**3GPP TSG-CT WG1 Meeting #125-eC1-20xxxx**

**Electronic meeting, 20-28 August 2020 (revision of C1-205030)**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **24.501** | **CR** | **2556** | **rev** | **1** | **Current version:** | **16.5.1** |  |
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| *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:*** | AMF to trigger Configuration Update Command Procedure indicating pending NSSAI | | | | | | | | | |
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| ***Source to WG:*** | Apple | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eNS | | | | |  | ***Date:*** | | | 12-08-2020 |
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| ***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 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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Currently as per the handling described for NSSAA, it is possible that UE will not service on the slice that is subjected to NSSAA if the following scenario occurs:  Scenario 1:   1. UE initiates registration procedure with requested NSSAI {A,B}. 2. S-NSSAI {A} is subject to NSSAA and is sent in pending NSSAI where as S-NSSAI {B} is sent in allowed NSSAI in REGISTRATION ACCEPT message. 3. After the registration is completed successfully, during the ongoing NSSAA procedure for slice {A} if UE goes out of coverage and does not respond to NSSAA related EAP messages in NETWORK SLICE-SPECIFIC. AUTHENTICATION COMMAND (NSSAC). 4. AMF attempts resending of the NSSAC 5 times at T3575 (10 secs) intervals. If UE does not respond to the NSSAC and all attempts are exhausted then AMF treats the NSSAA result as failed as per TS 24.501 section 5.4.7.2.3. 5. UE returns to in-coverage after all attempts are exhausted by AMF. At this stage, AMF has no NSSAA ongoing for the S-NSSAI {A} but UE still treats it as a pending S-NSSAI and waits for NSSAC from AMF. 6. This delays UE getting service on S-NSSAI {A} until UE attempts re-registration again due to mobility or due to periodic timer expiry. Or worse, AMF may consider the slice {A} as having failed NSSAA and indicate slice {A} in the rejected NSSAI.   Scenario 2:   1. UE initiates registration procedure with requested NSSAI {A}. 2. S-NSSAI {A} is subject to NSSAA and is sent in pending NSSAI 3. After the registration is completed successfully, during the ongoing NSSAA procedure for slice {A} if UE goes out of coverage and does not respond to NSSAA related EAP messages in NETWORK SLICE-SPECIFIC. AUTHENTICATION COMMAND (NSSAC). 4. AMF attempts resending of the NSSAC 5 times at T3575 (10 secs) intervals. If UE does not respond to the NSSAC and all attempts are exhausted then AMF treats the NSSAA result as failed as per TS 24.501 section 5.4.7.2.3. 5. UE returns to in-coverage after all attempts are exhausted by AMF. At this stage, AMF has no NSSAA ongoing for the S-NSSAI {A} but UE still treats it as a pending S-NSSAI and waits for NSSAC from AMF. Whereas, AMF considers the slice {A} as having failed NSSAA. 6. This delays UE getting service on S-NSSAI {A} until UE attempts re-registration again due to mobility or due to periodic timer expiry. AMF may as well consider the slice {A} as rejected and send in CONFIGURATION UPDATE COMMAND that the slice {A} has failed NSSAA and may indicate slice {A} in the rejected NSSAI. Consequently, UE may be assigned default slices or may be indicated with network initiated deregistration.   Due to references in TS 24.501 section 5.4.7.2.3 point ‘a’ - AMF can consider failure of NSSAA procedure as a negative result and update the NSSAA result field for the UE in UE context as per - TS 23.502 Table 5.2.2.2.2-1. AMF may re-use this result to immediately reject subsequent attempts by UE to activate S-NSSAI {A}. | | | | | | | | |
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| ***Summary of change:*** | | AMF to trigger Configuration Update Command Procedure indicating pending NSSAI. | | | | | | | | |
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| ***Consequences if not approved:*** | | UE will not be able to access the slice for which NSSAA failed due to maximum retries attempted for sending NSSAC are reached, until power cycle. | | | | | | | | |
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| ***Clauses affected:*** | | 4.6.2.2, 4.6.2.4, 5.4.4.2, 5.4.4.3, 8.2.19.1, 8.2.19.x (new), 9.11.3.74 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 \*\*\*\*\*

#### 4.6.2.2 NSSAI storage

If available, the configured NSSAI(s) shall be stored in a non-volatile memory in the ME as specified in annex C.

The allowed NSSAI(s) should be stored in a non-volatile memory in the ME as specified in annex C.

Each of the configured NSSAI stored in the UE is a set composed of at most 16 S-NSSAIs. Each of the allowed NSSAI stored in the UE is a set composed of at most 8 S-NSSAIs and is associated with a PLMN identity or SNPN identity and an access type. Each of the configured NSSAI except the default configured NSSAI, and the rejected NSSAI is associated with a PLMN identity or SNPN identity. Each of the pending NSSAI stored in the UE is a set composed of at most 16 S-NSSAIs and is associated with a PLMN identity or SNPN identity. The S-NSSAI(s) in the rejected NSSAI for the current registration area are further associated with one or more tracking areas where the rejected S-NSSAI(s) is not available. The S-NSSAI(s) in the rejected NSSAI for the current PLMN or SNPN shall be considered rejected for the current PLMN or SNPN regardless of the access type. The S-NSSAI(s) in the rejected NSSAI for the failed or revoked NSSAA shall be considered rejected for the current PLMN regardless of the access type. There shall be no duplicated PLMN identities or SNPN identities in each of the list of configured NSSAI(s), allowed NSSAI(s), rejected NSSAI(s) for the current PLMN or SNPN, and rejected NSSAI(s) for the current registration area.

