**3GPP TSG-CT WG6 Meeting #110*****C6-220189***

**E-meeting; 22th – 25th Feb. 2022**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **31.124** | **CR** | **0626** | **rev** | **1** | **Current version:** | **16.6.1** |  |
|  |
| *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 | **X** | ME | **X** | Radio Access Network | **X** | Core Network | **X** |

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|  |
| ***Title:***  | Add a TC for 27.22.4.7- REFRESH (SUPI\_NAI changing procedure, NG-RAN) |
|  |  |
| ***Source to WG:*** | China Mobile |
| ***Source to TSG:*** | CT6 |
|  |  |
| ***Work item code:*** | 5GS\_Ph1\_UEConTest |  | ***Date:*** | 2022-02-24 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***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 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)* |
|  | \_ |
| ***Reason for change:*** | The current specification doesn’t involve test case about REFRESH of EFSUPI\_NAI changing procedure for NG-RAN. |
|  |  |
| ***Summary of change:*** | Add a TC for REFRESH when EFSUPI\_NAI changes in NG-RAN. |
|  |  |
| ***Consequences if not approved:*** | The current test cases don’t cover REFRESH of EFSUPI\_NAI changing procedure for NG-RAN. |
|  |  |
| ***Clauses affected:*** | 3.3, 3.4, 27.22.4.7 |
|  |  |
|  | **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:*** | C6-220150 |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Start of change \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

## 3.3 Table of optional features

Support of USIM Application Toolkit is optional for Mobile Equipment. However, if an ME states conformance with a specific 3GPP release, it is mandatory for the ME to support all functions of that release, as stated in table B.1, with the exception of the functions:

- "Alpha identifier in REFRESH command supported by terminal";

- "Event Language Selection";

- "Proactive UICC: PROVIDE LOCAL INFORMATION (language)"; and

- "Proactive UICC: LANGUAGE NOTIFICATION".

In accordance to 3GPP TS 36.300 [40], clause 4.10, additional exceptions apply for NB-IoT only MEs.
As a number of E-UTRA protocol functions supported by Rel-8 MEs are not required for NB-IoT, the related USIM Application Toolkit functions may not be supported by NB-IoT only MEs.

Note: NB-IoT only MEs are MEs that only support NB-IoT and no other radio access technology.

The support of letter classes, which specify mainly ME hardware dependent features, is optional for the ME and may supplement the USIM Application Toolkit functionality described in the present document. If an ME states conformance to a letter class, it is mandatory to support all functions within the respective letter class.

The supplier of the implementation shall state the support of possible options in table A.1.

Table A.1: Options

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | Option | Status | Support | Mnemonic |
| 1 | Capability Configuration parameter | M |  | O\_Cap\_Conf |
| ... | … | ... | … | … |
| 190 | Class W: support of PROVIDE LOCATION INFORMATION, H(e)NB surrounding macrocells | O |  | O\_PLI\_HeNB\_Sur\_Macrocells |
| xxx | Terminal supports SUPI as Network Access Identifier | O |  | O\_SUPI\_NSI |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Next of change \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

## 3.4 Applicability table

Table B.1: Applicability of tests

| **Item** | **Description** | **Tested feature defined in Release** | **Test sequence(s)** | **R99 ME** | **Rel-4 ME** | **Rel-5 ME** | **…** | **Rel-14-ME** | **Rel-15 ME** | **Rel-16 ME** | Terminal Profile | **Network Dependency** | **Support** | **Additional test case execution recommendation** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| … | … | … | … | … | … | … | … | … | … |  |  | … | … | … |
| 10 | **REFRESH 27.22.4.7** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| … | … | … | … | … | … | … | … | … |  |  | … | … | … |
| REFRESH, UICC Reset for SUPI\_NAI Changing procedure, NG-RAN |  Rel-16 | x.1 |  |  |  |  |  |  | C231 AND Cxxx | E.1/24 | NG-RAN |  |  |
| REFRESH, 3G Session Reset for SUPI\_NAI Changing procedure, NG-RAN |  Rel-16 | x.2 |  |  |  |  |  |  | C231 AND Cxxx | E.1/24 | NG-RAN |  |  |

