**3GPP TSG-CT WG1 Meeting #134-eC1-22xxxx**

**E-Meeting, 17th – 25th February 2022**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **24.301** | **CR** | 3712 | **rev** | **1** | **Current version:** | **17.5.0** |  |
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| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network | **x** |

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| ***Title:*** | Clarification for EPS bearer deactivation due to the failure or revocation of UUAA | | | | | | | | | |
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| ***Source to WG:*** | Qualcomm Incorporated, Huawei, HiSilicon | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | ID\_UAS | | | | |  | ***Date:*** | | | 2022-02-10 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) ... Rel-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
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| ***Reason for change:*** | | Following EN remains in the spec:  Editor's note: (WI:ID\_UAS, CR#3557) it is FFS whether the UE can be informed about failed UUAA procedure using EPS bearer context deactivation procedure.  When UUAA is failed, there are two cases when it is informed at the PDN connectivity reject, or when it is infromed after the PDN connectivity procedure with the control of uplink data allowed/not-allowed. In addition, if UUAA is revoked by the USS, the network needs to inform the UE of the revocation of UUAA. ‘UAS service not allowed’ indication in the ePCO has been defined for this case. Hence, EPS bearer context deactivation procedure can be used for informing ‘UAS service not allowed’ due to UUAA failure or revocation.  CT4 has decided to use GTP-C cause reject indication #92 "User authentication failed" from the SGW to the MME/S4-SGSN over S11/S4 and the MME could map it to NAS ESM cause #29 "User authentication failed" and send to the UE based on the mapping Table C.1 in TS 29.274. Therefore, ESM cause #29 can be used for EPS bearer deactivation.  As there is no additional protocol impact at the MME, adding a NOTE is enough. | | | | | | | | |
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| ***Summary of change:*** | | Remove EN for informing failed UUAA procedure using EPS bearer context deactivation procedure  Clarify EPS bearer context deactivation procedure for UUAA failure or revocation cases. | | | | | | | | |
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| ***Consequences if not approved:*** | | UUAA failure or UUAA revocation cannot trigger EPS bearer context deactivation. | | | | | | | | |
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| ***Clauses affected:*** | | 6.4.4.1, 6.4.4.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | In rev1, style is corrected | | | | | | | | |

\*\*\* First change \*\*\*

6.4.4.1 General

The purpose of the EPS bearer context deactivation procedure is to deactivate an EPS bearer context or disconnect from a PDN by deactivating all EPS bearer contexts to the PDN. The EPS bearer context deactivation procedure is initiated by the network, and it may be triggered by the UE by means of the UE requested bearer resource modification procedure or UE requested PDN disconnect procedure.

In the case of EPS bearer context deactivation with reactivation requested for a PDN connection, if no NAS signalling connection exists, the MME follows the procedures for re-establishing the NAS signalling connection and deactivating the EPS bearer contexts to the PDN with reactivation requested, as specified in 3GPP TS 23.401 [10] clauses 5.4.4.1 and 5.10.3 and 3GPP TS 23.380 [33] clause 5.4.2.1.

If a UE is receiving emergency bearer services from a CSG cell, and the CSG subscription expires or is removed, the MME shall deactivate all non-emergency EPS bearers if any. The MME shall not deactivate the emergency EPS bearers.

If a detach is requested by the HSS for a UE that has bearers for emergency services, the MME shall send a DEACTIVATE EPS BEARER CONTEXT REQUEST message to the UE for all bearers that are not allocated for emergency services.

\*\*\* Next change \*\*\*

6.4.4.2 EPS bearer context deactivation initiated by the network

If a NAS signalling connection exists when the MME initiates the EPS bearer context deactivation procedure, the MME shall initiate the EPS bearer context deactivation procedure by sending a DEACTIVATE EPS BEARER CONTEXT REQUEST message to the UE, start the timer T3495, and enter the state BEARER CONTEXT INACTIVE PENDING (see example in figure 6.4.4.2.1). The DEACTIVATE EPS BEARER CONTEXT REQUEST message contains an ESM cause typically indicating one of the following:

#8: operator determined barring;

#26: insufficient resources;

#29: user authentication or authorization failed;

#36: regular deactivation;

#38: network failure;

#39: reactivation requested;

#112: APN restriction value incompatible with active EPS bearer context; or

#113: Multiple accesses to a PDN connection not allowed.

If the deactivation is triggered by a UE initiated bearer resource modification procedure or UE requested PDN disconnect procedure, the DEACTIVATE EPS BEARER CONTEXT REQUEST message shall contain the procedure transaction identity (PTI) value received by the MME in the BEARER RESOURCE MODIFICATION REQUEST or PDN DISCONNECT REQUEST respectively.

When the MME wants to deactivate all EPS bearer contexts of a PDN connection and thus disconnect the UE from the PDN, the MME shall include the EPS bearer identity of the default bearer associated to the PDN in the DEACTIVATE EPS BEARER CONTEXT REQUEST message. In this case, the MME shall not include the WLAN offload indication in the DEACTIVATE EPS BEARER CONTEXT REQUEST message, and if the UE receives the WLAN offload indication, the UE shall ignore the indication.

NOTE 1: If the DEACTIVATE EPS BEARER CONTEXT REQUEST message contains the UAS services not allowed indication in the extended protocol configuration options IE, then the ESM cause value #29 "user authentication or authorization failed" is included in the DEACTIVATE EPS BEARER CONTEXT REQUEST message.

If no NAS signalling connection exists when the MME initiates the EPS bearer context deactivation, the ESM entity in the MME shall locally deactivate the EPS bearer context towards the UE without any peer-to-peer ESM signalling between the MME and the UE.

NOTE 2: The EPS bearer context state(s) can be synchronized between the UE and the MME at the next EMM-IDLE to EMM-CONNECTED transition, e.g. during a service request or tracking area updating procedure.

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**Figure 6.4.4.2.1: EPS bearer context deactivation procedure**

\*\*\*End of changes\*\*\*