**3GPP TSG-SA3 Meeting #123 S3-252952-r2**

Goteborg, Sweden, 25 - 29 August 2025

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **33.501** | **CR** |  | **rev** | **1** | **Current version:** |  |  |
|  |
| *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:***  | Correct mutual authentication requirement |
|  |  |
| ***Source to WG:*** | MITRE-FFRDC, Nokia, Ericsson |
| ***Source to TSG:*** | S3 |
|  |  |
| ***Work item code:*** | TEI19 |  | ***Date:*** | 2025-08-25 |
|  |  |  |  |  |
| ***Category:*** |  |  | ***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 [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-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
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| ***Reason for change:*** | Mutual authentication shall be supported between NFs or SCP and SEPP; not just between NFs, according to requirements in clause 13:*A network function and the SEPP shall mutually authenticate before the SEPP forwards messages sent by the network function to network functions in other PLMN, and before the SEPP forwards messages sent by other network functions in other PLMN to the network function.**A SCP and the SEPP shall mutually authenticate before forwarding incoming or outgoing requests.**The SCP and network functions shall use one of the following methods described in clause 13.1 to mutually authenticate each other before service layer messages can be exchanged on that interface:*Mutual authentication is not supported with hop-by-hop security. |
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| ***Summary of change:*** | Clarify the mutual authentication is supported with direct connections.Clarify that the requirement applies to SCP and SEPP as well. |
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| ***Consequences if not approved:*** | 5GS security requirements are not clear. Can lead to assumption that 5GS supports mutual authentication in all scenarios. |
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| ***Clauses affected:*** | 5.9.2.1 |
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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:*** | **S3-252582** |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* START of CHANGE\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#### 5.9.2.1 Security Requirements for service registration, discovery and authorization

NF Service based discovery and registration shall support confidentiality, integrity, and replay protection.

NRF shall be able to ensure that NF Discovery and registration requests are authorized.

NF Service based discovery and registration shall be able to hide the topology of the available / supported NF's in one administrative/trust domain from entities in different trust/administrative domains (e.g. between NFs in the visited and the home networks.)

NF Service Request and Response procedure shall support mutual authentication for direct communication between NF Service Consumer and NF Service Producer.

NOTE: There is no mutual authentication between NF Service Consumer and NF Service Producer in case of indirect communication via SCP or SEPP.

Each NF shall validate all incoming messages. Messages that are not valid according to the protocol specification and network state shall be either rejected or discarded by the NF.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* END of CHANGE\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*