|  |  |  |
| --- | --- | --- |
| C101 | IF A.1/1 THEN M ELSE N/A | -- O\_Cap\_Conf |
| C102 | void |  |
| C103 | void |  |
| C104 | IF A.1/2 THEN M ELSE N/A | -- O\_Sust\_text |
| C105 | IF A.1/3 AND A.1/41 THEN M ELSE N/A | -- O\_Ucs2\_Entry AND O\_UCS2\_Cyrillic |
| C106 | IF A.1/4 THEN M ELSE N/A | -- O\_Ext\_Str |
| C107 | IF A.1/5 THEN M ELSE N/A | -- O\_Help |
| C108 | IF A.1/6 THEN O.1 ELSE N/A | -- O\_Icons |
| C109 | IF A.1/7 THEN M ELSE N/A | -- O\_Dual\_Slot |
| C110 | IF A.1/9 AND A.1/46 THEN M ELSE N/A | -- O\_Run\_At AND O\_+CIMI |
| C111 | IF (A.1/10 OR E.1/71) THEN M ELSE N/A | -- O\_LB |
| C112 | IF A.1/11 THEN M ELSE N/A | -- O\_Soft\_key |
| C113 | void |  |
| C114 | IF C110 AND C108 THEN O.1 ELSE N/A | -- O\_Run\_At AND O\_+CIMI AND O\_Icons |
| C115 | IF C111 AND C108 THEN M ELSE N/A | -- O\_LB AND O\_Icons |
| C116 | IF A.1/7 AND A.1/8 THEN M ELSE N/A | -- O\_Dual\_Slot AND O\_Detach\_Rdr |
| C117 | void |  |
| C118 | IF A.1/15 AND A.1/41 THEN M ELSE N/A  | -- O\_Ucs2\_Disp AND O\_UCS2\_Cyrillic |
| C119 | IF A.1/19 THEN M ELSE N/A  | -- O\_Redial |
| C120 | IF A.1/20 THEN M ELSE N/A | -- O\_D\_NoResp |
| C121 | IF A.1/21 AND A.1/17 THEN M ELSE N/A | -- O\_BIP\_GPRS AND O\_UDP |
| C122 | IF C111 AND A.1/16 THEN M ELSE N/A | -- O\_LB AND O\_GPRS |
| C123 | void |  |
| C124 | IF A.1/22, test x.A M ELSE x.B M (where x is the expected sequence number value) | -- O\_CP\_Subaddr |
| C125 | IF A.1/23 THEN M ELSE N/A | -- O\_Imm\_Resp |
| C126 | IF A.1/24 THEN M ELSE N/A | -- O\_Duration |
| C127 | void |  |
| C128 | void |  |
| C129 | void |  |
| C130 | void |  |
| C131 | void |  |
| C132 | IF A.1/27 THEN M ELSE N/A | -- O\_BIP\_Local |
| C133 | void |  |
| C134 | IF A.1/38 THEN M ELSE N/A | -- O\_MMS |
| C135 | void |  |
| C136 | void |  |
| C137 | void |  |
| C138 | void |  |
| C139 | IF A.1/35 THEN M ELSE N/A | -- O\_Batt |
| C140 | IF A.1/39 THEN M ELSE N/A | -- O\_UC\_Before\_EnvCC |
| C141 | IF A.1/40 THEN M ELSE N/A | -- O\_UC\_After\_EnvCC |
| C142 | IF A.1/3 AND A.1/42 THEN M ELSE N/A | -- O\_UCS2\_Entry AND O\_UCS2\_Chinese |
| C143 | IF A.1/15 AND A.1/42 THEN M ELSE N/A | -- O\_UCS2\_Disp AND O\_UCS2\_Chinese |
| C144 | IF A.1/3 AND A.1/43 THEN M ELSE N/A | -- O\_UCS2\_Entry AND O\_UCS2\_Katakana |
| C145 | IF A.1/15 AND A.1/43 THEN M ELSE N/A | -- O\_UCS2\_Disp AND O\_UCS2\_Katakana |
| C146 | IF A.1/45 THEN M ELSE N/A | -- O\_FDN |
| C147 | IF A.1/44 THEN M ELSE N/A | -- O\_BDN |
| C148 | IF A.1/9 AND A.1/47 THEN M ELSE N/A | -- O\_Run\_At AND O\_+CGMI |
| C149 | IF C148 AND C118 THEN M ELSE N/A | -- O\_Run\_At AND O\_+CGMI AND O\_Ucs2\_Disp AND O\_Ucs2\_ Cyrillic |
| C150 | IF C148 AND C143 THEN M ELSE N/A | -- O\_Run\_At AND O\_+CGMI AND O\_Ucs2\_Disp AND O\_Ucs2\_ Chinese |
