**3GPP TSG SA WG5 Meeting #155 *S5-243034***

Jeju, South Korea, 27 - 31 May 2024

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **32.254** | **CR** | **0049** | **rev** | **1** | **Current version:** | **18.2.0** |  |
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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:*** | Rel-18 CR 32.254 Add tenant identifier and correct charging information for 5G VN group management charging | | | | | | | | | |
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| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI18, 5GLAN\_CH | | | | |  | ***Date:*** | | | 2024-05-30 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *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 o. | | | | | | | | *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:*** | | 1. “Tenant identifier” is introduced in Release 18 to be part of the common IEs in TS 32.290 table 7.1. This field contains the identification of the business subscriber that uses the requested service.  Based on the 5G VN group management charging principle defined in Annex B.2.3.1, “The 5G VN group management charging information is collected per VN group”. The common IE Tenant identifier can be used for this scenario to hold the business subscriber identification.  2. TR 28.286 concluded on Solution #6.10: Only Applicable Common IEs should be reflected in common part description compared to TS 32.290.  3. Based on the conclusion of triggers mechanism (S5-237838 and S5-241623), the triggers for IEC, PEC and ECUR which can be linked and stated in the service special charging information are not required to be reported to CHF. | | | | | | | | |
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| ***Summary of change:*** | | 1. Add Tenant Identifier in Table B.2.4.1-2, Table B.2.4.1-4, Table B.2.4.3-1.  2. Remove not applicable IE and expand applicable sub-fields in Table B.2.4.1-2, Table B.2.4.1-3, Table B.2.4.3-1, Table B.2.4.3-2.  3. Remove trigger in Table B.2.4.1-2, Table B.2.4.1-3, Table B.2.4.3-1, Table B.2.4.3-2. | | | | | | | | |
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| ***Consequences if not approved:*** | | The 5G VN group management charging is incomplete, due to the absence of business subscriber identification. | | | | | | | | |
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| ***Clauses affected:*** | | B.2.4.1, B.2.4.3 | | | | | | | | |
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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:*** | | Revision of S5-242732 | | | | | | | | |

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| **First change** |

### B.2.4.1 Data description for 5G VN group management charging

The Charging Data Request and Charging Data Response are specified in subclause 5.1.2.2.1 of TS 32.290 [57].

Table B.2.4.1-1 describes the use of these messages for 5G VN group management charging.

Table B.2.4.1-1: 5G LAN VN group management messages reference table

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| --- | --- | --- |
| **Message** | **Source** | **Destination** |
| Charging Data Request | CEF/NEF | CHF |
| Charging Data Response | CHF | CEF/NEF |

Table B.2.4.1-2 illustrates the basic structure of a Charging Data Request message from the CEF as used for 5G VN group management charging.

Table B.2.4.1-2: Charging Data Request message contents

| **Information Element** | **Category for converged charging** | **Description** |
| --- | --- | --- |
| Session Identifier | OC | Described in TS 32.290 [57] |
| Tenant Identifier | OC | Described in TS 32.290 [57] |
| NF Consumer Identification | OC | Described in TS 32.290 [57] |
| NF Functionality | M | Described in TS 32.290 [57] |
| NF Name | OC | Described in TS 32.290 [57] |
| NF Address | OC | Described in TS 32.290 [57] |
| NF PLMN ID | OC | 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] |
| One-time Event | OC | Described in TS 32.290 [57] |
| One-time Event Type | OC | Described in TS 32.290 [57] |
| Retransmission Indicator | OC | Described in TS 32.290 [57] |
| Supported Features | OC | Described in TS 32.290 [57] |
| Service Specification Information | OC | Described in TS 32.290 [57] |
| 5G VNGM Charging Information | OM | This field is mapped to the NEF API Charging information defined in clause 6.3 for 5G VN group management charging |

Table B.2.4.1-3 illustrates the basic structure of a Charging Data Response message from the CHF to CEF as used for 5G VN group management charging.

Table B.2.4.1-3: Charging Data Response message contents

| **Information Element** | **Category for converged charging** | **Description** |
| --- | --- | --- |
| Session Identifier | OC | Described in TS 32.290 [57] |
| Invocation Timestamp | M | Described in TS 32.290 [57] |
| Invocation Result | OC | Described in TS 32.290 [57] |
| Invocation Result | OC | Described in TS 32.290 [57] |
| Failed parameter | OC | Described in TS 32.290 [57] |
| Failure Handling | OC | Described in TS 32.290 [57] |
| Invocation Sequence Number | M | Described in TS 32.290 [57] |
| Supported Features | OC | Described in TS 32.290 [57] |

Details of the Ga message contents are specified in TS 32.295 [54].

The following table B.2.4.1-4 provide a brief description of each CDR parameter. The category in the tables is used according to the charging data configuration defined in clause 5.4. Full definitions of the CDR parameters, sorted by the name in alphabetical order, are provided in TS 32.298 [51].

Table B.2.4.1-4 5G VN group management 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 CEF id. |
| Tenant Identifier | OC | Described in TS 32.298 [57]. |
| NF Consumer Information | M | This field holds the information of the entity that used the charging service (i.e. NF consumer (CTF), CEF). |
| NF Functionality | M | This field contains the function of the entity: Service Producer (CTF) or CEF |
| NF Name | OC | This field holds the name of the entity. |
| NF Address | OC | This field holds the IP Address of the entity |
| NF PLMN ID | OC | This field holds the PLMN identifier (MCC MNC) of the entity. |
| Record Opening Time | M | Described in TS 32.298 [57] |
| Duration | M | Described in TS 32.298 [57] |
| Record Sequence Number | C | Described in TS 32.298 [57] |
| Cause for Record Closing | M | Described in TS 32.298 [57] |
| Diagnostics | OM | Described in TS 32.298 [57] |
| Local Record Sequence Number | OM | Described in TS 32.298 [57] |
| Record Extensions | OC | Described in TS 32.298 [57] |
| 5G VNGM Charging Information | OM | This field is mapped to the NEF API Charging information defined in clause 6.3 for 5G VN group management charging. |

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| **Next change** |

### B.2.4.3 Detailed message format for converged charging

The following clause specifies per Operation Type the charging data that are sent by CEF for 5G VN group management converged charging.

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

Table B.2.4.3-1 defines the basic structure of the supported fields in the *Charging Data Request* message for CEF converged charging.

Table B.2.4.3-1: Supported fields in *Charging Data Request* message

| Information Element | Analytics and Performance | CEF |
| --- | --- | --- |
| Supported Operation Types | E |
| Session Identifier | | E |
| Tenant Identifier | | E |
| NF Consumer Identification | | E |
| NF Functionality | | E |
| NF Name | | E |
| NF Address | | E |
| NF PLMN ID | | E |
| Invocation Timestamp | | E |
| Invocation Sequence Number | | E |
| One-time Event | | E |
| One-time Event Type | | E |
| Retransmission Indicator | | E |
| Supported Features | | E |
| Service Specification Information | | E |
| 5G VNGM Charging Information | | E |

Table B.2.4.3-2 defines the basic structure of the supported fields in the *Charging Data Response* message for CEF converged charging.

Table B.2.4.3-2: Supported fields in *Charging Data Response* message

| Information Element | **Analytics and Performance** | CEF |
| --- | --- | --- |
| Supported Operation Types | E |
| Session Identifier | | E |
| Invocation Timestamp | | E |
| Invocation Result | | E |
| Invocation Result | | E |
| Failed parameter | | E |
| Failure Handling | | E |
| Invocation Sequence Number | | E |
| Supported Features | | E |

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| **End of change** |