The UE stores NSSAIs as follows:

a) The configured NSSAI shall be stored until a new configured NSSAI is received for a given PLMN or SNPN. The network may provide to the UE the mapped S-NSSAI(s) for the new configured NSSAI which shall also be stored in the UE. When the UE is provisioned with a new configured NSSAI for a PLMN or SNPN, the UE shall:

1) replace any stored configured NSSAI for this PLMN or SNPN with the new configured NSSAI for this PLMN or SNPN;

2) delete any stored mapped S-NSSAI(s) for the configured NSSAI and, if available, store the mapped S-NSSAI(s) for the new configured NSSAI;

3) delete any stored allowed NSSAI for this PLMN or SNPN and, if available, the stored mapped S-NSSAI(s) for the allowed NSSAI, if the UE received the new configured NSSAI for this PLMN or SNPN and the Configuration update indication IE with the Registration requested bit set to "registration requested", in the same CONFIGURATION UPDATE COMMAND message but without any new allowed NSSAI for this PLMN or SNPN included;

4) delete any stored rejected NSSAI for the current PLMN or SNPN, rejected NSSAI for the current registration area and rejected NSSAI for the failed or revoked NSSAA; and

5) delete any stored pending NSSAI, if not already included in the new configured NSSAI for the current PLMN or SNPN;

If the UE receives an S-NSSAI associated with a PLMN ID from the network during the PDN connection establishment procedure in EPS as specified in 3GPP TS 24.301 [15] or via ePDG as specified in 3GPP TS 24.302 [16], the UE may store the received S-NSSAI in the configured NSSAI for the PLMN identified by the PLMN ID associated with the S-NSSAI, if not already in the configured NSSAI;

The UE may continue storing a received configured NSSAI for a PLMN and associated mapped S-NSSAI(s), if available, when the UE registers in another PLMN.

NOTE 1: The maximum number of configured NSSAIs and associated mapped S-NSSAIs for PLMNs other than the HPLMN that need to be stored in the UE, and how to handle the stored entries, are up to UE implementation.

b) The allowed NSSAI shall be stored until a new allowed NSSAI is received for a given PLMN or SNPN, or until the CONFIGURATION UPDATE COMMAND message with the Registration requested bit of the Configuration update indication IE set to "registration requested" is received and contains no other parameters (see subclauses 5.4.4.2 and 5.4.4.3). The network may provide to the UE the mapped S-NSSAI(s) for the new allowed NSSAI (see subclauses 5.5.1.2 and 5.5.1.3) which shall also be stored in the UE. When a new allowed NSSAI for a PLMN or SNPN is received, the UE shall:

1) replace any stored allowed NSSAI for this PLMN or SNPN with the new allowed NSSAI for this PLMN or SNPN;

2) delete any stored mapped S-NSSAI(s) for the allowed NSSAI and, if available, store the mapped S-NSSAI(s) for the new allowed NSSAI;

3) remove from the stored rejected NSSAI, the S-NSSAI(s), if any, included in the new allowed NSSAI for the current PLMN or SNPN; and

4) remove from the stored pending NSSAI, one or more S-NSSAIs, if any, included in the new allowed NSSAI for the current PLMN or SNPN and its equivalent PLMN(s).

If the UE receives the CONFIGURATION UPDATE COMMAND message with the Registration requested bit of the Configuration update indication IE set to "registration requested" and contains no other parameters (see subclauses 5.4.4.2 and 5.4.4.3), the UE shall delete any stored allowed NSSAI for this PLMN or SNPN, and delete any stored mapped S-NSSAI(s) for the allowed NSSAI, if available;

NOTE 2: Whether the UE stores the allowed NSSAI and the mapped S-NSSAI(s) for the allowed NSSAI also when the UE is switched off is implementation specific.

c) When the UE receives the S-NSSAI(s) included in rejected NSSAI in the REGISTRATION ACCEPT message, the REGISTRATION REJECT message, the DEREGISTRATION REQUEST message or in the CONFIGURATION UPDATE COMMAND message, the UE shall:

1) store the S-NSSAI(s) into the rejected NSSAI based on the associated rejection cause(s);

2) remove from the stored allowed NSSAI for the current PLMN or SNPN, the S-NSSAI(s), if any, included in the:

i) rejected NSSAI for the current PLMN or SNPN, for each and every access type; and

ii) rejected NSSAI for the current registration area, associated with the same access type;

3) remove from the stored mapped S-NSSAI(s) for the allowed NSSAI if available, the S-NSSAI(s), if any, included in the:

i) rejected NSSAI due to the failed or revoked network slice-specific authentication and authorization, for each and every access type;

4) remove from the stored pending NSSAI for the current PLMN or SNPN and its equivalent PLMN(s), the S-NSSAI(s), if any, included in the:

i) rejected NSSAI for the current PLMN or SNPN, for each and every access type; and

ii) rejected NSSAI for the current registration area, associated with the same access type; and

5) remove from the stored mapped S-NSSAI(s) for the pending NSSAI, the S-NSSAI(s), if any, included in the:

i) rejected NSSAI for the failed or revoked NSSAA, for each and every access type.

When the UE:

1) deregisters with the current PLMN using explicit signalling or enters state 5GMM-DEREGISTERED following an unsuccessful registration for 5GMM causes other than #62 "No network slices available"for the current PLMN; or

2) successfully registers with a new PLMN; or

3) enters state 5GMM-DEREGISTERED following an unsuccessful registration with a new PLMN;

and the UE is not registered with the current PLMN over another access, the rejected NSSAI for the current PLMN shall be deleted.

When the UE:

1) deregisters over an access type;

2) successfully registers in a new registration area over an access type; or

3) enters state 5GMM-DEREGISTERED or 5GMM-REGISTERED following an unsuccessful registration in a new registration area over an access type;

the rejected NSSAI for the current registration area corresponding to the access type shall be deleted;

d) When the UE receives the pending NSSAI in the REGISTRATION ACCEPT message or in the CONFIGURATION UPDATE COMMAND message, the UE shall replace any stored pending NSSAI for this PLMN or SNPN with the new pending NSSAI received in the REGISTRATION ACCEPT message or in the CONFIGURATION UPDATE COMMAND message for this PLMN or SNPN. If the UE receives pending NSSAI status set as "no NSSAA procedure is ongoing for any of the S-NSSAIs” in the CONFIGURATION UPDATE COMMAND message, then UE shall remove all pending S-NSSAIs from the stored pending NSSAI.

Editor’s Note [WI: eNS, CR#1602]: The NSSAI storage update regarding Allowed NSSAI in scenario when re-authentication and re-authorization is challenged for one or more S-NSSAIs in the Allowed NSSAI of a UE is FFS.

