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| **3GPP TSG-SA5 Meeting #143-e *S5-223442***  **e-meeting, 9 - 17 May 2022**   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | *CR-Form-v12.1* | | | | | | | | | | **CHANGE REQUEST** | | | | | | | | | |  | | | | | | | | | |  | **32.298** | **CR** | **0902** | **rev** | **-** | **Current version:** |  |  | |  | | | | | | | | | | *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** |
|  | | | | | | | | | | | | | | | | | |
| ***Title:*** | Introduce 5G ProSe charging to CHF CDR | | | | | | | | | | | | | | | | |
|  |  | | | | | | | | | | | | | | | | |
| ***Source to WG:*** |  | | | | | | | | | | | | | | | | |
| ***Source to TSG:*** | SA5 | | | | | | | | | | | | | | | | |
|  |  | | | | | | | | | | | | | | | | |
| ***Work item code:*** | 5G\_ProSe | | | | | | | | |  | ***Date:*** | | |  | | | |
|  |  | | | | |  | | | | |  | | |  | | | |
| ***Category:*** | **B** |  | | | | | | | | | ***Release:*** | | |  | | | |
|  | *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)* | | | | |
|  |  | | | | | | | | | | | | | | | | |
| ***Reason for change:*** | | 5G ProSe charging information needs to be introduced in CHF CDR. | | | | | | | | | | | | | | | |
|  | |  | | | | | | | | | | | | | | | |
| ***Summary of change:*** | | Specify 5G ProSe charging information in in CHF CDR | | | | | | | | | | | | | | | |
|  | |  | | | | | | | | | | | | | | | |
| ***Consequences if not approved:*** | | No converged charging of 5G ProSe. | | | | | | | | | | | | | | | |
|  | |  | | | | | | | | | | | | | | | |
| ***Clauses affected:*** | | 5.1.5.0, 5.1.5.1.14 | | | | | | | | | | | | | | | |
|  | |  | | | | | | | | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | | | | | | | | |
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| ***This CR's revision history:*** | |  | | | | | | | | | | | | | | | |

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| **First change** |

### 5.1.5 Common charging data in CHF-CDR

#### 5.1.5.0 CHF record (CHF-CDR)

If enabled, CHF records shall be produced for chargeable events, with or without quota management. The generic fields in the record are specified in table 5.1.5.0.1. The NF specific parts will be concatenated to this e.g. the PDU Session Information, PDU Container Information and Roaming QBC Information are concatenated for the SMF.

Table 5.1.5.0.1: CHF record (CHF-CDR)