| C151 | IF C148 AND C145 THEN M ELSE N/A | -- O\_Run\_At AND O\_+CGMI AND O\_Ucs2\_Disp AND O\_Ucs2\_ Katakana |
| C152 | IF C121 AND A.1/49 THEN M ELSE N/A | -- O\_BIP\_GPRS AND O\_UDP AND O\_BUFFER\_SIZE |
| C153 | IF A.1/50 THEN M ELSE N/A | -- O\_TAT\_AL |
| C154 | IF A.1/51 THEN M ELSE N/A | -- O\_TAT\_AC |
| C155 | IF A.1/52 THEN M ELSE N/A | -- O\_TAT\_AR |
| C156 | IF A.1/53 THEN M ELSE N/A | -- O\_TAT\_FSN |
| C157 | IF A.1/54 THEN M ELSE N/A | -- O\_TAT\_FSL |
| C158 | IF A.1/55 THEN M ELSE N/A | -- O\_TAT\_FSS |
| C159 | IF A.1/56 THEN M ELSE N/A | -- O\_TAT\_SN |
| C160 | IF A.1/57 THEN M ELSE N/A | -- O\_TAT\_SB |
| C161 | IF A.1/58 THEN M ELSE N/A | -- O\_TAT\_SI |
| C162 | IF A.1/59 THEN M ELSE N/A | -- O\_TAT\_SU |
| C163 | IF A.1/60 THEN M ELSE N/A | -- O\_TAT\_SS |
| C164 | IF A.1/61 THEN M ELSE N/A | -- O\_TAT\_STFC |
| C165 | IF A.1/62 THEN M ELSE N/A | -- O\_TAT\_STBC |
| C166 | IF A.1/63 THEN test step option n.A M ELSE test step option n.B M | -- O\_longFTN |
| C167 | IF A.1/64 THEN M ELSE N/A | -- O\_GERAN |
| C168 | IF A.1/65 THEN M ELSE N/A | -- O\_Global\_PB |
| C169 | IF (C121 AND A.1/68 THEN test x.A M ELSE IF (C121 AND NOT A.1/68) test x.B M ELSE N/A | -- (O\_BIP\_GPRS AND O\_UDP AND O\_User\_Confirm\_Before\_PDP\_Context\_Request) OR (O\_BIP\_GPRS AND O\_UDP AND NOT O\_User\_Confirm\_Before\_PDP\_Context\_Request) |
| C170 | IF A.1/69 THEN M ELSE N/A | -- O\_Serv\_SS\_HOLD |
| C171 | IF A.1/6 THEN O.2 ELSE N/A | -- O\_Icons |
| C172 | IF A.1/6 THEN O.4 ELSE N/A | -- O\_Icons |
| C173 | IF C110 AND A.1/6 THEN O.2 ELSE N/A | -- O\_Run\_At AND O\_+CIMI AND O\_Icons |
| C174 | IF A.1/78 AND A.1/79 THEN M ELSE N/A  | -- O\_AddInfo\_SS AND O\_Serv\_SS\_CFU |
| C175 | IF A.1/78 AND A.1/80 THEN M ELSE N/A | -- O\_AddInfo\_SS AND O\_Serv\_SS\_CLIR |
| C176 | IF A.1/44 THEN N/A ELSE M | -- O\_BDN |
| C177 | IF A.1/84 THEN M ELSE N/A | -- O\_No\_Type\_ND |
| C178 | IF A.1/85 THEN M ELSE N/A | -- O\_No\_Type\_NK |
| C179 | IF A.1/86 THEN M ELSE N/A | -- O\_No\_Type\_NA |
| C180 | IF A.1/87 THEN M ELSE N/A | -- O\_No\_Type\_NS |
| C181 | IF A.1/88 THEN M ELSE N/A | -- O\_No\_Type\_NL |
| C182 | IF A.1/18 AND (A.1/132 OR A.1/133) THEN M ELSE N/A | -- O\_TCP AND (pc\_BIP\_eFDD OR pc\_BIP\_eTDD) |
| C183 | IF (NOT A.1/135) AND (A.1/64 OR A.1/134) THEN M ELSE N/A | -- (NOT O\_EUTRAN\_NO\_UTRAN\_NO\_GERAN) AND (O\_GERAN OR O\_UTRAN) |
| C184 | IF A.1/134 THEN M ELSE N/A | -- O\_UTRAN |
| C185 | IF A.1/6 AND A.1/111 THEN M ELSE N/A | -- O\_Icons AND O\_Icon\_Rec1\_Send\_SS |
| C186 | IF A.1/6 AND A.1/115 THEN M ELSE N/A | -- O\_Icons AND O\_Icon\_Rec2\_Send\_USSD |
| C187 | IF A.1/6 AND A.1/114 THEN M ELSE N/A | -- O\_Icons AND O\_Icon\_Rec1\_Send\_USSD |
| C188 | IF A.1/6 AND A.1/120 THEN M ELSE N/A | -- O\_Icons AND O\_Icon\_Rec1\_Set\_Up\_Idle\_Mode\_Text |