If the registration area contains TAIs belonging to different PLMNs, which are equivalent PLMNs, then for each of the equivalent PLMNs, the UE shall replace any stored pending NSSAI with the pending NSSAI received in the registered PLMN.

When the UE:

1) deregisters with the current PLMN using explicit signalling or enters state 5GMM-DEREGISTERED for the current PLMN;

2) successfully registers with a new PLMN;

3) enters state 5GMM-DEREGISTERED following an unsuccessful registration with a new PLMN;

4) successfully completes an attach or tracking area update procedure in S1 mode and the UE is operating in single-registration mode; or

5) initiates attach or tracking area update procedure in S1 mode and receives an ATTACH REJECT or TRACKING AREA UPDATE REJECT and the UE is operating in single-registration mode;

and the UE is not registered with the current PLMN over another access, the pending NSSAI for the current PLMN and its equivalent PLMN(s) shall be deleted; and

e) In case of a PLMN, when the UE receives the Network slicing indication IE with the Network slicing subscription change indication set to "Network slicing subscription changed" in the REGISTRATION ACCEPT message or in the CONFIGURATION UPDATE COMMAND message, the UE shall delete the network slicing information for each of the PLMNs that the UE has slicing information stored for (excluding the current PLMN). The UE shall not delete the default configured NSSAI. Additionally, the UE shall update the network slicing information for the current PLMN (if received) as specified above in bullets a), b), c) and e).

\*\*\*\*\* Second change \*\*\*\*\*

#### 4.6.2.4 Network slice-specific authentication and authorization

The UE and network may support network slice-specific authentication and authorization.

A serving PLMN shall perform network slice-specific authentication and authorization for the S-NSSAI(s) of the HPLMN which are subject to it based on subscription information. The UE shall indicate whether it supports network slice-specific authentication and authorization in the 5GMM Capability IE in the REGISTRATION REQUEST message as specified in subclauses 5.5.1.2.2 and 5.5.1.3.2.

The upper layer stores an association between each S-NSSAI and its corresponding credentials for the network slice-specific authentication and authorization.

NOTE 1: The credentials for network slice-specific authentication and authorization and how to provision them in the upper layer are out of the scope of 3GPP.

The network slice-specific authentication and authorization procedure shall not be performed unless:

a) the primary authentication and key agreement procedure as specified in the subclause 5.4.1 has successfully been completed; and

b) the initial registration procedure or the mobility and periodic registration update procedure has been completed.

The AMF informs the UE about S-NSSAI(s) for which network slice-specific authentication and authorization will be performed in the pending NSSAI. The AMF informs the UE about S-NSSAI(s) for which NSSAA procedure is completed as success in the allowed NSSAI. The AMF informs the UE about S-NSSAI(s) for which NSSAA procedure is completed as failure in the rejected NSSAI for the failed or revoked NSSAA. The AMF stores and handles allowed NSSAI, pending NSSAI, rejected NSSAI, and 5GS registration result in the REGISTRATION ACCEPT message according to subclauses 5.5.1.2.4 and 5.5.1.3.4.

NOTE 2: The AMF maintains the NSSAA procedure status for each S-NSSAI, as specified in 3GPP TS 29.518 [20B].

To perform network slice-specific authentication and authorization for an S-NSSAI, the AMF invokes an EAP-based network slice-specific authentication and authorization procedure for the S-NSSAI, see subclause 5.4.7 and 3GPP TS 23.502 [9] using the EAP framework as described in 3GPP TS 33.501 [24].

The AMF updates the allowed NSSAI and the rejected NSSAI using the generic UE configuration update procedure as specified in the subclause 5.4.4 after the network slice-specific authentication and authorization procedure is completed.

The AMF shall send the pending NSSAI containing all S-NSSAIs for which the network slice-specific authentication and authorization procedure will be performed or is ongoing in the REGISTRATION ACCEPT message. The AMF shall also include in the REGISTRATION ACCEPT message the allowed NSSAI containing one or more S-NSSAIs from the requested NSSAI which are allowed by the AMF and for which network slice-specific authentication and authorization is not required, if any.The network slice-specific authentication and authorization procedure or the network slice-specific authorization revocation procedure can be invoked by the network for a UE supporting NSSAA at any time. After the network performs the network slice-specific re-authentication and re-authorization procedure or network slice-specific authorization revocation procedure:

a) if network slice-specific authentication and authorization fails or network slice-specific authorization is revoked for some but not all S-NSSAIs in the allowed NSSAI, the AMF updates the allowed NSSAI and the rejected NSSAI accordingly using the generic UE configuration update procedure as specified in the subclause 5.4.4 and inform the SMF to release all PDU sessions associated with the S-NSSAI for which network slice-specific re-authentication and re-authorization fails or network slice-specific authorization is revoked;

b) if network slice-specific authentication and authorization fails or network slice-specific authorization is revoked for all S-NSSAIs in the allowed NSSAI and the pending NSSAI, then AMF performs the network-initiated de-registration procedure and includes the rejected NSSAI in the DEREGISTRATION REQUEST message as specified in the subclause 5.5.2.3 except when the UE has an emergency PDU session established or the UE is establishing an emergency PDU session. In this case the AMF shall send the CONFIGURATION UPDATE COMMAND message containing rejected NSSAI and inform the SMF to release all PDU sessions associated with the S-NSSAI for which network slice-specific re-authentication and re-authorization fails or network slice-specific authorization is revoked. After the emergency PDU session is released, the AMF performs the network-initiated de-registration procedure as specified in the subclause 5.5.2.3; or

c) if network slice-specific authentication and authorization is aborted due to maximum retries by AMF to send NETWORK SLICE-SPECIFIC AUTHENTICATION COMMAND message are reached, then AMF shall send CONFIGURATION UPDATE COMMAND indicating to UE that the specific S-NSSAI is no longer a pending S-NSSAI by:

1) sending updated pending NSSAI if at least one or more S-NSSAIs have NSSAA procedure ongoing; or

2) sending pending NSSAI status set to "no NSSAA procedure is ongoing for any of the S-NSSAIs".

