**3GPP TSG-CT WG1 Meeting #126-eC1-20xxxx**

**Electronic meeting, 15-23 October 2020**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **24.501** | **CR** | **2735** | **rev** | **1** | **Current version:** | **17.0.0** |  |
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| *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:***  | Correction in the AUSF operation in terms of checking the presence of the AT\_RESULT\_IND attribute in the EAP-response/AKA'-challenge message |
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| ***Source to WG:*** | Nokia, Nokia Shanghai Bell, Verizon |
| ***Source to TSG:*** | C1 |
|  |  |
| ***Work item code:*** | 5GProtoc17 |  | ***Date:*** | 2020-10-18 |
|  |  |  |  |  |
| ***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-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)* |
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| ***Reason for change:*** | According to the current text, the AUSF is mandated to check the presence of the AT\_RESULT\_IND attribute in the EAP-response/AKA'-challenge message. However, if the AUSF did not include the AT\_RESULT\_IND attribute in the EAP-request/AKA'-challenge message, there is no need to check the presence.What is worse is that the current text implies that the protected success indications are used even if the AUSF did not include the AT\_RESULT\_IND attribute in the EAP-request/AKA'-challenge message. |
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| ***Summary of change:*** | It is clarified that, if the AUSF did not include the AT\_RESULT\_IND attribute in the EAP-request/AKA'-challenge message, the AUSF sends an EAP-success message and considers the procedure complete without checking whether the AT\_RESULT\_IND attribute is included in the EAP-response/AKA'-challenge message. |
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| ***Consequences if not approved:*** | The AUSF can unnecessarily check the presence of the AT\_RESULT\_IND attribute in the EAP-response/AKA'-challenge message. |
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| ***Clauses affected:*** | 5.4.1.2.2.5 |
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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 ...  |
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| ***Other comments:*** |  |
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| ***This CR's revision history:*** |  |

###### 5.4.1.2.2.5 Network successfully authenticates UE

Upon reception of the EAP-response/AKA'-challenge message, if procedures for handling an EAP-response/AKA'-challenge message as specified in IETF RFC 5448 [40] are successful, the AUSF shall generate EMSK, the KAUSF from the EMSK, and the KSEAF from the KAUSF as described in 3GPP TS 33.501 [24], and:

a) if the AUSF included the AT\_RESULT\_IND attribute in the EAP-request/AKA'-challenge message and the AT\_RESULT\_IND attribute is included in the corresponding EAP-response/AKA'-challenge message, the AUSF shall send an EAP-request/AKA'-notification message as specified in IETF RFC 5448 [40]; or

b) if the AUSF:

1) included the AT\_RESULT\_IND attribute in the EAP-request/AKA'-challenge message and the AT\_RESULT\_IND attribute is not included in the corresponding EAP-response/AKA'-challenge message; or

2) did not include the AT\_RESULT\_IND attribute in the EAP-request/AKA'-challenge message;

 then the AUSF shall send an EAP-success message as specified in IETF RFC 5448 [40] and shall consider the procedure complete.

NOTE: The AUSF provides the KSEAF to the SEAF. Upon reception of the KSEAF, the SEAF generates the KAMF based on the ABBA and the KSEAF as described in 3GPP TS 33.501 [24] and provides ngKSI and the KAMF to the AMF. Upon reception of the ngKSI and the KAMF, the AMF creates a partial native 5G NAS security context identified by the ngKSI and stores the KAMF in the created partial native 5G NAS security context.