| C189 | IF C110 AND A.1/6 AND A.1/123 THEN M ELSE N/A | -- O\_Run\_At AND O\_+CIMI AND O\_Icons AND O\_Icon\_Rec1\_Run\_AT\_Cmd |
| C190 | IF (A.1/139 OR A.1/140) THEN M ELSE N/A | -- pc\_eTDD OR pc\_eFDD |
| C191 | IF A.1/21 AND A.1/18 THEN M ELSE N/A | -- O\_BIP\_GPRS AND O\_TCP |
| C192 | IF A.1/21 AND A.1/18 AND A.1/72 THEN M ELSE N/A | -- O\_BIP\_GPRS AND O\_TCP AND O\_BIP\_UICCServer |
| C193 | IF (A.1/10 OR (E.1/71 AND E.1/42)) THEN M ELSE N/A | -- O\_LB |
| C194 | IF A.1/138 THEN M ELSE N/A | -- O\_Select\_Item\_Default\_Item |
| C195 | IF A.1/137 THEN M ELSE N/A | -- O\_CSG\_Cell\_Discovery |
| C196 | IF A.1/142 AND (A.1/139 OR A.1/140) THEN M ELSE N/A | -- pc\_MO\_SM-over-IMS AND (pc\_eFDD OR pc\_eTDD) |
| C197 | IF A.1/142 AND A.1/134 THEN M ELSE N/A | -- pc\_MO\_SM-over-IMS AND O\_UTRAN |
| C198 | IF A.1/141 AND (A.1/139 OR A.1/140) THEN M ELSE N/A | -- pc\_SM-over-IP-receiver AND (pc\_eFDD OR pc\_eTDD) |
| C199 | IF A.1/141 AND A.1/134 THEN M ELSE N/A | -- pc\_SM-over-IP-receiver AND O\_UTRAN |
| C200 | IF A.1/136 THEN M ELSE N/A | -- O\_Event\_CSG\_Cell\_Selection |
| C201 | IF A.1/64 AND A.1/149 THEN M ELSE N/A | -- O\_GERAN AND O\_SMS-CB\_Data\_Download |
| C202 | IF (A.1/139 OR A.1/140) AND A.1/150 THEN M ELSE N/A | -- (pc\_eFDD OR pc\_eTDD) AND O\_IMS |
| C203 | IF A.1/134 AND A.1/150 THEN M ELSE N/A | -- O\_UTRAN AND O\_IMS |
| C204 | IF A.1/151 THEN N/A ELSE M | -- O\_PS\_OPMODE |
| C205 | IF (A.1/139 OR A.1/140) AND A.1/152 THEN M ELSE N/A | -- (pc\_eFDD OR pc\_eTDD) AND O\_SMS\_SGs\_MT |
| C206 | IF (A.1/139 OR A.1/140) AND A.1/153 THEN M ELSE N/A | -- (pc\_eFDD OR pc\_eTDD) AND O\_SMS\_SGs\_MO |
| C207 | IF A.1/147 AND A.1/148 AND A.1/150 THEN M ELSE O | -- O\_Event\_IMS\_Registration AND O\_UICC\_ACCESS\_IMS AND O\_IMS |
| C208 | IF A.1/146 AND A.1/147 AND A.1/148 AND A.1/150 THEN M ELSE N/A | -- O\_Event\_Incoming\_IMS\_Data AND O\_Event\_IMS\_Registration AND O\_UICC\_ACCESS\_IMS AND O\_IMS AND  |
| C209 | IF (A.1/157 OR A.1/159) THEN M ELSE N/A | -- (pc\_SMS\_CS\_MO OR pc\_SMS\_PS\_MO) |
| C210 | IF (NOT A.1/135) AND (A.1/64 OR A.1/134) AND (A.1/157 OR A.1/159) THEN M ELSE N/A | -- (NOT (O\_EUTRAN\_NO\_UTRAN NO\_GERAN) AND (O\_GERAN OR O\_UTRAN)) AND (pc\_SMS\_CS\_MO OR pc\_SMS\_PS\_MO) |
| C211 | IF (A.1/156 OR A.1/158) THEN M ELSE N/A | -- (pc\_SMS\_CS\_MT OR pc\_SMS\_PS\_MT) |
| C212 | IF (NOT A.1/135) AND (A.1/64 OR A.1/134) AND (A.1/156 OR A.1/158) THEN M ELSE N/A | -- (NOT (O\_EUTRAN\_NO\_UTRAN NO\_GERAN) AND (O\_GERAN OR O\_UTRAN)) AND (pc\_SMS\_CS\_MT OR pc\_SMS\_PS\_MT) |
| C213 | IF (NOT A.1/160) THEN M ELSE N/A | -- NOT O\_Rej\_Launch\_Browser\_withDefURL |
| C214 | IF A.1/160 THEN M ELSE N/A | -- O\_Rej\_Launch\_Browser\_withDefURL |
