**§3GPP TSG-SA5 Meeting #131e *S5-203223***

**e-meeting 25th May-3rd June 2020**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **32.255** | **CR** | **0234** | **rev** | **1** | **Current version:** | **16.4.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

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

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Correcting of PDU session information in charging data response | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI16, 5GS\_Ph1-SBI\_CH | | | | |  | ***Date:*** | | | 2020-05-15 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The PDU session information cannot contain any information in the response and the setting for the corresponding supported field is inconsistent | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Making the PDU session information not possible to send in the response. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The PDU Session Information cannot be sent empty and the spec is inconsistent. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 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 32.291 CR 0240 | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

|  |
| --- |
| **First change** |

### 6.2.2 Detailed message format for converged charging

The following clause specifies per Operation Type the charging data that are sent by SMF for 5G data connectivity converged charging or offline only 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 5G data connectivity converged charging or offline only charging.

Table 6.2.2.1: Supported fields in *Charging Data Request* message

| Information Element | | Functionality of SMF | FBC | | QBC | | FBC | | QBC | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Charging Service | Converged Charging | | Converged Charging | | Offline Only Charging | | Offline Only Charging | |
| Supported Operation Types | I/U/T/E | | I/U/T/E | | I/U/T/E | | I/U/T/E | |
| Session Identifier | | | -UT- | | -UT- | | -UT- | | -UT- | |
| Subscriber Identifier | | | IUT- | | IUT- | | IUT- | | IUT- | |
| NF Consumer Identification | | | IUT- | | IUT- | | IUT- | | IUT- | |
| Invocation Timestamp | | | IUT- | | IUT- | | IUT- | | IUT- | |
| Invocation Sequence Number | | | IUT- | | IUT- | | IUT- | | IUT- | |
| Notify URI | | | IU- | | IU- | | IU- | | IU- | |
| Service Specification Information | | | IUT- | | IUT- | | IUT- | | IUT- | |
| Triggers | | | -UT- | | -UT- | | -UT- | | -UT- | |
| Multiple Unit Usage | | | IUT- | | - | | IUT- | | - | |
| Rating Group | | | IUT- | | - | | IUT- | | - | |
| Requested Unit | | | IU-- | | - | | - | | - | |
| Used Unit Container | | | -UT- | | - | | -UT- | | - | |
| Triggers | | | -UT- | | - | | -UT- | | - | |
| PDU Container Information | | | -UT- | | - | | -UT- | | - | |
| UPF ID | | | IUT- | | IUT- | | IUT- | | IUT- | |
| PDU Session Charging Information | | | IUT- | | IUT- | | IUT- | | IUT- | |
| Charging Id | | | IUT- | | IUT- | | IUT- | | IUT- | |
| Home Provided Charging Id | | | -UT- | | -UT- | | -UT- | | -UT- | |
| User Information | | | IUT- | | IUT- | | IUT- | | IUT- | |
| User Location Info | | | IUT- | | IUT- | | IUT- | | IUT- | |
| UE Time Zone | | | IUT- | | IUT- | | IUT- | | IUT- | |
| Presence Reporting Area Information | | | -UT- | | -UT- | | -UT- | | -UT- | |
| PDU Session Information | | | IUT- | | IUT- | | IUT- | | IUT- | |
| PDU Session ID | | | IUT- | | IUT- | | IUT- | | IUT- | |
| Network Slice Instance Identifier | | | IUT- | | IUT- | | IUT- | | IUT- | |
| PDU Type | | | IUT- | | IUT- | | IUT- | | IUT- | |
| PDU Address | | | IUT- | | IUT- | | IUT- | | IUT- | |
| SSC Mode | | | IUT- | | IUT- | | IUT- | | IUT- | |
| SUPI PLMN ID | | | IUT- | | IUT- | | IUT- | | IUT- | |
| Serving Network Function ID | | | IUT- | | IUT- | | IUT- | | IUT- | |
| Serving CN PLMN ID | | | IUT- | | IUT- | | IUT- | | IUT- | |
| RAT Type | | | IUT- | | IUT- | | IUT- | | IUT- | |
| Data Network Name Identifier | | | IUT- | | IUT- | | IUT- | | IUT- | |
| DNN Selection Mode | | | IUT- | | IUT- | | IUT- | | IUT- | |
| Authorized QoS Information | | | IUT- | | IUT- | |  | |  | |
| Subscribed QoS Information | | | IUT- | | IUT- | |  | |  | |
| Authorized Session-AMBR | | | IUT- | | IUT- | |  | |  | |
| Subscribed Session-AMBR | | | IUT- | | IUT- | |  | |  | |
| PDU session start Time | | | I--- | | I--- | | I--- | | I--- | |
| PDU session stop Time | | | --T- | | --T- | | --T- | | --T- | |
| Diagnostics | | | --T- | | --T- | | --T- | | --T- | |
| Charging Characteristics | | | IUT- | | IUT- | | IUT- | | IUT- | |
| Charging Characteristics Selection Mode | | | IUT- | | IUT- | | IUT- | | IUT- | |
| 3GPP PS Data Off Status | | | IUT- | | IUT- | | IUT- | | IUT- | |
| Session Stop Indicator | | | --T- | | --T- | | --T- | | --T- | |
| Unit Count Inactivity Timer | | | IU-- | | - | | IU-- | | - | |
| RAN Secondary RAT Usage Report | | | -UT- | | -UT- | | -UT- | | -UT- | |
| Roaming QBC information | | | - | | IUT- | | - | | IUT- | |
| Multiple QFI container | | | - | | IUT- | | - | | IUT- | |
| UPF ID | | | - | | IUT- | | - | | IUT- | |
| Roaming Charging Profile | | | - | | IU-- | | - | | IU-- | |