When performing the network slice-specific re-authentication and re-authorization procedure if the S-NSSAI is included in the allowed NSSAI for both 3GPP and non-3GPP accesses, and the UE is registered to both 3GPP and non-3GPP accesses in the same PLMN, then the AMF selects an access type to perform network slice-specific authentication and authorization based upon operator policy.

If network slice-specific authorization is revoked for an S-NSSAI that is in the current allowed NSSAI for an access type, the AMF shall:

a) provide a new allowed NSSAI, excluding the S-NSSAI for which the network slice-specific authorization is revoked; and

b) provide a new rejected NSSAI for the failed or revoked NSSAA, including the S-NSSAI for which the network slice-specific authorization is revoked, with the reject cause "S-NSSAI is not available due to the failed or revoked network slice-specific authentication and authorization",

to the UE using the generic UE configuration update procedure as specified in the subclause 5.4.4 and inform the SMF to release all PDU sessions associated with the S-NSSAI for which the network slice-specific authorization is revoked for this access type.

If the UE requests the establishment of a new PDU session for an S-NSSAI for which the AMF is performing network slice-specific authentication and authorization procedure, the AMF may determine to not forward the 5GSM message to the SMF as described in subclause 5.4.5.3.2.

NOTE 2: If the AMF receives the HTTP code set to "4xx" or "5xx" as specified in 3GPP TS 29.500 [20AA] or the AMF detects that the NSSAAF failure as specified in 3GPP TS 29.526 [21A] during the NSSAA procedure for an S-NSSAI, then the AMF considers the NSSAA procedure has failed for this S-NSSAI.

\*\*\*\*\* Third change \*\*\*\*\*

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 aborted and initiate a CONFIGURATION UPDATE COMMAND indicating to UE that the specific S-NSSAI is no longer a pending S-NSSAI or indicate "no NSSAA procedure is ongoing for any of the S-NSSAIs" to the UE in the pending NSSAI status.

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 via is completed as a failure, if available.

\*\*\*\*\* Fourth change \*\*\*\*\*

#### 5.4.4.2 Generic UE configuration update procedure initiated by the network

The AMF shall initiate the generic UE configuration update procedure by sending the CONFIGURATION UPDATE COMMAND message to the UE.

The AMF shall in the CONFIGURATION UPDATE COMMAND message either:

a) include one or more of the following parameters: 5G-GUTI, TAI list, allowed NSSAI that may include the mapped S-NSSAI(s), LADN information, service area list, MICO indication, NITZ information, configured NSSAI that may include the mapped S-NSSAI(s), rejected NSSAI, network slicing subscription change indication, operator-defined access category definitions, SMS indication, service gap time value, "CAG information list", UE radio capability ID, 5GS registration result, UE radio capability ID deletion indication or truncated 5G-S-TMSI configuration;

b) include the Configuration update indication IE with the Registration requested bit set to "registration requested"; or

c) include a combination of both a) and b).

If an acknowledgement from the UE is requested, the AMF shall indicate "acknowledgement requested" in the Acknowledgement bit of the Configuration update indication IE in the CONFIGURATION UPDATE COMMAND message and shall start timer T3555. Acknowledgement shall be requested for all parameters except when only NITZ is included.

To initiate parameter re-negotiation between the UE and network, the AMF shall indicate "registration requested" in the Registration requested bit of the Configuration update indication IE in the CONFIGURATION UPDATE COMMAND message.

If a new allowed NSSAI information or AMF re-configuration of supported S-NSSAIs requires an AMF relocation, the AMF shall indicate "registration requested" in the Registration requested bit of the Configuration update indication IE and include the Allowed NSSAI IE in the CONFIGURATION UPDATE COMMAND message.

If the AMF includes a new configured NSSAI in the CONFIGURATION UPDATE COMMAND message and the new configured NSSAI requires an AMF relocation as specified in 3GPP TS 23.501 [8], the AMF shall indicate "registration requested" in the Registration requested bit of the Configuration update indication IE in the message.

If the CONFIGURATION UPDATE COMMAND message is initiated only due to changes to the allowed NSSAI and these changes require the UE to initiate a registration procedure, but the AMF is unable to determine an allowed NSSAI for the UE as specified in 3GPP TS 23.501 [8], then the CONFIGURATION UPDATE COMMAND message shall indicate "registration requested" in the Registration requested bit of the Configuration update indication IE, and shall not contain any other parameters.

If the AMF needs to enforce a change in the restriction on the use of enhanced coverage or use of CE mode B as described in subclause 5.3.18, the AMF shall indicate "registration requested" in the Registration requested bit of the Configuration update indication IE and "release of N1 NAS signalling connection not required" in the Signalling connection maintain request bit of the Additional configuration indication IE in the CONFIGURATION UPDATE COMMAND message.

If a network slice-specific authentication and authorization procedure for an S-NSSAI is completed as:

a) a success, the AMF shall include this S-NSSAI in the allowed NSSAI;

b) a failure, the AMF shall include this S-NSSAI in the rejected NSSAI for the failed or revoked NSSAA with the reject cause "S-NSSAI not available due to the failed or revoked network slice-specific authentication and authorization"; or

c) aborted, the AMF shall not include this S-NSSAI in the pending NSSAI and send the pending NSSAI in the CONFIGURATION UPDATE COMMAND message when the NSSAA procedure is aborted due to reaching maximum retries of sending NETWORK SLICE-SPECIFIC AUTHENTICATION COMMAND message. If there are no pending S-NSSAIs, then the AMF shall set pending NSSAI status to "no NSSAA procedure is ongoing for any of the S-NSSAIs".

If authorization is revoked for an S-NSSAI that is in the current allowed NSAAI for an access type, the AMF shall:

a) provide a new allowed NSSAI to the UE, excluding the S-NSSAI for which authorization is revoked; and

b) provide a new reject NSSAI for the failed or revoked NSSAA, including the S-NSSAI in the rejected NSSAI for which the authorization is revoked, with the reject cause "S-NSSAI is not available due to the failed or revoked network slice-specific authorization and authentication".

