**3GPP TSG-RAN WG3 Meeting #122R3-23xxxx**

**Chicago, IL, U.S.A., November 13th – 17th 2023**

Agenda Item: 13.2.

Source: Ericsson

Title: (TP for mIAB BL CR for TS 38.423): IAB-node De-registration Handling

Document for: Agreement

# TP for QoE BL CR for TS 38.413

-------------------------------------------Start of changes-------------------------------------------

8.1 List of NGAP Elementary Procedures

In the following tables, all EPs are divided into Class 1 and Class 2 EPs (see subclause 3.1 for explanation of the different classes):

**Table 8.1-1: Class 1 procedures**

**Table 8.1-2: Class 2 procedures**

|  |  |
| --- | --- |
| **Elementary Procedure** | **Message** |
| Downlink RAN Configuration Transfer | DOWNLINK RAN CONFIGURATION TRANSFER |
| Downlink RAN Status Transfer | DOWNLINK RAN STATUS TRANSFER |
| Downlink NAS Transport | DOWNLINK NAS TRANSPORT |
| Error Indication | ERROR INDICATION |
| Uplink RAN Configuration Transfer | UPLINK RAN CONFIGURATION TRANSFER |
| Uplink RAN Status Transfer | UPLINK RAN STATUS TRANSFER |
| Handover Notification | HANDOVER NOTIFY |
| Initial UE Message | INITIAL UE MESSAGE |
| NAS Non Delivery Indication | NAS NON DELIVERY INDICATION |
| Paging | PAGING |
| PDU Session Resource Notify | PDU SESSION RESOURCE NOTIFY |
| Reroute NAS Request | REROUTE NAS REQUEST |
| UE Context Release Request | UE CONTEXT RELEASE REQUEST |
| Uplink NAS Transport | UPLINK NAS TRANSPORT |
| AMF Status Indication | AMF STATUS INDICATION |
| PWS Restart Indication | PWS RESTART INDICATION |
| PWS Failure Indication | PWS FAILURE INDICATION |
| Downlink UE Associated NRPPa Transport | DOWNLINK UE ASSOCIATED NRPPA TRANSPORT |
| Uplink UE Associated NRPPa Transport | UPLINK UE ASSOCIATED NRPPA TRANSPORT |
| Downlink Non UE Associated NRPPa Transport | DOWNLINK NON UE ASSOCIATED NRPPA TRANSPORT |
| Uplink Non UE Associated NRPPa Transport | UPLINK NON UE ASSOCIATED NRPPA TRANSPORT |
| Trace Start | TRACE START |
| Trace Failure Indication | TRACE FAILURE INDICATION |
| Deactivate Trace | DEACTIVATE TRACE |
| Cell Traffic Trace | CELL TRAFFIC TRACE |
| Location Reporting Control | LOCATION REPORTING CONTROL |
| Location Reporting Failure Indication | LOCATION REPORTING FAILURE INDICATION |
| Location Report | LOCATION REPORT |
| UE TNLA Binding Release | UE TNLA BINDING RELEASE REQUEST |
| UE Radio Capability Info Indication | UE RADIO CAPABILITY INFO INDICATION |
| RRC Inactive Transition Report | RRC INACTIVE TRANSITION REPORT |
| Overload Start | OVERLOAD START |
| Overload Stop | OVERLOAD STOP |
| Secondary RAT Data Usage Report | SECONDARY RAT DATA USAGE REPORT |
| Uplink RIM Information Transfer | UPLINK RIM INFORMATION TRANSFER |
| Downlink RIM Information Transfer | DOWNLINK RIM INFORMATION TRANSFER |
| Retrieve UE Information | RETRIEVE UE INFORMATION |
| UE Information Transfer | UE INFORMATION TRANSFER |
| RAN CP Relocation Indication | RAN CP RELOCATION INDICATION |
| Connection Establishment Indication | CONNECTION ESTABLISHMENT INDICATION |
| AMF CP Relocation Indication | AMF CP RELOCATION INDICATION |
| Handover Success | HANDOVER SUCCESS |
| Uplink RAN Early Status Transfer | UPLINK RAN EARLY STATUS TRANSFER |
| Downlink RAN Early Status Transfer | DOWNLINK RAN EARLY STATUS TRANSFER |
| Multicast Group Paging | MULTICAST GROUP PAGING |
| Broadcast Session Release Required | BROADCAST SESSION RELEASE REQUIRED |
| IAB-node Release Notification | IAB-NODE RELEASE NOTIFICATION |

