3GPP TSG-RAN WG3 Meeting #126 R3-247800

**Orlando, USA, 18 - 22 November, 2024**

Agenda Item: 12.3

Source: Huawei, Nokia

Title: (TP for TS 38.413) Functional split for NR Femto

Document for: Discussion

# 1 Introduction

This contribution provides NGAP change to support the functional split for NR Femto.

# Annex——TP for TS 38.413

*Start of Change*

#### 8.3.1.2 Successful Operation

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If the *PNI-NPN Area Scope of MDT* IE is included in the *MDT Configuration-NR* IE included in the INITIAL CONTEXT SETUP REQUEST message, the NG-RAN node shall, if supported, use it to derive the MDT area scope for MDT measurement collection in PNI-NPN areas. Upon reception of the *PNI-NPN Area Scope of MDT* IE, the NG-RAN node shall consider that the area scope for MDT measurement collection in PNI-NPN areas is defined only by the areas included in the *PNI-NPN Area Scope of MDT* IE.

If the *AMF UE NGAP ID 2* IE is contained in the INITIAL CONTEXT SETUP REQUEST message, the gNB shall, if supported, store this information in the UE context and use it for subsequent Xn handovers.

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#### 8.4.2.2 Successful Operation

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If the *Partially Allowed NSSAI* IE is contained in the HANDOVER REQUEST message, the NG-RAN node shall, if supported, deduce from it the partially allowed network slices for the UE, store and replace any previously received Partially Allowed NSSAI and use it as specified in TS 23.501 [9].

If the *MBS Support Indicator* IE is included in the *Handover Request Acknowledge Transfer* IE in the HANDOVER REQUEST ACKNOWLEDGE message, the SMF shall, if supported, handle this information as specified in TS 23.247 [44].

The *AMF UE NGAP ID 2* IE shall only be contained in the HANDOVER REQUEST message according to subclause 4.X.2 of TS 38.300 [8].If the *AMF UE NGAP ID 2* IE is present, the target gNB shall store this information in the UE context and use it for subsequent Xn handovers.

If the *ECN Marking or Congestion Information Reporting Status* IE is included in the *Handover Request Acknowledge Transfer* IE, the SMF shall, if supported, use it to deduce if ECN marking at NG-RAN or ECN marking at UPF or congestion information reporting is active or not active as described in TS 23.501 [9].

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#### 8.4.4.2 Successful Operation



Figure 8.4.4.2-1: Path switch request: successful operation

The NG-RAN node initiates the procedure by sending the PATH SWITCH REQUEST message to the AMF. Upon reception of the PATH SWITCH REQUEST message the AMF shall, for each PDU session indicated in the *PDU Session ID* IE, transparently transfer the *Path Switch Request Transfer* IE to the SMF associated with the concerned PDU session.

Upon reception of the PATH SWITCH REQUEST message the AMF shall deactivate MT communication handling if already activated, as specified in TS 23.502 [10].

If the *RRC Resume Cause* IE is included in the PATH SWITCH REQUEST message, the AMF shall, if supported, use it as described in TS 23.502 [10] for User Plane CIoT 5GS Optimisation when the NG-RAN node is an ng-eNB.

If the *RedCap Indication* IE or the *eRedCap Indication* IE is included in the PATH SWITCH REQUEST message, the AMF shall, if supported, consider the UE respectively as a RedCap UE or an eRedCap UE that was previously served by a E-UTRA cell, and use the IE according to TS 23.501 [9].

After all necessary updates including the UP path switch have been successfully completed in the 5GC for at least one of the PDU session resources included in the PATH SWITCH REQUEST, the AMF shall send the PATH SWITCH REQUEST ACKNOWLEDGE message to the NG-RAN node and the procedure ends.

The list of accepted QoS flows shall be included in the PATH SWITCH REQUEST message within the *Path Switch Request Transfer* IE. The SMF shall handle this information as specified in TS 23.502 [10].

If the GUAMI of the AMF currently serving the UE is available at the gNB (see TS 38.300 [8]) the gNB shall include the *Source AMF GUAMI* IE within the PATH SWITCH REQUEST message.

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If the *Ranging and Sidelink Positioning Service Information* IE is contained in the PATH SWITCH REQUEST ACKNOWLEDGE message, the NG-RAN node shall, if supported, update the Ranging and Sidelink Positioning service information for the UE accordingly. If the *Ranging and Sidelink Positioning Authorized* IEwithin the *Ranging and Sidelink Positioning Service Information* IE is set to "not authorized", the NG-RAN node shall, if supported, initiate actions to ensure that the UE is no longer accessing the Ranging and Sidelink Positioning service.

