**3GPP TSG-SA5 Meeting #158 *S5-246954***

**Orlando, United States, 18th Nov 2024 - 22nd Nov 2024**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  |  | **CR** | **0244** | **rev** | **-** | **Current version:** | **19.1.0** |  |
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| *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** |

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| ***Title:*** | Rel-19 CR 32.290 CHF Segmentation with Supported Features | | | | | | | | | |
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| ***Source to WG:*** | Amdocs, Nokia | | | | | | | | | |
| ***Source to TSG:*** | SA5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | CHFSeg | | | | |  | ***Date:*** | | | 2024-11-20 |
|  |  | | | |  | |  | | |  |
| ***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)* | |
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| ***Reason for change:*** | | Conclusion from the Study on CHF Segmentation in TR 28.840 | | | | | | | | |
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| ***Summary of change:*** | | Specify the use of supported features to support CHF segmentation by charging domains | | | | | | | | |
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| ***Consequences if not approved:*** | | CHF Segmentation by charging domains is not possible | | | | | | | | |
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| ***Clauses affected:*** | | 6.1 | | | | | | | | |
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|  | | **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 0590 | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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| **First Change** |

## 6.1 NF service framework

5G Charging Function supports to interact with NRF, as specified in clause 7.1 of TS 23.501 [201] and clauses 4.17 and 5.2.7 of TS 23.502 [202] to enable following functionalities:

- CHF instance(s) registration, CHF service(s) instance(s) registration in a CHF instance.

- CHF instance(s) update, CHF service(s) instance(s) update in a CHF instance.

- CHF instance(s) deregistration.

- CHF instance(s) and CHF service(s) instance(s) discovery by CHF service consumer.

The services specified in clause 7.2.6 TS 23.501 [201] may be used and the interaction is described in TS 29.510 [300]:

- Nnrf\_NFManagement.

- Nnrf\_NFDiscovery.

- Nnrf\_AccessToken.

The Nnrf\_NFManagement service invoked by CHF for CHF instance(s) and CHF service(s) instance(s) registration described in the TS 29.510 [300] may include in particular:

- The attributes in ChfInfo in NFProfile, as defined in clause 6.1.6.2.32, for example, Range(s) of SUPIs, Range(s) of GPSIs, Range(s) of PLMNs, CHF Group ID.

- The common attributes in NFProfile, as defined in clause 6.1.6.2.2.

- The attributes in NFService, as defined in clause 6.1.6.2.3, for example, locality / extLocality, servingScope, allowedNssais, nfSetIdList that identifies the CHF set ID, nfServiceSetIdList that identifies the CHF service set ID.

The Nnrf\_NFDiscovery service invoked by CHF service consumer for retrieving CHF instance(s) and CHF service(s) instance(s) satisfied a number of filter criteria described in the TS 29.510 [300] may include filter criteria in URI query parameters in particular:

- supi, gpsi, chf-supported-plmn (in the PlmnRange of ChfInfo attribute), group-id-list, as defined in table 6.2.3.2.3.1-1, for discovery from ChfInfo.

- preferred-locality/ext-preferred-locality (service consumer’s own Locality or locally configured Locality in service consumer), serving-scope (the list of areas derived from e.g. the TAI of the UE), requester-snssais, target-nf-set-id, as defined in table 6.2.3.2.3.1-1, for discovery from NFProfile.

- target-nf-service-set-id, as defined in table 6.2.3.2.3.1-1, for discovery from NFService.

A CHF instance is either a part of:

- a primary CHF instance and secondary CHF instance pair, or

- a CHF set, which refers to a group of interchangeable CHF instances of the same type, supporting the same services and the same Network Slice(s), as specified in clause 3.1 TS 23.501, or

- a CHF Group, which refers to one or more CHF instances managing a specific set of SUPIs, as specified in clause 3.1 TS 23.501.

The CHF instance may register itself in NRF with one or more charging domains as ‘supportedFeatures’ for the ‘Nchf\_ConvergedCharging’ Service, as defined in 3GPP TS 32.291 [58]. The NF Consumer can discover the CHF instance providing the Nchf\_ConvergedCharging service for one or more domains, by including the query parameter of ‘required-features’ in the discovery request to NRF, as described in TS 29.510 [300]:

Both the domains and the attributes that are connected to that domain may be included in the list of supported features by the NF Producer i.e. CHF and the NF Consumer e.g. NEF

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| **End of changes** |