**3GPP TSG- Meeting #**

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  |  | **CR** |  | **rev** |  | **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 |  | Radio Access Network |  | Core Network |  |

|  |
| --- |
|  |
| ***Title:***  | Correction to eNS test case 9.1.10.2  |
|  |  |
| ***Source to WG:*** |  |
| ***Source to TSG:*** | R5 |
|  |  |
| ***Work item code:*** |  |  | ***Date:*** | 7 |
|  |  |  |  |  |
| ***Category:*** |  |  | ***Release:*** |  |
|  | *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-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)* |
|  |  |
| ***Reason for change:*** | At step 14a1, the SS will send PDU SESSION ESTABLISHMENT ACCEPT using the default contents which includes an NSSAI from the configured pending NSSAI list (SST 1). Due to this the UE can immediately send PDU SESSION RELEASE REQUEST. |
|  |  |
| ***Summary of change:*** | Added a new specific message content Table 9.1.10.3.3.3-1AA to specify usage of SST 3 (from allowed NSSAI list) in PDU SESSION ESTABLISHMENT ACCEPT |
|  |  |
| ***Consequences if not approved:*** | A conformant UE may fail the test case |
|  |  |
| ***Clauses affected:*** | 9.1.10.2 |
|  |  |
|  | **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:*** | Associated with TTCN CR R5s230593 |
|  |  |
| ***This CR's revision history:*** |  |

#### 9.1.10.2 NSSAA / EAP message transport / Abnormal

9.1.10.2.1 Test Purpose (TP)

(1)

**with** { the UE in 5GMM-DEREGISTERED-INITIATED state }

**ensure that** {

 **when** { SS sends NETWORK SLICE-SPECIFIC AUTHENTICATION COMMAND message }

 **then** { the UE shall ignore the NETWORK SLICE-SPECIFIC AUTHENTICATION COMMAND message and proceed with the de-registration procedure }

 }

9.1.10.2.2 Conformance requirements

References: The conformance requirements covered in the present TC are specified in: TS 24.501, clause 5.4.7.2.4. Unless otherwise stated these are Rel-16 requirements.

[TS 24.501 clause 5.4.7.2.4]

The following abnormal cases can be identified:

a) Transmission failure of the NETWORK SLICE-SPECIFIC AUTHENTICATION COMPLETE message with TAI change from lower layers

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

 If the current TAI is still part of the TAI list, it is up to the UE implementation how to re-run the ongoing procedure that triggered the network slice-specific authentication and authorization procedure.

b) Transmission failure of NETWORK SLICE-SPECIFIC AUTHENTICATION COMPLETE message indication without TAI change from lower layers

 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.

9.1.10.2.3 Test description

9.1.10.2.3.1 Pre-test conditions

System Simulator:

 NGC Cell A;

UE:

 None.

Preamble:

 The UE is in state Switched OFF (state 0N-B) according to TS 38.508-1 [4].

9.1.10.2.3.2 Test procedure sequence

Table 9.1.10.2.3.2-1: Main behaviour

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| St | Procedure | Message Sequence | TP | Verdict |
|  |  | U - S | Message |  |  |
| 1 | The UE is switched on. | - | - | - | - |
| 2 | Check: Does UE transmit a REGISTRATION REQUEST message including NSSAA bit? | --> | REGISTRATION REQUEST | 1 | P |
| 3-11 | Steps 5 to 13 of the generic procedure for NR RRC\_IDLE specified in TS 38.508-1 subclause 4.5.2 are performed. | - | - | - | - |
| 12 | The SS transmits a REGISTRATION ACCEPT message including Pending NSSAI IE. | <-- | REGISTRATION ACCEPT | - | - |
| 13 | The UE transmits an *ULInformationTransfer* message and a REGISTRATION COMPLETE message. | --> | REGISTRATION COMPLETE | - | - |
| - | EXCEPTION: Step 14a1 is performed if pc\_noOf\_PDUsSameConnection > 0. | - | - | - | - |
| 14a1 | The generic procedure for UE-requested PDU session establishment, specified in TS 38.508-1[4], subclause 4.5A.2, takes place performing establishment of UE-requested PDU session(s) with ExpectedNumberOfNewPDUSessions = pc\_noOf\_PDUsSameConnection using the allowed NSSAI. | - | - | - | - |
| 15 | Cause UE De-Registration by AT or MMI command | - | - | - | - |
| 16 | Check: Does the UE transmit a DEREGISTRATION REQUEST with the De-registration type IE indicating "normal de-registration"? | --> | DEREGISTRATION REQUEST | - | - |
| 17 | The SS transmits a NETWORK SLICE-SPECIFIC AUTHENTICATION COMMAND message. | <-- | NETWORK SLICE-SPECIFIC AUTHENTICATION COMMAND | - | - |
| 18 | Check: Does the UE transmit a NETWORK SLICE-SPECIFIC AUTHENTICATION COMPLETE message within 5 seconds? | --> | NETWORK SLICE-SPECIFIC AUTHENTICATION COMPLETE | 1 | F |
| 19 | The SS transmits DEREGISTRATION ACCEPT message. | <-- | DEREGISTRATION ACCEPT | - | - |
| 20 | The SS transmits an *RRCRelease* message. | - | - | - | - |
| 21 | Check: Does the test result of the generic procedure in TS 38.508-1 [4] subclause 4.9.13 indicates that the UE doesn’t responds to paging when paged with NG-5G-S-TMSI? | - | - | 1 | P |

