**3GPP TSG-SA3 Meeting #100e *S3-201840***

**e-meeting, 17 -24 August 2020**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **33.514** | **CR** | **0003** | **rev** |  | **Current version:** | **16.2.0** |  |
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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:***  | Clarification on the test cases if the UDM and AUSF are collocated |
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| ***Source to WG:*** | Huawei |
| ***Source to TSG:*** | S3 |
|  |  |
| ***Work item code:*** | SCAS\_5G |  | ***Date:*** | 21/07/2020 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-16 |
|  | *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:*** | During the SA3 #99e meeting, one note “*NOTE: this test case does not apply to the deployment scenario where the UDM and AUSF network products are collocated without an open N13 interface.*” is added in the test case 4.2.2.2 in case the UDM and AUSF are collocated.However, the test cases in 4.2.1.1 and 4.2.2.1 is not clarified in this collocated scenario. |
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| ***Summary of change:*** | Clarification on the test cases in 4.2.1.1 and 4.2.2.1 in the UDM and AUSF collocated scenario. |
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| ***Consequences if not approved:*** | The test cases can not be used if the UDM and AUSF are collocated. |
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| ***Clauses affected:*** | 4.2.1.1, 4.2.2.1 |
|  |  |
|  | **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 the 1st change\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#### 4.2.1.1 De-concealment of SUPI from the SUCI based on the protection scheme used to generate the SUCI.

*Requirement Name:* De-concealment of SUPI from the SUCI based on the protection scheme used to generate the SUCI.

*Requirement Reference:* TS 33.501 [2], clause 5.8.2.

*Requirement Description:* "The SIDF shall resolve the SUPI from the SUCI based on the protection scheme used to generate the SUCI." as specified in TS 33.501 [2], clause 5.8.2.

*Threat References*: TR 33.926 [4], clause E.2.2.1, Incorrect SUCI de-concealment.

**TEST CASE:**

**Test Name:** TC\_DE-CONCEAL\_SUPI\_from\_SUCI\_UDM

**Purpose:**

Verify that the SIDF De-conceals the SUPI from the SUCI based on the protection scheme used to generate the SUCI.

**Procedure and execution steps:**

**Pre-Condition:**

- UDM network product is connected in simulated/real network environment including an AUSF and AMF.

- Tester shall have access to the subscription data stored in UDR.

- Tester shall record the SUPI from the UE.

**Execution Steps:**

**Test case:**

Tester shall capture the entire authentication procedure between UE and AMF over N1, N12 and N13 interface using any network analyser.

1. Tester shall filter the Nudm\_Authentication\_Get Response message sent from UDM to AUSF over N13 interface containing the SUPI.

2. Tester shall compare the SUPI gotten from UE and the SUPI retrieved from Nudm\_Authentication\_Get Response message.

NOTE: The tester may filter the Nausf\_UEAutentication\_Authenticate Response message sent from the UDM/AUSF to the AMF over N12 interface containing the SUPI, if the UDM and AUSF network products are collocated without an open N13 interface.

**Expected Results:**

SIDF resolves the SUPI from the SUCI based on the protection scheme used to generate the SUCI.

**Expected format of evidence:**

Evidence suitable for the interface, e.g., evidence can be presented in the form of screenshot/screen-capture.

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\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Start of the 2nd change\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#### 4.2.2.1 Synchronization failure handling

*Requirement Name*: Synchronization failure handling

*Requirement Reference:* TS 33.501 [2], clause 6.1.3.3.2.

*Requirement Description*: "When the UDM/ARPF receives an Nudm\_UEAuthentication\_Get Request message with a "synchronisation failure indication" it acts as described in TS 33.102 [9], clause 6.3.5 where ARPF is mapped to HE/AuC. The UDM/ARPF sends an Nudm\_UEAuthentication\_Get Response message with a new authentication vector for either EAP-AKA' or 5G-AKA depending on the authentication method applicable for the user to the AUSF.as specified in TS 33.501 [2], clause 6.1.3.3.2.

*Threat References*: TR 33.926 [4], clause E.2.2.2, Synchronization failure.

*Test Case*:

**Purpose:**

Verify that synchronization failure is recovered correctly in the home network.

**Pre-Conditions:**

Test environment with an AUSF or AMF. The AUSF may be simulated.

**Execution Steps**

1. The AUSF sends an Nudm\_UEAuthentication\_Get Request message to the UDM with a "synchronisation failure indication" and parameters *RAND* and *AUTS*.

2. The UDM/ARPF performs steps 1-5 as described in TS 33.102, clause 6.3.5.

**Expected Results:**

The UDM sends an Nudm\_UEAuthentication\_Get Response message with a new authentication vector to the AUSF.

NOTE: The expected results would be that the UDM/AUSF sends an Nausf\_UEAuthentication\_Authenticate Response message with EAP Request/AKA’-Challenge for EAP AKA’, or 5G SE AV for 5G AKA to the AMF, if the UDM and AUSF network products are collocated without an open N13 interface.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*End of the changes\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*