**3GPP TSG-SA3 Meeting #106-e *S3-220082r01***

**e-meeting, 14 - 25 February 2022**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **33.501** | **CR** | **1211** | **rev** | **1** | **Current version:** | **17.4.2** |  |
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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:***  | Integrity check during context transfer scenario 2 |
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| ***Source to WG:*** | NEC |
| ***Source to TSG:*** | SA3 |
|  |  |
| ***Work item code:*** | TEI17 |  | ***Date:*** | 2022-02-06 |
|  |  |  |  |  |
| ***Category:*** | F |  | ***Release:*** | 7 |
|  | *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-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
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| ***Reason for change:*** | Scenario:1) The UE is registered over a 3GPP access to a PLMN 1 and 5G-GUTI 1 is assigned to the UE. The UE was not registered over non-3GPP access.2) The UE is switched off.3) The UE selects PLMN 2 and initiates registration procedure over non-3GPP access to a PLMN 2. In this case according to TS 24.501 the UE will include the 5G-GUTI in the registration request message. 4) Now it is not clear how the UE will integrity protect the registration request message. |
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| ***Summary of change:*** | Specify that:When a UE is registering to a PLMN over second access and the UE was registered to the PLMN over the second access, the UE uses the common security context and UL NAS COUNT set to zero to integrity protect the registrartion request message. When the AMF receives message with access type set to second access and securiy context doesn’t exist for the second access then the AMF uses the common secrurity context and with UL NAS COUNT set to zero to integrity check the registration request message. |
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| ***Consequences if not approved:*** | Undefined UE and the AMF behavior. Incomplete specification. |
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| ***Clauses affected:*** | 6.9.3 |
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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 ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

\*\*\*\* START OF CHANGE \*\*\*\*

#### 6.3.2.1 Multiple registrations in different PLMNs

The UE shall independently maintain and use two different 5G security contexts, one per PLMN's serving network. Each security context shall be established separately via a successful primary authentication procedure with the Home PLMN.

The ME shall store the two different 5G security contexts on the USIM if the USIM supports the 5G parameters storage. If the USIM does not support the 5G parameters storage, then the ME shall store the two different 5G security contexts in the ME non-volatile memory. Both of the two different 5G security contexts are current 5G security context.

The latest KAUSF result of the successful completion of the latest primary authentication shall be used by the UE and the HN regardless over which access network type (3GPP or non-3GPP) it was generated.

The HN shall keep the latest KAUSF generated during successful authentication over a given access even if the UE is deregistered from that access, but the UE is registered via another access.

When a UE was registered to a first PLMN via first access and the UE is registering to a second PLMN over second access, the UE includes 5G-GUTI assigned by the first PLMN in the registration request message and the UE shall directly take into use the available common 5G NAS security context created during registeartion to the first PLMN and use it to protect the registration over the second access. The source AMF shall use the available common 5G NAS security context to check the integrity of the received registration request message from the target AMF. If there are stored NAS counts for the second access the UE, and the source AMF uses the stored NAS counts for the second access oherwise, the UE and the source AMF shall set the UL NAS COUNT value and DL NAS COUNT value for the second access to zero before the UE and the AMF are taking the 5G NAS security context into use over the second access.

\*\*\*\* END OF CHANGE \*\*\*\*