| C215 | IF A.1/16 THEN M ELSE N/A | -- O\_GPRS |
| C216 | IF A.1/161 THEN M ELSE N/A | -- O\_Lang\_Select |
| C217 | IF A.1/162 THEN M ELSE N/A | -- O\_Provide\_Local\_LS |
| C218 | IF A.1/163 THEN M ELSE N/A | -- O\_Lang\_Notif |
| C219 | IF A.1/164 THEN M ELSE N/A | -- O\_Refresh\_AlphaIdentifier |
| C220 | IF (A.1/139 OR A.1/140 OR A.1/173) AND A.1/153 THEN M ELSE N/A | -- (pc\_eFDD OR pc\_eTDD OR pc\_NB) AND O\_SMS\_SGs\_MO |
| C221 | IF (A.1/139 OR A.1/140 OR A.1/173) AND A.1/152 THEN M ELSE N/A | -- (pc\_eFDD OR pc\_eTDD OR pc\_NB) AND O\_SMS\_SGs\_MT |
| C222 | IF (A.1/139 OR A.1/140 OR A.1/173) THEN M ELSE N/A | -- pc\_eTDD OR pc\_eFDD OR pc\_NB |
| C223 | IF A.1/18 AND (A.1/132 OR A.1/133 OR A.1/177) THEN M ELSE N/A | -- O\_TCP AND (pc\_BIP\_eFDD OR pc\_BIP\_eTDD OR pc\_BIP\_NB) |
| C224 | IF A.1/18 AND A.1/178 AND (A.1/132 OR A.1/133 OR A.1/177) THEN M ELSE N/A | -- O\_TCP AND pc\_Multiple\_PDN AND (pc\_BIP\_eFDD OR pc\_BIP\_eTDD OR pc\_BIP\_NB) |
| C225 | IF A.1/18 AND (A.1/132 OR A.1/133 OR A.1/177) AND A.1/182 THEN M ELSE N/A | -- O\_TCP AND (pc\_BIP\_eFDD OR pc\_BIP\_eTDD OR pc\_BIP\_NB) AND O\_PSM\_SUSPEND\_UICC |
| C226 | IF A.1/18 AND (A.1/132 OR A.1/133 OR A.1/177) AND A.1/181 THEN M ELSE N/A | -- O\_TCP AND (pc\_BIP\_eFDD OR pc\_BIP\_eTDD OR pc\_BIP\_NB) AND O\_PSM\_DEAC\_UICC |
| C227 | IF A.1/18 AND (A.1/132 OR A.1/133 OR A.1/177) AND A.1/183 THEN M ELSE N/A | -- O\_TCP AND (pc\_BIP\_eFDD OR pc\_BIP\_eTDD OR pc\_BIP\_NB) AND O\_eDRX\_SUSPEND\_UICC |
| C228 | IF (A.1/132 OR A.1/133) AND A.1/152 AND A.1/184 THEN M ELSE N/A | -- (pc\_BIP\_eFDD OR pc\_BIP\_eTDD) AND O\_SMS\_SGs\_MT AND O\_PS\_Data\_Off |
| C229 | IF (A.1/132 OR A.1/133 OR A.1/177) THEN M ELSE N/A | -- pc\_BIP\_eFDD OR pc\_BIP\_eTDD OR pc\_BIP\_NB |
| C230 | A.1/17 AND A.1/178 AND (A.1/132 OR A.1/133 OR A.1/177) THEN M ELSE N/A | -- O\_UDP AND pc\_Multiple\_PDN AND (pc\_BIP\_eFDD OR pc\_BIP\_eTDD OR pc\_BIP\_NB) |
| C231 | IF A.1/187THEN M ELSE N/A | -- pc\_NG\_RAN |
| C232 | IF (A.1/187 AND A.1/188) THEN M ELSE N/A | -- pc\_NG\_RAN AND pc\_BIP\_NG\_RAN |
| Cxxx | IF (A.1/xxx) THEN M ELSE N/A | --O\_SUPI\_NSI |
|  |
| O.1 | IF A.1/zz tests x.yA M ELSE tests x.yB M (where zz corresponds to the option relating to the command being tested (e.g. A.1/90 if Display Text supports icons as defined in record 1 of EF(IMG)) and x.y is the expected sequence number value) |
| O.2 | IF A.1/zz tests x.yA M ELSE tests x.yB M (where zz corresponds to the option relating to the command being tested (e.g. A.1/91 if Display Text supports icons as defined in record 2 of EF(IMG)) and x.y is the expected sequence number value) |
| O.3 | void |
