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

Jeju, South Korea, 27 - 31 May 2024

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **32.290** | **CR** | **0228** | **rev** | **1** | **Current version:** | **18.5.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Rel-19 CR 32.290 Enhance the input for CHF discovery and selection | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, Verizon, Nokia | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***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 can be 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)* | |
|  |  | | | | | | | | | |
| ***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. | | | | | | | | |
|  | |  | | | | | | | | |
| ***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. | | | | | | | | |
|  | |  | | | | | | | | |
| ***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. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 S5-242750 | | | | | | | | |

|  |
| --- |
| **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

|  |
| --- |
| **End of change** |