If the *AMF UE NGAP ID 2* IE is contained in the PATH SWITCH REQUEST ACKNOWLEDGE message, the gNB shall store this information in the UE context and use it for subsequent Xn handovers.

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#### 8.6.1.2 Successful Operation



Figure 8.6.1.2-1: Initial UE message

The NG-RAN node initiates the procedure by sending an INITIAL UE MESSAGE message to the AMF. The NG-RAN node shall allocate a unique RAN UE NGAP ID to be used for the UE and the NG-RAN node shall include this identity in the INITIAL UE MESSAGE message.

The *NAS-PDU* IE contains a UE – AMF message that is transferred without interpretation in the NG-RAN node.

In case of network sharing, the selected PLMN is indicated by the *PLMN Identity* IE within the *TAI* IE included in the INITIAL UE MESSAGE message, or by the *Serving PLMN* IE within the *NR NTN TAI Information* IE included in the same message for NTN.

When the NG-RAN node has received from the radio interface the *5G-S-TMSI* IE, it shall include it in the INITIAL UE MESSAGE message.

If the *AMF Set ID* IE is included in the INITIAL UE MESSAGE message this indicates that the message is a rerouted message and the AMF shall, if supported, use the IE as described in TS 23.502 [10].

If the gNB does not support NNSF and the gNB has received from the radio interface the *GUAMI* IE, the gNB may include it in the INITIAL UE MESSAGE message. If the gNB does not support NNSF and the gNB has received from the radio interface the *GUAMI Type* IE, the gNB may include it in the INITIAL UE MESSAGE message. If the gNB does not support NNSF and the gNB has received from the radio interface the *Requested S-NSSAI* IE, the gNB may include it in the INITIAL UE MESSAGE message.

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#### 8.7.7.2 Successful Operation



Figure 8.7.7.2-1: Overload start

The NG-RAN node receiving the OVERLOAD START message shall assume the AMF from which it receives the message as being in an overloaded state.

If the *Overload Action* IE is included the *AMF* *Overload Response* IE within the OVERLOAD START message, the NG-RAN node shall use it to identify the related signalling traffic. When the *Overload Action* IE is set to

- "reject RRC connection establishments for non-emergency mobile originated data transfer" (i.e., reject traffic corresponding to RRC cause "mo-data", "mo-SMS", "mo-VideoCall" and "mo-VoiceCall" in TS 38.331 [18] or "mo-data" and "mo-VoiceCall" in TS 36.331 [21]), or

- "reject RRC connection establishments for signalling" (i.e., reject traffic corresponding to RRC cause "mo-data", "mo-SMS", "mo-signalling", "mo-VideoCall" and "mo-VoiceCall" in TS 38.331 [18] or "mo-data", "mo-signalling" and "mo-VoiceCall" in TS 36.331 [21]), or

- "only permit RRC connection establishments for emergency sessions and mobile terminated services" (i.e., only permit traffic corresponding to RRC cause "emergency" and "mt-Access" in TS 38.331 [18] or in TS 36.331 [21]), or

- "only permit RRC connection establishments for high priority sessions and mobile terminated services" (i.e., only permit traffic corresponding to RRC cause "highPriorityAccess", "mps-PriorityAccess", "mcs-PriorityAccess" and "mt-Access" in TS 38.331 [18] or "highPriorityAccess", "mo-ExceptionData" and "mt-Access" in TS 36.331 [21]),

the NG-RAN node shall:

- if the *AMF Traffic Load Reduction Indication* IE is included in the OVERLOAD START message, reduce the signalling traffic by the indicated percentage,

- otherwise ensure that only the signalling traffic not indicated as to be rejected is sent to the AMF.

If the *Overload Start NSSAI List* IE is included in the OVERLOAD START message, the NG-RAN node shall:

- if the *Slice Traffic Load Reduction Indication* IE is present, reduce the signalling traffic by the indicated percentage for the UE(s) whose requested NSSAI only include S-NSSAI(s) contained in the *Overload Start NSSAI List* IE, and the signalling traffic indicated as to be reduced by the *Overload Action* IE in the *Slice Overload Response* IE if the IE is present,

- otherwise ensure that only the signalling traffic from UE(s) whose requested NSSAI includes S-NSSAI(s) other than the ones contained in the *Overload Start NSSAI List* IE, or the signalling traffic not indicated as to be reduced by the *Overload Action* IE in the *Slice Overload Response* IE for the UE(s) if the requested NSSAI matched, is sent to the AMF.

If the *GUAMI List* IE is present, the gNB shall, if supported, use this information to identify to which traffic the above defined rejections shall be applied.

