**3GPP TSG SA WG5 Meeting #155 *S5-242993***

Jeju, South Korea, 27 - 31 May 2024

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **32.290** | **CR** | **0228** | **rev** | **1** | **Current version:** | **18.5.0** |  |
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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 Enhance the input for CHF discovery and selection |
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| ***Source to WG:*** | Huawei, Verizon, Nokia  |
| ***Source to TSG:*** | S5 |
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| ***Work item code:*** | Dummy |  | ***Date:*** | 2024-05-30 |
|  |  |  |  |  |
| ***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 canbe found in 3GPP o. | *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:*** | Based on TR 28.840 conclusion, solution #1.3, #1.5, #3.3, #3.4 are recommended and can be supported by existing NRF discovery mechanism specified in TS 29.510.Solution #1.3 and #1.5 support the CHF discovery and selection based on NF consumer location information, re-use the locality/extLocality or servingScope attribute in NF profile.Solution #3.3 and #3.4 support the CHF discovery and selection based on tenant information, which also re-use the existing attribute, i.e. allowed S-NSSAI in NF profile and range of SUPIs in ChfInfo. |
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| ***Summary of change:*** | 1. Extend the list of inputs for CHF invoking the Nnrf\_NFManagement\_NFRegister or Nnrf\_NFDiscovery service. 2. Add the source reference for the listed inputs.  |
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| ***Consequences if not approved:*** | Charging service may not be efficient, since the NF consumer may not be able to select CHF instance with the best matched location or tenant information. |
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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  |
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| ***Other comments:*** |  |
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| ***This CR's revision history:*** | Revision of S5-242750 |

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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\_NFRegister 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 NF Profile, 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 NF Profile, as defined in clause 6.1.6.2.2, for example:

- locality / extLocality.

- servingScope.

- allowedNssais.

- nfSetIdList that identifies the CHF set ID.

- nfServiceSetIdList that identifies the CHF service set ID.

These parameters may also be used by CHF service consumer(s) invoking the Nnrf\_NFDiscovery service for the CHF instance(s) and CHF service(s) instance(s) discovery.

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 set ID and CHF Group ID can be accessed by a NF Consumer (e.g. NRF, SMF, PCF, NEF, AMF) for registration and discovery process

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| **End of change** |