**3GPP TSG-SA5 Meeting #154 *S5-241847***

**Changsha, CHINA, 15 Apr - 19 Apr 2024**  Revision of S5-241626

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **28.203** | **CR** | **0003** | **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)*.* | | | | | | | | |
|  | | | | | | | | |

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

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Rel-18 CR 28.203 Clarification on triggers for NSACF | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, Matrixx Software | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NETSLICE\_CH\_Ph2 | | | | |  | ***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 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: | | Based on the conclusion of triggers mechanism (S5-237838 and S5-241623), the triggers for IEC, PEC and ECUR which can be linked an existing Information Element specified in the service special charging information are not required to be reported to CHF. The triggers for SCUR are required to be reported to CHF. For NSACF explicit Triggers are needed since no servie specific Information Element can be used.  TR 28.286 concluded on Solution #6.10: Only Applicable Common IEs should be reflected in common part description compared to TS 32.290. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Clarify the triggers in the NSACF message content. The trigger in the message level is not applicable  Remove not applicable IEs from Table 6.1.1.2-1,Table 6.1.1.3-1, Table 6.2.2-1 and Table 6.2.2-2  Expand the sub-fields in 6.2.2 tables | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The triggers for NSACF charging is unclear. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.1.2,6.1.3,6.2.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

|  |
| --- |
| **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 NSACF as used for network slice admission control.

Table 6.1.1.2-1: Charging Data Request message contents

| Information Element | Converged Charging  Category | | Description | |
| --- | --- | --- | --- | --- |
| Session Identifier | OC | | Described in 3GPP TS 32.290 [5] | |
| NF Consumer Identification | M | | Described in 3GPP TS 32.290 [5] and holds the identifier of the NSACF | |
| NF Functionality | M | | Described in 3GPP TS 32.290 [5]. | |
| NF Name | OC | | Described in 3GPP TS 32.290 [5]. | |
| NF Address | OC | | Described in 3GPP TS 32.290 [5]. | |
| NF PLMN ID | OC | | Described in 3GPP TS 32.290 [5]. | |
| Charging Identifier | OM | | Described in 3GPP TS 32.290 [5]. | |
| Invocation Timestamp | M | | Described in 3GPP TS 32.290 [5]. | |
| Invocation Sequence Number | M | | Described in 3GPP TS 32.290 [5]. | |
| Retransmission Indicator | OC | | Described in 3GPP TS 32.290 [5]. | |
| One-time Event | OC | | Described in 3GPP TS 32.290 [5]. | |
| One-time Event Type | OC | | Described in 3GPP TS 32.290 [5]. | |
| Notify URI | OC | | Described in 3GPP TS 32.290 [5]. | |
| Supported Features | OC | | Described in 3GPP TS 32.290 [5]. | |
| Service Specification Information | OC | | Described in 3GPP TS 32.290 [5]. | |
| Multiple Unit Usage | OM | | Described in 3GPP TS 32.290 [5]. | |
| Rating Group | OM | | Described in 3GPP TS 32.290 [5]. | |
| Allocate Unit | OC | This field holds the new allowed units to be allocated, overriding previous allowed units. | |
| Allocate Unit Indicator | OM | This field indicates on whether the allowed units to be allocated are determined by CHF or supplied by the NSACF. | |
| NSAC Container Information | OC | | This field holds the network slice admission control specific Allocate Unit described in clause 6. 2.1.3. | |
| Allocated Unit | OC | This field holds the Allocated Unit. | | |
| Quota management Indicator | OC | Described in 3GPP TS 32.290 [5]. | |
| Triggers | OC | Described in 3GPP TS 32.290 [5]. | |
| Trigger Timestamp | OC | Described in 3GPP TS 32.290 [5]. | |
| Local Sequence Number | OM | | Described in 3GPP TS 32.290 [5]. | |
| NSAC Container Information | OC | This field holds the network slice admission control specific units in use described in clause 6.2.1.3. | |
| S NSSAI | M | | This field holds the Single Network Slice Selection Assistance Information identifying the network slice. | |
| NSAC Charging Information | OM | | This field holds NSAC specific information described in clause 6.2.1.2 | |

|  |
| --- |
| **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 to the NSACF as used for network slice admission control.

