**3GPP TSG-SA3 Meeting #103-e *S3-211908***

**e-meeting, 17 - 28 May 2021**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **33.535** | **CR** | **0079** | **rev** | **-** | **Current version:** | **17.1.0** |  |
|  |
| *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:***  |  |
|  |  |
| ***Source to WG:*** | Ericsson |
| ***Source to TSG:*** | S3 |
|  |  |
| ***Work item code:*** |  |  | ***Date:*** | 2021-05-10 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-17 |
|  | *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:*** | According to the AKMA procedures, the AUSF needs to select an instance of AAnF to store the AKMA context (at least (SUPI, A-KID, KAKMA)) for a UE upon primary authentication of the UE . The AF/NEF needs to select the appropriate AAnF instance based on the AF request containing the A-KID. The appropriate instance is the one that contains the correct AKMA context. From the SA2 reply LS to SA3 (S2-2101304), the criteria for selecting an AAnF by the AUSF and the AF/NEF is the Routing Indicator.  |
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| ***Summary of change:*** | Detailed clause specifying the AAnF discovery and selection procedures. |
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| ***Consequences if not approved:*** | Not clear specification for the selection of AAnF by the different NFs in AKMA. |
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| ***Clauses affected:*** |  |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **N** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **N** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **N** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

\*\*\* 1st CHANGE \*\*\*

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 33.501: "Security architecture and procedures for 5G system".

[3] 3GPP TS 23.501: "System Architecture for the 5G System".

[4] 3GPP TS 33.220: "Generic Authentication Architecture (GAA); Generic Bootstrapping Architecture (GBA)".

[5] 3GPP TS 23.222: "Common API Framework for 3GPP Northbound APIs".

[6] IETF RFC 7542: "The Network Access Identifier".

[XX] 3GPP TS 23.003: "Numbering, addressing and identification".

\*\*\* 2nd CHANGE \*\*\*

## 6.X AAnF Discovery and Selection

The NF consumer or the SCP performs AAnF discovery to discover an AAnF instance.

In the case of NF consumer-based discovery and selection, the following applies:

- Internal AFs and the NEF performs AAnF selection to allocate an AAnF Instance that handles the AKMA request. The AF/NEF shall utilize the NRF to discover the AAnF instance(s) unless AAnF information is available by other means, e.g. locally configured on the AF/NEF.

- The AUSF performs AAnF selection to allocate an AAnF Instance to send the AKMA key material related to the UE. The AUSF shall utilize the NRF to discover the AAnF instance(s) unless AAnF information is available by other means, e.g. locally configured on the AUSF.

The AAnF selection functionality in NF consumer or in SCP should consider the following factor:

- the UE's Routing Indicator.

NOTE 1: The AF/NEF obtains the Routing Indicator as part of the A-KID in the AKMA request. The AUSF obtains the Routing Indicator within the Nudm\_UEAuthentication\_Get Response from the UDM.

When the UE's Routing Indicator is set to its default value as defined in TS 23.003 [XX], the AAnF NF consumer can select any AAnF instance within the home network of the UE.

NOTE 2: In scenarios where multiple sets of AAnFs are deployed, it is left up to implementation how to ensure that the AAnF NF consumers select an AAnF instance within the AAnF set the UE belongs to when the UE's Routing Indicator is set to its default value.

In the case of delegated discovery and selection in SCP, the AAnF NF consumer shall send all available factors to the SCP.

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