**3GPP TSG-CT WG1 Meeting #134-eC1-221302**

**E-Meeting, 17th – 25th February 2022**

|  |
| --- |
| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **24.501** | **CR** | **4015** | **rev** | **-** | **Current version:** | **17.5.0** |  |
|  |
| *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 | **x** |

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| --- |
|  |
| ***Title:***  | Coding of NSSRG information IE |
|  |  |
| ***Source to WG:*** | ZTE |
| ***Source to TSG:*** | C1 |
|  |  |
| ***Work item code:*** | eNS\_Ph2 |  | ***Date:*** | 2022-02-10 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-17 |
|  | *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:*** | In TS 24.501 subclause 9.11.3.82, there is one editor’s note that needs to be resolved:“*Editor's note: Coding of NSSRG information IE is FFS.*” |
|  |  |
| ***Summary of change:*** | Coding of NSSRG information IE is proposed. |
|  |  |
| ***Consequences if not approved:*** | Coding of NSSRG information IE is unspecified. |
|  |  |
| ***Clauses affected:*** | 8.2.7.1, 8.2.19.1, 9.11.3.82 |
|  |  |
|  | **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:*** |  |

\* \* \* First Change \* \* \* \*

#### 8.2.7.1 Message definition

The REGISTRATION ACCEPT message is sent by the AMF to the UE. See table 8.2.7.1.1.

Message type: REGISTRATION ACCEPT

Significance: dual

Direction: network to UE

Table 8.2.7.1.1: REGISTRATION ACCEPT message content

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| IEI | Information Element | Type/Reference | Presence | Format | Length |
|  | Extended protocol discriminator | Extended protocol discriminator9.2 | M | V | 1 |
|  | Security header type | Security header type9.3 | M | V | 1/2 |
|  | Spare half octet | Spare half octet9.5 | M | V | 1/2 |
|  | Registration accept message identity | Message type9.7 | M | V | 1 |
|  | 5GS registration result | 5GS registration result9.11.3.6 | M | LV | 2 |
| 77 | 5G-GUTI | 5GS mobile identity9.11.3.4 | O | TLV-E | 14 |
| 4A | Equivalent PLMNs | PLMN list9.11.3.45 | O | TLV | 5-47 |
| 54 | TAI list | 5GS tracking area identity list9.11.3.9 | O | TLV | 9-114 |
| 15 | Allowed NSSAI | NSSAI9.11.3.37 | O | TLV | 4-74 |
| 11 | Rejected NSSAI | Rejected NSSAI9.11.3.46 | O | TLV | 4-42 |
| 31 | Configured NSSAI | NSSAI9.11.3.37 | O | TLV | 4-146 |
| 21 | 5GS network feature support | 5GS network feature support9.11.3.5 | O | TLV | 3-5 |
| 50 | PDU session status | PDU session status9.11.3.44 | O | TLV | 4-34 |
| 26 | PDU session reactivation result | PDU session reactivation result9.11.3.42 | O | TLV | 4-34 |
| 72 | PDU session reactivation result error cause | PDU session reactivation result error cause9.11.3.43 | O | TLV-E | 5-515 |
| 79 | LADN information | LADN information9.11.3.30 | O | TLV-E | 12-1715 |
| B- | MICO indication | MICO indication9.11.3.31 | O | TV | 1 |
