



# Access Bearer Release Support

- [Feature Summary and Revision History, on page 1](#)
- [Feature Description, on page 1](#)
- [How it Works, on page 2](#)

## 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.	2020.03.0

## Feature Description

cnSGW-C supports the handling of the Release Access Bearer (RAB) request procedure. It's a UE-level message. In multiple PDN scenarios, the MME sends only one RAB message, which applies to all the PDNs. cnSGW-C brings all the bearers of all the PDNs to the IDLE state.

# How it Works

This section describes how this feature works.

cnSGW-C sends the Sx Modification Request message per PDN to the corresponding User Plane. After receiving the Sx Modification response message from all user planes (for all PDNs), cnSGW-C sends the response message to MME.

cnSGW-C updates the state as IDLE for all the bearers in CDL.

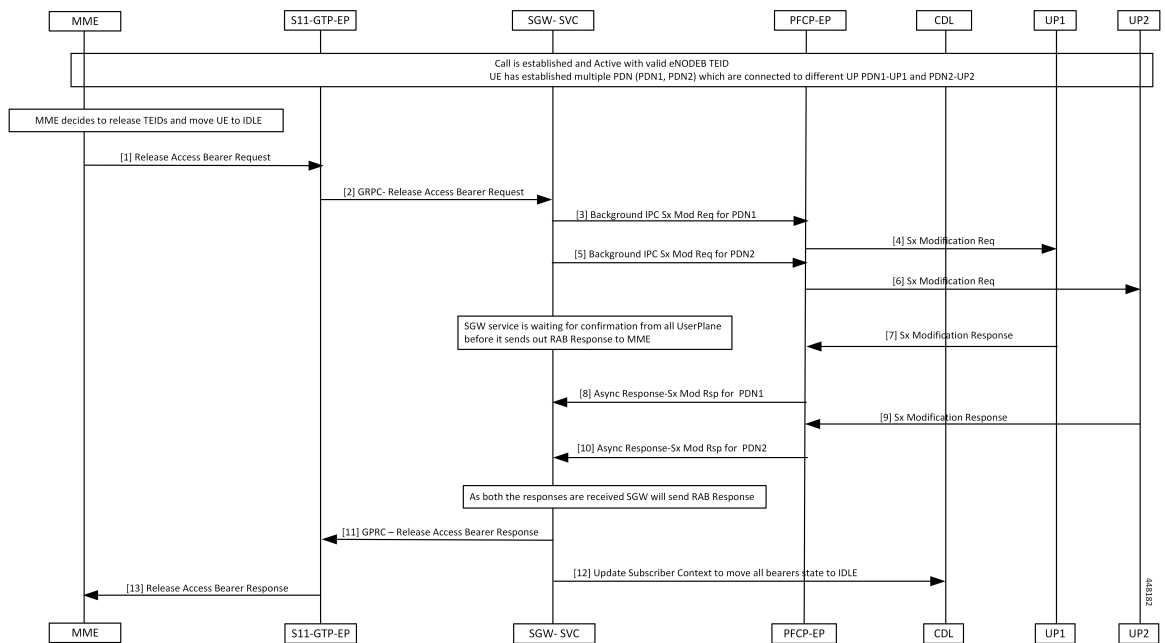
## Call Flows

This section describes the key call flow for the Access Bearer Release Support feature.

### Release Access Bearer (Active to IDLE Transaction) Call Flow

This section describes the Release Access Bearer call flow.

**Figure 1: Release Access Bearer (Active to IDLE Transaction) Call Flow**



**Table 3: Release Access Bearer (Active to IDLE Transaction) Call Flow Description**

Step	Description
1	MME sends Release Access Bearer (RAB) request to S11-GTP-EP to release all S1-U bearers for the UE.

Step	Description
2	<p>S11-GTP EP decodes the received UDP message and converts it into gRPC. The converted gRPC message then sent to the SGW-Service pod, using the TEID value, which can handle this UE session.</p> <p>SGW-Service pod performs the following activities:</p> <ul style="list-style-type: none"> <li>• Finds out Subscriber Context using local ingress TEID</li> <li>• Validates the RAB request content</li> <li>• Moves UE to the IDLE state</li> <li>• Builds the Sx Modify request message with the downlink apply action as DROP, to drop all downlink packets at SGW-U</li> </ul>
3	SGW-Service pod sends the Sx Mod request message using the background IPC async call for PDN1 to PFCP-EP.
4	PFCP-EP forwards the Sx Modify Request (PDN1) message to UPF1 through the UDP proxy. UPF1 processes the Sx Modify Request (PDN1) message.
5	<p>SGW-Service pod sends the Sx Modify Request message using the background IPC async call for PDN2.</p> <p>PFCP-EP forwards the Sx Modify Request (PDN2) message to UPF2 through the UDP proxy.</p>
6	UPF2 processes the Sx Modify Request (PDN2) message.
7	UPF1 sends the Sx Modify response (PDN1) message to PFCP-EP.
8	<p>PFCP-EP sends the Async Sx Modify response message to cnSGW-C service for PDN1.</p> <p>SGW-Service pod waits for the PDN2 Sx Modify response message.</p>
9	UPF2 sends the Sx Modify response (PDN2) message to PFCP-EP.
10	PFCP-EP sends the Async Sx Modify response message to cnSGW-C service for PDN2.
11	<p>The SGW-Service pod sends the following, after receiving the PDN (PDN1, PDN2) responses:</p> <ul style="list-style-type: none"> <li>• RAB response message to S11-GTP-EP using the gRPC protocol.</li> <li>• Updates to the CDL module</li> </ul>
12	<p>SGW-Service pod sends Update Subscriber Context state to CDL, which moves all the bearers to the IDLE state.</p> <p>CDL module updates the information in the database.</p>
13	<p>S11-GTP-EP forwards the RAB response message to MME.</p> <p>MME process the RAB response message.</p>