>>>>>>>>>>>>>>>>>>Unchanged parts are skipped<<<<<<<<<<<<<<<<<<

-------------------------------------------Next change-------------------------------------------

8.3.4 UE Context Modification

8.3.4.1 General

The purpose of the UE Context Modification procedure is to partly modify the established UE context. The procedure uses UE-associated signalling.

* 8.3.4.2 Successful Operation

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**Figure 8.3.4.2-1: UE context modification: successful operation**

Upon receipt of the UE CONTEXT MODIFICATION REQUEST message the NG-RAN node shall

>>>>>>>>>>>>>>>>>>Unchanged parts are skipped<<<<<<<<<<<<<<<<<<

If the *5G ProSe PC5 QoS Parameters* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node shall, if supported, use it as defined in TS 23.304 [47].

If the *IAB-node Release Status Inquiry* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node shall, if supported, include in the corresponding UE CONTEXT MODIFICATION RESPONSE message the *IAB-node Release Status* IE.

If the *IAB-node Release Status* IE is included in the UE CONTEXT MODIFICATION RESPONSE message, the AMF shall, if supported, store it and use it as defined in TS 38.401 [2].

**Interactions with RRC Inactive Transition Report procedure:**

If the *RRC Inactive Transition Report Request* IE is included in the UE CONTEXT MODIFICATION REQUEST message and set to "single RRC connected state report", the NG-RAN node shall, if supported and if the UE is in RRC\_INACTIVE state, send one subsequent RRC INACTIVE TRANSITION REPORT message to the AMF when the RRC state transitions to RRC\_CONNECTED state.

If the *RRC Inactive Transition Report Request* IE is included in the UE CONTEXT MODIFICATION REQUEST message and set to "subsequent state transition report", the NG-RAN node shall, if supported, send the RRC INACTIVE TRANSITION REPORT message to the AMF to report the RRC state of the UE when the UE enters or leaves RRC\_INACTIVE state.

8.3.4.3 Unsuccessful Operation

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**Figure 8.3.4.3-1: UE context modification: unsuccessful operation**

In case the UE context update cannot be performed successfully, the NG-RAN node shall respond with the UE CONTEXT MODIFICATION FAILURE message to the AMF with an appropriate cause value in the *Cause* IE.

If the *New AMF UE NGAP ID* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node may use the received *New AMF UE NGAP ID* IE or *Old AMF UE NGAP ID* IE in the UE CONTEXT MODIFICATION FAILURE message.

8.3.4.4 Abnormal Conditions

If the UE CONTEXT MODIFICATION REQUEST message includingthe *New AMF UE NGAP ID* IE is received after the NG-RAN node has initiated another class 1 NGAP EP, the NG-RAN node shall be prepared to receive the response message containing an AMF UE NGAP ID with the value received in the *New AMF UE NGAP ID* IE.

NOTE: If the *Emergency Fallback Indicator* IE and the *Security Key* IE are both included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node may handle only the *Emergency Fallback Indicator* IE.

>>>>>>>>>>>>>>>>>>Unchanged parts are skipped<<<<<<<<<<<<<<<<<<

-------------------------------------------Next change-------------------------------------------

9.2.2.7 UE CONTEXT MODIFICATION REQUEST

This message is sent by the AMF to provide UE Context information changes to the NG-RAN node.