Table 6.1.1.3-1: Charging Data Response message contents

| Information Element | Converged Charging  Category | Description |
| --- | --- | --- |
| Session Identifier | OC | Described in 3GPP TS 32.290 [5]. |
| Invocation Timestamp | M | Described in 3GPP TS 32.290 [5]. |
| Invocation Result | OC | Described in 3GPP TS 32.290 [5]. |
| Invocation Sequence Number | OM | Described in 3GPP TS 32.290 [5]. |
| Session Failover | OC | Described in 3GPP TS 32.290 [5]. |
| Supported Features | OC | Described in 3GPP TS 32.290 [5]. |
| Multiple Unit Information | OC | Described in 3GPP TS 32.290 [5]. |
| Result Code | OC | Described in 3GPP TS 32.290 [5]. |
| Rating Group | OM | Described in 3GPP TS 32.290 [5]. |
| Allocated Unit | OC | This field holds the Allocated Unit. |
| NSAC Container Information | OC | This field holds the network slice admission control specific Allocated Unit described in clause 6.2.1.3. |
| Validity Time | OC | Described in 3GPP TS 32.290 [5]. |
| Triggers | OC | Described in 3GPP TS 32.290 [5] and holds the network slice admission control specific triggers described in clause 5.2.1. |

|  |
| --- |
| **Next change** |

### 6.2.2 Detailed message format for converged charging

The following clause specifies per Operation Type the charging data that are sent by NSACF for Network Slice Admission Control 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 (i.e. IUT or E) as indicated in the table heading. The omission of an Operation Type for a particular field is marked with "-" (i.e. IU-E). Also, when an entire field is not allowed in a node the entire cell is marked as "-".

Table 6.2.2-1 defines the basic structure of the supported fields in the *Charging Data Request* message for Network Slice Admission Control converged charging.

Table 6.2.2-1: Supported fields in Charging Data Request message

| Information Element | Functionality of NSACF | Network Slice Admission Control |
| --- | --- | --- |
| Supported Operation Types | I/U/T/E |
| Session Identifier | | IUT- |
| NF Consumer Identification | | IUTE |
| NF Functionality | | IUTE |
| NF Name | | IUTE |
| NF Address | | IUTE |
| NF PLMN ID | | IUTE |
| Charging Identifier | | IUT- |
| Invocation Timestamp | | IUTE |
| Invocation Sequence Number | | IUTE |
| Retransmission Indicator | | IUT- |
| One-time Event | | E |
| One-time Event Type | | E |
| Notify URI | | IU-- |
| Supported Features | | IUTE |
| Service Specification Information | | IUTE |
| Multiple Unit Usage | | IUTE |
| Rating Group | | IUTE |
| Allocate Units | | IU-- |
| NSAC Container Information | | IU-- |
| Allocated Unit | | IUTE |
| Quota management Indicator | | -UT- |
| Triggers | | IUTE |
| Trigger Timestamp | | IUTE |
| NSAC Container Information | | IUTE |
| Local Sequence Number | | IUTE |
| S NSSAI | | IUTE |
| NSAC Charging Information | | IUTE |

Table 6.2.2-2 defines the basic structure of the supported fields in the *Charging Data Response* message for Network Slice Admission Control converged charging.

Table 6.2.2-2: Supported fields in Charging Data Response message

| Information Element | Functionality of NSACF | Network Slice Admission Control |
| --- | --- | --- |
| Supported Operation Types | I/U/T/E |
| Session Identifier | | IUT- |
| Invocation Timestamp | | IUTE |
| Invocation Result | | IUTE |
| Invocation Sequence Number | | IUTE |
| Session Failover | | IUTE |
| Supported Features | | IUTE |
| Multiple Unit Information | | IU-- |
| Result Code | | IU-- |
| Rating Group | | IU-- |
| Allocated Units | | IU-- |
| NSAC Container Information | | IU-- |
| Validity Time | | IU-- |
| Triggers | | IU-- |
| NSAC Container Information | | IU-- |

|  |
| --- |
| **End of change** |