9.1.10.2.3.3 Specific message contents

Table 9.1.10.2.3.3-1: REGISTRATION ACCEPT (step 12, Table 9.1.10.2.3.2-1)

|  |
| --- |
| Derivation path: TS 38.508-1 Table 4.7.1-7 with condition INITIAL |
| Information Element | Value/remark | Comment | Condition |
| 5GS registration result |  |  |  |
|  5GS registration result value | ‘001’B | 3GPP access |  |
|  NSSAA Performed | ‘1’B | Network slice-specific authentication and authorization is to be performed |  |
| Allowed NSSAI |  |  |  |
|  Length of NSSAI contents | '0000 0100'B | 4 octets |  |
|  S-NSSAI |  |  |  |
|  Length of S-NSSAI contents | ‘0000 0001’B | SST |  |
|  SST | ‘0000 0011’B | SST value 3 |  |
|  SD | Not Present |  |  |
|  Mapped configured SST | Not Present |  |  |
|  Mapped configured SD | Not Present |  |  |
|  S-NSSAI |  |  |  |
|  Length of S-NSSAI contents | ‘0000 0001’B | SST |  |
|  SST | ‘0000 0100’B | SST value 4 |  |
|  SD | Not Present |  |  |
|  Mapped configured SST | Not Present |  |  |
|  Mapped configured SD | Not Present |  |  |
| Configured NSSAI |  |  |  |
|  Length of NSSAI contents | '0000 0100'B | 4 octets |  |
|  S-NSSAI |  | S-NSSAI value 1 |  |
|  Length of S-NSSAI contents | ‘00000001’B | SST |  |
|  SST | ‘00000001’B | SST value 1 |  |
|  SD | Not Present |  |  |
|  Mapped configured SST | Not Present |  |  |
|  Mapped configured SD | Not Present |  |  |
|  S-NSSAI |  | S-NSSAI value 2 |  |
|  Length of S-NSSAI contents | ‘00000001’B | SST |  |
|  SST | ‘00000010’B | SST value 2 |  |
|  SD | Not Present |  |  |
|  Mapped configured SST | Not Present |  |  |
|  Mapped configured SD | Not Present |  |  |
| Pending NSSAI |  |  |  |
|  Length of NSSAI contents | '0000 0100'B | 4 octets |  |
|  S-NSSAI |  | S-NSSAI value 1 |  |
|  Length of S-NSSAI contents | ‘00000001’B | SST |  |
|  SST | ‘00000001’B | SST value 1 |  |
|  SD | Not Present |  |  |
|  Mapped configured SST | Not Present |  |  |
|  Mapped configured SD | Not Present |  |  |
|  S-NSSAI |  | S-NSSAI value 2 |  |
|  Length of S-NSSAI contents | ‘00000001’B | SST |  |
|  SST | ‘00000010’B | SST value 2 |  |
|  SD | Not Present |  |  |
|  Mapped configured SST | Not Present |  |  |
|  Mapped configured SD | Not Present |  |  |

Table 9.1.10.3.3.3-1AA: PDU SESSION ESTABLISHMENT ACCEPT (step 14a1, Table 9.1.10.2.3.2-1)

|  |
| --- |
| Derivation path: TS 38.508-1 [4], Table 4.7.2-2 |
| Information Element | Value/remark | Comment | Condition |
| S-NSSAI |  |  |  |
|  Length of S-NSSAI contents | ‘0000 0001’B | SST |  |
|  SST | ‘0000 0011’B | SST value 3 |  |

Table 9.1.10.2.3.3-1A: DEREGISTRATION REQUEST (step 16, Table 9.1.10.2.3.2-1)

|  |
| --- |
| Derivation path: TS 38.508-1 [4], Table 4.7.1-12 |
| Information Element | Value/remark | Comment | Condition |
| De-registration type |  |  |  |
|   Switch off | ‘0’B | Normal de-registration |  |
|   Access type | ‘01’B | 3GPP access |  |

Table 9.1.10.2.3.3-2: NETWORK SLICE-SPECIFIC AUTHENTICATION COMMAND (step 17, Table 9.1.10.2.3.2-1)

|  |
| --- |
| Derivation Path: TS 38.508-1 Table 4.7.1-31 |
| Information Element | Value/remark | Comment | Condition |
| S-NSSAI |  |  |  |
|  Length of S-NSSAI contents | ‘00000001’B | SST |  |
|  SST | ‘00000001’B | SST value 1 |  |
|  SD | Not Present |  |  |
|  Mapped configured SST | Not Present |  |  |
|  Mapped configured SD | Not Present |  |  |

Table 9.1.10.2.3.3-3: REGISTRATION REQUEST (step 2, Table 9.1.10.2.3.2-1)

|  |
| --- |
| Derivation path: TS 38.508-1 [4], Table 4.7.1-6 |
| Information Element | Value/remark | Comment | Condition |
| 5GS registration type value | ‘001’B | Initial registration |  |
| 5GMM capability |  |  |  |
|   NSSAA | ‘1’B | Network slice-specific authentication and authorization supported |  |