Direction: AMF → NG-RAN node

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** | **Criticality** | **Assigned Criticality** |
| Message Type | M |  | 9.3.1.1 |  | YES | reject |
| AMF UE NGAP ID | M |  | 9.3.3.1 |  | YES | reject |
| RAN UE NGAP ID | M |  | 9.3.3.2 |  | YES | reject |
| RAN Paging Priority | O  |  | 9.3.3.15 |  | YES | ignore |
| Security Key | O |  | 9.3.1.87 |  | YES | reject |
| Index to RAT/Frequency Selection Priority | O |  | 9.3.1.61 |  | YES | ignore |
| UE Aggregate Maximum Bit Rate | O |  | 9.3.1.58 |  | YES | ignore |
| UE Security Capabilities | O |  | 9.3.1.86 |  | YES | reject |
| Core Network Assistance Information for RRC INACTIVE | O |  | 9.3.1.15 |  | YES | ignore |
| Emergency Fallback Indicator | O |  | 9.3.1.26 |  | YES | reject |
| New AMF UE NGAP ID | O |  | AMF UE NGAP ID9.3.3.1 |  | YES | reject |
| RRC Inactive Transition Report Request | O |  | 9.3.1.91 |  | YES | ignore |
| New GUAMI | O |  | GUAMI9.3.3.3 |  | YES | reject |
| CN Assisted RAN Parameters Tuning | O |  | 9.3.1.119 |  | YES | ignore |
| SRVCC Operation Possible | O |  | 9.3.1.128 |  | YES | ignore |
| IAB Authorized | O |  | 9.3.1.129 |  | YES | ignore |
| NR V2X Services Authorized | O |  | 9.3.1.146 |  | YES | ignore |
| LTE V2X Services Authorized | O |  | 9.3.1.147 |  | YES | ignore |
| NR UE Sidelink Aggregate Maximum Bit Rate | O |  | 9.3.1.148 | This IE applies only if the UE is authorized for NR V2X services. | YES | ignore |
| LTE UE Sidelink Aggregate Maximum Bit Rate | O |  | 9.3.1.149 | This IE applies only if the UE is authorized for LTE V2X services. | YES | ignore |
| PC5 QoS Parameters | O |  | 9.3.1.150 | This IE applies only if the UE is authorized for NR V2X services. | YES | ignore |
| UE Radio Capability ID | O |  | 9.3.1.142 |  | YES | reject |
| RG Level Wireline Access Characteristics | O |  | OCTET STRING | Specified in TS 23. 316 [34]. Indicates the wireline access technology specific QoS information corresponding to a specific wireline access subscription. | YES | ignore |
| Time Synchronisation Assistance Information | O |  | 9.3.1.220 |  | YES | ignore |
| QMC Configuration Information | O |  | 9.3.1.223 |  | YES | ignore |
| QMC Deactivation | O |  | 9.3.1.222 |  | YES | ignore |
| UE Slice Maximum Bit Rate List | O |  | 9.3.1.231 |  | YES | ignore |
| Management Based MDT PLMN Modification List | O |  | MDT PLMN Modification List9.3.1.243 |  | YES | ignore |
| 5G ProSe Authorized | O |  | 9.3.1.233 |  | YES | ignore |
| 5G ProSe UE PC5 Aggregate Maximum Bit Rate | O |  | NR UE Sidelink Aggregate Maximum Bit Rate9.3.1.148 | This IE applies only if the UE is authorized for 5G ProSe services. | YES | ignore |
| 5G ProSe PC5 QoS Parameters | O |  | 9.3.1.234 | This IE applies only if the UE is authorized for 5G ProSe services. | YES | ignore |
| IAB-node Release Status Inquiry | O |  | BOOLEAN |  | YES | ignore |

9.2.2.8 UE CONTEXT MODIFICATION RESPONSE

This message is sent by the NG-RAN node to confirm the performed UE context updates.

Direction: NG-RAN node → AMF

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** | **Criticality** | **Assigned Criticality** |
| Message Type | M |  | 9.3.1.1 |  | YES | reject |
| AMF UE NGAP ID | M |  | 9.3.3.1 |  | YES | ignore |
| RAN UE NGAP ID | M |  | 9.3.3.2 |  | YES | ignore |
| RRC State | O |  | 9.3.1.92 |  | YES | ignore |
| User Location Information | O |  | 9.3.1.16 |  | YES | ignore |
| Criticality Diagnostics | O |  | 9.3.1.3 |  | YES | ignore |
| IAB-node Release Status | O |  | ENUMERATED (f1-released, f1-not-released…) |  | YES | ignore |

-------------------------------------------End of changes-------------------------------------------