**3GPP TSG-SA3 Meeting #98e S3-200223**

**e-meeting, 2 – 6 March 2020**

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| *CR-Form-v11.4* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **33.117** | **CR** | **0058** | **rev** | **-** | **Current version:** | **16.3.0** |  |
|  | | | | | | | | |
| *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:*** | Clarification on PLMN ID verification | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, Hisilicon | | | | | | | | | |
| ***Source to TSG:*** | S3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | SCAS\_5G | | | | |  | ***Date:*** | | | 2020-02-12 |
|  |  | | | |  | |  | | |  |
| ***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 can be 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)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | As defined in TS 33.117 clause 4.2.2.2.3.2, the NF service producer verifies that the PLMN ID in the consumerPlmnId claim of the access token is different from its own home PLMN identity.  However, the verification is no align with TS 33.501, which defined that the NF service producer shall verify that the PLMN ID in the producerPlmnId claim of the access token with its own PLMN ID.  On the other hand, the consumerPlmnId claim of the access token is always not the same with the NF service producer’s own home PLMN identity in the roaming scenario.  Hence, the test case in clause 4.2.2.2.3.2 shall be updated to align with TS 33.501. | | | | | | | | |
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| ***Summary of change:*** | | Change the “consumerPlmnId claim of the access token” to “producerPlmnId claim of the access token” | | | | | | | | |
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| ***Consequences if not approved:*** | | There would be misalignment between TS 33.117 and TS 33.501. | | | | | | | | |
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| ***Clauses affected:*** | | 4.2.2.2.3.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

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

###### 4.2.2.2.3.2 Authorization token verification failure handling in different PLMNs

*Requirement Name*: Authorization token verification failure handling in different PLMNs

*Requirement Reference:* TS 33.501 [10], clause 13.4.1.2

*Requirement Description*:

"The NF service producer shall check that the home PLMN ID of audience claim in the access token matches its own PLMN identity."

*Threat References*: TR 33.926 [4], clause 6.3.3.1, Incorrect Verification of Access Tokens

*Test Case*:

**Test Name:** TC\_AUTHORIZATION\_TOKEN\_VERIFICATION\_FAILURE\_DIFF\_PLMN

**Purpose:**

Verify that the NF service producer does not grant service access if the verification of authorization token from a NF service consumer in a different PLMN fails.

**Procedure and execution steps:**

**Pre-Conditions:**

- Test environment with a NF service consumer and two SEPPs (one cSEPP, one pSEPP).

- The NF service consumer and SEPPs may be simulated.

- The network product under test has already mutually authenticated with the NF service consumer in a different PLMN via the SEPPs.

- The tester has the NRF’s private key or the shared key.

- The network product under test is preconfigured with the NRF’s public key or the shared key.

- The tester shall have access to the interfaces of the NF service consumer and the network product under test.

**Execution Steps**

The network product under test receives the access token sent from the NF service consumer, verifies the access token in accordance with the execution steps in 4.2.2.1.3.1, with the following additional test cases:

Test Case 1: incorrect PLMN ID of the NF service producer in the access token

1) The test computes an access token correctly, except that the PLMN ID in the producerPlmnId claim of the access token is different from the home PLMN ID of the network product under test, and then includes the access token in the NF Service Request sent from the NF service consumer to the network product under test through the SEPPs.

2) The network product under test receives the access token sent from the NF service consumer through the SEPPs, verifies that the PLMN ID in the producerPlmnId claim of the access token is different from its own home PLMN identity**.**

Test Case 2: absent PLMN ID of the NF service producer in the access token

1) The test computes an access token correctly, except that no producerPlmnId claim is included in the access token or no PLMN ID is appended in the producerPlmnId claim of the access token, and then includes the access token in the NF Service Request sent from the NF service consumer to the network product under test through the SEPPs.

2) The network product under test receives the access token sent from the NF service consumer through the SEPPs, verifies that the access token is not a token to be used by the NF service consumer in a different PLMN, based on the absence of PLMN ID of the NF service producer in the access token.

**Expected Results:**

For both test cases 1 and 2, the network product under test rejects the NF service consumer’s service request based on Oauth 2.0 error response defined in RFC 6749 [12].

**Expected format of evidence:**

Evidence suitable for the interface, e.g., Screenshot containing the operational results.

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