**3GPP TSG-CT WG3 Meeting #123-eC3-224410**

**E-Meeting, 18th – 26th August 2022**

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **29.535** | **CR** | **0021** | **rev** | **-** | **Current version:** | **17.5.0** |  |
|  |
| *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:***  | Support for Naanf\_AKMA\_ApplicationKey\_ AnonUser\_Get service operation |
|  |  |
| ***Source to WG:*** | Samsung, Ericsson |
| ***Source to TSG:*** | CT3 |
|  |  |
| ***Work item code:*** | AKMA-CT |  | ***Date:*** | 2022-08-11 |
|  |  |  |  |  |
| ***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-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)* |
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| ***Reason for change:*** | Definition of Naanf\_AKMA\_ApplicationKey\_ AnonUser\_Get service operation is missing and not aliged to TS 33.535 clause 6.2.2 and clause 7.1.5 requirement in stage-2.Upon TS 33.535 clause 7.1.5 is similar as clause 7.1.3, the only difference is No SUPI in response to the anonymous user access, hence prefer NOT to add a new service operation, instead better to update the exisiting Naanf\_AKMA\_ApplicationKey\_Get service operation by adding the optional anonInd with boolean type to indicate anonymous user, and update table description for the AkmaAfKeyData in TS 29.535 on excluding SUPI if the received anonInd is set to true. |
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| ***Summary of change:*** | Update the Naanf\_AKMA\_ApplictionKey\_Get service as above consideration, to fulfill the requirement of Naanf\_AKMA\_ApplicationKey\_AnonUser\_Get in clause 7.1.5 of TS 33.535. |
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| ***Consequences if not approved:*** | Misalignment with Stage-2, cannot support cannot support the anonymous user access to the AF based on A-KID. |
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| ***Clauses affected:*** | 4.2.2.3.2 |
|  |  |
|  | **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:*** | The CR introduces backward compatible changes to OpenAPI file for Naanf\_AKMA API |
|  |  |
| ***This CR's revision history:*** |  |

\* \* \* \* First Change \* \* \* \*

##### 4.2.2.3.2 AKMA Application Key request

Figure 4.2.2.3.2-1 shows a scenario where the NF service consumer sends a request to the AAnF to request and get the AKMA Application Key information for the UE (as shown in 3GPP TS 33.535 [14]).



Figure 4.2.2.3.2-1: NF service consumer retrieve AKMA Application Key information

The NF service consumer shall invoke the Naanf\_AKMA\_ApplicationKey\_Get service operation to retrieve the AKMA Application Key information. The NF service consumer shall send for this purpose an HTTP POST request with "{apiRoot}/naanf-akma/<apiVersion>/retrieve-applicationkey" as Resource URI, as shown in step 1 of figure 4.2.2.3.2-1, and the request body containing the AkmaAfKeyRequest data structure.

If the AAnF determines the received HTTP POST request needs to be redirected, the AAnF shall send an HTTP redirect response as specified in clause 6.10.9 of 3GPP TS 29.500 [4].

If the AAnF cannot successfully fulfil the received HTTP POST request due to an internal error or an error in the HTTP POST request, the AAnF shall send an HTTP error response as specified in clause 5.1.7.

The AAnF shall also verify the presence of the UE specific KAKMA key identified by the A-KID.

- If KAKMA is not present in the AAnF, the AAnF shall reply with an HTTP "403 Forbidden" status code and the response message body including a ProblemDetails data structure with the "cause" attribute set to the "K\_AKMA\_NOT\_PRESENT" application error specified in table 5.1.7.3-1.

- If KAKMA is present in the AAnF, the AAnF shall continue and process the request as specified below.

Upon the reception of the HTTP POST request, the AAnF shall respond with an HTTP "200 OK" status code and the response message body containing the AkmaAfKeyData data structure which shall include:

- KAF as "kaf" attribute;

- KAF expiration time as "expiry" attribute; and

- SUPI as "supi" attribute, if the "anonInd" attribute is not requested and set to true.

If the requested AKMA Application Key information for the UE does not exist, the AAnF shall respond with "204 No Content".

If the NF service consumer is an NEF, and if UE identifier is required to relay to the AF based on local policy, the NEF invokes the Nudm\_SubscriberDataManagement service defined in 3GPP TS 29.503 [17] to translate the SUPI to a GPSI, and then invoke the AKMA API to include the GPSI in the response to the AF as defined in 3GPP TS 29.522 [16]. The NEF shall not send the SUPI to the AF.

NOTE: The Naanf\_AKMA\_ApplicationKey\_ AnonUser\_Get service operation defined in 3GPP TS 33.535 [14] is implemented in this serivce operation together by adding the "anonInd" attribute and set to true to exclude the SUPI in the HTTP POST response message.

\* \* \* \* End of Changes \* \* \* \*