**3GPP TSG SA WG5 Meeting #155 *S5-243047***

Jeju, South Korea, 27 - 31 May 2024

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **32.255** | **CR** | **0522** | **rev** | **2** | **Current version:** | **18.3.0** |  |
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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:*** | Rel-18 CR 32.255 Correct the generic business charging procedure | | | | | | | | | |
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| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI18, NETSLICE\_CH\_Ph2 | | | | |  | ***Date:*** | | | 2024-05-30 |
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| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *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)* | |
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| ***Reason for change:*** | | A few procedures in the business charging are not clearly specified.  The concept of B-CDR was introduced in Business charging based on 5G data connectivity in clause 5.2.2.21, referring to the CDR generated by B-CHF.  However, both B-CHF and C-CHF generate CDR using the same CHF CDR structure, which may include different attributes. It is misleading to use a new concept to represent the CDR generated by B-CHF. | | | | | | | | |
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| ***Summary of change:*** | | Clarify the PUD session establishment, modification and release procedures in the Business charging based on 5G data connectivity.  Clarify the PDU session establishment procedures in the UE PDU session charging based on Business converged charging.  Change the “B-CDR” to “CDR”. | | | | | | | | |
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| ***Consequences if not approved:*** | | The business charging can not working accurately.  The CHF CDR structure used by B-CHF is ambiguous. | | | | | | | | |
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| ***Clauses affected:*** | | 5.2.2.21.2, 5.2.2.21.3, 5.2.2.21.4, 5.2.2.22.2 | | | | | | | | |
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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 ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | Revision of S5-241846, which is Revision of S5-241622 | | | | | | | | |

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| **First change** |

##### 5.2.2.21.2 PDU session establishment

The clause describes the high level charging procedure for business converged charging based on 5G data connectivity with PDU session SCUR scenario.

The following figure 5.2.2.21.2-1 describes a UE PDU session establishment for business converged charging based on 5G data connectivity



Figure 5.2.2.21.2-1: business converged charging based on 5G data connectivity – UE PDU session establishment

0. Business dependent charging information is configured in C-CHF and B-CHF which could include e.g. subscriber identifier, identification of the business subscriber

1 to 9ch-b. PDU session establishment for individual UE per Figure 5.2.2.2.2-1.

9ch-ba. Business charging based on 5G data connectivity charging information is enabled

9ch-bc. C-CHF sends the Charging Data Request [Initial] to B-CHF with UE PDU session charging information received from SMF. It includes business specific identifier (e.g. S-NSSAI or DNN, or Tenant ID).

9ch-bd. The B-CHF opens or updates CDR for this business specific identifier with the PDU session. B-CHF may perform the account, rating and reservation control for the Tenant.

9ch-be. B-CHF provides appropriate Charging Data Response [Initial] for Tenant.

9ch-c. C-CHF provides appropriate Charging Data Response [Initial] for the individual UE.

10 to 16ch-b. PDU session establishment for individual UE per Figure 5.2.2.2.2-1.

16ch-ba. Business charging based on 5G data connectivity charging information is enabled.

16ch-bc. C-CHF sends the Charging Data Request [Update] to B-CHF for reservation control.

16ch-bd. The B-CHF updates CDR for this business specific identifier and performs reservation control.

16ch-be. B-CHF provides appropriate Charging Data Response [Update] for Tenant.

16ch-c. C-CHF provides appropriate Charging Data Response [Update] for the individual UE.

17 to 19. PDU session establishment for individual UE per Figure 5.2.2.2.2-1.

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| **Next change** |

##### 5.2.2.21.3 PDU session modification

The following figure 5.2.2.21.3-1 describes a UE PDU session modification for business converged charging based on 5G data connectivity:



Figure 5.2.2.21.3-1: business converged charging based on 5G data connectivity – UE PDU session modification

1 to 2ch-b. PDU session modification for individual UE per Figure 5.2.2.2.3-1.

2ch-ba. Business charging based on 5G data connectivity charging information is enabled.

2ch-bc. C-CHF sends the Charging Data Request [Update] to B-CHF with UE PDU session charging information received from SMF. It includes business specific identifier (e.g. S-NSSAI or DNN, or Tenant ID).

2ch-bd. The B-CHF updates CDR for this business specific identifier with the PDU session. B-CHF may perform the account, rating and reservation control for the Tenant.

2ch-be. B-CHF provides appropriate Charging Data Response [Update] for Tenant.

2ch-c to 13. PDU session modification for individual UE per Figure 5.2.2.2.2-1.

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| **Next change** |

##### 5.2.2.21.4 PDU session release

The following figure 5.2.2.21.4-1 describes a UE PDU session release for business converged charging based on 5G data connectivity:



Figure 5.2.2.21.4-1: business converged charging based on 5G data connectivity – UE PDU session release

1a to 2ch-b. PDU session release for individual UE per Figure 5.2.2.2.4-1.

2ch-ba. Business charging based on 5G data connectivity charging information is enabled

2ch-bc. C-CHF sends the Charging Data Request [Termination] to B-CHF with UE PDU session charging information received from SMF. It includes business specific identifier (e.g. S-NSSAI or DNN, or Tenant ID).

2ch-bd. The B-CHF updates or closes CDR for this business specific identifier. B-CHF may perform the account, rating and reservation control for the Tenant.

2ch-be. B-CHF provides appropriate Charging Data Response [Termination] for Tenant.

2ch-c to 15. PDU session release for individual UE per Figure 5.2.2.2.4-1.

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| **Next change** |

##### 5.2.2.22.2 PDU session establishment

The following figure 5.2.2.22.2-1 describes a UE PDU session converged influenced by business converged charging:



Figure 5.2.2.22.2-1: UE PDU session converged charging influenced by business charging

0ch. Business charging information obtained by B-CHF (e.g. from NWDAF, MnS Producer, or NSACF, etc), which could be e.g:

- S-NSSAI service profile: e.g. "Max nb of PDU sessions", "Max nb of UEs”, "Duration of the slice"…

- S-NSSAI KPIs;

- load level.

1 to 9ch-b. PDU session establishment for individual UE per Figure 5.2.2.2.2-1.

9ch-ba. UE PDU session charging needs input from business charging

9ch-bc. C-CHF sends the Charging Data Request [Initial] to B-CHF with UE PDU session charging information received from SMF, and "UE requested business charging information".

9ch-bd. Based on received "UE requested business charging information", B-CHF determines based on business charging information the UE charging information to be supplied.

9ch-be. B-CHF sends the Charging Data Response [Initial] to C-CHF with the "UE supplied business charging information".

9ch-bf. Account, Rating and reservation control for individual UE based on "UE supplied business charging information".

9ch-c. C-CHF provides appropriate Charging Data Response [Initial] for the individual UE.

10 to 16a-b. PDU session establishment for individual UE per Figure 5.2.2.2.2-1.

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| **End of change** |