Table 6.2.2.2 defines the basic structure of the supported fields in the *Charging Data* Response message for 5G data connectivity converged charging or offline only charging.

Table 6.2.2.2: Supported fields in *Charging Data Response* message

| **Information Element** | **Functionality of SMF** | **FBC** | **QBC** | | **FBC** | | **QBC** | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Charging Service** | **Converged Charging** | **Converged Charging** | | **Offline Only Charging** | | **Offline Only Charging** | |
| **Supported Operation Types** | **I/U/T/E** | **I/U/T/E** | | **I/U/T/E** | | **I/U/T/E** | |
| Session Identifier | | I--- | I--- | | I--- | | I--- | |
| Invocation Timestamp | | IUT- | IUT- | | IUT- | | IUT- | |
| Invocation Result | | IUT- | IUT- | | IUT- | | IUT- | |
| Invocation Sequence Number | | IUT- | IUT- | | IUT- | | IUT- | |
| Session Failover | | IU-- | IUT- | | IU-- | | IUT- | |
| Triggers | | IU-- | IU-- | | IU-- | | IU-- | |
| Multiple Unit information | | IU-- | - | | IU-- | | - | |
| Result Code | | IU-- | - | | IU-- | | - | |
| Rating Group | | IU-- | - | | IU-- | | - | |
| UPF ID | | IU-- | - | | IU-- | | - | |
| Granted Unit | | IU-- | - | | - | | - | |
| Validity Time | | IU-- | - | | - | | - | |
| Final Unit Indication | | IU-- | - | | - | | - | |
| Time Quota Threshold | | IU-- | - | | - | | - | |
| Volume Quota Threshold | | IU-- | - | | - | | - | |
| Unit Quota Threshold | | IU-- | - | | - | | - | |
| Quota Holding Time | | IU-- | - | | - | | - | |
| Triggers | | IU-- | - | | IU-- | | - | |
| PDU Session Charging Information | | IU-- | IU-- | | IU-- | | IU-- | |
| Charging Id | | - | - | | - | | - | |
| Home Provided Charging Id | | - | - | | - | | - | |
| User Information | | - | - | | - | | - | |
| User Location Info | | - | - | | - | | - | |
| UE Time Zone | | - | - | | - | | - | |
| Presence Reporting Area Information | | IU-- | IU-- | | IU-- | | IU-- | |
| PDU Session Information | | - | - | | - | | - | |
| PDU Session ID | | - | - | | - | | - | |
| Network Slice Instance Identifier | | - | - | | - | | - | |
| PDU Type | | - | - | | - | | - | |
| PDU Address | | - | - | | - | | - | |
| SSC Mode | | - | - | | - | | - | |
| SUPI PLMN ID | | - | - | | - | | - | |
| Serving Network Function ID | | - | - | | - | | - | |
| Serving CN PLMN ID | | - | - | | - | | - | |
| RAT Type | | - | - | | - | | - | |
| Data Network Name Identifier | | - | - | | - | | - | |
| DNN Selection Mode | | - | - | | - | | - | |
| Authorized QoS Information | | - | - | | - | | - | |
| Subscribed QoS Information | | - | - | | - | | - | |
| Authorized Session-AMBR | | - | - | | - | | - | |
| Subscribed Session-AMBR | | - | - | | - | | - | |
| PDU session start Time | | - | - | | - | | - | |
| PDU session stop Time | | - | - | | - | | - | |
| Diagnostics | | - | - | | - | | - | |
| Charging Characteristics | | - | - | | - | | - | |
| Charging Characteristics Selection Mode | | - | - | | - | | - | |
| Charging Rule Base Name | | - | - | | - | | - | |
| 3GPP PS Data Off Status | | - | - | | - | | - | |
| Session Stop Indicator | | - | - | | - | | - | |
| Unit Count Inactivity Timer | | IU-- | - | | - | | - | |
| RAN Secondary RAT Usage Report | | - | - | | - | | - | |
| Roaming QBC information | | - | IU-- | | - | | IU-- | |
| Multiple QFI container | | - | - | | - | | - | |
| UPF ID | | - | - | | - | | - | |
| Roaming Charging Profile | | - | IU-- | | - | | IU-- | |

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| **End of changes** |