If an overload action is ongoing and the gNB receives a further OVERLOAD START message, the gNB shall replace the ongoing overload action with the newly requested one. If the *GUAMI List* IE is present, the gNB replaces applicable ongoing actions according to TS 38.300 [8], clause 4.X.2.

If an overload control is ongoing and the NG-RAN node receives a further OVERLOAD START message, the NG-RAN node shall replace the contents of the previously received information with the new one.

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#### 8.7.8.2 Successful Operation



Figure 8.7.8.2-1: Overload stop

The NG-RAN node receiving the OVERLOAD STOP message shall assume that the overload situation at the AMF from which it receives the message has ended and shall resume normal operation for the applicable traffic towards this AMF.

If the *GUAMI List* IE is present, the gNB shall, if supported, use this information to identify which traffic to cease rejecting, and proceed according to TS 38.300 [8], clauses 4.X.2. If no particular overload action is ongoing for a particular GUAMI value, the gNB shall ignore this value.

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#### 9.2.2.1 INITIAL CONTEXT SETUP REQUEST

This message is sent by the AMF to request the setup of a UE context.

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 |
| Old AMF | O |  | AMF Name9.3.3.21 |  | YES | reject |
| UE Aggregate Maximum Bit Rate | C-ifPDUsessionResourceSetup |  | 9.3.1.58 |  | YES | reject |
| Core Network Assistance Information for RRC INACTIVE | O |  | 9.3.1.15 |  | YES | ignore |
| GUAMI | M |  | 9.3.3.3 |  | YES | reject |
| **PDU Session Resource Setup Request List** |  | *0..1* |  |  | YES | reject |
| **>PDU Session Resource Setup Request Item** |  | *1..<maxnoofPDUSessions>* |  |  | - |  |
| >>PDU Session ID | M |  | 9.3.1.50 |  | - |  |
| >>PDU Session NAS-PDU | O |  | NAS-PDU9.3.3.4 |  | - |  |
| >>S-NSSAI  | M |  | 9.3.1.24 |  | - |  |
| >>PDU Session Resource Setup Request Transfer | M |  | OCTET STRING | Containing the *PDU Session Resource Setup Request Transfer* IE specified in subclause 9.3.4.1. | - |  |
| >>PDU Session Expected UE Activity Behaviour | O |  | Expected UE Activity Behaviour9.3.1.94 | Expected UE Activity Behaviour for the PDU Session. | YES | ignore |
| Allowed NSSAI | M |  | 9.3.1.31 | Indicates the S-NSSAIs permitted by the network | YES | reject |
| UE Security Capabilities | M |  | 9.3.1.86 |  | YES | reject |
| Security Key | M |  | 9.3.1.87 |  | YES | reject |
| Trace Activation | O |  | 9.3.1.14 |  | YES | ignore |
| Mobility Restriction List | O |  | 9.3.1.85 |  | YES | ignore |
| UE Radio Capability | O |  | 9.3.1.74 |  | YES | ignore |
| Index to RAT/Frequency Selection Priority | O |  | 9.3.1.61 |  | YES | ignore |
| Masked IMEISV | O |  | 9.3.1.54 |  | YES | ignore |
| NAS-PDU | O |  | 9.3.3.4 |  | YES | ignore |
| Emergency Fallback Indicator | O |  | 9.3.1.26 |  | YES | reject |
| RRC Inactive Transition Report Request | O |  | 9.3.1.91 |  | YES | ignore |
| UE Radio Capability for Paging | O |  | 9.3.1.68 |  | YES | ignore |
| Redirection for Voice EPS Fallback  | O |  | 9.3.1.116 |  | YES | ignore |
| Location Reporting Request Type | O |  | 9.3.1.65 |  | YES | ignore |
| 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 |
| Enhanced Coverage Restriction | O |  | 9.3.1.140 |  | YES | ignore |
| Extended Connected Time | O |  | 9.3.3.31 |  | YES | ignore |
| UE Differentiation Information | O |  | 9.3.1.144 |  | 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 |
| CE-mode-B Restricted | O |  | 9.3.1.155 |  | YES | ignore |
| UE User Plane CIoT Support Indicator | O |  | 9.3.1.160 |  | YES | ignore |
| 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 |
| Management Based MDT PLMN List | O |  | MDT PLMN List9.3.1.168 |  | YES | ignore |
| UE Radio Capability ID | O |  | 9.3.1.142 |  | YES | reject |
| Time Synchronisation Assistance Information | O |  | 9.3.1.220 |  | YES | ignore |
| QMC Configuration Information | O |  | 9.3.1.223 |  | YES | ignore |
| Target NSSAI Information | O |  | 9.3.1.229 |  | YES | ignore |
| UE Slice Maximum Bit Rate List | O |  | 9.3.1.231 |  | 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 |
| Network Controlled Repeater Authorized | O |  | 9.3.1.245 |  | YES | ignore |
| Aerial UE Subscription Information | O |  | 9.3.1.246 |  | YES | ignore |
| NR A2X Services Authorized | O |  | 9.3.1.247 |  | YES | ignore |
| LTE A2X Services Authorized | O |  | 9.3.1.248 |  | YES | ignore |
| NR A2X 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 NR A2X services. | YES | ignore |
| LTE A2X UE PC5 Aggregate Maximum Bit Rate | O |  | LTE UE Sidelink Aggregate Maximum Bit Rate9.3.1.149 | This IE applies only if the UE is authorized for LTE A2X services. | YES | ignore |
| A2X PC5 QoS Parameters | O |  | 9.3.1.249 | This IE applies only if the UE is authorized for A2X services. | YES | ignore |
| Mobile IAB Authorized | O |  | 9.3.1.259 |  | YES | ignore |
| Partially Allowed NSSAI | O |  | 9.3.1.261 | Indicates the S-NSSAIs partially permitted by the network. | YES | ignore |
| Ranging and Sidelink Positioning Service Information  | O |  | 9.3.1.269 | This IE applies only if the UE is authorized for NR V2X services and/or 5G ProSe services. | YES | ignore |
| AMF UE NGAP ID 2 | O |  | AMF UE NGAP ID 9.3.3.1 | This IE indicates the AMF UE NGAP ID assigned by the AMF. | YES | ignore |

