**3GPP TSG-SA5 Meeting #158 *S5-246969***

Orlando, USA, 18 - 22 November 2024

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **32.255** | **CR** | **0569** | **rev** | **1** | **Current version:** | **19.0.0** |  |
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| *For* [***HELP***](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-19 CR 32.255 Correction of Charging Id for SMF Set |
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| ***Source to WG:*** | Ericsson |
| ***Source to TSG:*** | SA5 |
|  |  |
| ***Work item code:*** | TEI17 |  | ***Date:*** | 2024-11-07 |
|  |  |  |  |  |
| ***Category:*** | **A** |  | ***Release:*** | Rel-19 |
|  | *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-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
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| ***Reason for change:*** | An SMF set can cover many SMF instances which means that the number of PDU sessions handled will be even larger, requiring that the Charging Identifier for the PDU Session shall be unique will be infeasible if the 32-bit integer is used. |
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| ***Summary of change:*** | Add that if Charging Identifier uniqueness is required when SMF Set is used then this requires string-based Charging Identifier |
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| ***Consequences if not approved:*** | The handling of Charging Identifier uniqueness will be unclear leading to interoperability issues. |
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| ***Clauses affected:*** | 5.1.4 |
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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:*** | Revision of S5-246827 |

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| **First change** |

5.1.4 Charging Identifier

Charging identifier is created to allow correlation of charging information.

For the SMF the charging identifier is assigned per PDU session including the case of I-SMF insertion. At each PDU session establishment, i.e. assignment of a new PDU session id, a new PDU session specific Charging Identifier is generated at the first SMF that processes the PDU session initiating request. The same Charging Identifier shall be used in all subsequent messages throughout the PDU session’s lifetime once assigned. In case of inter-system changes or handovers of PDU session, the Charging Identifier is preserved while the PDU session Identifier is preserved.

The Charging Identifier shall be unique within the SMF (or SMF set if SMF set is used) that assigned it throughout the PDU session’s lifetime. To ensure uniqueness over a longer period it is recommended to use the SMF Charging Id or SMF Home Provided Charging Id, see table 6.2.1.2.1, especially for SMF set where a set can handle a large number of PDU sessions.

For EPS handover 5GS in Home routed scenario, the Charging Identifier for the EPS PDN connection will be generated by PGW-C+SMF in HPLMN and transferred to the SMF in VPLMN, if the V-SMF has already generated the Charging Identifier, the value shall be replaced by a home provided Charging Identifier generated by H-SMF.

For 5GS interworking with EPS, an EPS bearer Charging Identifier is assigned by the PGW-C+SMF to each dedicated EPS bearer The EPS default bearer Charging Identifier is the Charging Identifier assigned to the default bearer of PDU connection.

For mobility from HPLMN with I-SMF to VPLMN in Home routed scenario, the charging identifier for the PDU session will be generated by SMF in HPLMN and transferred to the SMF in VPLMN, if the V-SMF has already generated a Charging Identifier, the value shall be replaced by a home provided Charging Identifier generated by H-SMF.

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| **End of changes** |