**3GPP TSG SA WG5 Meeting #156 *S5-244487***

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

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **32.290** | **CR** | **0237** | **rev** | **1** | **Current version:** | **19.0.0** |  |
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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 Clarify the query attributes for NRF based CHF discovery | | | | | | | | | |
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| ***Source to WG:*** | Huawei, Nokia | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
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| ***Work item code:*** | CHFSeg | | | | |  | ***Date:*** | | | 2024-08-22 |
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| ***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. | | | | | | | | *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)* | |
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| ***Reason for change:*** | | 1. The query attributes used by CHF service consumer to discovery CHF using NRF based discovery service is not exactly the same as the attributes used for CHF registration with NRF. As defined in TS 29.510, there is a set of attributes used for NF registration using Nnrf\_NFManagement service, and there is also a set of query attributes used for NF discovery using Nnrf\_NFDiscovery service. Therefore, the query attribute should be clarified.  2. Some attribute does not align with its attribute name in the referenced TS, e.g. “Range(s) of SUPIs” referring to the supiRangeList in ChfInfo defined in TS 29.510. To avoid potential mismatch, it is better to clearly state the attribute name as it is in the referenced TS.  3. Errors:  - Nnrf\_NFManagement\_NFRegister is not a service name defined in TS 29.510, instead NFRegister is one of the operations in the Nnrf\_NFManagement service. The term should be corrected.  - nfServiceSetIdList is an attribute in NFService, not in NFProfile. | | | | | | | | |
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| ***Summary of change:*** | | 1. Clarify the query attributes used for NRF based CHF discovery.  2. Clarify the attribute used for CHF registration with NRF.  3. Correct errors identified above. | | | | | | | | |
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| ***Consequences if not approved:*** | | The NRF based CHF registration and discovery procedure is not complete. | | | | | | | | |
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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/TR … CR | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | Revision of S5-244010 | | | | | | | | |

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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, supiRangeList (i.e. Range(s) of SUPIs), gpsiRangeList (i.e. Range(s) of GPSIs), plmnRangeList (i.e. Range(s) of PLMNs), groupId (i.e. CHF Group ID).

- The common attributes in NFProfile, as defined in clause 6.1.6.2.2, locality / extLocality, servingScope, allowedNssais, nfSetIdList that identifies the CHF set ID.

- The attributes in NFService, as defined in clause 6.1.6.2.3, 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.

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| **End of change** |