**3GPP TSG SA WG5 Meeting #155 *S5-243035***

**Jeju, South Korea, 27 - 31 May 2024**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  |  | **CR** |  | **rev** | **2** | **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** |

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| ***Title:*** |  | | | | | | | | | |
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| ***Source to WG:*** | Huawei, | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** |  | | | | |  | ***Date:*** | | |  |
|  |  | | | |  | |  | | |  |
| ***Category:*** |  |  | | | | | ***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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Application Identification and Subscriber Identification are mutually exclusive. It’s required to store the Application Identifier independently from SUPI.  The ‘Tenant Identifier’ is the default attribute to hold the AF identifier. The possibility of using “Subscriber identifier” for holding AF identifier is only remained for backward compatibility. | | | | | | | | |
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| ***Summary of change:*** | | Extend the Charging Data Request message with ‘Tenant Identifier’ field and allow the possibility of using it for Application Identifier | | | | | | | | |
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| ***Consequences if not approved:*** | | It may cause interoperability situations in case the SUPI and Application Identier are required to be used in a Charging scenario | | | | | | | | |
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| ***Clauses affected:*** | | 6.2a.1.2.1, 6.2a.3.2, 6.3.4 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 is a revision to the agreed CR in SA5#154 (S5-241854).  If agreed, this contribution should be implemented instead of S5-241854. | | | | | | | | |
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| ***This CR's revision history:*** | | Revision of S5-242733, which is a Revision of S5-241854 (revision of S5-241498) | | | | | | | | |

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| **First change** |

##### 6.2a.1.2.1 Charging Data Request message

Table 6.2a.1.2.1.1 illustrates the basic structure of a Charging Data Request message as used for NEF converged charging.

Table 6.2a.1.2.1.1: Charging Data Request message contents

|  |  |  |
| --- | --- | --- |
| **Information Element** | **Category** | **Description** |
| Session Identifier | OC | Described in TS 32.290 [57] |
| Subscriber Identifier | OM | Described in TS 32.290 [57], and may hold the identifier of the AF as an alternative to tenant identifier. |
| Tenant Identifier | OC | Described in TS 32.290 [57], and may hold the identifier of the AF. |
| NF Consumer Identification | M | Described in TS 32.290 [57] |
| Charging Identifier | OM | Described in TS 32.290 [57] |
| Invocation Timestamp | M | Described in TS 32.290 [57] |
| Invocation Sequence Number | M | Described in TS 32.290 [57] |
| Retransmission Indicator | - | This field is not applicable. |
| One-time Event | OC | Described in TS 32.290 [57]. |
| One-time Event Type | OC | Described in TS 32.290 [57]. |
| Notify URI | - | This field is only applicable for the notification of abort charging. |
| Supported Features | OC | Described in TS 32.290 [57] |
| Triggers | OC | This field is described in TS 32.290 [57] and holds the NEF specific triggers described in clause 5.4.1.2 |
| Multiple Unit Usage | OC | This field contains the parameters for the quota management request and/or usage reporting. |
| Rating Group | M | Described in TS 32.290 [57] |
| Requested Unit | OC | Described in TS 32.290 [57] |
| Used Unit Container | OC | Described in TS 32.290 [57] |
| NEF API Charging Information | OM | This field holds the NEF API specific information described in clause 6.3.1.4 |

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| **Second change** |

#### 6.2a.3.2 NEF charging CHF CDR data

If enabled, CHF CDRs for NEF charging shall be produced for NEF chargeable events.

The fields of NEF charging CHF CDR are specified in table 6.2a.3.2.1.

Table 6.2a.3.2.1: NEF charging CHF record data

|  |  |  |
| --- | --- | --- |
| **Field** | **Category** | **Description** |
| Record Type | M | Described in TS 32.298 [3] |
| Recording Network Function ID | OM | Described in TS 32.298 [3] |
| Subscriber Identifier | M | This field contains the identification of the API user (e.g. SCS Identifier) |
| Tenant Identifier | OC | This field contains the identification of the Tenant, and may hold the Application Identifier |
| NF Consumer Information | OC | This field holds the information of the NEF that used the charging service |
| Triggers | OC | This field is described in TS 32.298 [3] and holds the NEF specific triggers described in clause 5.4.1.2 |
| List of Multiple Unit Usage | OM | Described in TS 32.298 [3] |
| Record Opening Time | OC | Described in TS 32.298 [3] |
| Duration | M | Described in TS 32.298 [3] |
| Record Sequence Number | OC | Described in TS 32.298 [3] |
| Cause for Record Closing | M | Described in TS 32.298 [3] |
| Local Record Sequence Number | OM | Described in TS 32.298 [3] |
| Record Extensions | OC | Described in TS 32.298 [3] |
| NEF API Charging Information | OM | This field holds the NEF specific information defined in clause 6.3.1.4 |

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| **Third change** |

### 6.3.4 Detailed message format for converged charging

The operation types are listed in the following order: I (Initial) / U (Update)/T (Termination)/E (Event). Therefore, when all Operation types are possible it is marked as IUTE. If only some operation types are allowed for a node, only the appropriate letters are used ( e.g., IUT or E) as indicated in the table heading. The omission of an operation type for a particular field is marked with "-" ( e.g., I-E). Also, when an entire field is not allowed in a node the entire cell is marked as "-".

Table 6.3.4.1 illustrates the basic structure of the supported fields in the Charging Data Request for exposure function API online charging.

Table 6.3.4.1: Supported fields in Charging Data Request message

| Information Element | Node Type | NEF |
| --- | --- | --- |
| Supported Operation Types | IUTE |
| Session Identifier | | I-TE |
| Subscriber Identifier | | I-TE |
| Tenant Identifier | | I-TE |
| NF Consumer Identification | | I-TE |
| Charging Identifier | | I-TE |
| Invocation Timestamp | | I-TE |
| Invocation Sequence Number | | I-TE |
| Retransmission Indicator | | - |
| One-time Event | | ---E |
| One-time Event Type | | ---E |
| Notify URI | | I--- |
| Supported Features | | I--E |
| Triggers | | I-TE |
| Multiple Unit Usage | | I-TE |
| NEF API Charging Information | | |
| External Individual Identifier | | I-TE |
| External Individual Id List | | ITE |
| Internal Individual Identifier | | ITE |
| Internal Individual Id List | | ITE |
| External Group Identifier | | I-TE |
| Internal Group Identifier | | I-TE |
| API Direction | | I-TE |
| API Target Network Function | | I-TE |
| API Result Code | | I-TE |
| API Name | | I-TE |
| API Operation | | ITE |
| API Reference | | I-TE |
| API Content | | I-TE |

Table 6.3.4.2 illustrates the basic structure of the supported fields in the Charging Data Response for exposure function API converged charging.

Table 6.3.4.2: Supported fields in *Charging Data Response* Message

| Information Element | Node Type | NEF |
| --- | --- | --- |
| Supported Operation Types | IUTE |
| Session Identifier | | I-TE |
| Invocation Timestamp | | I-TE |
| Invocation Result | | I-TE |
| Invocation Sequence Number | | I-TE |
| Session Failover | | I-TE |
| Supported Features | | I--E |
| Triggers | | - |
| Multiple Unit Information | | I--E |