**3GPP TSG-SA3 Meeting #102-e *draft\_S3-210158-r1***

**e-meeting, 18 - 29 January 2021, Online**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **33.535** | **CR** | 0061 | **rev** | **<->** | **Current version:** | **17.0.0** |  |
|  | | | | | | | | |
| *For* ***[HE](http://www.3gpp.org/3G_Specs/CRs.htm" \l "_blank)******[LP](http://www.3gpp.org/3G_Specs/CRs.htm" \l "_blank)*** *on using this form: comprehensive instructions can be found at  <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:*** | UDM notifies AAnF AKMA context removal | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | S3 | | | | | | | | | |
| ***Source to TSG:*** | ZTE | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | AKMA | | | | |  | ***Date:*** | | | 2021-1-8 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | B |  | | | | | ***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 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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | AAnF need to delete the AKMA context. There may be two solutions:  1. As described in Section 1968, the UDM notifies the AAnF via AUSF to delete AKMA context.  2. The UDM directly instructs the AAnF to delete the AKMA context.  The disadvantage of Solution 1 is that it is necessary to add the new AAnF service and need the notification service via AUSF. Solution 2 directly adopts the existing UDM notification service.  Therefore, it is recommended Solution 2. | | | | | | | | |
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| ***Summary of change:*** | | This CR proposes the following changes:   1. To add TS 23.502 to the References 2. To add a new clause 6.X to capture the procedure for AKMA context removal support in AKMA.   To modify the UDM services in clause 7.4. | | | | | | | | |
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| ***Consequences if not approved:*** | | Lack of proposed procedure/service leads to the misuse of AKMA services | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 2, 6.X(new), 7.4 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

\*\*\* 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".

[x] 3GPP TS 23.502: "Procedures for the 5G System (5GS)".

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

## 6.X UDM notifies AAnF AKMA context removal

If the AKMA subscription of the UE need to be cancelled, the UDM sends the Nudm\_SDM\_Notification request to related serving AAnF. If the AAnF receives a AKMA subscription cancel indication from the UDM, the AAnF deletes the related AKMA context.



Figure 6.X-1: UDM notifies AAnF AKMA context removal procedure

1.UDM finds the AKMA subscription of the UE is cancelled or UE is purged from the network.

2.UDM discovers the AAnF of the UE based on local configuration or via NRF, and sends a Nudm\_SDM\_Notification\_request toAAnF to remove AKMA context for the UE.

3.AAnF shall delete AKMA Context (e.g. A-KID, KAKMA) from its local database.

4.AAnF sends a Nudm\_SDM\_Notification\_Response to UDM.

From this point onwards, any request to refresh KAF by the AF/NEF fails and UEs can no longer access to the application.

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

## 7.4 Services provided by UDM

UDM services related to AKMA key generation service are defined in TS 33.501 [2] clause 14.2.2.

UDM services related to AKMA context removal service are defined in TS 23.502 [x] clause 5.2.3.3.3

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