**3GPP TSG-SA3 Meeting #102-e *draft\_S3-210103-r4***

**e-meeting, 18 – 29 January 2021**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **33.501** | **CR** | **1025** | **rev** | **1** | **Current version:** | **16.5.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **x** |

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|  | | | | | | | | | | |
| ***Title:*** | Optional registration of NF Service Consumer to NRF | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia, Nokia Shanghai Bell, Huawei, HiSilicon | | | | | | | | | |
| ***Source to TSG:*** | S3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GS\_Ph1-SEC | | | | |  | ***Date:*** | | | 2021-01-29 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | There is a mix of OAuth registionration and Registration of a NF Service Ambigiouty should be removed. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Removeal of registration of NF Service Consumer | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Ambigiouty in specification. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 13.4.1.1.1, 13.4.1.2.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  |  | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  |  | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  |  | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | S3-210103 | | | | | | | | |

\*\*\*\*\*\*\*\*\*\*\*\*\* START OF CHANGES

13.4.1.1.1 OAuth 2.0 roles

OAuth 2.0 roles, as defined in clause 1.1 of RFC 6749 [43], are as follows:

a. The Network Repository Function (NRF) shall be the OAuth 2.0 Authorization server.

b. The NF Service Consumer shall be the OAuth 2.0 client.

c. The NF Service Producer shall be the OAuth 2.0 resource server.

**OAuth 2.0 client (NF Service Consumer) registration with the OAuth 2.0 authorization server (NRF)**

NOTE: OAuth 2.0 client (NF Service Consumer) registration with the OAuth 2.0 authorization server (NRF) is not specified in this document and left to implementation.

**OAuth 2.0 resource server (NF Service Producer) registration with the OAuth 2.0 authorization server (NRF)**

The NF Service registration procedure, as defined in clause 4.17.1 of TS 23.502 [8], shall be used to register the OAuth 2.0 resource server (NF Service Producer) with the OAuth 2.0 Authorization server (NRF). The NF Service Producer, as part of its NF profile, may include "additional scope" information related to the allowed service operations and resources per NF Service Consumer type.

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**Figure 13.4.1.1-1b NF Service Producer registers in NRF**

1) The NF Service Producer registers as OAuth 2.0 resource server in the NRF. The NF profile configuration data of the NF Service Producer may include the "additional scope". The "additional scope" information indicates the resources and the actions (service operations) that are allowed on these resources for the NF Service Consumer. These resources may be per NF type of the NF Service Consumer or per NF instance ID of the NF Service Consumer.

2-3) After storing the NF Profile, NRF responds successfully.

\*\*\*\*\*\*\*\*\*\*\*\*\* NEXT CHANGE

##### 13.4.1.2.1 OAuth 2.0 roles

In the roaming scenario, OAuth 2.0 roles are as follows:

a. The visiting Network Repository Function (vNRF) shall be the OAuth 2.0 Authorization server for vPLMN and authenticates the NF Service Consumer.

b. The home Network Repository Function (hNRF) shall be OAuth 2.0 Authorization server for hPLMN and generates the access token.

c. The NF Service Consumer in the visiting PLMN shall be the OAuth 2.0 client.

d. The NF Service Producer in the home PLMN shall be the OAuth 2.0 resource server.

**OAuth 2.0 client (NF Service Consumer) registration with the OAuth 2.0 authorization server (NRF) in the vPLMN**

Same as in the non-roaming scenario in 13.4.1.1.1.

\*\*\*\*\*\*\*\*\*\*\*\*\* END OF CHANGES