The allowed NSSAI and the rejected NSSAI shall be included in the CONFIGURATION UPDATE COMMAND message to reflect the result of the procedures subject to network slice-specific authentication and authorization.

NOTE: If there are multiple S-NSSAIs subject to network slice-specific authentication and authorization, it is implementation specific if the AMF informs the UE about the outcome of the procedures in one or more CONFIGURATION UPDATE COMMAND messages.

If the AMF includes the Network slicing indication IE in the CONFIGURATION UPDATE COMMAND message with the Network slicing subscription change indication set to "Network slicing subscription changed", and changes to the allowed NSSAI require the UE to initiate a registration procedure, but the AMF is unable to determine an allowed NSSAI for the UE as specified in 3GPP TS 23.501 [8], then the CONFIGURATION UPDATE COMMAND message shall additionally indicate "registration requested" in the Registration requested bit of the Configuration update indication IE and shall not include an allowed NSSAI.

If the AMF needs to update the LADN information, the AMF shall include the LADN information in the LADN information IE of the CONFIGURATION UPDATE COMMAND message.

If the AMF needs to update the "CAG information list", the AMF shall include the CAG information list IE in the CONFIGURATION UPDATE COMMAND message. If the AMF needs to update the "CAG information list" and the UE:

a) has an emergency PDU session; and

b) is in

1) a CAG cell and none of the CAG-ID(s) supported by the CAG cell is included in the "allowed CAG list" for the current PLMN in the updated "CAG information list"; or

2) a non-CAG cell and the entry for the current PLMN in the updated "CAG information list" includes an "indication that the UE is only allowed to access 5GS via CAG cells";

the AMF shall indicate to the SMF to perform a local release of all non-emergency PDU sessions associated with 3GPP access.

If the AMF needs to update the truncated 5G-S-TMSI configuration for a UE in NB-N1 mode using control plane CIoT 5GS optimization, the AMF shall include the Truncated 5G-S-TMSI configuration IE in the CONFIGURATION UPDATE COMMAND message.

If the AMF includes a UE radio capability ID deletion indication IE in the CONFIGURATION UPDATE COMMAND message, the AMF shall indicate "registration requested" in the Registration requested bit of the Configuration update indication IE.

If the AMF needs to redirect the UE to EPC as described in subclause 4.8.4A.2, the AMF shall indicate "registration requested" in the Registration requested bit of the Configuration update indication IE and "release of N1 NAS signalling connection not required" in the Signalling connection maintain request bit of the Additional configuration indication IE in the CONFIGURATION UPDATE COMMAND message.

If the UE is not in NB-N1 mode and the UE supports RACS, the AMF may include either a UE radio capability ID IE or a UE radio capability ID deletion indication IE in the CONFIGURATION UPDATE COMMAND message.

During an established 5GMM context, the network may send none, one, or more CONFIGURATION UPDATE COMMAND messages to the UE. If more than one CONFIGURATION UPDATE COMMAND message is sent, the messages need not have the same content.

#### 5.4.4.3 Generic UE configuration update accepted by the UE

Upon receiving the CONFIGURATION UPDATE COMMAND message, the UE shall stop timer T3346 if running and use the contents to update appropriate information stored within the UE.

If "acknowledgement requested" is indicated in the Acknowledgement bit of the Configuration update indication IE in the CONFIGURATION UPDATE COMMAND message, the UE shall send a CONFIGURATION UPDATE COMPLETE message.

If the UE receives a new 5G-GUTI in the CONFIGURATION UPDATE COMMAND message, the UE shall consider the new 5G-GUTI as valid, the old 5G-GUTI as invalid, stop timer T3519 if running, and delete any stored SUCI; otherwise, the UE shall consider the old 5G-GUTI as valid. The UE shall provide the 5G-GUTI to the lower layer of 3GPP access if the CONFIGURATION UPDATE COMMAND message is sent over the non-3GPP access, and the UE is in 5GMM-REGISTERED in both 3GPP access and non-3GPP access in the same PLMN.

If the UE receives a new TAI list in the CONFIGURATION UPDATE COMMAND message, the UE shall consider the new TAI list as valid and the old TAI list as invalid; otherwise, the UE shall consider the old TAI list as valid.

If the UE receives a new truncated 5G-S-TMSI configuration in the CONFIGURATION UPDATE COMMAND message, the UE shall consider the new truncated 5G-S-TMSI configuration as valid and the old truncated 5G-S-TMSI configuration as invalid; otherwise, the UE shall consider the old truncated 5G-S-TMSI configuration as valid.

If the UE receives a new service area list in the CONFIGURATION UPDATE COMMAND message, the UE shall consider the new service area list as valid and the old service area list as invalid; otherwise, the UE shall consider the old service area list, if any, as valid.

If the UE receives new NITZ information in the CONFIGURATION UPDATE COMMAND message, the UE considers the new NITZ information as valid and the old NITZ information as invalid; otherwise, the UE shall consider the old NITZ information as valid.

If the UE receives a LADN information IE in the CONFIGURATION UPDATE COMMAND message, the UE shall consider the old LADN information as invalid and the new LADN information as valid, if any; otherwise, the UE shall consider the old LADN information as valid.

If the UE receives a new allowed NSSAI for the associated access type in the CONFIGURATION UPDATE COMMAND message, the UE shall consider the new allowed NSSAI as valid for the associated access type, store the allowed NSSAI for the associated access type as specified in subclause 4.6.2.2 and consider the old allowed NSSAI for the associated access type as invalid; otherwise, the UE shall consider the old Allowed NSSAI as valid for the associated access type.

For each of the PDU session(s) active in the UE, if the CONFIGURATION UPDATE COMMAND message indicates "registration not requested" in the Registration requested bit of the Configuration update indication IE and if the allowed NSSAI contains a mapped S-NSSAI matching to the mapped S-NSSAI of the PDU session, the UE shall locally update the S-NSSAI associated with the PDU session to the corresponding S-NSSAI received in the allowed NSSAI.

