**3GPP TSG-SA5 Meeting #129e *S5-201231r1***

**e-meeting, 24 February – 4 March 2020**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **32.255** | **CR** | **0188** | **rev** | **-** | **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:*** | Add procedure for 5G-RG scenario | | | | | | | | | |
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| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5WWC | | | | |  | ***Date:*** | | | 2020-02-14 |
|  |  | | | |  | |  | | |  |
| ***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)* | |
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| ***Reason for change:*** | | This contribution is to add message flow for 5G RG access scenario. | | | | | | | | |
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| ***Summary of change:*** | | Add add work flow for 5G RG access scenario in TS 32.255. | | | | | | | | |
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| ***Consequences if not approved:*** | | No work flow for 5G RG access scenario in TS 32.255. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.2.2.x (new) | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

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| ***First change*** |

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TS 32.240: "Telecommunication management; Charging management; Charging architecture and principles".

[2] - [50] Void.

[51] 3GPP TS 32.298: "Telecommunication management; Charging management; Charging Data Record (CDR) parameter description".

[52] 3GPP TS 32.297: "Telecommunication management; Charging management; Charging Data Record (CDR) file format and transfer".

[53] Void.

[54] 3GPP TS 32.295: "Telecommunication management; Charging management; Charging Data Record (CDR) transfer".

[55-56] Void.

[57] 3GPP TS 32.290: "Telecommunication management; Charging management; 5G system; Services, operations and procedures of charging using Service Based Interface (SBI)".

[58] 3GPP TS 32.291: " Telecommunication management; Charging management; 5G system; Charging service, stage 3".

[59] - [99] Void.

[100] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[101] 3GPP TS 22.115: "Service aspects; Charging and billing".

[102] 3GPP TS 22.261: "Service requirements for next generation new services and markets".

[103] - [199] Void

[200] 3GPP TS 23.501:"System Architecture for the 5G System".

[201] 3GPP TS 23.502:"Procedures for the 5G System".

[202] 3GPP TS 23.503:"Policy and Charging Control Framework for the 5G System; Stage 2".

[203] 3GPP TS 23.316: "Wireless and wireline convergence access support for the 5G System (5GS)".

[204] - [299] Void

[300] - [399] Void.

[400] - [499] Void.

[500] - [599] Void.

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| ***Second change*** |

#### 5.2.2.x PDU session charging – wireline access

##### 5.2.2.x.1 General

After registration management procedures to 5GC via wireline access network, a PDU session can be established via this wireline access, as specified in TS 23.316 [203] for different scenarios:

- 5G-RG connected via NR-RAN and W-5GAN;

- FN-RG connected via W-5GAN.

##### 5.2.2.x.2 5G-RG Requested PDU Session Establishment via W-5GAN

The following figure 5.2.2.x.2.1 describes charging when 5G-RG requests a PDU session establishment via W-AGF.

1. The 5G-RG connects to a W-5GAN and the W-AGF sends an EAP-Request/5G-Start packet over the W-CP connection as described in clause 7.3.1.1 in TS 23.316 [203].
2. The steps are specified as step 2-7 in clause 4.3.2.1 of TS 23.502 [202].

3ch-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.

3ch-b. The CHF opens CDR for this PDU session.

3ch-c. The CHF acknowledges by sending Charging Data Response [Initial] to the SMF.

1. The steps are specified as step 10-11 in clause 4.2.3.1 of TS 23.502 [202].
2. The steps are specified as step 2-6 in clause 7.3.1.1 of TS 23.316 [203].
3. All steps are specified in clause 4.3.2.1 of TS 23.502 [202]

##### 5.2.2.x.3 5G-RG Requested PDU Session Establishment via NG-RAN

This clause describes PDU session charging when 5G-RG requests a PDU session establishment via NG-RAN. The specification for 5G RG connect 5G Core via NG-RAN can be seen in TS 23.501 [200] and TS 23.502 [202].

The work flow of PDU session charging in case that 5G-RG requests PDU session establishment is specified in clause 5.2.2.2 in this document, except:

* UE is replaced by 5G-RG.

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| **End of change** |