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#### 9.2.2.4 UE CONTEXT RELEASE REQUEST

This message is sent by the NG-RAN node to request the release of the UE-associated logical NG-connection over the NG interface.

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 | ignore |
| AMF UE NGAP ID | M |  | 9.3.3.1 |  | YES | reject |
| RAN UE NGAP ID | M |  | 9.3.3.2 |  | YES | reject |
| **PDU Session Resource List** |  | *0..1* |  |  | YES | reject |
| **>PDU Session Resource Item** |  | *1..<maxnoofPDUSessions>* |  |  | - |  |
| >>PDU Session ID | M |  | 9.3.1.50 |  | - |  |
| Cause | M |  | 9.3.1.2 |  | YES | ignore |
| GW Context Release Indication | O |  | 9.3.1.x |  | YES | reject |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxnoofPDUSessions | Maximum no. of PDU sessions allowed towards one UE. Value is 256. |

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#### 9.2.3.4 HANDOVER REQUEST

This message is sent by the AMF to the target NG-RAN node to request the preparation of resources.

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 |
| Handover Type | M |  | 9.3.1.22 |  | YES | reject |
| Cause | M |  | 9.3.1.2 |  | YES | ignore |
| UE Aggregate Maximum Bit Rate | M |  | 9.3.1.58 |  | YES | reject |
| Core Network Assistance Information for RRC INACTIVE | O |  | 9.3.1.15 |  | YES | ignore |
| UE Security Capabilities  | M |  | 9.3.1.86 |  | YES | reject |
| Security Context | M |  | 9.3.1.88 |  | YES | reject |
| New Security Context Indicator | O |  | 9.3.1.55 |  | YES | reject |
| NASC | O |  | NAS-PDU9.3.3.4 | Refers to either the “Intra N1 mode NAS transparent container” or the “S1 mode to N1 mode NAS transparent container”, the details of the IE definition and the encoding arespecified in TS 24.501 [26]. | YES | reject |
| **PDU Session Resource Setup List** |  | *1* |  |  | YES | reject |
| **>PDU Session Resource Setup Item** |  | *1..<maxnoofPDUSessions>* |  |  | - |  |
| >>PDU Session ID  | M |  | 9.3.1.50 |  | - |  |
| >>S-NSSAI | M |  | 9.3.1.24 |  | - |  |
| >>Handover Request Transfer | M |  | OCTET STRING | Containing the *PDU Session Resource Setup Request Transfer* IE specified in subclause 9.3.4.1. | - |  |
| >>PDU Session Expected UE Activity Behaviour | O |  | Expected UE Activity Behaviour9.3.1.94 | Expected UE Activity Behaviour for the PDU Session. | YES | ignore |
| Allowed NSSAI | M |  | 9.3.1.31 | Indicates the S-NSSAIs permitted by the network. | YES | reject |
| Trace Activation | O |  | 9.3.1.14 |  | YES | ignore |
| Masked IMEISV | O |  | 9.3.1.54 |  | YES | ignore |
| Source to Target Transparent Container | M |  | 9.3.1.20 |  | YES | reject |
| Mobility Restriction List | O |  | 9.3.1.85 |  | YES | ignore |
| Location Reporting Request Type | O |  | 9.3.1.65 |  | YES | ignore |
| RRC Inactive Transition Report Request | O |  | 9.3.1.91 |  | YES | ignore |
| GUAMI | M |  | 9.3.3.3 |  | YES | reject |
| Redirection for Voice EPS Fallback  | O |  | 9.3.1.116 |  | YES | ignore |
| 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 | reject |
| Enhanced Coverage Restriction | O |  | 9.3.1.140 |  | YES | ignore |
| UE Differentiation Information | O |  | 9.3.1.144 |  | 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 |