If the UE receives a new configured NSSAI in the CONFIGURATION UPDATE COMMAND message, the UE shall consider the new configured NSSAI for the registered PLMN as valid and the old configured NSSAI for the registered PLMN as invalid; otherwise, the UE shall consider the old configured NSSAI for the registered PLMN as valid The UE shall store the new configured NSSAI as specified in subclause 4.6.2.2.

If the UE finds that a S-NSSAI is no longer in the pending NSSAI then the UE shall remove the specific S-NSSAI from the stored pending NSSAI as described in subclause 4.6.2.2. If the UE receives in the pending NSSAI status "no NSSAA procedure is ongoing for any S-NSSAI" in the CONFIGURATION UPDATE COMMAND, then UE shall remove all S-NSSAI(s) from the pending NSSAI as described in subclause 4.6.2.2.

If the UE receives the Network slicing indication IE in the CONFIGURATION UPDATE COMMAND message with the Network slicing subscription change indication set to "Network slicing subscription changed", the UE shall delete the network slicing information for each and every PLMN except for the current PLMN as specified in subclause 4.6.2.2.

If the UE receives Operator-defined access category definitions IE in the CONFIGURATION UPDATE COMMAND message and the Operator-defined access category definitions IE contains one or more operator-defined access category definitions, the UE shall delete any operator-defined access category definitions stored for the RPLMN and shall store the received operator-defined access category definitions for the RPLMN. If the UE receives the Operator-defined access category definitions IE in the CONFIGURATION UPDATE COMMAND message and the Operator-defined access category definitions IE contains no operator-defined access category definitions, the UE shall delete any operator-defined access category definitions stored for the RPLMN. If the CONFIGURATION UPDATE COMMAND message does not contain the Operator-defined access category definitions IE, the UE shall not delete the operator-defined access category definitions stored for the RPLMN.

If the UE receives the SMS indication IE in the CONFIGURATION UPDATE COMMAND message with the SMS availability indication set to:

a) "SMS over NAS not available", the UE shall consider that SMS over NAS transport is not allowed by the network; and

b) "SMS over NAS available", the UE may request the use of SMS over NAS transport by performing a registration procedure for mobility and periodic registration update as specified in subclause 5.5.1.3, after the completion of the generic UE configuration update procedure.

If the UE receives the CAG information list IE in the CONFIGURATION UPDATE COMMAND message, the UE shall:

a) replace the "CAG information list" stored in the UE with the received CAG information list IE when received in the HPLMN, a PLMN equivalent to the HPLMN, or equivalent home PLMN;

b) replace the serving VPLMN's entry of the "CAG information list" stored in the UE with the serving VPLMN's entry of the received CAG information list IE when the UE receives the CAG information list IE in a serving PLMN other than the HPLMN, a PLMN equivalent to the HPLMN, or equivalent home PLMN.

NOTE: When the UE receives the CAG information list IE in a serving PLMN other than the HPLMN, a PLMN equivalent to the HPLMN, or equivalent home PLMN, entries of a PLMN other than the serving VPLMN, if any, in the received CAG information list IE are ignored.

The UE shall store the "CAG information list" received in the CAG information list IE as specified in annex C.

If the received "CAG information list" includes an entry containing the identity of the current PLMN, the UE shall operate as follows.

a) If the UE receives the CONFIGURATION UPDATE COMMAND message via a CAG cell, the entry for the current PLMN in the received "CAG information list" does not include any of the CAG-ID(s) supported by the current CAG cell, and:

1) the entry for the current PLMN in the received "CAG information list" does not include an "indication that the UE is only allowed to access 5GS via CAG cells", then the UE shall enter the state 5GMM-REGISTERED.LIMITED-SERVICE and shall search for a suitable cell according to 3GPP TS 38.304 [28] with the updated "CAG information list"; or

2) the entry for the current PLMN in the received "CAG information list" includes an "indication that the UE is only allowed to access 5GS via CAG cells" and:

i) if the entry for the current PLMN in the received "CAG information list" includes one or more CAG-IDs, the UE shall enter the state 5GMM-REGISTERED.LIMITED-SERVICE and shall search for a suitable cell according to 3GPP TS 38.304 [28] with the updated "CAG information list"; or

ii) if the entry for the current PLMN in the received "CAG information list" does not include any CAG-ID and:

A) the UE does not have an emergency PDU session, then the UE shall enter the state 5GMM-DEREGISTERED.PLMN-SEARCH and shall apply the PLMN selection process defined in 3GPP TS 23.122 [6] with the updated "CAG information list"; or

B) the UE has an emergency PDU session, then the UE shall perform a local release of all PDU sessions associated with 3GPP access except for the emergency PDU session; or

b) If the UE receives the CONFIGURATION UPDATE COMMAND message via a non-CAG cell and the entry for the current PLMN in the received "CAG information list" includes an "indication that the UE is only allowed to access 5GS via CAG cells" and:

1) if the "allowed CAG list" for the current PLMN in the received "CAG information list" includes one or more CAG-IDs, the UE shall enter the state 5GMM-REGISTERED.LIMITED-SERVICE and shall search for a suitable cell according to 3GPP TS 38.304 [28] with the updated "CAG information list"; or

2) if the entry for the current PLMN in the received "CAG information list" does not include any CAG-ID and:

i) the UE does not have an emergency PDU session, then the UE shall enter the state 5GMM-DEREGISTERED.PLMN-SEARCH and shall apply the PLMN selection process defined in 3GPP TS 23.122 [6] with the updated "CAG information list"; or

ii) the UE has an emergency PDU session, then the UE shall perform a local release of all PDU sessions associated with 3GPP access except for the emergency PDU session.

