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

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

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **24.501** | **CR** | **4035** | **rev** | **1** | **Current version:** | **17.5.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network |  |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | UE locally leaves the MBS sessions locally when the PDU session is released locally | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | ZTE, Nokia, Nokia Shanghai Bell | | | | | | | | | |
| ***Source to TSG:*** | CT1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5MBS | | | | |  | ***Date:*** | | | 2022-02-08 |
|  |  | | | |  | |  | | |  |
| ***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)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | As agreed in C1-220780 in CT1  “*If there is one or more MBS multicast session associated with a PDU session, upon receipt of the PDU SESSION RELEASE COMMAND message for that PDU session, the UE shall locally leave the associated MBS multicast sessions.*”  During the UE-requested PDU session release procedure, there are some normal and abnormal cases of PDU sesssion released locally. Then the UE shall locally leave the associated MBS multicast sessions. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | If there is one or more MBS multicast sessions associated with the locally released PDU session, the UE shall locally leave the associated MBS multicast sessions. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Associated MBS sessions may be kept on the UE side at PDU session release wich results in misalignment between network and UE. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.4.3.4, 6.5.3.5 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

\* \* \* First Change \* \* \* \*

#### 6.4.3.4 UE-requested PDU session release procedure not accepted by the network

Upon receipt of a PDU SESSION RELEASE REQUEST message, if the SMF does not accept the request to release the PDU session, the SMF shall create a PDU SESSION RELEASE REJECT message.

The SMF shall set the 5GSM cause IE of the PDU SESSION RELEASE REJECT message to indicate the reason for rejecting the PDU session release.

The 5GSM cause IE typically indicates one of the following SM cause values:

#35 PTI already in use; or

#43 Invalid PDU session identity; or

#95 – 111: protocol errors.

The SMF shall send the PDU SESSION RELEASE REJECT message.

Upon receipt of a PDU SESSION RELEASE REJECT message and a PDU session ID, using the NAS transport procedure as specified in subclause 5.4.5, the UE shall stop timer T3582, release the allocated PTI value and locally release the PDU session. If there is one or more MBS multicast sessions associated with the PDU session, the UE shall locally leave the associated MBS multicast sessions.

\* \* \* Next Change \* \* \* \*

#### 6.4.3.5 Abnormal cases in the UE

The following abnormal cases can be identified:

a) Expiry of timer T3582.

The UE shall, on the first expiry of the timer T3582, retransmit the PDU SESSION RELEASE REQUEST message and the PDU session information which was transported together with the initial transmission of the PDU SESSION RELEASE REQUEST message and shall reset and start timer T3582. This retransmission is repeated four times, i.e. on the fifth expiry of timer T3582, the UE shall abort the procedure, release the allocated PTI, perform a local release of the PDU session, and perform the registration procedure for mobility and periodic registration update by sending a REGISTRATION REQUEST message including the PDU session status IE over each access that user plane resources have been established if the PDU session is an MA PDU session, or over the access the PDU session is associated with if the PDU session is a single access PDU session. If there is one or more MBS multicast sessions associated with the PDU session, the UE shall locally leave the associated MBS multicast sessions.

b) Collision of UE-requested PDU session release procedure and network-requested PDU session modification procedure.

When the UE receives a PDU SESSION MODIFICATION COMMAND message during the UE-requested PDU session release procedure, and the PDU session indicated in PDU SESSION MODIFICATION COMMAND message is the PDU session that the UE had requested to release, the UE shall ignore the PDU SESSION MODIFICATION COMMAND message and proceed with the PDU session release procedure.

c) Collision of UE-requested PDU session release procedure and network-requested PDU session release procedure.

When the UE receives a PDU SESSION RELEASE COMMAND message with the PTI IE set to "No procedure transaction identity assigned" during the UE-requested PDU session release procedure, the PDU session indicated in the PDU SESSION RELEASE COMMAND message is the same as the PDU session that the UE requests to release:

- if the Access type IE is included in the PDU SESSION RELEASE COMMAND message and the PDU session is an MA PDU session and having user-plane resources established on the access different from the access indicated in the Access type IE in the PDU SESSION RELEASE COMMAND message, the UE shall proceed both the UE-requested PDU session release procedure and network-requested PDU session release procedure; or

- otherwise, the UE shall abort the UE-requested PDU session release procedure and shall stop the timer T3582 and proceed with the network-requested PDU session release procedure.

d) Receipt of an indication that the 5GSM message was not forwarded due to routing failure

Upon receiving an indication that the 5GSM message was not forwarded due to routing failure along with a PDU SESSION RELEASE REQUEST message with the PDU session ID IE set to the same value as the PDU session ID that was sent by the UE, the UE shall stop timer T3582, abort the procedure, release the allocated PTI, perform a local release of the PDU session, and perform the registration procedure for mobility and periodic registration update by sending a REGISTRATION REQUEST message including the PDU session status IE over each access that user plane resources have been established if the PDU session is an MA PDU session, or over the access the PDU session is associated with if the PDU session is a single access PDU session. If there is one or more MBS multicast sessions associated with the released PDU session, the UE shall locally leave the associated MBS multicast sessions.

e) PDU session release signalling restricted due to service area restriction

The UE may delay the release of the PDU session until the UE is not restricted by service area restrictions, or it may release the allocated PTI, perform a local release of the PDU session, and include the PDU session status IE over each access that user plane resources have been established if the PDU session is an MA PDU session, or over the access the PDU session is associated with if the PDU session is a single access PDU when performing the next registration procedure.

f) Collision of UE-requested PDU session release procedure and N1 NAS signalling connection release

The UE may immediately retransmit the PDU SESSION RELEASE REQUEST message and stop, reset and restart timer T3582, if the following conditions apply:

1) The original UE-requested PDU session release procedure was initiated over an existing N1 NAS signalling connection;

2) the previous transmission of the PDU SESSION RELEASE REQUEST message was not initiated due to timer T3582 expiry; and

3) no 5GSM message related to the PDU session (e.g. PDU SESSION RELEASE REJECT message) or indication that the 5GSM message was not forwarded (see item d) was received after the PDU SESSION RELEASE REQUEST message was transmitted.

\* \* \* End of Changes \* \* \* \*