**3GPP TSG-SA5 Meeting #129e *S5-201227***

**e-meeting, 24 February – 4 March 2020** Revision of S5-20xxxx

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| *CR-Form-v11.4* | | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | | |
|  | | | | | | | | | |
|  | **32.255** | **CR** | **0184** | **rev** | **1** | **Current version:** | **16.3.0** |  |
|  | | | | | | | | | |
| *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)*.* | | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

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| ***Title:*** | Correct PDU session establishment procedure with I-SMF insertion. | | | | | | | | | |
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| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | ETSUN | | | | |  | ***Date:*** | | | 2019-02-15 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***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 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)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The PDU session establishment procedure for I-SMF is specified in TS 32.255. The step 19c in figure 5.2.2.14.2-1 is not specified in the clause 4.3.2.2.2 of TS 23.502. The I-SMF reports the usage to SMF is only applied for UL CL/BP controlled by I-SMF. Addition of PDU Session Anchor and UL CL/BP controlled by I-SMF shall be applied after PDU session establishment procedure with I-SMF insertion. | | | | | | | | |
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| ***Summary of change:*** | | Remove the steps 19c and 19.ch-a~19.ch-c in the clause 5.2.2.14.2. | | | | | | | | |
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| ***Consequences if not approved:*** | | Reporting the usage from I-SMF to SMF are not applied in the PDU session establishment procedure for I-SMF. | | | | | | | | |
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| ***Clauses affected:*** | | 5.2.2.14.2 | | | | | | | | |
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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:*** | |  | | | | | | | | |

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| **First change to TS 32.255** |

##### 5.2.2.14.2 PDU session establishment with I-SMF insertion

The following figure 5.2.2.14.2.1 describes a PDU session establishment charging, for the case where the service area of the selected SMF does not include the location where the UE camps, based on TS 23.502 [201] figure 4.3.2.2.2, where the V-SMF and V-UPF are replaced by I-SMF and I-UPF, and H-SMF and H-UPF are replaced by SMF and UPF (PSA) respectively:



Figure 5.2.2.14.2-1: UE-requested PDU Session Establishment with I-SMF insertion

2. The AMF selects SMF and I-SMF upon SMF serving area cannot cover UE location.

5a. I-SMF selects one or more UPFs.

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

11ch-a. The SMF creates a Charging Id for the PDU session, and sends Charging Data Request [initial] including I-SMF information to CHF for authorization for the subscriber to start the PDU session which is triggered by start of PDU session and insertion of I-SMF charging events.

11ch-b. The CHF opens CDR for this PDU session.

11ch-c. The CHF acknowledges by sending Charging Data Response [Initial] to the SMF.

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

[19a-b]. N4 session Modification.

NOTE 1: The steps from 19ch-a to 19ch-c for quota request from CHF are not applicable for offline only charging.

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

21. SMF sends SM Context Status Notify to AMF.

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

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| **End of Change** |