If the CONFIGURATION UPDATE COMMAND message indicates "registration requested" in the Registration requested bit of the Configuration update indication IE and:

a) contains no other parameters or contains at least one of the following parameters: a new allowed NSSAI, a new configured NSSAI or the Network slicing subscription change indication, and:

1) an emergency PDU session exists, the UE shall, after the completion of the generic UE configuration update procedure and the release of the emergency PDU session, release the existing N1 NAS signalling connection, and start a registration procedure for mobility and periodic registration update as specified in subclause 5.5.1.3; or

2) no emergency PDU Session exists, the UE shall, after the completion of the generic UE configuration update procedure and the release of the existing N1 NAS signalling connection, start a registration procedure for mobility and periodic registration update as specified in subclause 5.5.1.3;

b) a MICO indication is included without a new allowed NSSAI; a new configured NSSAI or the Network slicing subscription change indication, the UE shall, after the completion of the generic UE configuration update procedure, start a registration procedure for mobility and registration update as specified in subclause 5.5.1.3 to re-negotiate MICO mode with the network;

c) an Additional configuration indication IE is included, and:

1) "release of N1 NAS signalling connection not required" is indicated in the Signalling connection maintain request bit of the Additional configuration indication IE; and

2) a new allowed NSSAI, a new configured NSSAI and the Network slicing subscription change indication is not included in the CONFIGURATION UPDATE COMMAND message,

the UE shall, after the completion of the generic UE configuration update procedure, start a registration procedure for mobility and registration update as specified in subclause 5.5.1.3; or

d) a UE radio capability ID deletion indication IE set to "Network-assigned UE radio capability IDs deletion requested" is included, and:

1) the UE is not in NB-N1 mode;

2) a new allowed NSSAI, a new configured NSSAI or a Network slicing subscription change indication is not included; and

3) the UE has set the RACS bit to "RACS supported" in the 5GMM capability IE of the REGISTRATION REQUEST message,

the UE shall, after the completion of the generic UE configuration update procedure, start a registration procedure for mobility and registration update as specified in subclause 5.5.1.3.

The UE receiving the rejected NSSAI in the CONFIGURATION UPDATE COMMAND message takes the following actions based on the rejection cause in the rejected S-NSSAI(s):

"S-NSSAI not available in the current PLMN or SNPN"

The UE shall add the rejected S-NSSAI(s) in the rejected NSSAI for the current PLMN as specified in subclause 4.6.2.2 and shall not attempt to use this S-NSSAI(s) in the current PLMN until switching off the UE, the UICC containing the USIM is removed, the entry of the "list of subscriber data" with the SNPN identity of the current SNPN is updated, or the rejected S-NSSAI(s) are removed or deleted as described in subclause 4.6.2.2.

"S-NSSAI not available in the current registration area"

The UE shall add the rejected S-NSSAI(s) in the rejected NSSAI for the current registration area as specified in subclause 4.6.2.2 and shall not attempt to use this S-NSSAI(s) in the current registration area until switching off the UE, the UE moving out of the current registration area, the UICC containing the USIM is removed, the entry of the "list of subscriber data" with the SNPN identity of the current SNPN is updated, or the rejected S-NSSAI(s) are removed or deleted as described in subclause 4.6.2.2.

"S-NSSAI is not available due to the failed or revoked network slice-specific authentication and authorization"

The UE shall add the rejected S-NSSAI(s) in the rejected NSSAI for the failed or revoked NSSAA as specified in subclause 4.6.2.2 and shall not attempt to use this S-NSSAI in the current PLMN over any access until switching off the UE, the UICC containing the USIM is removed, the entry of the "list of subscriber data" with the SNPN identity of the current SNPN is updated, or the rejected S-NSSAI(s) are removed or deleted as described in subclause 4.6.1 and 4.6.2.2.

If the UE receives a T3447 value IE in the CONFIGURATION UPDATE COMMAND message and has indicated "service gap control supported" in the REGISTRATION REQUEST, then the UE shall replace the stored T3447 value with the received value in the T3447 value IE, and if neither zero nor deactivated use the received T3447 value with the timer T3447 next time it is started. If the received T3447 value is zero or deactivated, then the UE shall stop the timer T3447 if running.

If the UE is not in NB-N1 mode, the UE has set the RACS bit to "RACS supported" in the 5GMM capability IE of the REGISTRATION REQUEST message and the CONFIGURATION UPDATE COMMAND message includes:

a) a UE radio capability ID deletion indication IE set to "Network-assigned UE radio capability IDs deletion requested", the UE shall delete any network-assigned UE radio capability IDs associated with the RPLMN or RSNPN stored at the UE; and

b) a UE radio capability ID IE, the UE shall store the UE radio capability ID as specified in annex C.

If the UE is not currently registered for emergency services and the 5GS registration result IE in the CONFIGURATION UPDATE COMMAND message is set to "Registered for emergency services", the UE shall consider itself registered for emergency services.

\*\*\*\*\* Fifth change \*\*\*\*\*

### 8.2.19 Configuration update command

#### 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 discriminator  9.2 | M | V | 1 |
|  | Security header type | Security header type  9.3 | M | V | 1/2 |
|  | Spare half octet | Spare half octet  9.5 | M | V | 1/2 |
|  | Configuration update command message identity | Message type  9.7 | M | V | 1 |
| D- | Configuration update indication | Configuration update indication  9.11.3.18 | O | TV | 1 |
| 77 | 5G-GUTI | 5GS mobile identity  9.11.3.4 | O | TLV-E | 14 |
| 54 | TAI list | 5GS tracking area identity list  9.11.3.9 | O | TLV | 9-114 |
| 15 | Allowed NSSAI | NSSAI  9.11.3.37 | O | TLV | 4-74 |
| 27 | Service area list | Service area list  9.11.3.49 | O | TLV | 6-114 |
| 43 | Full name for network | Network name  9.11.3.35 | O | TLV | 3-n |
| 45 | Short name for network | Network name  9.11.3.35 | O | TLV | 3-n |
| 46 | Local time zone | Time zone  9.11.3.52 | O | TV | 2 |
| 47 | Universal time and local time zone | Time zone and time  9.11.3.53 | O | TV | 8 |
| 49 | Network daylight saving time | Daylight saving time  9.11.3.19 | O | TLV | 3 |
| 79 | LADN information | LADN information  9.11.3.30 | O | TLV-E | 3-1715 |
| B- | MICO indication | MICO indication  9.11.3.31 | O | TV | 1 |
| 9- | Network slicing indication | Network slicing indication  9.11.3.36 | O | TV | 1 |
| 31 | Configured NSSAI | NSSAI  9.11.3.37 | O | TLV | 4-146 |
| 11 | Rejected NSSAI | Rejected NSSAI  9.11.3.46 | O | TLV | 4-42 |
| 76 | Operator-defined access category definitions | Operator-defined access category definitions  9.11.3.38 | O | TLV-E | 3-n |
| F- | SMS indication | SMS indication  9.11.3.50A | O | TV | 1 |
| 6C | T3447 value | GPRS timer 3  9.11.2.5 | O | TLV | 3 |
| 75 | CAG information list | CAG information list  9.11.3.18A | O | TLV-E | 3-n |
| 67 | UE radio capability ID | UE radio capability ID  9.11.3.68 | O | TLV | 3-n |
| XX | UE radio capability ID deletion indication | UE radio capability ID deletion indication  9.11.3.69 | O | TV | 1 |
| 44 | 5GS registration result | 5GS registration result  9.11.3.6 | O | TLV | 3 |
| 1B | Truncated 5G-S-TMSI configuration | Truncated 5G-S-TMSI configuration  9.11.3.70 | O | TLV | 3 |
| C- | Additional configuration indication | Additional configuration indication  9.11.3.74 | O | TV | 1 |
| 39 | Pending NSSAI | NSSAI  9.11.3.37 | O | TLV | 4-74 |

