**3GPP TSG-SA5 Meeting #135e *S5-211179***

**electronic meeting, online, 25 January - 3 February 2021** Revision of S5-20xxxx

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| *CR-Form-v11.4* | | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | | |
|  | | | | | | | | | |
|  | **32.255** | **CR** | **0274** | **rev** | **-** | **Current version:** | **17.0.0** |  |
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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 |  | Radio Access Network |  | Core Network | **X** |

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| ***Title:*** | Add the PDU Modification and Release Message flow | | | | | | | | | |
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| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5G\_URLLC | | | | |  | ***Date:*** | | | 2021-01-15 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***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-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:*** | | The general charging message flow for the PDU session modification and PDU session release are absent in the TS 32.255. | | | | | | | | |
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| ***Summary of change:*** | | Add the charging message flow for the PDU session modification and PDU session release. | | | | | | | | |
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| ***Consequences if not approved:*** | | The charging message flow for PDU session modification and PDU session release are absent. | | | | | | | | |
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| ***Clauses affected:*** | | 5.2.2.2.2,5.2.2.2.X (New), 5.2.2.2.Y (New) | | | | | | | | |
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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 32.255 CR 0275 | | |
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| ***Other comments:*** | | Implement the 5.2.2.2.X after 5.2.2.2.2, 5.2.2.2.Y after 5.2.2.2.X.  The CR 0275 refers to the figure 5.2.2.2.X and 5.2.2.2.y | | | | | | | | |

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| **First change** |

##### 5.2.2.2.2 PDU session establishment

The following figure 5.2.2.2.2-1 describes a PDU session establishment charging, based on figure 4.3.2.2.1.1 TS 23.502 [202] description:



Figure 5.2.2.2.2-1: PDU session establishment

8. The SMF selects an SSC mode for the PDU Session and also selects one or more UPFs.

9. The SMF may perform a Session Management Policy Modification procedure to report some event to the PCF that has previously subscribed.

9ch-a.The SMF creates a Charging Id for the PDU session, and sends Charging Data Request[initial] to CHF for authorization for the subscriber to start the PDU session which is triggered by start of PDU session charging event.

9ch-b. The CHF opens CDR for this PDU session.

9ch-c. The CHF acknowledges by sending Charging Data Response[Initial] to the SMF.

15. AMF to SMF: SM Request (N2 SM information).

[16a-b]. N4 session Modification.

16ch-a. This step may occur in case "start of service data flow" needs quota from CHF, for the SMF to request quota.

16ch-b. The CHF updates CDR for this PDU session.

16ch-c. The CHF acknowledges by sending Charging Data Response[Update] to the SMF.

NOTE 1: The steps from 16ch-a to 16ch-c for quota request from CHF are not applicable for offline only charging.

17. SM Request with PDU session Update Response to AMF.

18. SMF sends SM Context Status Notify to AMF.

19. In case of PDU Type IPv6, IPv6 Address Configuration.

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| **Next change** |

##### 5.2.2.2.X PDU Session Modification

The following figure 5.2.2.2.X-1 describes the PDU session modification charging, based on figure 4.3.3.2-1 TS 23.502 [202] description:



Figure 5.2.2.2.X-1: PDU Session Modification

2ch-a. The SMF sends Charging Data Request [Update] to the CHF for reporting the charging information when the corresponding trigger is armed.

2ch-b. The CHF update the CDR for the PDU session.

2ch-c. The CHF acknowledges by sending Charging Data Response [Update] to the SMF.

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| **Next change** |

##### 5.2.2.2.Y PDU Session Release

The following figure 5.2.2.2.Y-1 describes the PDU session release charging, based on figure 4.3.4.2-1 TS 23.502 [202] description:



Figure 5.2.2.2.Y-1: PDU Session Release

2ch-a. The SMF sends Charging Data Request [Termination] to the CHF for terminating the charging associated with PDU sessions, with the trigger "End of PDU session".

2ch-b. The CHF closes the CDR for the PDU session.

2ch-c. The CHF acknowledges by sending Charging Data Response [Termination] to the SMF.

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| **End of change** |