**3GPP TSG-SA5 Meeting #133e *S5-205064rev2***

**e-meeting 12th - 21st October 2020**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **32.255** | **CR** | **0249** | **rev** | **1** | **Current version:** | **16.6.1** |  |
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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 Multi-homed PDU Address in CHF-CDR for IPv6 multi-homing  |
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| ***Source to WG:*** | Huawei  |
| ***Source to TSG:*** | S5 |
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| ***Work item code:*** | TEI16, 5GS\_Ph1-DCH |  | ***Date:*** | 2020-09-30 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***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 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-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 PDU Addresses in CHF-CDR for IPv6 multi-homing is not specified in TS 32.255. |
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| ***Summary of change:*** | This contribution is to add multi-homed PDU Addresses in Multiple Unit Usage for IPv6 multi-homing, including in the CHF-CDR. |
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| ***Consequences if not approved:*** | In IPv6 multi-homing scenario, only one PDU address in CHF-CDR is reported to CGF, and other multi-homed PDU addresses are droped by CHF. |
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| ***Clauses affected:*** | 6.1.3.2 |
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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:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

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| **First change to TS 32.255** |

#### 6.1.3.2 PDU session charging CHF CDR data

If enabled, CHF CDRs for PDU session charging shall be produced for each PDU session. In roaming Home routed scenario, the PDU session charging CHF CDR shall cover both Flow based Charging and Qos flow Based Charging (QBC) from H-SMF.

The fields of PDU session charging CHF CDR are specified in table 6.1.3.2.1.

Table 6.1.3.2.1: PDU session charging CHF record data

| Field | Category | Description |
| --- | --- | --- |
| Record Type  | M | CHF record. |
| Recording Network Function ID | OM | This field holds the name of the recording entity, i.e. the CHF id. |
| Subscriber Identifier | OM | This field holds the Subscription Permanent Identifier (SUPI) of the served party. This fields should be present except for emergency session. The detail of SUPI is specified in clause 5.9.2 of TS 23.501 [200] |
| NF Consumer Information | M | This field holds the information of the SMF that used the charging service. |
| NF Functionality | M | This field contains the function of the node (i.e. SMF) |
| NF Name | OC | This field holds the name of the SMF used. |
| NF Address | OC | This fields holds the IP Address of the SMF used. |
| NF PLMN ID | Oc | This field holds the PLMN identifier (MCC MNC) of the SMF. |
| List of Multiple Unit Usage  | OM | This field holds a list of changes in charging conditions for all service data flows within this PDU session.This list is categorized per rating group or per combination of rating group and service id or per combination of rating group, sponsor identity and application service provider identity. In addition, usage is differentiated between with and without quota management. Each change is time stamped. Charging conditions are used to categorize traffic volumes, elapsed time and number of events, such as per tariff period.  |
| Rating Group | OM | This filed holds the rating group.  |
| Used Unit Container | OC | This field holds the used units and information connected to the reported units. |
| Service Identifier | OC | This field holds the Service Identifier. |
| Quota management Indicator | OM | This field holds an indicator on whether the used units are with or without quota management. |
| Triggers | OC | This field holds the reason for closing the used unit container. |
| Trigger Timestamp | OC | This field holds the timestamp of the trigger. |
| Time | OC | This field holds the amount of used time. |
| Total Volume | OC | This field holds the amount of used volume in both uplink and downlink directions. |
| Uplink Volume | OC | This field holds the amount of used volume in uplink direction. |
| Downlink Volume | OC | This field holds the amount of used volume in downlink direction. |
| Service Specific Unit | OC | This field holds the amount of used service specific units. |
| Event Time Stamps | OC | This field holds the timestamps of the event reported in the Service Specific Units, if the reported units are event based. |
| Rating Indicator | OC | This field indicates if the units have been rated or not. |
| Local Sequence Number | M | This field holds the container sequence number. |
| PDU Container Information | OC | This field holds the 5G data connectivity specific information defined in clause 6.2.1.3. |
| UPF ID | OC | This field holds the UPF identifier used to identify the UPF when reporting the usage for the UPF. |
| Multi-homed PDU address | Oc | This field holds the Multi-homed IPv6 prefix used by UPF, identified by the UPF ID. It may only be used for reporting used units. |
| Record Opening Time | M | Time stamp when the PDU session is activated in the SMF or record opening time on subsequent partial records. |
| Duration | M | This field holds the duration of this record. |
| Record Sequence Number | C | Partial record sequence number, only present in case of partial records. |
| Cause for Record Closing  | M | The reason for the release of the record. |
| Diagnostics | OM | This field holds a more detailed reason for the release of the PDU session, when a single cause is applicable. |
| Local Record Sequence Number | OM | Consecutive record number created by the CDF. The number is allocated sequentially including all CDR types. |
| Record Extensions | OC | A set of network operator/manufacturer specific extensions to the record. Conditioned upon the existence of an extension. |
| PDU Session Charging Information | OM | This field holds the 5G data connectivity specific information defined in clause 6.2.1.2. |
| Roaming QBC information | OC | This field holds the roaming QBC specific information defined in clause 6.2.1.4, when applicable. |

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| **End of Change** |