**3GPP TSG-SA5 Meeting #130-e *S5-202173rev2***

**Online, , 20th Apr 2020 - 28th Apr 2020**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **32.255** | **CR** | **0213** | **rev** | **1** | **Current version:** | **16.4.0** |  |
|  | | | | | | | | |
| *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:*** |  | | | | | | | | | |
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| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI 16 | | | | |  | ***Date:*** | | | 2020-04-23 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | 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:*** | | The PDU Addresses per PSA for IPv6 multi-homing is not specified in TS 32.255. | | | | | | | | |
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| ***Summary of change:*** | | This contribution is to add PDU Addresses per PSA in Multiple Unit Usage for IPv6 multi-homing, including in the charging data request/response and CDR. | | | | | | | | |
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| ***Consequences if not approved:*** | | In IPv6 multi-homing scenario, only one PDU address is reported to CHF, and other PDU addresses are droped by SMF. | | | | | | | | |
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| ***Clauses affected:*** | | 6.1.1.2 | | | | | | | | |
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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:*** | |  | | | | | | | | |

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| **First change to TS 32.255** |

#### 6.1.1.2 Charging Data Request message

Table 6.1.1.2.1 illustrates the basic structure of a Charging Data Request message from the SMF as used for 5G data connectivity converged charging.

Table 6.1.1.2.1: Charging Data Request message contents

| **Information Element** | **Category for converged charging** | **Category for offline only charging** | **Description** |
| --- | --- | --- | --- |
| Session Identifier | OC | OC | Described in TS 32.290 [57] |
| Subscriber Identifier | OM | M | Described in TS 32.290 [57]  In case SUPI is not present (for emergency service), the User Equipment Info in table 6.2.1.2.1. shall be present for identifying the user. |
| NF Consumer Identification | M | M | Described in TS 32.290 [57] |
| NF Functionality | M | OC | Described in TS 32.290 [57] |
| NF Name | OC | OC | Described in TS 32.290 [57] |
| NF Address | OC | OC | Described in TS 32.290 [57] |
| NF PLMN ID | OC | OC | Described in TS 32.290 [57] |
| Invocation Timestamp | M | M | Described in TS 32.290 [57] |
| Invocation Sequence Number | M | M | Described in TS 32.290 [57] |
| Notify URI | OC | OC | Described in TS 32.290 [57] |
| Service Specification Information | OC | OC | Described in TS 32.290 [57] |
| Triggers | OC | OC | This field is described in TS 32.290 [57] and holds the 5G data connectivity specific triggers described in clause 5.2.1. |
| Multiple Unit Usage | OC | OC | Described in TS 32.290 [57]  This field is not applicable to QBC. |
| Rating Group | M | M | Described in TS 32.290 [57] |
| Requested Unit | OC | - | Described in TS 32.290 [57] |
| Used Unit Container | OC | OC | Described in TS 32.290 [57] |
| Triggers | OC | OC | This field is described in TS 32.290 [57] and holds the 5G data connectivity specific triggers described in clause 5.2.1. |
| PDU Container Information | OC | OC | This field holds the 5G data connectivity PDU session container specific information described in clause 6.2. |
| UPF ID | OC | OC | This field holds the UPF identifier used to identify the UPF.  These fields shall only be included when either quota is requested per UPF, or used units are reported per UPF |
| Used multi-homing address | Oc | Oc | This field holds the IPv6 prefix used by PSA to transfer service data flow for the IPv6 multi-homed PDU session.  These fields shall only be included when used units are associated with the PDU address. |
| PDU Session Charging Information | OM | OM | This field holds the 5G data connectivity specific information described in clause 6.2. |
| Roaming QBC information | OM | OM | This field holds the roaming QBC specific information defined in clause 6.2.1.4  This field is not applicable to FBC. |

#### 6.2.1.3 Definition of PDU Container information

Used Unit Container, described in table 6.1.1.2.1, specific charging information used for 5G data connectivity charging is provided within the PDU Container Information described in table 6.2.1.3.1.

Table 6.2.1.3.1: Structure of PDU Container Information

| Information Element | Category | Description |
| --- | --- | --- |
| Time of First Usage | OC | This field holds the Timestamp when the first transmitted IP packet of the service data flow matching the current used unit container |
| Time of Last Usage | OC | This field holds the Timestamp when the last transmitted IP packet of the service data flow matching the current used unit container |
| QoS Information | OC | This field holds the QoS applied during the service data container interval |
| QoS Characteristics | OC | This field holds the QoS characteristics applied for QoS information. It is only be used when the non-standardized 5QI is present in QoS information. |
| AF Charging Identifier | OC | An identifier, provided from the AF, may be used to correlate the measurement for the Charging key/Service identifier values in this PCC rule with application level reports. |
| User Location Information | OC | This field holds the user location during the used unit container interval |
| UE Time Zone | OC | This field holds the Time Zone of where the UE is located, during the used unit container interval. |
| Presence Reporting Area Information | OC | This field holds the Presence Reporting Area Information of UE during the used unit container interval. |
| Serving Network Function ID | OC | Serving Network Function identifier. |
| RAT Type | OC | This field holds the RAT type during the used unit container interval |
| Sponsor Identity | OC | This field holds the identifier of the sponsor when sponsored data connectivity is used |
| Application Service Provider Identity | OC | This field holds the identifier of the application service provider that is delivering a service to the end user. |
| Charging Rule Base Name | OC | This field holds the reference to group of PCC rules predefined at the SMF |
| 3GPP PS Data Off Status | OC | This field holds the 3GPP Data off Status during the used unit container interval |
| Used multi-homing Address | Oc | This field holds the IPv6 prefix used by PSA to transfer service data flow for the IPv6 multi-homed PDU session. The used unit container are associated with the IPv6 prefix. |

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| **End of Change** |