**3GPP TSG-SA3 Meeting #99-e *S3-201248***

**e-meeting, 11-14 Mai 2020**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  |  | **CR** |  | **rev** |  | **Current version:** |  |  |
|  |
| *For* [***HELP***](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:***  | Clarification to SEAF |
|  |  |
| ***Source to WG:*** |  |
| ***Source to TSG:*** | S3 |
|  |  |
| ***Work item code:*** |  |  | ***Date:*** | 15.5.2020 |
|  |  |  |  |  |
| ***Category:*** |  |  | ***Release:*** |  |
|  | *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)* |
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| ***Reason for change:*** | Mistake in the description. SEAF receives the Response message “Nausf\_UEAuthentication\_Authenticate Response” and not a “Request” message. Further the text is very difficult to read with the if-bullet list.SUCI is received, not retrieved. |
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| ***Summary of change:*** | Correction of the message name and editorial modification |
|  |  |
| ***Consequences if not approved:*** | Spec is not correct. |
|  |  |
| ***Clauses affected:*** | 6.1.3.2.2 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  |  |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  |  |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  |  |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

**\*\*\*\*\* START OF CHANGES**

6.1.3.2.2 RES\* verification failure in SEAF or AUSF or both

The expected response RES\* allows the serving network and the home network to verify the successful authentication of the UE. This clause describes how RES\* verification failure in the SEAF or in the AUSF shall be handled.

In step 9 in Figure 6.1.3.2-1, the SEAF shall compute HRES\* from RES\* according to Annex A.5, and the SEAF shall compare HRES\* and HXRES\*. If they do not coincide, then the SEAF shall consider the authentication as unsuccessful.

The SEAF shall proceed with step 10 in Figure 6.1.3.2-1.

After SEAF received the Nausf\_UEAuthentication\_Authenticate Response message from the AUSF (step 12 in Figure 6.1.3.2-1), the SEAF shall proceed as described below:

The authentication result is "unsuccessful" if one or both of the following reasons apply:

- If the AUSF has indicated in the Nausf\_UEAuthentication\_Authenticate Response message to the SEAF that the verification of the RES\* was not successful in the AUSF, or

- if the verification of the RES\* (by comparing HRES\* and HXRES\*) was not successful in the SEAF.

In these cases, the SEAF shall either reject the authentication by sending an Authentication Reject to the UE if the SUCI was used by the UE in the initial NAS message or the SEAF/AMF shall initiate an Identification procedure with the UE if the 5G-GUTI was used by the UE in the initial NAS message. In the latter, the AMF may receive a new SUCI and an additional authentication attempt may be initiated.

It needs to be noted, that AUSF is mandated to respond to the SEAF (step 12 in Figure 6.1.3.2-1). If the SEAF does not receive any Nausf\_UEAuthentication\_Authenticate Response message from the AUSF (as expected after comparing RES\* with XRES\*), the SEAF shall either reject the authentication to the UE or initiate an Identification procedure with the UE.

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