**3GPP TSG-CT WG1 Meeting #138-eC1-226024**

**E-Meeting, 10th – 14th October 2022**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  |  | **CR** | **4747** | **rev** | **1** | **Current version:** |  |  |
|  | | | | | | | | |
| *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 | **X** | Radio Access Network |  | Core Network | **X** |

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| ***Title:*** | NSSAA and SR procedure collision handling | | | | | | | | | |
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| ***Source to WG:*** | Samsung | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GProtoc18 | | | | |  | ***Date:*** | | | 2022-09-29 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
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| ***Reason for change:*** | | This CR proposes to handle Network slice-specific authentication and authorization procedure and service request procedure collision.  If the service request message includes the UE request type IE with Request type value set to "NAS signalling connection release”, then network and UE shall abort the network slice-specific authentication and authorization procedure to avoid delaying the release of the NAS signalling connection. Otherwise both the procedures can be progressed. | | | | | | | | |
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| ***Summary of change:*** | | To abort NSSAA procedure if SR message includes UE request type IE with Request type value set to "NAS signalling connection release”. Otherwise both the procedures can be progressed. | | | | | | | | |
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| ***Consequences if not approved:*** | | Delay in releasing the NAS signaling connection for MUSIM UE, consequently delaying to initiate service on another USIM. | | | | | | | | |
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| ***Clauses affected:*** | | 5.4.7.2.3, 5.4.7.2.4 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 changes \*\*\*\*\*

##### 5.4.7.2.3 Abnormal cases on the network side

The following abnormal cases can be identified:

a) T3575 expiry

The AMF shall, on the first expiry of the timer T3575, retransmit the NETWORK SLICE-SPECIFIC AUTHENTICATION COMMAND message and shall reset and start timer T3575. This retransmission is repeated four times, i.e. on the fifth expiry of timer T3575, the AMF shall abort the network slice-specific authentication and authorization procedure for the S-NSSAI. The AMF shall consider that the network slice-specific authentication and authorization procedure for the S-NSSAI is completed as a failure.

b) Lower layers indication of non-delivered NAS PDU due to handover

If the NETWORK SLICE-SPECIFIC AUTHENTICATION COMMAND message could not be delivered due to an intra AMF handover and the target TAI is included in the TAI list, then upon successful completion of the intra AMF handover the AMF shall retransmit the NETWORK SLICE-SPECIFIC AUTHENTICATION COMMAND message. If a failure of handover procedure is reported by the lower layer and the N1 NAS signalling connection exists, the AMF shall retransmit the NETWORK SLICE-SPECIFIC AUTHENTICATION COMMAND message.

c) Network slice-specific authentication and authorization procedure and de-registration procedure collision

If the network receives a DEREGISTRATION REQUEST message before the ongoing network slice-specific authentication and authorization procedure has been completed and the access type included in the DEREGISTRATION REQUEST message is the same as the one for which the network slice-specific authentication and authorization procedure is ongoing, the network shall abort the network slice-specific authentication and authorization procedure and shall progress the UE-initiated de-registration procedure. The AMF may initiate the network slice-specific authentication and authorization procedure for the S-NSSAI which is completed as a failure, if available. If the access type included in the DEREGISTRATION REQUEST message is different from the one for which the network slice-specific authentication and authorization procedure is ongoing, the network shall proceed with both procedures.

d) Network slice-specific authentication and authorization procedure and service request procedure collision

If the network receives a SERVICE REQUEST message before the ongoing network slice-specific authentication and authorization procedure has been completed and the SERVICE REQUEST message includes the UE request type IE with the Request type value set to "NAS signalling connection release", the network shall abort the network slice-specific authentication and authorization procedure and shall progress the service request procedure.

If the network receives a SERVICE REQUEST message before the ongoing network slice-specific authentication and authorization procedure has been completed and the SERVICE REQUEST message does not include UE request type IE with the Request type value set to "NAS signalling connection release", both procedures shall be progressed.

\*\*\*\*\*Next changes \*\*\*\*\*

##### 5.4.7.2.4 Abnormal cases in the UE

The following abnormal cases can be identified:

a) Transmission failure of the NETWORK SLICE-SPECIFIC AUTHENTICATION COMPLETE message with change in the current TAI

If the current TAI is not in the TAI list, the network slice-specific authentication and authorization procedure shall be aborted and:

- if the UE is in 5GMM-REGISTERED state, a registration procedure for mobility and periodic registration update indicating "mobility registration updating" in the 5GS registration type IE of the REGISTRATION REQUEST message shall be initiated; and

- otherwise a registration procedure for initial registration shall be initiated.

b) Transmission failure of NETWORK SLICE-SPECIFIC AUTHENTICATION COMPLETE message indication without change in the current TAI

It is up to the UE implementation how to re-run the ongoing procedure that triggered the network slice-specific authentication and authorization procedure.

c) Network slice-specific authentication and authorization procedure and de-registration procedure collision

If the UE receives NETWORK SLICE-SPECIFIC AUTHENTICATION COMMAND message after sending a DEREGISTRATION REQUEST message and the access type included in the DEREGISTRATION REQUEST message is the same as the access in which the NETWORK SLICE-SPECIFIC AUTHENTICATION COMMAND message is received, then the UE shall ignore the NETWORK SLICE-SPECIFIC AUTHENTICATION COMMAND message and proceed with the de-registration procedure. Otherwise, the UE shall proceed with both procedures.

d) Network slice-specific authentication and authorization procedure and service request procedure collision

If the SERVICE REQUEST message includes the UE request type IE with the Request type value set to "NAS signalling connection release" and the UE receives a NETWORK SLICE-SPECIFIC AUTHENTICATION COMMAND message before the ongoing service request procedure has been completed, the UE shall ignore the NETWORK SLICE-SPECIFIC AUTHENTICATION COMMAND message and proceed with the service request procedure.

If the the SERVICE REQUEST message does not include the UE request type IE with the Request type value set to "NAS signalling connection release" and the UE receives a NETWORK SLICE-SPECIFIC AUTHENTICATION COMMAND message before the ongoing service request procedure has been completed, the UE shall proceed with both the procedures.

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