\*\*\*\*\* Sixth change \*\*\*\*\*

#### 8.2.19.2 Configuration update indication

The AMF shall include this IE if the AMF needs to request an acknowledgement or a registration procedure from the UE.

#### 8.2.19.3 5G-GUTI

This IE may be included to assign a new 5G GUTI to the UE.

#### 8.2.19.4 TAI list

This IE may be included to assign a new TAI list to the UE.

#### 8.2.19.5 Allowed NSSAI

This IE may be included to assign a new allowed NSSAI to the UE.

#### 8.2.19.6 Service area list

This IE may be included to assign a new service area list to the UE.

#### 8.2.19.7 Full name for network

This IE may be included to assign a new full name for network to the UE.

#### 8.2.19.8 Short name for network

This IE may be included to assign a new short name for network to the UE.

#### 8.2.19.9 Local time zone

This IE may be included to assign a new local time zone to the UE.

#### 8.2.19.10 Universal time and local time zone

This IE may be included to assign new universal time and local time zone to the UE.

#### 8.2.19.11 Network daylight saving time

This IE may be included to assign new network daylight saving time to the UE.

#### 8.2.19.12 LADN information

This IE may be included to assign new LADN information to the UE or delete the LADN information at the UE side.

#### 8.2.19.13 MICO indication

This IE may be included to request the UE to re-negotiate MICO mode.

#### 8.2.19.14 Network slicing indication

This IE shall be included if the user's network slicing subscription has changed in the UDM of a PLMN.

#### 8.2.19.15 Configured NSSAI

The AMF shall include this IE when the AMF needs to provide the UE with a new configured NSSAI for the current PLMN or SNPN.

#### 8.2.19.16 Rejected NSSAI

The network may include this IE to inform the UE of one or more S-NSSAIs that were previously sent to the UE in the allowed NSSAI or the pending NSSAI, but are now considered rejected by the network.

#### 8.2.19.17 Operator-defined access category definitions

This IE may be included to assign new operator-defined access category definitions to the UE or delete the operator-defined access category definitions at the UE side.

#### 8.2.19.18 SMS indication

This IE may be included to indicate that the ability for the UE to use SMS over NAS has changed.

#### 8.2.19.19 T3447 value

This IE may be included to assign a new T3447 value to the UE.

#### 8.2.19.20 CAG information list

This IE may be included to assign new "CAG information list" to the UE or delete the "CAG information list" at the UE side.

#### 8.2.19.21 UE radio capability ID

This IE may be included if the UE is not in NB-N1 mode, both the UE and the network support RACS and the network needs to assign a network-assigned UE radio capability ID to the UE.

#### 8.2.19.22 UE radio capability ID deletion indication

This IE may be included if the UE is not in NB-N1 mode, both the UE and the network support RACS and the network needs to trigger the UE to delete all network-assigned UE radio capability IDs stored at the UE for the serving PLMN or serving SNPN.

#### 8.2.19.23 5GS registration result

This IE shall be included if the network wants to indicate to the UE that the UE is registered for emergency services.

#### 8.2.19.24 Truncated 5G-S-TMSI configuration

This IE may be included to provide a new truncated 5G-S-TMSI configuration to the UE in NB-N1 mode if the network is configured to provide the truncated 5G-S-TMSI configuration for control plane CIoT 5GS optimizations.

#### 8.2.19.25 Additional configuration indication

The network may include this IE when requesting the UE to register without the release of the N1 NAS signalling connection or when pending NSSAI status needs to be indicated to UE.

#### 8.2.19.x Pending NSSAI

This IE may be included to indicate to UE the pending S-NSSAIs to the UE.

\*\*\*\*\* Seventh changes \*\*\*\*\*

#### 9.11.3.74 Additional configuration indication

The purpose of the Additional configuration indication information element is to indicate additional information associated with the generic UE configuration update procedure.

The Additional configuration indication information element is coded as shown in figure 9.11.3.74.1 and table 9.11.3.74.1.

The Additional configuration indication is a type 1 information element.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |  |
| Additional configuration indication IEI | | | | 0  Spare | 0  Spare | Pending NSSAI status | SCMR | octet 1 |

Figure 9.11.3.74.1: Additional configuration indication

Table 9.11.3.74.1: Additional configuration indication

|  |  |
| --- | --- |
| Signalling connection maintain request (SCMR) (octet 1, bit 1) | |
| Bit | |
| 1 |  |
| 0 | no additional information |
| 1 | release of N1 NAS signalling connection not required |
|  | |
| Pending NSSAI status (octet 1, bit 2) | |
| Bit | |
| **2** | |
| 0 | no NSSAA procedure is ongoing for any of the S-NSSAIs |
| 1 | NSSAA procedure is ongoing for one or more S-NSSAIs |
|  | |
| Bits 3 to 4 are spare and shall be coded as zero. | |

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