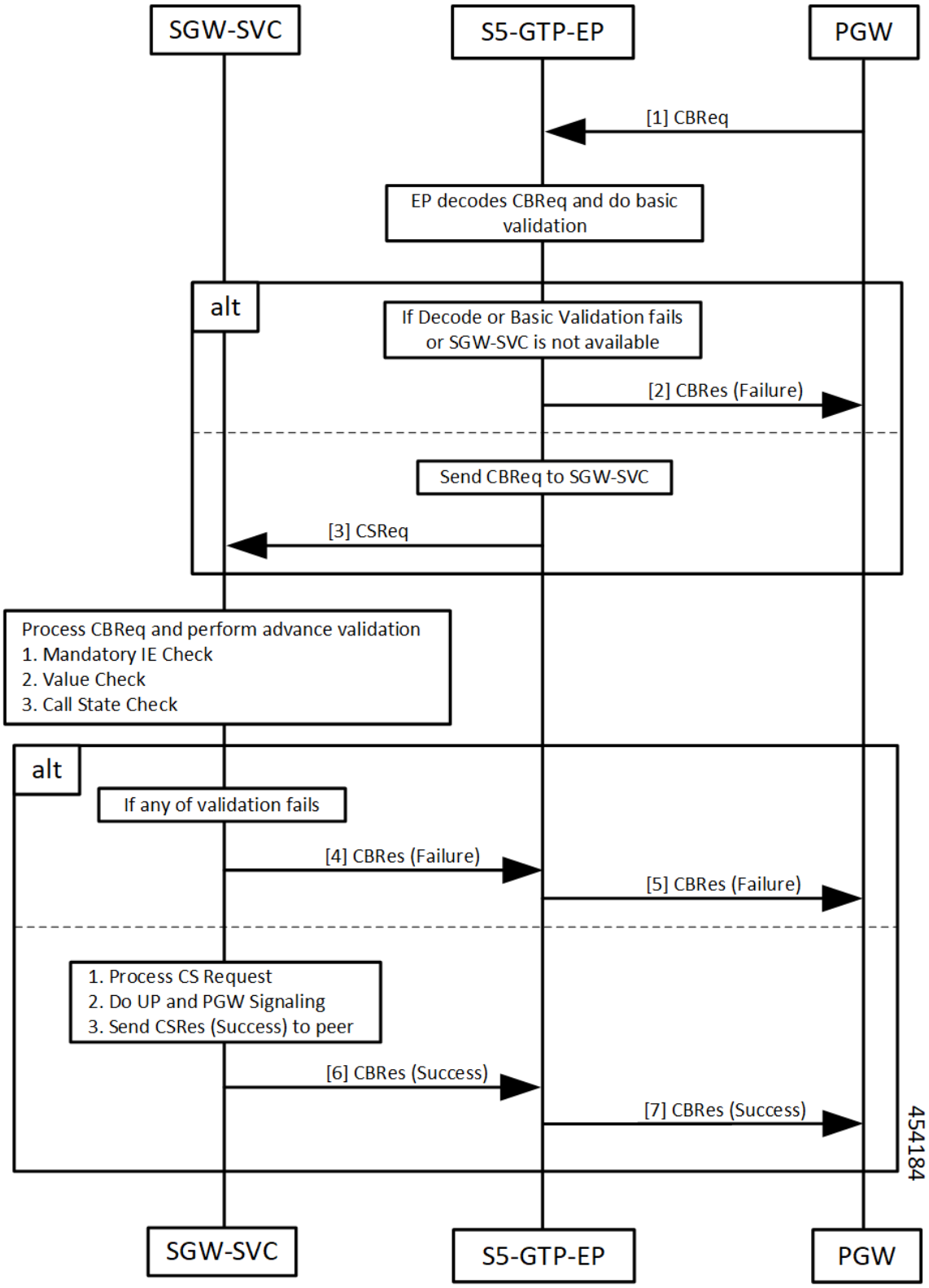

Table 4: Basic and Advance Validation - S5 Call Flow Description

Step	Description
1	The PGW sends the Create Bearer Request to the S5-GTPC-EP pod. 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. SGW-SVC processes the Create Bearer Request and performs the following: • Mandatory IE check • Value check • Call State check
4, 5	If validation from Step 3 fails: • The SGW-SVC sends the Create Bearer Response failure message to the S5-GTP-EP pod. • The S5-GTP-EP pod forwards the Create Bearer Response failure message to the PGW.
6, 7	If validation from Step 3 is successful, the SGW-SVC performs the following: • Processes Create Bearer Request • Performs UP and PGW signaling • Sends Create Bearer Response success message to the S5-GTP-EP pod The S5-GTP-EP pod forwards the Create Bearer Response success message to the PGW.