| O.4 | IF A.1/zz AND A.1/ww tests x.yA M ELSE tests x.yB M (where zz and ww correspond to the option relating to the command being tested (e.g. A.1/90 if Display Text supports icons as defined in record 1 of EF(IMG) and A.1.92 if Display Text supports icons as defined in record 5 of EF(IMG) ) and x.y is the expected sequence number value) |
|  |
| TCEP001 | IF NOT A.1/84 THEN during the test execution, the display or the non-display of any alpha identifier, text string or icon shall be treated as successfully verified. |
| TCEP002 | IF NOT A.1/85 THEN the terminal may open the channel without explicit confirmation by the user. |
| TCEP003 | If A.1/181 and/or A.1/182 is supported, in addition to the test case initial conditions, any specific information or particular UE configurations required to ensure that the UE performs UICC deactivation/suspension in PSM shall be provided by the UE manufacturer |
| TCEP004 | If A.1/183 is supported, in addition to the test case initial conditions, any specific information or particular UE configurations required to ensure that the UE suspends the UICC in eDRX shall be provided by the UE manufacturer |
| AER001 | IF ((A.1/21 AND A.1/17) AND ((A.1/132 OR A.1/133) AND (A.1/134 OR A.1/64))) THEN R(27.22.4.27.6, Seq. 6.1) ELSE A | -- (O\_BIP\_GPRS AND O\_UDP) AND (O\_BIP\_eFDD OR O\_BIP\_eTDD) AND (O\_UTRAN OR O\_GERAN) |
| AER002 | IF ( (A.1/132 OR A.1/133 OR A.1/173) AND (A.1/134 OR A.1/64))) THEN R(27.22.7.4 Seq. 1.2) ELSE A | -- (pc\_BIP\_eFDD OR pc\_BIP\_eTDD OR pc\_NB) AND (O\_GERAN OR O\_UTRAN) |
| AER003 | IF ( (A.1/132 OR A.1/133) AND (A.1/134 OR A.1/64))) THEN R(27.22.4.15 Seq. 1.17) ELSE A | -- (pc\_BIP\_eFDD OR pc\_BIP\_eTDD) AND (O\_UTRAN OR O\_GERAN) |
| AER004 | IF ( (A.1/132 OR A.1/133) AND (A.1/134 OR A.1/64))) THEN R(27.22.4.15 Seq. 1.14) ELSE A | -- (pc\_BIP\_eFDD OR pc\_BIP\_eTDD) AND (O\_UTRAN OR O\_GERAN) |
| AER005 | IF ((A.1/21 AND A.1/17) AND ((A.1/132 OR A.1/133) AND (A.1/134 OR A.1/64))) THEN R(27.22.4.27.6, Seq. 6.4) ELSE A | -- (O\_BIP\_GPRS AND O\_UDP) AND (O\_BIP\_eFDD OR O\_BIP\_eTDD) AND (O\_UTRAN OR O\_GERAN) |
| AER006 | IF ((A.1/21 AND A.1/17) AND ((A.1/132 OR A.1/133) AND (A.1/134 OR A.1/64))) THEN R(27.22.4.27.6, Seq. 6.3) ELSE A | -- (O\_BIP\_GPRS AND O\_UDP) AND (O\_BIP\_eFDD OR O\_BIP\_eTDD) AND (O\_UTRAN OR O\_GERAN) |
| AER007 | IF ((A.1/21 AND A.1/17) AND ((A.1/132 OR A.1/133) AND (A.1/134 OR A.1/64))) THEN R(27.22.4.27.6, Seq. 6.5) ELSE A | -- (O\_BIP\_GPRS AND O\_UDP) AND (O\_BIP\_eFDD OR O\_BIP\_eTDD) AND (O\_UTRAN OR O\_GERAN) |
| AER008 | IF ((A.1/21 AND A.1/17) AND ((A.1/132 OR A.1/133) AND (A.1/134 OR A.1/64))) THEN R(27.22.4.29, Seq. 1.2) ELSE A | -- (O\_BIP\_GPRS AND O\_UDP) AND (O\_BIP\_eFDD OR O\_BIP\_eTDD) AND (O\_UTRAN OR O\_GERAN) |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Next of change \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

