Update Bearer Request and Response

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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.	2020.04

Feature Description

In this release, cnSGW-C supports only relay of update bearer request (which can contain TFT change, QCI change or APB – AMBR change) from PGW towards MME. When MME sends response to cnSGW-C, it relays update bearer response towards PGW.

This release doesnt support signaling towards User Plane.

Standards Compliance

The Update Bearer Request and Response Support feature complies with the following standards:

- *3GPP TS 23.401*
- *3GPP TS 23.214*
- *3GPP TS 29.274*
- *3GPP TS 29.244*

How it Works

This section describes how this feature works.

Call Flows

This section describes the key call flow of Update Bearer Request and Response feature.

Figure 1: Bearer Request/Response without UP Signaling Call Flow

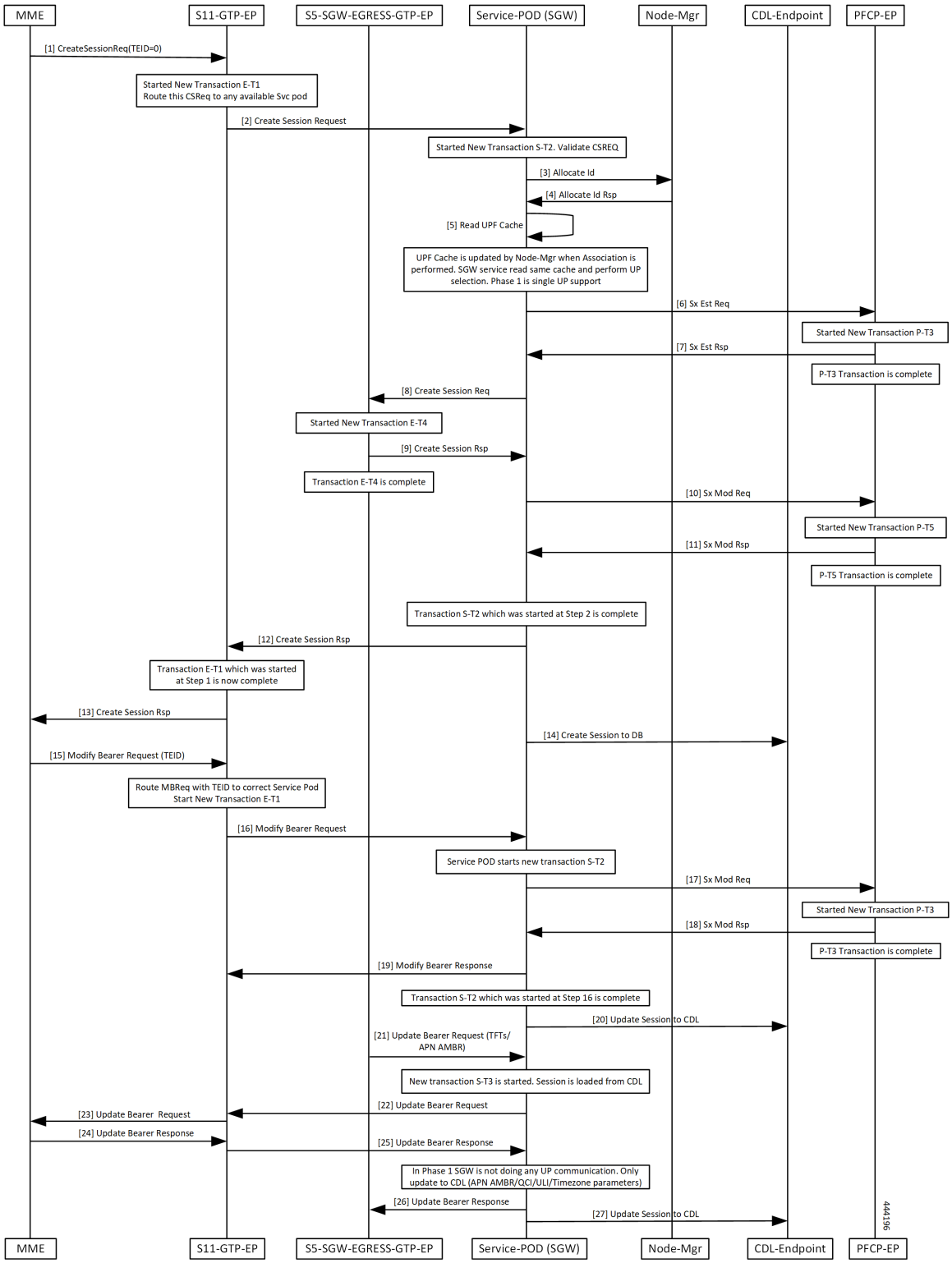

Table 3: Bearer Request/Response without UP Signaling Call Flow Description

Step	Description
1	MME sends Create Session Req to S11-GTP-EP with TEID value as zero.
2	Transaction E-T1 started. S11-GTP-EP sends Create Session Req to SGW-Service POD.
3, 4	Transaction S-T2 started. SGW-Service POD sends Allocate ID to Node-Mgr and receives response from it.
5, 6, 7	SGW-Service POD reads Node-Mgr updated UPF cache and performs UPF selection. SGW-Service POD sends Sx Est Req to PFCP-EP. Transaction P-T3 started. SGW-Service POD receives Sx Est Rsp from PFCP-EP.
8, 9	Transaction P-T3 completed. SGW-Service POD sends Create Session Req to S5-SGW-EGRESS-GTP-EP. Transaction E-T4 started. SGW-Service POD receives Create Session Rsp from S5-SGW-EGRESS-GTP-EP.
10, 11, 12	Transaction E-T4 completed. SGW-Service POD sends Sx Mod Req to PFCP-EP. Transaction P-T5 started. SGW-Service POD receives Sx Mod Rsp from PFCP-EP.
12	Transaction S-T2 ans P-T5 completed. SGW-Service POD sends Create Session Rsp to S11-GTP-EP.
13	Transaction E-T1 completed. S11-GTP-EP sends Create Session Rsp to MME.
14	SGW-Service POD sends Create Session to DB.
15	MME sends Modify Bearer Req with TEID value to S11-GTP-EP.
16	S11-GTP-EP routes MBReq with TEID to the exact SGW-Service POD. S11-GTP-EP sends Modify Bearer Request SGW-Service POD.
17	Transaction S-T2 completed. SGW-Service POD sends Sx Mod Req to PFCP-EP.
18	Transaction P-T3 started. SGW-Service POD receives Sx Mod Rsp from PFCP-EP.

Step	Description
19	Transaction P-T3 completed. SGW-Service POD sends Sx Mod Rsp to S11-GTP-EP.
20	Transaction S-T2 completed. SGW-Service POD sends Update Session to CDL.
21	S5-SGW-EGRESS-GTP-EP sends Update Bearer request with TFTs and APN AMBR to SGW-Service POD.
22, 23	Transaction S-T3 completed. SGW-Service POD sends Update Bearer Request to S11-GTP-EP. S11-GTP-EP forwards Update Bearer Request to MME.
24, 25	MME sends Update Bearer Rsp to S11-GTP-EP. S11-GTP-EP forwards Update Bearer Rsp to SGW-Service POD.
26	SGW-Service POD forwards Update Bearer Rsp to S5-SGW-EGRESS-GTP-EP.
27	SGW-Service POD sends Update Session to CDL.