**3GPP TSG-WG SA2 Meeting #139E e-meeting  *S2-200xxxx***

**Elbonia, June 01 - 12, 2020 (revision of S2-200xxxx)**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **23.502** | **CR** | **XXXX** | **rev** | **-** | **Current version:** | **16.4.0** |  |
|  | | | | | | | | |
| *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:*** | Unsubscribe the notification of Re-authentication and Re-authorization or Revocation | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, HiSilicon | | | | | | | | | |
| ***Source to TSG:*** | SA2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eNS | | | | |  | ***Date:*** | | | 2020-05-22 |
|  |  | | | |  | |  | | |  |
| ***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:*** | | During NSSAA procedure, the AMF implicitly subscribes to the notification of the need to re-authenticate and re-authorize the UE or to revoke the UE authorization as defined in clause 4.2.9.2 step 15..  *The AAA-S stores the S-NSSAI for which the authorisation has been granted, so it may decide to trigger reauthentication and reauthorization based on its local policies.*  According to the last e-meeting discussion, the UE may no longer access to the authorized S-NSSAIs due to, e.g., Deregistration or 5GS to EPS mobility in which case the PDU sessions associated with S-NSSAIs subject to NSSAA cannot be maintained. However, there is no corresponding method of how to terminate the notification of re-authentication and re-authorization or revocation from AAA-S., hence the AAA server will keep notify AMF on the re-authorization or Revocation even after UE don’t use the slice any more.  It is proposed that the AMF unsubscribes the notification of Re-authentication and Re-authorization or Revocation. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | The AMF unsubscribes notification of Re-authentication and Re-authorization or Revocation in case UE no longer access to the authorized S-NSSAIs. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The AAA will keep notifying the AMF about Re-auth or Revocation even after UE don’t use the slice any more. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.2.9.x (new), 5.2.10.5 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS23.501 CRxx | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\* \* \* \* First change \* \* \* \*

#### 4.2.9.X Unsubscribe the notification of Re-authentication and Re-authorization or Revocation

AMF

NSSAAF

AAA-P

AAA-S

1. Nnssaaf\_NSSAA\_Unsubscribe

2a. AAA protocol message

2a. AAA protocol message

2b. AAA protocol message

Figure 4.2.9.x-1: Unsubscribe the notification of Re-authentication and Re-authorization or Revocation

The AMF decides the UE no longer access to the S-NSSAIs that map to the HPLMN S-NSSAIs for which Network Slice-Specific Authentication and Authorization succeeded previously, based on the following conditions e.g. after UE deregistration or 5GS to EPS mobility:

1. The AMF unsubscribes the notification of re-authentication and re-authorization or revocation for the Network Slices identified by the HPLMN S-NSSAIs by invoking the Nnssaaf\_NSSAA\_Unsubscribe service operation (GPSI, AAA-S address, HPLMN S-NSSAIs) from the NSSAAF.

2. If the AAA-P is present, the NSSAAF sends the AAA protocol message including the GPSI, AAA-S address and HPLMN S-NSSAIs to the AAA-P. The AAA-P forwards this message to the AAA-S together with GPSI and HPLMN S-NSSAIs. Otherwise the NSSAAF forwards AAA protocol message directly to the AAA-S. The AAA-S terminates the notification of re-authentication and re-authorization or revocation and deletes the authentication result related for the HPLMN S-NSSAIs from the context of UE identified by the GPSI included in the received message.

\* \* \* \* Second change \* \* \* \*

#### 5.2.10.5 Nnssaaf\_NSSAA service

##### 5.2.10.5.1 General

The following table illustrates the NSSAAF Services.

Table 5.2.10.5-1: List of NSSAAF Services

|  |  |  |  |
| --- | --- | --- | --- |
| Service Name | Service Operations | Operation  Semantics | Example Consumer(s) |
| Nnssaaf\_NSSAA | Authenticate | Request/Response | AMF |
|  | Notify | Subscribe/Notify | AMF |
|  | Unsubscribe | Subscribe/Notify | AMF |

##### **Service Description:** the NSSAAF provides Network Slice- Specific Authentication and Authorization (NSSAA) service to the requester NF by relaying EAP messages towards a AAA-S or AAA-P and performing related protocol conversion as needed. It also provides notification to the current AMF where the UE is of the need to re-authenticate and re-authorize the UE or to revoke the UE authorization. The AMF to receive the notification is implicitly subscribed and it is found in the UDM by providing the UE GPSI. If the AMF decides the UE no longer access to the S-NSSAIs that map to the HPLMN S-NSSAIs for which Network Slice-Specific Authentication and Authorization succeeded previously, the AMF shall unsubscribe the notification of Re-authentication and Re-authorization or Revocation using Nnssaaf\_NSSAA\_Unsubscribe.5.2.10.5.2 Nnssaaf\_\_NSSAA\_Authenticate service operation

See TS 33.501 [15].

##### 5.2.10.5.3 Nnssaaf\_NSSAA\_Notify service operation

See TS 33.501 [15].

##### 5.2.10.5.x Nnssaaf\_NSSAA\_Unsubscribe service operation

See TS 33.501 [15].

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