##### 27.22.4.7.x REFRESH (SUPI\_NAI changing procedure, NG-RAN)

27.22.4.7.x.1 Definition and applicability

See clause 3.2.2.

27.22.4.7.x.2 Conformance requirement

The ME shall support the REFRESH command as defined in:

- TS 31.111 [15] clause 6.1, clause 6.4.7, clause 6.4.7.1, clause 6, clause 6.6.13, clause 5.2, clause 8.6, clause 8.7 and clause 8.18.

Additionally the ME shall support the USIM Initialization and USIM application closure procedure as defined in:

- TS 31.102 [14] clause 5.1.1.2, clause 5.1.3 and Annex I.

27.22.4.7.x.3 Test purpose

To verify that the ME performs the Proactive Command – REFRESH in accordance with the Command Qualifier and the SUPI\_NAI changing procedure. This may require the ME to perform:

- the USIM initialization

- a re-read of the contents and structure of the SUPI\_NAI on the USIM

- a restart of the card session

- a successful return of the result of the execution of the command in the TERMINAL RESPONSE command sent to the UICC.

27.22.4.7.x.4 Method of test

27.22.4.7.x.4.1 Initial conditions

The ME is connected to the USIM Simulator and connected to the NG-SS.

The NG-RAN parameters of the system simulator are:

- Mobile Country Code (MCC) = 001;

- Mobile Network Code (MNC) = 01;

- Tracking Area Code (TAC) = 000001;

The elementary files are coded as the default NG-RAN UICC with the following exceptions:

**EFUST (USIM Service Table)**

Logically:

User controlled PLMN selector available

Fixed dialling numbers available

The GSM Access available

The Group Identifier level 1 and level 2 not available

Service n 33 (Packed Switched Domain) shall be set to '1'

Enabled Services Table available

EPS Mobility Management Information available

Allowed CSG Lists and corresponding indications

5GS Mobility Management Information available

5G Security Parameters available

Subscription identifier privacy support available

SUCI calculation by the USIM not available

Support for SUPI of type NSI or GLI or GCI available

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Byte: | B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 |
| Binary: | xxxx xx1x | xxxx xxxx | xxxx 1x00 | xxxx x1xx | xxxx xx11 | xxxx xxxx | xxxx xxxx | xxxx xxxx |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  | B9 | B10 | B11 |  | B16 | B17 |  |  |
|  | xxxx xxxx | xxxx xxxx | xx11 xxxx | ..... | xxx0 111x | xxxxxx1x |  |  |

The coding of EFUST shall conform with the capabilities of the USIM used.

**EFSUPI\_NAI (SUPI as Network Access Identifier)**

Logically:

Network Access Identifier TLV data object: 80 14 75 73 65 72 69 64 31 38 40 65 78 61 6D 70 6C 65 2E 63 6F 6D

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Coding:** | **B1** | **B2** | **B3** | **B4** | **B5** | **B6** | **B7** | **B8** |
| Hex | 80  | 14 | 75 | 73 | 65 | 72 | 69 | 64 |
|  | **B9** | **B10** | **B11** | **B12** | **B13** | **B14** | **B15** | **B16** |
|  | 31 | 38 | 40 | 65 | 78 | 61 | 6D | 70 |
|  | **B17** | **B18** | **B19** | **B20** | **B21** | **B22** |  |  |
|  | 6C | 65 | 2E | 63 | 6F | 6D |  |  |

Prior to this test the ME shall have been powered on and performed the PROFILE DOWNLOAD procedure.

27.22.4.7.x.4.2 Procedure

**Expected Sequence x.1 (REFRESH, UICC Reset for SUPI\_NAI Changing procedure, NG-RAN)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Step** | **Direction** | **MESSAGE / Action** | **Comments** |
| 1 | ME → NG-SS | ME successfully REGISTER with NG-RAN cell. | The ME registers using SUPI\_NAI “userid18@example.com” in NG-RAN |
| 2 | UICC | Update EF SUPI\_NAI and EF 5GSN3GPPLOCI. | The content of EF SUPI\_NAI has been changed to "userid19@example.com" and the 5G-GUTI in EF 5GSN3GPPLOCI is updated to 'FF FF FF FF FF FF FF FF FF FF FF FF FF'. |
| 3 | UICC → ME | PROACTIVE COMMAND PENDING: REFRESH x.1.1 | [To inform the ME that SUPI\_NAI has changed] |
| 4 | ME → UICC | FETCH |  |
| 5 | UICC → ME | PROACTIVE COMMAND: REFRESH x.1.1 or x.1.2 | IF terminal supports PD\_ Refresh\_Enforcement\_Policy use PROACTIVE COMMAND: REFRESH x.1.2, ELSE x.1.1. |
| 6 | ME→NG-SS | Deregistration Request |  |
| 7 | ME → UICC | ME performs UICC reset. | Both cold and warm resets are allowed |
| 8 | ME→NG-SS | Registration Request | The ME will register using SUPI\_NAI "userid19@example.com" in NG-RAN. |
| 9 | NG-SS→ME | Registration Accept |  |
| 10 | ME→NG-SS | Registration Complete |  |

PROACTIVE COMMAND: REFRESH x.1.1

Logically:

Command details

 Command number: 1

 Command type: REFRESH

 Command qualifier: UICC RESET

Device identities

 Source device: UICC

 Destination device: ME

Coding:

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| BER-TLV: | D0 | 09 | 81 | 03 | 01 | 01 | 04 | 82 | 02 | 81 | 82 |

PROACTIVE COMMAND: REFRESH x.1.2

Logically:

Command details

 Command number: 1

 Command type: REFRESH

 Command qualifier: UICC RESET

Device identities

 Source device: UICC

 Destination device: ME

Refresh enforcement policy: Force immediate REFRESH even if the terminal is busy on data call

Coding:

