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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **3GPP TSG-SA5 Meeting #142-e *S5-222314rev1***  **e-meeting, 4 - 12 April 2022**   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | *CR-Form-v12.1* | | | | | | | | | | **CHANGE REQUEST** | | | | | | | | | |  | | | | | | | | | |  | **32.277** | **CR** |  | **rev** | **-** | **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** |
|  | | | | | | | | | | | | | | | | | |
| ***Title:*** | Introduction of Detailed message format for converged charging | | | | | | | | | | | | | | | | |
|  |  | | | | | | | | | | | | | | | | |
| ***Source to WG:*** |  | | | | | | | | | | | | | | | | |
| ***Source to TSG:*** | SA5 | | | | | | | | | | | | | | | | |
|  |  | | | | | | | | | | | | | | | | |
| ***Work item code:*** | 5G\_ProSe | | | | | | | | |  | ***Date:*** | | |  | | | |
|  |  | | | | |  | | | | |  | | |  | | | |
| ***Category:*** | **B** |  | | | | | | | | | ***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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | | | | |
|  |  | | | | | | | | | | | | | | | | |
| ***Reason for change:*** | | The charging information over Nchf for 5G ProSe converged charging is missing | | | | | | | | | | | | | | | |
|  | |  | | | | | | | | | | | | | | | |
| ***Summary of change:*** | | Introduce 5G ProSe information over Nchf | | | | | | | | | | | | | | | |
|  | |  | | | | | | | | | | | | | | | |
| ***Consequences if not approved:*** | | No charging for 5G ProSe. | | | | | | | | | | | | | | | |
|  | |  | | | | | | | | | | | | | | | |
| ***Clauses affected:*** | | 6.x.3(new) | | | | | | | | | | | | | | | |
|  | |  | | | | | | | | | | | | | | | |
|  | | **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 needs to be implemented after CR#00xy (inside chapter 6.x of CR#00xy\_S5-222313) | | | | | | | | | | | | | | | |
|  | |  | | | | | | | | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | | | | | | | | |

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| --- |
| **1st modified section** |

### 6.x.3 Detailed message format for converged charging

The following clause specifies per Operation Type the charging data for 5G ProSe 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.x.3.1 illustrates the basic structure of the supported fields in the Charging Data Request for 5G ProSe converged charging.

Table 6.x.3.1: Supported fields in Charging Data Request message

| Information Element | Node Type | Direct  Discovery | Direct  Communication | |
| --- | --- | --- | --- | --- |
| Supported Operation Types | I/U/T/E | I/U/T/E |
| Session Identifier | | --E | IUTE | |
| Subscriber Identifier | | --E | IUTE | |
| NF Consumer Identification | | --E | IUTE | |
| Invocation Timestamp | | --E | IUTE | |
| Invocation Sequence Number | | --E | IUTE | |
| Retransmission Indicator | | --- | --- | |
| One-time Event | | --E | --E | |
| One-time Event Type | | --E | --E | |
| Notify URI | | I-- | I-- | |
| Triggers | | --E | IUTE | |
| Multiple Unit Usage | | --E | IUTE | |
| **Service Information with ProSe Information** | | | | |
| Announcing PLMN ID | | ---E | - | |
| Announcing UE HPLMN Identifier | | ---E | - | |
| Announcing UE VPLMN Identifier | | ---E | - | |
| Monitoring UE HPLMN Identifier | | ---E | - | |
| Monitoring UE VPLMN Identifier | | ---E | - | |
| Discoverer UE HPLMN Identifier | | ---E | - | |
| Discoverer UE VPLMN Identifier | | ---E | - | |
| Discoveree UE HPLMN Identifier | | ---E | - | |
| Discoveree UE VPLMN Identifier | | ---E | - | |
| Monitored PLMN Identifier | | ---E | - | |
| ProSe Application ID | | ---E | - | |
| Application ID | | ---E | IUTE | |
| Application Specific Data | | - | IUTE | |
| ProSe functionality | | ---E | IUTE | |
| ProSe Event Type | | ---E | - | |
| Direct Discovery Model | | ---E |  | |
| Validity Period | | ---E |  | |
| Role of UE | | ---E |  | |
| ProSe Request Timestamp | | ---E |  | |
| PC3 Protocol Cause | | ---E |  | |
| Monitoring UE Identifier | | ---E |  | |
| Requested Application Layer User ID | | ---E |  | |
| Requested PLMN Identifier | | ---E |  | |
| Time Window | | ---E |  | |
| Range Class | | ---E |  | |
| Proximity Alert Indication | | ---E |  | |
| Proximity Alert Timestamp | | ---E |  | |
| Proximity Cancellation Timestamp | | ---E |  | |
| Relay IP address | | - | IUTE | |
| ProSe UE-to-Network Relay UE ID | | - | IUTE | |
| ProSe Destination Layer-2 ID | | - | IUTE | |
| Coverage Info | | - | IUTE | |
| Radio Parameter Set Info | | - | IUTE | |
| Transmitter Info | | - | IUTE | |
| Time of First Transmission | | - | IUTE | |
| Time of First Reception | | - | IUTE | |
| Transmission Data Container | | - | IUTE | |
| Reception Data Container | | - | IUTE | |
| PC5 Radio Technology | | ---E | - | |

Table 6.x.3.2 illustrates the basic structure of the supported fields in the Charging Data Response for 5G ProSe converged charging.

Table 6.x.3.2: Supported fields in *Charging Data Response* Message

| Information Element | Node Type | Direct  Discovery | Direct  Communication | |
| --- | --- | --- | --- | --- |
| Supported Operation Types | I/U/T/E | I/U/T/E |
| Session Identifier | | --E | IUTE | |
| Invocation Timestamp | | --E | IUTE | |
| Invocation Result | | --E | IUTE | |
| Invocation Sequence Number | | --E | IUTE | |
| Session Failover | | - | IUTE | |
| Supported Features | | - | IUTE | |
| Triggers | | I--E | IUTE | |
| Multiple Unit Usage | | --E | IUTE | |
| Result Code | | --E | IUTE | |
| Rating Group | | --E | IUTE | |
| Granted Unit | | --E | IUTE | |
| Tariff Time Change | | --E | IUTE | |
| Time | | --E | IUTE | |
| Total Volume | | --E | IUTE | |
| Uplink Volume | | --E | IUTE | |
| Downlink Volume | | --E | IUTE | |
| Service Specific Units | | --E | IUTE | |
| Validity Time | | --E | IUTE | |
| Final Unit Indication | | --E | IUTE | |
| Time Quota Threshold | | --E | IUTE | |
| Volume Quota Threshold | | --E | IUTE | |
| Unit Quota Threshold | | --E | IUTE | |
| Quota Holding Time | | --E | IUTE | |
| Triggers | | --E | IUTE | |

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| --- |
| **End of changes** |