**­­3GPP TSG-CT WG1 Meeting #131-eC1-214771**

**E-meeting, 19-27 August 2021**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **24.301** | **CR** | **3544** | **rev** | **1** | **Current version:** | **17.3.0** |  |
|  | | | | | | | | |
| *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:*** | PDN connection handling with intersystem changes | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Vodafone | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GProtoc17 | | | | |  | ***Date:*** | | | 2021-07-28 |
|  |  | | | |  | |  | | |  |
| ***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:*** | | The approved CR 2970 of TS23.501 has the following stage 2 requirement:  *As a UE option, to support IP address preservation at mobility from EPC to 5GS for PDN connections without 5GS related parameters, a 5GS capable UE may:*  *- Following mobility from GERAN/UTRAN to EPS, release those PDN connection(s) and re-establish them as specified in clause 4.11.1.5.4.1 of TS 23.502 [3] so that they support interworking to 5GS.*  Stage 3 specification needs to be updated accordingly. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | UE may first release the PDN connection(s) not containing the mapped PDU session context and then re-establish the PDN connections(s). | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Service continuity cannot be attained because of intersystem changes between 5G and 4G and 2/3G. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.5.0 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 \*\*\*\*\*

### 6.5.0 General

The UE's maximum number of active EPS bearer contexts in a PLMN is determined by whichever is the lowest of the maximum number of EPS bearer identities allowed by the protocol (as specified in 3GPP TS 24.007 [12] clause 11.2.3.1.5), the PLMN's maximum number of EPS bearer contexts in S1 mode and the UE's implementation-specific maximum number of EPS bearer contexts.

NOTE 1: Clauses 6.5.1.4 and 6.5.3.4 specify how the UE determines the PLMN's maximum number of EPS bearer contexts in S1 mode.

In earlier versions of the protocol, the maximum number of simultaneously active EPS bearer contexts was limited by lower layer protocols to 8.

In the present version of the protocol, the UE and the network may support a maximum number of 15 EPS bearer contexts.

A UE supporting signalling for a maximum number of 15 EPS bearer contexts shall support the extended range or EPS bearer identities from 0 to 15 (as specified in 3GPP TS 24.007 [12] clause 11.2.3.1.5). The UE indicates support of signalling for a maximum number of 15 EPS bearer contexts by setting the 15 bearers bit in the UE Network Capability IE.

A network supporting signalling for a maximum number of 15 EPS bearer contexts shall support the extended range or EPS bearer identities from 0 to 15 (as specified in 3GPP TS 24.007 [12] clause 11.2.3.1.5). The network indicates support of signalling for a maximum number of 15 EPS bearer contexts by setting the 15 bearers bit in the EPS network feature support IE.

NOTE 2: A UE and a network not supporting signalling for a maximum number of 15 EPS bearer contexts will treat the EPS bearer identity values 1 to 4 as 'reserved' values.

For a UE in NB-S1 mode, the UE's implementation-specific maximum number of active user plane radio bearers is 2 (as defined in 3GPP TS 36.300 [20]) when the UE sets the Multiple DRB support bit to "Multiple DRB supported" during attach or tracking area updating procedures, and 1 otherwise.

Upon an inter-system change from N1 mode to NB-S1 mode in EMM-IDLE mode for the UE operating in single-registration mode, if:

a) the number of active default EPS bearer contexts in the UE is larger than the UE's implementation-specific maximum number of active user plane radio bearers; and

b) the UE is using user plane CIoT EPS optimization;

the UE shall locally deactivate at least one default EPS bearer context such that the total number of active default EPS bearer contexts that remained does not exceed the UE's implementation-specific maximum number of active user plane radio bearers. In this case, choosing which EPS bearer context to deactivate is implementation specific. The UE shall then include the EPS bearer context status IE in the TRACKING AREA UPDATE REQUEST message.

Upon the inter-system change from A/Gb mode or Iu mode to S1 mode, for any PDN connection that has been transferred, if the PDN connection is not associated with a PDU session ID and the UE supporting N1 mode decides to enable the transfer of the PDN connection from S1 mode to N1 mode, the UE may first initiate the UE requested PDN disconnection procedure and then the UE requested PDN connectivity procedure for such PDN connection(s).