| 9- | Network slicing indication | Network slicing indication9.11.3.36 | O | TV | 1 |
| 27 | Service area list | Service area list9.11.3.49 | O | TLV | 6-114 |
| 5E | T3512 value | GPRS timer 39.11.2.5 | O | TLV | 3 |
| 5D | Non-3GPP de-registration timer value | GPRS timer 29.11.2.4 | O | TLV | 3 |
| 16 | T3502 value | GPRS timer 29.11.2.4 | O | TLV | 3 |
| 34 | Emergency number list | Emergency number list9.11.3.23 | O | TLV | 5-50 |
| 7A | Extended emergency number list | Extended emergency number list9.11.3.26 | O | TLV-E | 7-65538 |
| 73 | SOR transparent container | SOR transparent container9.11.3.51 | O | TLV-E | 20-n |
| 78 | EAP message | EAP message9.11.2.2 | O | TLV-E | 7-1503 |
| A- | NSSAI inclusion mode | NSSAI inclusion mode9.11.3.37A | O | TV | 1 |
| 76 | Operator-defined access category definitions | Operator-defined access category definitions9.11.3.38 | O | TLV-E | 3-8323 |
| 51 | Negotiated DRX parameters | 5GS DRX parameters9.11.3.2A | O | TLV | 3 |
| D- | Non-3GPP NW policies | Non-3GPP NW provided policies9.11.3.36A | O | TV | 1 |
| 60 | EPS bearer context status | EPS bearer context status9.11.3.23A | O | TLV | 4 |
| 6E | Negotiated extended DRX parameters | Extended DRX parameters9.11.3.26A | O | TLV | 3 |
| 6C | T3447 value | GPRS timer 39.11.2.5 | O | TLV | 3 |
| 6B | T3448 value | GPRS timer 29.11.2.4 | O | TLV | 3 |
| 6A | T3324 value | GPRS timer 39.11.2.5 | O | TLV | 3 |
| 67 | UE radio capability ID | UE radio capability ID9.11.3.68 | O | TLV | 3-n |
| E- | UE radio capability ID deletion indication | UE radio capability ID deletion indication9.11.3.69 | O | TV | 1 |
| 39 | Pending NSSAI | NSSAI9.11.3.37 | O | TLV | 4-146 |
| 74 | Ciphering key data | Ciphering key data9.11.3.18C | O | TLV-E | 34-n |
| 75 | CAG information list | CAG information list9.11.3.18A | O | TLV-E | 3-n |
| 1B | Truncated 5G-S-TMSI configuration | Truncated 5G-S-TMSI configuration9.11.3.70 | O | TLV | 3 |
| 1C | Negotiated WUS assistance information | WUS assistance information9.11.3.71 | O | TLV | 3-n |
| 29 | Negotiated NB-N1 mode DRX parameters | NB-N1 mode DRX parameters9.11.3.73 | O | TLV | 3 |
| 68 | Extended rejected NSSAI | Extended rejected NSSAI9.11.3.75 | O | TLV | 5-90 |
| 7C | Service-level-AA container | Service-level-AA container9.11.2.10 | O | TLV-E | 6-n |
| 33 | Negotiated PEIPS assistance information | PEIPS assistance information9.11.3.80 | O | TLV | 3-n |
| 34 | 5GS additional request result | 5GS additional request result9.11.3.81 | O | TLV | 3 |
| TBD | NSSRG information | NSSRG information9.11.3.82 | O | TLV-E | 8-65538 |
| 14 | Disaster roaming wait range | Registration wait range9.11.3.84 | O | TLV | 4 |
| 15 | Disaster return wait range | Registration wait range9.11.3.84 | O | TLV | 4 |
| 13 | List of PLMNs to be used in disaster condition | List of PLMNs to be used in disaster condition9.11.3.83 | O | TLV | 2-n |

