**3GPP TSG-CT WG1 Meeting #125-e C1-20xxxx**

**Electronic meeting, 20-28 August 2020**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **24.501** | **CR** | **xxxx** | **rev** | **x** | **Current version:** | **16.5.0** |  |
|  |
| *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 | **x** | Radio Access Network |  | Core Network |  |

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| ***Title:***  | The requirements of Rejected NSSAI for unknown cause value |
|  |  |
| ***Source to WG:*** | China Mobile,ZTE, Huawei, HiSilicon |
|  |  |
| ***Work item code:*** | 5GProtoc16 |  | ***Date:*** | 2020-08-06 |
|  |  |  |  |  |
| ***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 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-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
|  |  |
| ***Reason for change:*** | The Rejected NSSAI IE contains multiple rejected S-NSSAIs, and each rejected S-NSSAI consists of one S-NSSAI and an associated cause value.Considering that:1. An early version UE may not know a cause value defined in late version.
2. The cause value indicates the associated S-NSSAI belonging to VPLMN or HPLMN.
3. It’s not proper for UE to store a rejected S-NSSAI with an unknown cause, although the S-NSSAI is rejected by the network for some reason.
4. Each rejected S-NSSAI can be decoded independently.
5. It’s not proper for UE to ignore a whole Rejected NSSAI IE due to a reserved cause value within in one of the rejected S-NSSAIs, since other rejected S-NSSAIs can be decoded normally.

It is suggested that the UE shall not ignore the whole IE but skip the Rejected S-NSSAI with the reserved value. That is, UE can keep other rejected S-NSSAIs with a known cause value. |
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| ***Summary of change:*** |  Specify that UE ignores the rejected S-NSSAI with an unknown cause value, and keeps other rejected S-NSSAIs in the Rejected NSSAI IE. |
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| ***Consequences if not approved:*** | 1. UE may store a rejected S-NSSAI without knowing it belongs to VPLMN or HPLMN.
2. UE may ignore a whole Rejected NSSAI IE due to an unknown cause value, which could impact other rejected S-NSSAIs decoded normally.
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| ***Clauses affected:*** | 9.11.3.46 |
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|  | **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:*** |  |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* NEXT CHANGE \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#### 9.11.3.46 Rejected NSSAI

The purpose of the Rejected NSSAI information element is to identify a collection of rejected S-NSSAIs.

The Rejected NSSAI information element is coded as shown in figure 9.11.3.46.1, figure 9.11.3.46.2 and table 9.11.3.46.1.

The Rejected NSSAI is a type 4 information element with a minimum length of 4 octets and a maximum length of 42 octets.

NOTE: The number of rejected S-NSSAI(s) cannot exceed eight.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |  |
| Rejected NSSAI IEI | octet 1 |
| Length of Rejected NSSAI contents | octet 2 |
| Rejected S-NSSAI 1 | octet 3octet m  |
| Rejected S-NSSAI 2 | octet m+1\*octet n\* |
| … | octet n+1\*octet u\* |
| Rejected S-NSSAI n | octet u+1\*octet v\* |

Figure 9.11.3.46.1: Rejected NSSAI information element

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |  |
| Length of rejected S-NSSAI | Cause value | octet 1 |
| SST | octet 2 |
| SD | octet 3\*octet 5\* |

Figure 9.11.3.46.2: Rejected S-NSSAI

Table 9.11.3.46.1: Rejected NSSAI information element

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| Value part of the Rejected NSSAI information element (octet 3 to v) |
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| The value part of the Rejected NSSAI information element consists of one or more rejected S-NSSAIs. Each rejected S-NSSAI consists of one S-NSSAI and an associated cause value. The length of each rejected S-NSSAI can be determined by the 'length of rejected S-NSSAI' field in the first octet of the rejected S-NSSAI. |
| The UE shall store the complete list received. If more than 8 rejected S-NSSAIs are included in this information element, the UE shall store the first 8 rejected S-NSSAIs and ignore the remaining octets of the information element. |
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| Rejected S-NSSAI: |
|  |
| Cause value (octet 1) |
| Bits |
| 4 | 3 | 2 | 1 |  |  |
| 0 | 0 | 0 | 0 |  | S-NSSAI not available in the current PLMN or SNPN |
| 0 | 0 | 0 | 1 |  | S-NSSAI not available in the current registration area |
| 0 | 0 | 1 | 0 |  | S-NSSAI not available due to the failed or revoked network slice-specific authentication and authorization. |
| All other values are reserved. The UE shall ignore the rejected S-NSSAI associated with a reserved cause value. |
|  |
| Slice/service type (SST) (octet 2) |
| This field contains the 8 bit SST value. The coding of the SST value part is defined in 3GPP TS 23.003 [4]. (NOTE 2) |
|  |
| Slice differentiator (SD) (octet 3 to octet 5) |
| This field contains the 24 bit SD value. The coding of the SD value part is defined in 3GPP TS 23.003 [4]. (NOTE 3) |
| NOTE 1: If octet 3 is included, then octet 4 and octet 5 shall be included. NOTE 2: If the Cause value is “S-NSSAI not available due to the failed or revoked network slice-specific authentication and authorization”, this field shall contain the 8 bit SST value of an S-NSSAI in the S-NSSAI(s) of the HPLMN.NOTE 3: If the Cause value is “S-NSSAI not available due to the failed or revoked network slice-specific authentication and authorization”, this field shall contain the 24 bit SD value of an S-NSSAI in the S-NSSAI(s) of the HPLMN. |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* END of CHANGE \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*