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| BER-TLV: | D0 | 0C | 81 | 03 | 01 | 01 | 04 | 82 | 02 | 81 | 82 | 3A |
|  | 01 | 02 |

**Expected Sequence x.2 (REFRESH, 3G Session Reset for SUPI\_NAI Changing procedure, NG-RAN)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Step** | **Direction** | **MESSAGE / Action** | **Comments** |
| 1 | ME → NG-SS | ME successfully REGISTER with NG-RAN cell. | The ME registers using SUPI\_NAI “userid18@example.com” in NG-RAN |
| 2 | UICC | Update EF SUPI\_NAI and EF 5GSN3GPPLOCI. | The content of EF SUPI\_NAI has been changed to "userid19@example.com" and the 5G-GUTI in EF 5GSN3GPPLOCI is updated to 'FF FF FF FF FF FF FF FF FF FF FF FF FF'. |
| 3 | UICC→ ME | PROACTIVE COMMAND PENDING: REFRESH x.2.1 | [To inform the ME that SUPI\_NAI has changed] |
| 4 | ME → UICC | FETCH |  |
| 5 | UICC → ME | PROACTIVE COMMAND: REFRESH x.2.1 or x.2.2 | IF terminal supports PD\_ Refresh\_Enforcement\_Policy use PROACTIVE COMMAND: REFRESH x.2.2, ELSE x.2.1. |
| 6 | ME→NG-SS | Deregistration Request |  |
| 7 | ME → UICC | STATUS[P1='02'] | If A.1/172 is supported, then the ME indicates to USIM that the termination procedure is starting, completes the 3G session termination procedure and resets the application via SELECT by DF name command with the AID.The ME performs the USIM initialization. |
| 8 | ME → UICC | TERMINAL RESPONSE: REFRESH x.2.1A or TERMINAL RESPONSE: REFRESH x.2.1B | [normal ending] |
| 9 | UICC → ME | PROACTIVE UICC SESSION ENDED |  |
| 10 | ME→NG-SS | Registration Request | The ME will register using SUPI\_NAI "userid19@example.com" in NG-RAN. |
| 11 | NG-SS→ME | Registration Accept |  |
| 12 | ME→NG-SS | Registration Complete |  |

PROACTIVE COMMAND: REFRESH x.2.1

Logically:

Command details

 Command number: 1

 Command type: REFRESH

 Command qualifier: 3G Session Reset

Device identities

 Source device: UICC

 Destination device: ME

File list

 Number of files: 2

 File: EF SUPI\_NAI

 File: EF 5GSN3GPPLOCI

Coding:

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| BER-TLV: | D0 | 1C | 81 | 03 | 01 | 01 | 06 | 82 | 02 | 81 | 82 | 92 |
|  | 11 | 02 | 3F | 00 | 7F | FF | 5F | C0 | 4F | 09 | 3F | 00 |
|  | 7F | FF | 5F | C0 | 4F | 02 |  |  |  |  |  |  |

PROACTIVE COMMAND: REFRESH x.2.2

Logically:

Command details

 Command number: 1

 Command type: REFRESH

 Command qualifier: 3G Session Reset

Device identities

 Source device: UICC

 Destination device: ME

File list

 Number of files: 2

 File: EF SUPI\_NAI

 File: EF 5GSN3GPPLOCI

Refresh enforcement policy: Force immediate REFRESH even if the terminal is busy on data call

Coding:

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| BER-TLV: | D0 | 1F | 81 | 03 | 01 | 01 | 06 | 82 | 02 | 81 | 82 | 92 |
|  | 11 | 02 | 3F | 00 | 7F | FF | 5F | C0 | 4F | 09 | 3F | 00 |
|  | 7F | FF | 5F | C0 | 4F | 02 | 3A | 01 | 02 |  |  |  |

TERMINAL RESPONSE: REFRESH x.2.1A

Logically:

Command details

 Command number: 1

 Command type: REFRESH

 Command qualifier: 3G Session Reset

Device identities

 Source device: ME

 Destination device: UICC

Result

 General Result: Command performed successfully

Coding:

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| BER-TLV: | 81 | 03 | 01 | 01 | 06 | 82 | 02 | 82 | 81 | 83 | 01 | 00 |

TERMINAL RESPONSE: REFRESH x.2.1B

Logically:

Command details

 Command number: 1

 Command type: REFRESH

 Command qualifier: 3G Session Reset

Device identities

 Source device: ME

 Destination device: UICC

Result

 General Result: REFRESH performed with additional EFs read

Coding:

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| BER-TLV: | 81 | 03 | 01 | 01 | 06 | 82 | 02 | 82 | 81 | 83 | 01 | 03 |

27.22.4.7.5.5 Test requirement

The ME shall operate in the manner defined in expected sequences x.1 to x.2.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* End of change \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*