**3GPP TSG SA WG5 Meeting #162 S5-253656**

**Goteborg, SWEDEN 25 - 29 August 2025**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **32.255** | **CR** | **0600** | **rev** | **1** | **Current version:** | **19.2.0** |  |
|  | | | | | | | | |
| *For* ***[HE](http://www.3gpp.org/3G_Specs/CRs.htm" \l "_blank)******[LP](http://www.3gpp.org/3G_Specs/CRs.htm" \l "_blank)*** *on using this form: comprehensive instructions can be found at  <http://www.3gpp.org/Change-Requests>.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Rel-19 CR 32.255 Correction on the UPF ID | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | China Mobile Com. Corporation | | | | | | | | | |
| ***Source to TSG:*** | SA5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GS\_Ph1-DCH | | | | |  | ***Date:*** | | | 2025-08-15 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **C** |  | | | | | ***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 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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Since the billing side needs to regularly conduct data consistency checks with the network side to avoid CDR loss during transmission, and the data provided by the network side during these checks includes the UPF ID.However,the CDRs transmitted to the billing side do not carry the UPF ID in some cases. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | The UPF ID field will be made mandatory. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | This will lead to mismatch between the two sides' data and make it difficult to locate the root cause of the inconsistency. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.1.1.2, 6.1.3.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 32.291 CR 0629 | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | Revision of S5-253318 | | | | | | | | |

|  |
| --- |
| **First Change** |

#### 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. | |
| Tenant Identifier | | OC | | OC | | Described in TS 32.290 [57].  This field may be used in the business context. | |
| 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] | |
| Retransmission Indicator | | OC | | OC | | 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] | |
| Supported Features | | OC | | - | | This field indicates the features supported by the NF consumer. | |
| 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] | |
| Time | | OC | | - | | Described in TS 32.290 [57] | |
| Total Volume | | OC | | - | | Described in TS 32.290 [57] | |
| Uplink Volume | | OC | | - | | Described in TS 32.290 [57] | |
| Downlink Volume | | OC | | - | | Described in TS 32.290 [57] | |
| Used Unit Container | | OC | | OC | | Described in TS 32.290 [57] | |
| Service Identifier | | OC | | OC | | Described in TS 32.290 [57] | |
| Quota management Indicator | | 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. | |
| Trigger Timestamp | | OC | | OC | | Described in TS 32.290 [57] | |
| Time | | OC | | OC | | Described in TS 32.290 [57] | |
| Total Volume | | OC | | OC | | Described in TS 32.290 [57] | |
| Uplink Volume | | OC | | OC | | Described in TS 32.290 [57] | |
| Downlink Volume | | OC | | OC | | Described in TS 32.290 [57] | |
| Local Sequence Number | | OM | | OM | | Described in TS 32.290 [57] | |
| PDU Container Information | | OC | | OC | | This field holds the 5G data connectivity PDU session container specific information described in clause 6.2. | |
| UPF ID | | OM | | OC | | This field holds the UPF identifier used to identify the UPF that report the usage information to SMF. | |
| multi-homed PDU address | | OC | | OC | | This field holds the IPv6 prefix used by UPF. It may only be used for IPv6 multi-homed PDU sessions and then only for reporting used units. | |
| PDU Session Charging Information | | OM | | OM | | This field holds the 5G data connectivity specific information described in clause 6.2.  This field is applicable to FBC and QBC. | |
| Roaming QBC information | | OM | | OM | | This field holds the roaming QBC specific information defined in clause 6.2.1.4  This field is only applicable to QBC. | |
| Inter-CHF Information | | OC | | - | | This field holds inter CHF specific information described in clause 6.2.1.6 | |

|  |
| --- |
| **2nd Change** |

#### 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] | |
| Tenant Identifier | | OC | | Described in TS 32.298 [57]. It is used in the business context. | |
| 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. | |
| Invocation Timestamp | | OC | | This field holds the timestamp of the charging service invocation, described in TS 32.290 [57]. | |
| 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. | |
| 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 | | OM | | This field holds the UPF identifier used to identify the UPF that report the usage information to SMF | |
| 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 | | This field contains the time stamp when the record is opened, described in TS 32.298 [51], | |
| 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. | |
| Inter-CHF Information | | OC | | This field holds inter-CHF specific information described in clause 6.2.1.6 | |

|  |
| --- |
| **End of Change** |