**3GPP TSG-SA5 Meeting #154 *S5-241859***

**Changsha, CHINA, 15 Apr - 19 Apr 2024**  Revision of S5-241624

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **28.201** | **CR** | **0013** | **rev** | **1** | **Current version:** | **18.0.0** |  |
|  |
| *For* [***HELP***](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 28.201 Clarification on triggers for NSPA message content |
|  |  |
| ***Source to WG:*** | Huawei |
| ***Source to TSG:*** | S5 |
|  |  |
| ***Work item code:*** | TEI18 |  | ***Date:*** | 2024-04-17 |
|  |  |  |  |  |
| ***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 canbe 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)* |
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| Reason for change: | 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. For the IEC and PEC, the Session Identifier is not applicable in the Charging Data Request, but can be included in the Charging Data Response. For the ECUR, the Session Identifier is not applicable in the Charging Data Request [Initial], but can be included in the Charging Data Response and Charging Data Request [Termination].For the NSPA PEC charging, the Invocation Sequence Number should be used and Session Failover is not required.TR 28.286 concluded on Solution #6.10: Only Applicable Common IEs should be reflected in common part description compared to TS 32.290. |
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| ***Summary of change:*** | Clarify the triggers in the NSPA message content.Correct the Session Identifier, Invocation Sequence Number and Session Failover in the NSPA message content.Remove not applicable IEs and Expand the sub-fields in the message content. |
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| ***Consequences if not approved:*** | The triggers for NSPA charging is unclear. |
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| ***Clauses affected:*** | 6.1.1.2, 6.1.1.3, 6.1.3.2, 6.2.3 |
|  |  |
|  | **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's revision history:*** |  |

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| **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 CEF as used for performance and analytics based charging.

Table 6.1.1.2-1: Charging Data Request message contents

| Information Element | Category for converged charging | Description |
| --- | --- | --- |
|  |  |  |
|  |  |  |
| Tenant Identifier | OM | This field if present is the identifier of subscriber of network slice. |
| NF Consumer Identification | M | 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]. |
|  |  |  |
| Service Specification Information | OC | Described in TS 32.290 [57]. |
|  |  |  |
| Multiple Unit Usage  | OC | Described in TS 32.290 [57], with the exception that quota management is not applicable. |
| Rating Group | M | Described in TS 32.290 [57] |
|  |  |  |
| Used Unit Container | OC | Described in TS 32.290 [57] |
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| Local Sequence Number  | OM | Described in TS 32.290 [57] |
| NSPA Container Information  | OC | This field holds the network slice performance and analytics container specific information described in clause 6.2.1.3. |
| NSPA Charging Information | OC | This field holds the network slice information, which is reported to the CHF described in clause 6.2.1.2. |

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| **Next change** |

#### 6.1.1.3 Charging data response message

Table 6.1.1.3-1 illustrates the basic structure of a Charging Data Response message from the CHF as used for performance and analytics based charging.

Table 6.1.1.3-1: 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 Sequence Number | M | Described in TS 32.290 [57]. |
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| **Next change** |

#### 6.1.3.2 Network slice performance and analytics CHF CDR data

If enabled, network slice performance and analytics CDRs shall be produced for each network slice (i.e. S-NSSAI).

The fields of network slice performance and analytics CHF CDR are specified in table 6.1.3.2-1.

Table 6.1.3.2-1: Network slice performance and analytics 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. |
| Tenant Identifier | OM | This field if present is the identifier of subscriber of network slice.. |
| NF Consumer Information | M | This field holds the information of the CEF that used the charging service. |
| NF Functionality | M | This field contains the function of the node (i.e. CEF) |
| NF Name | OC | This field holds the name of the CEF used. |
| NF Address | OC | This field holds the IP Address of the CEF used. |
| NF PLMN ID | OC | This field holds the PLMN identifier (MCC MNC) of the CEF. |
| List of Multiple Unit Usage  | OM | This field holds a list of changes in charging conditions for one single Network Slice Selection Assistance. The list is categorized per rating group. Each change is time stamped.  |
| Rating Group | OM | This filed holds the rating group.  |
| Used Unit Container | OC | This field holds the information connected to the reported network slice. |
|  |  |  |
|  |  |  |
| Local Sequence Number | M | This field holds the container sequence number. |
| NSPA Container Information | OC | This field holds the network slice performance and analytics container specific information described in clause 6.2.1.3. |
| NSPA Charging Information | OM | This field holds the network slice performance and analytics charging information defined in clause 6.2.1.2. |
| 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]. |
| Local Record Sequence Number | OM | Described in TS 32.298 [57]. |
| Record Extensions | OC | Described in TS 32.298 [57]. |

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| **Next change** |

### 6.2.3 Detailed message format for converged charging

The following clause specifies per Operation Type the charging data that are sent by CEF for network slice performance and analytics 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 6.2.3-1 defines the basic structure of the supported fields in the *Charging Data Request* message for CEF converged charging.

Table 6.2.3-1: Supported fields in *Charging Data Request* message

| Information Element | Performance and Analytics  | CEF |
| --- | --- | --- |
| Supported Operation Types | E |
|  |  |
|  |  |
| Tenant Identifier | E |
| NF Consumer Identification | E |
| Invocation Timestamp | E |
| Invocation Sequence Number | E |
|  |  |
| One-time Event | E |
| One-time Event Type | E |
|  |  |
|  |  |
| Multiple Unit Usage | E |
| Rating Group | E |
| Used Unit Container | E |
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| Local Sequence Number  | E |
| NSPA Container Information  | E |
| NSPA Charging Information |
| Single NSSAI | E |

Table 6.2.3-2 defines the basic structure of the supported fields in the *Charging Data Response* message for CEF converged charging.

Table 6.2.3-2: Supported fields in *Charging Data Response* message

| Information Element | **Performance and Analytics** | CEF |
| --- | --- | --- |
| Supported Operation Types | E |
| Session Identifier | E |
| Invocation Timestamp | E |
| Invocation Result | E |
| Invocation Sequence Number | E |
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| **End of change** |