**3GPP TSG-SA5 Meeting #156 *S5-244488***

**Maastricht, Netherlands, 19 - 23 August 2024**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **32.255** | **CR** | **0549** | **rev** | **1** | **Current version:** | **18.4.0** |  |
|  | | | | | | | | |
| *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-19 CR 32.255 Addition of NRF discovery reference | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson LM | | | | | | | | | |
| ***Source to TSG:*** | SA5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | CHFSeg | | | | |  | ***Date:*** | | | 2024-08-22 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-19 |
|  | *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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The NRF discovery have been updated in TS 32.290. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Adding the reference to NRF discovery handling in TS 32.290. | | | | | | | | |
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| ***Consequences if not approved:*** | | The CHF selection based on NRF will be incomplete. | | | | | | | | |
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| ***Clauses affected:*** | | 5.1.8, and A.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 S5-244138 | | | | | | | | |

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| **First change** |

5.1.8 CHF selection

The CHF selection by the SMF is done at the PDU session establishment, this selection shall be based on the following and with this priority order (highest to lowest):

- PCF provided CHF address(es) with possible associated CHF instance ID(s) and/or CHF set ID(s).

- UDM provided charging characteristics.

- NRF based discovery.

- SMF locally provisioned possibly based on charging characteristics.

The UDM provided charging characteristics may be used to indicate CHF instance ID(s), CHF set ID(s), CHF Group ID. and that NRF based discovery is to be used, for charging characteristics see annex A and NRF based discovery see TS 32.290 [57] clause 6.1.When NRF is used for the CHF selection, and the PDU session charging method indicates "offline only" for the PDU session, CHF instance(s) supporting CHF "offline only" service instances may be selected.

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| **Second change** |

A.1 General

A subscriber may have Charging Characteristics assigned to his subscription and/or his subscribed DNNs. Default Charging Characteristics may also be pre-provisioned on the SMF.

During UE PDU session establishment, when the SMF retrieves subscription data from the UDM, if a subscribed Charging Characteristics for the requested DNN is identified, it may override the SMF pre-provisioned Charging Characteristics.

The Charging Characteristics parameter consists of a string of 16 bits designated as Behaviours (B), freely defined by Operators, as shown in TS 32.298 [51]. Each bit corresponds to a specific charging behaviour which is configured on a per operator basis, and pointed when bit is set to "1" value.

A charging behaviour is defined as an association to a specific usage design:

One usage may consist of a set of trigger profiles associated to the PDU session in converged charging as described in the Table A.1 example:

**Table A.1: Example of Charging Characteristics behaviours for SMF**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | |  | |  | | **PDU session charging** | | | | | | | |
| **Behaviour index** | **Default charging method** | **PDU session charging method** | | **Charging service** | | **CHF selection method** | | **Primary and Secondary CHF**  **addresses** | **Active** | **Time**  **Limit**  **Per PDU session** | **Vol**  **Limit**  **Per PDU session** | **Change**  **Cond.**  **Per PDU session** | **Tariff times** | **…** |
| 0 | Online | - | | Converged charging | | NRF | | URI 1  URI 2 | Yes | 10 min | 1Mb | 2 | 0-7,  7-12 | ... |
| 1 | Offline | - | | Converged charging | | Local config. | | URI 1  URI 2 | Yes | 15  min | 5Mb | 3 | 0-24 | … |
| 2 | Online | - | | Converged charging | | NRF | | URI 1  URI 2 | Yes | 30  min | 2Mb | 2 | 0-7,  7-12 | ... |
| 3 |  | Offline only | | Offline only charging | | Local config. | | URI 1  URI 2 | Yes | 15  min | 1MB | -1 | -0-24 | ... |
| 4 | - | Offline  only | | Converged charging | | Local config. | | URI 1  URI 2 | No | 15  min | 1MB | 1 | 0-24 | … |
| … | … |  | |  | | … | | … | … | … | … | … | … | … |

Associated to the behaviour, the following may also be configured:

- the CHF addresses to be used by the SMF, optionaly with associated CHF instance ID(s) and/or CHF set ID(s);

- the "Default charging method" (online or offline) to be used as the default one for every PCC rules of the PDU Session;

- the PDU session charging method indicating whether the charging method for the PDU session is "offline only".

- charging service.

The "Default charging method", PDU session charging method and CHF addresses with possible associated CHF instance ID(s) and/or CHF set ID(s) configured in the applicable Charging Characteristics behaviour, are superseded by "Default charging method", PDU session charging method and CHF addresses with possible associated CHF instance ID(s) and/or CHF set ID(s) supplied by the PCF if any, during SMF interaction with the PCF at PDU session establishment, as described in TS 23.503 [202].

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| **End of changes** |