\* \* \* Next Change \* \* \* \*

#### 8.2.19.1 Message definition

The CONFIGURATION UPDATE COMMAND message is sent by the AMF to the UE. See table 8.2.19.1.1.

Message type: CONFIGURATION UPDATE COMMAND

Significance: dual

Direction: network to UE

Table 8.2.19.1.1: CONFIGURATION UPDATE COMMAND message content

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| IEI | Information Element | Type/Reference | Presence | Format | Length |
|  | Extended protocol discriminator | Extended protocol discriminator9.2 | M | V | 1 |
|  | Security header type | Security header type9.3 | M | V | 1/2 |
|  | Spare half octet | Spare half octet9.5 | M | V | 1/2 |
|  | Configuration update command message identity | Message type9.7 | M | V | 1 |
| D- | Configuration update indication | Configuration update indication9.11.3.18 | O | TV | 1 |
| 77 | 5G-GUTI | 5GS mobile identity9.11.3.4 | O | TLV-E | 14 |
| 54 | TAI list | 5GS tracking area identity list9.11.3.9 | O | TLV | 9-114 |
| 15 | Allowed NSSAI | NSSAI9.11.3.37 | O | TLV | 4-74 |
| 27 | Service area list | Service area list9.11.3.49 | O | TLV | 6-114 |
| 43 | Full name for network | Network name9.11.3.35 | O | TLV | 3-n |
| 45 | Short name for network | Network name9.11.3.35 | O | TLV | 3-n |
| 46 | Local time zone | Time zone9.11.3.52 | O | TV | 2 |
| 47 | Universal time and local time zone | Time zone and time9.11.3.53 | O | TV | 8 |
| 49 | Network daylight saving time | Daylight saving time9.11.3.19 | O | TLV | 3 |
| 79 | LADN information | LADN information9.11.3.30 | O | TLV-E | 3-1715 |
| B- | MICO indication | MICO indication9.11.3.31 | O | TV | 1 |
| 9- | Network slicing indication | Network slicing indication9.11.3.36 | O | TV | 1 |
| 31 | Configured NSSAI | NSSAI9.11.3.37 | O | TLV | 4-146 |
| 11 | Rejected NSSAI | Rejected NSSAI9.11.3.46 | O | TLV | 4-42 |
| 76 | Operator-defined access category definitions | Operator-defined access category definitions9.11.3.38 | O | TLV-E | 3-8323 |
| F- | SMS indication | SMS indication9.11.3.50A | O | TV | 1 |
| 6C | T3447 value | GPRS timer 39.11.2.5 | O | TLV | 3 |
| 75 | CAG information list | CAG information list9.11.3.18A | O | TLV-E | 3-n |
| 67 | UE radio capability ID | UE radio capability ID9.11.3.68 | O | TLV | 3-n |
| A- | UE radio capability ID deletion indication | UE radio capability ID deletion indication9.11.3.69 | O | TV | 1 |
| 44 | 5GS registration result | 5GS registration result9.11.3.6 | O | TLV | 3 |
| 1B | Truncated 5G-S-TMSI configuration | Truncated 5G-S-TMSI configuration9.11.3.70 | O | TLV | 3 |
| C- | Additional configuration indication | Additional configuration indication9.11.3.74 | O | TV | 1 |
| 68 | Extended rejected NSSAI | Extended rejected NSSAI9.11.3.75 | O | TLV | 5-90 |
| 7C | Service-level-AA container | Service-level-AA container9.11.2.10 | O | TLV-E | 6-n |
| TBD | NSSRG information | NSSRG information9.11.3.82 | O | TLV-E | 8-65538 |
| 14 | Disaster roaming wait range | Registration wait range9.11.3.84 | O | TLV | 4 |
| 15 | Disaster return wait range | Registration wait range9.11.3.84 | O | TLV | 4 |
| 13 | List of PLMNs to be used in disaster condition | List of PLMNs to be used in disaster condition9.11.3.83 | O | TLV | 2-n |

\* \* \* Next Change \* \* \* \*

#### 9.11.3.82 NSSRG information

The purpose of the NSSRG information information element is to identify one or more NSSRG values associated with each of the S-NSSAIs in a configured NSSAI.

The NSSRG information information element is coded as shown in figure 9.11.3.82.1, figure 9.11.3.82.2 and table 9.11.3.82.1.

The NSSRG information is a type 6 information element with minimal length of 8 octets and maximum length of 65538 octets.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |  |
| NSSRG information IEI | octet 1 |
| Length of NSSRG information contents | octet 2octet 3 |
| NSSRG value(s) for S-NSSAI 1 | octet 4octet m |
| NSSRG value(s) for S-NSSAI 2 | octet m+1\*octet n\* |
| … | octet n+1\*octet u\* |
| NSSRG value(s) for S-NSSAI x | octet u+1\*octet v\* |

Figure 9.11.3.82.1: NSSRG information information element

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |  |
| Length of NSSRG value(s) for S-NSSAI | octet 4 |
| S-NSSAI value | octet 5octet w |
| Number of NSSRG value(s) | octet w+1 |
| NSSRG value 1 for the S-NSSAI | octet w+2 |
| NSSRG value 2 for the S-NSSAI | octet w+3\* |
| … | octet w+4\*octet m-1\* |
| NSSRG value y for the S-NSSAI | octet m\* |

Figure 9.11.3.82.2: NSSRG value(s) for S-NSSAI

Table 9.11.3.82.1: NSSRG information information element

|  |
| --- |
| Value part of the NSSRG information information element (octet 4 to v)The value part of the NSSRG information information element consists of one or more NSSRG values for each S-NSSAI in the Configured NSSAI IE.S-NSSAI value (octet 5 to w)S-NSSAI value is coded as the length and value part of S-NSSAI information element as specified in subclause 9.11.2.8 starting with the second octet.Number of NSSRG value(s) (octet w+1) |
|  |
| This field indicates the number of NSSRG values for the S-NSSAI. |
| NSSRG value for the S-NSSAI (octet w+2) |
| This field contains the 8 bit NSSRG value. |

\* \* \* End of Changes \* \* \* \*