**3GPP TSG-CT WG4 Meeting #99eC4-204xxx**

**E-Meeting, 18th – 28th August 2020 *Revision of C4-204165***

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **29.281** | **CR** | **0110** | **rev** | **1** | **Current version:** | **16.0.0** |  |
|  |
| *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)*.* |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

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| ***Title:***  | End marker in EPS and 5GS |
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| ***Source to WG:*** | Huawei |
| ***Source to TSG:*** | CT4 |
|  |  |
| ***Work item code:*** | TEI16 |  | ***Date:*** | 2020-07-20 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-16 |
|  | *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 canbe 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-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
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| ***Reason for change:*** | End marker message is used in EPS and 5GS networks, current definition mixes the requirements in EPS and 5GS, which makes the clause messy.It is proposed to restructure the clause to separate the end marker message used in EPS and 5GS in different subclauses. |
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| ***Summary of change:*** | Restructure the clause about the End Marker message. |
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| ***Consequences if not approved:*** | Difficult to understand the End marker message used in EPS and 5GS. |
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| ***Clauses affected:*** | 7.3.2 |
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|  | **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 ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

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

### 7.3.2 End Marker

#### 7.3.2.1 General

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#### 7.3.2.2 End Marker in EPS

The End Marker message(s) shall be sent after sending the last G-PDU that needs to be sent on a GTP-U tunnel as specified in 3GPP TS 23.401 [5] or after receiving an End Marker Indication as specified in clause 5.7.1 of 3GPP TS 23.402 [23].

The End Marker message(s) shall be sent for each GTP-U tunnel, except for the case of an E-UTRAN Initiated E-RAB modification procedure. During an E-UTRAN Initiated E-RAB modification procedure, the SGW shall send End marker message(s) to the eNodeB on the old S1-U tunnel for the tunnel(s) that are switched, i.e. if the S1 eNodeB F-TEID of the GTP-U tunnel provided by the MME in a Modify Bearer Request or Modify Access Bearer Request is not the same as the one previously stored in the SGW. Each GTP-U tunnel is identified with a respective TEID value in the GTP-U header.

 An MME may receive End Marker packets over an S11-U tunnel during the following procedures:

- Inter-MME TAU procedure;

- Establishment of S1-U bearer during Data Transport in Control Plane CIoT EPS optimisation.

The MME shall discard the End Marker packets. The MME may also initiate the release of the corresponding S11-U resources; however the release of the S11-U resources is implementation dependent.

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#### 7.3.2.3 End Marker in 5GS

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