**3GPP TSG-SA3 Meeting #100e *S3-202166***

**e-meeting, 17-28 August 2020**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **33.501** | **CR** | **0948** | **rev** | **-** | **Current version:** | **15.9.0** |  |
|  | | | | | | | | |
| *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:*** | Static authorization details | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Mavenir, Deutsche Telekom, Nokia, Nokia Shanghai | | | | | | | | | |
| ***Source to TSG:*** | S3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GS\_Ph1-SEC | | | | |  | ***Date:*** | | | 2020-08-17 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-15 |
|  | *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:*** | | Porting the static authorization text clarification to Rel-15 15.9.0.  In TS33.501, static authorization is referenced but details are missing. During Nnrf\_NFDiscovery, the NRF is required to ensure the NF service consumer is authorized to discover the NF service producer by comparing the NF service consumer NF type, NSSAI, and PLMN with the allowed NF Type, allowed NSSAI, and allowed PLMN of the NF service producers.  After the Discovery procedure is complete, the NF service consumer can assume that the NRF has authorized it to receive the requested service from the discovered or expected NF service producer(s).  When static authorization is used, i.e., Access Token authorization is NOT enabled, the NF service consumer is not required to request an access token from NRF; it sends the service request to NF service producer without the access token. Similarly, NF service producer assumes NF service consumer is authorized and it accepts service request without a token. NF service producer may validate that NF service consumer NF type, NSSAI, and PLMN match the allowed NF type, NSSAI, and PLMN of its NF profile. | | | | | | | | |
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| ***Summary of change:*** | | Adding the details of static authorization without impacting NRF, NF service consumer, nor NF service producer. | | | | | | | | |
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| ***Consequences if not approved:*** | | Incomplete spec as static authorization details are missing. | | | | | | | | |
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| ***Clauses affected:*** | | 13.3.0 (NEW) | | | | | | | | |
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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:*** | |  | | | | | | | | |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Start of Change 1 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

## 13.3 Authentication and static authorization

### 13.3.0 Static authorization

Static authorization is a local authorization at the NRF and the NF service producer and can be used when token-based authorization is not used.

During the Nnrf\_NFDiscovery procedure, the NRF ensures that the NF service consumer is authorized to discover the NF service producer service(s) as specified in clause 13.3.1 of this document.

If token-based authorization is not used within one PLMN and the NF service producer receives a service request, the NF service producer follows clause 13.3.2 for the authorization of the NF service consumer before granting the NF service consumer access to the service API.

### 13.3.1 Authentication and authorization between network functions and the NRF

NRF and NF shall authenticate each other during discovery, registration, and access token request. If the PLMN uses protection at the transport layer as described in clause 13.1, authentication provided by the transport layer protection solution shall be used for mutual authentication of the NRF and NF.

If the PLMN does not use protection at the transport layer, mutual authentication of NRF and NF may be implicit by NDS/IP or physical security (see clause 13.1).

When NRF receives message from unauthenticated NF, NRF shall support error handling, and may send back an error message. The same procedure shall be applied vice versa.

After successful authentication between NRF and NF, the NRF shall decide whether the NF is authorized to perform discovery and registration.

In the non-roaming scenario, the NRF authorizes the Nnrf\_NFDiscovery\_Request based on the profile of the expected NF/NF service and the type of the NF service consumer, as described in clause 4.17.4 of TS23.502 [8].In the roaming scenario, the NRF of the NF Service Provider shall authorize the Nnrf\_NFDiscovery\_Request based on the profile of the expected NF/NF Service, the type of the NF service consumer and the serving network ID.

If the NRF finds NF service consumer is not allowed to discover the expected NF instances(s) as described in clause 4.17.4 of TS 23.502[8], NRF shall support error handling, and may send back an error message.

NOTE 1: When a NF accesses any services (i.e. register, discover or request access token) provided by the NRF , the OAuth 2.0 access token for authorization between the NF and the NRF is not needed.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* End of Change 1 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*