|  |  |  |
| --- | --- | --- |
| 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. |
| Charging Session Identifier | OC | This field holds the Session Identifier described in TS 32.290 [57]. |
| Subscriber Identifier | OM | This field holds the 5G Subscription Permanent Identifier (SUPI) of the served party as specified in TS 29.571 [249], if available. |
| Tenant Identifier | OM | This field holds the tenant identifier |
| MnS Consumer Identifier | OM | This fields holds the identifier of the MnS Consumer. |
| NF Consumer Information | M | This field holds the information of the NF consumer of the charging service. |
| NF Functionality | M | This field holds the type of functionality the NF provides. |
| NF Name | OC | This field holds the name of the NF used. |
| NF Address | OC | This field holds the IP Address of the NF used. |
| NF PLMN ID | OC | This field holds the PLMN identifier (MCC MNC) of the NF. |
| Charging Identifier | OM | Charging identifier for correlation between different records. Only applicable if not available in the service specific information. |
| Triggers | OC | This field holds the triggers that are common to all Multiple Unit Usage. Can be the same as in Used Unit Container. |
| SMF Triggers | OC | This field holds the 5G data connectivity specific triggers described in TS 32.255 [15]. |
| List of Multiple Unit Usage | OC | This field holds the parameters for the unit reporting. It may have multiple occurrences. |
| Rating Group | M | This filed holds the rating group. The parameter corresponds to the Charging Key as specified in TS 23.203 [203] |
| 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 | OC | This field holds an indicator on whether the reported used units are with or without quota management control. If the field is not present, it indicates the used unit is without quota management applied. |
| Local Sequence Number | OM | This field holds the container sequence number. |
| Time | OC | This field holds the amount of used time. |
| 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. |
| Total Volume | OC | This field holds the amount of used volume in both uplink and downlink directions. |
| Service Specific Units | OC | This field holds the amount of used service specific units. |
| Event Time Stamp | 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. |
| Triggers | OC | This field holds the triggers that caused the Used Unit Container to be reported, independently on if they are PDU Session or RG level triggers. |
| SMF Triggers | OC | This field holds the 5G data connectivity specific triggers described in TS 32.255 [15]. |
| Trigger Time Stamp | OC | This field holds the timestamp of the trigger. |
| PDU Container Information | OC | This field holds the 5G data connectivity specific information described in TS 32.255 [15]. |
| NSPA Container Information | OC | This field holds the network slice performance and analytics container specific information described in TS 28.201 [151]. |
| PC5 Container Information | OC | This field holds the PC5 container information |
| UPF ID | OC | This field holds the UPF identifier used to identify the UPF when reporting the usage for the UPF. |
| Record Opening Time | OC | 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. |
| 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.  This field can be used to capture the specific information for charging. |
| Service Specification Information | OC | Identifies service specific document that applies to the request, e.g. the service specific document ('middle tier' TS) and 3GPP release the service specific document is based upon. |
| PDU Session Charging Information | OM | This field holds the 5G data connectivity specific information described in TS 32.255 [15] |
| Roaming QBC Information | OM | This field holds the roaming 5G data connectivity specific information described in TS 32.255 [15] |
| SMS Charging Information | OC | This field holds the SMS specific information described in TS 32.274 [34]. |
| Registration Charging Information | OM | This field holds the 5G registration specific information described in TS 32.256 [16]. |
| N2 connection charging Information | OM | This field holds the N2 connection specific information described in TS 32.256 [16]. |
| Location reporting charging Information | OM | This field holds the Location reporting specific information described in TS 32.256 [16]. |
| NEF API Charging Information | OM | This field holds the NEF API specific information described in TS 32.254 [14]. |
| NSPA Charging Information | OM | This field holds the performance and analytics specific information described in TS 28.201 [151]. |
| NSM charging Information | OM | This field holds the Network Slice Management (NSM) specific information described in TS 28.202 [71]. |
| ProSe charging Information | OM | This field holds the ProSe specific information described in TS 32.277 [37]. |

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| **Second change** |

##### 5.1.5.1.14 Used Unit Container

This list applicable in CHF-CDR includes one or more containers.

Each container includes the following fields:

- **Service Identifier** may designate an end user service, a part of an end user service or an arbitrarily formed group thereof.

- **Quota management Indicator** holds an indicator on whether the reported used units are with or without quota management control. If the field is not present, it indicates the used unit is without quota management applied.

- **Local Sequence Number** is the sequence number for the used unit containers, i.e. the order in which charging information was reported or used unit container was closed.

- **Time** includes the duration of a time based service.

- **Uplink Volume**  includes the number of octets transmitted during the use of the packet data services in the uplink direction. The counting of uplink data volumes is optional.

- **Downlink Volume**  includes the number of octets transmitted during the use of the packet data services in the downlink direction.

- **Total Volume** includes the total number of octets transmitted in both uplink and downlink direction.

- **Service Specific Units** includes the number of units, specific for the service, used during the service.

- **Event Time Stamp** defines the moment when the event was reported in the Service Specific Units when event based charging applies.

- **Rating Indicator** indicates if the units have been rated or not.

- **Triggers** includes the reason for charging information reporting or closing for the used unit container, the 5G data connectivity specific triggers are described in TS 32.255 [15].

- **Trigger Time Stamp** is the date and time of the charging information reporting or closing for the used unit container.

- **PDU Container Information** is the 5G data connectivity specific information described in TS 32.255 [15].

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| - **PC5 Container Information** is the PC5 data connectivity specific information described in TS 32.277 [37].**End of changes** |