| CE-mode-B Restricted | O |  | 9.3.1.155 |  | YES | ignore |
| UE User Plane CIoT Support Indicator | O |  | 9.3.1.160 |  | YES | ignore |
| Management Based MDT PLMN List | O |  | MDT PLMN List9.3.1.168 |  | YES | ignore |
| UE Radio Capability ID | O |  | 9.3.1.142 |  | YES | reject |
| Extended Connected Time | O |  | 9.3.3.31 |  | YES | ignore |
| Time Synchronisation Assistance Information | O |  | 9.3.1.220 |  | YES | ignore |
| UE Slice Maximum Bit Rate List | O |  | 9.3.1.231 |  | 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 |
| Aerial UE Subscription Information | O |  | 9.3.1.246 |  | YES | ignore |
| NR A2X Services Authorized | O |  | 9.3.1.247 |  | YES | ignore |
| LTE A2X Services Authorized | O |  | 9.3.1.248 |  | YES | ignore |
| NR A2X 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 NR A2X services. | YES | ignore |
| LTE A2X UE PC5 Aggregate Maximum Bit Rate | O |  | LTE UE Sidelink Aggregate Maximum Bit Rate9.3.1.149 | This IE applies only if the UE is authorized for LTE A2X services. | YES | ignore |
| A2X PC5 QoS Parameters | O |  | 9.3.1.249 | This IE applies only if the UE is authorized for A2X services. | YES | ignore |
| Mobile IAB Authorized | O |  | 9.3.1.259 |  | YES | ignore |
| No PDU Session Indication | O |  | ENUMERATED (true, ...) | This IE applies only if the UE is a mobile IAB-MT. | YES | ignore |
| Partially Allowed NSSAI | O |  | 9.3.1.261 | Indicates the S-NSSAIs partially permitted by the network. | YES | ignore |
| Ranging and Sidelink Positioning Service Information  | O |  | 9.3.1.269 | This IE applies only if the UE is authorized for NR V2X services and/or 5G ProSe services. | YES | ignore |
| AMF UE NGAP ID 2 | O |  | AMF UE NGAP ID 9.3.3.1 | This IE indicates the AMF UE NGAP ID assigned by the AMF. | YES | ignore |

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#### 9.2.3.8 PATH SWITCH REQUEST

This message is sent by the NG-RAN node to inform the AMF of the new serving NG-RAN node and to transfer some NG-U DL tunnel termination point(s) to the SMF via the AMF for one or multiple PDU session resources.

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 |
| RAN UE NGAP ID | M |  | 9.3.3.2 |  | YES | reject |
| Source AMF UE NGAP ID | M |  | AMF UE NGAP ID9.3.3.1 |  | YES | reject |
| User Location Information | M |  | 9.3.1.16 |  | YES | ignore |
| UE Security Capabilities | M |  | 9.3.1.86 |  | YES | ignore |
| **PDU Session Resource to be Switched in Downlink List** |  | *1* |  |  | YES | reject |
| **>PDU Session Resource to be Switched in Downlink Item** |  | *1..<maxnoofPDUSessions>* |  |  | - |  |
| >>PDU Session ID  | M |  | 9.3.1.50 |  | - |  |
| >>Path Switch Request Transfer | M |  | OCTET STRING | Containing the *Path Switch Request Transfer* IE specified in subclause 9.3.4.8. | - |  |
| **PDU Session Resource Failed to Setup List** |  | *0..1* |  |  | YES | ignore |
| **>PDU Session Resource Failed to Setup Item** |  | *1..<maxnoofPDUSessions>* |  |  | - |  |
| >>PDU Session ID | M |  | 9.3.1.50 |  | - |  |
| >>Path Switch Request Setup Failed Transfer | M |  | OCTET STRING | Containing the *Path Switch Request Setup Failed Transfer* IE specified in subclause 9.3.4.15. | - |  |
| RRC Resume Cause | O |  | RRC Establishment Cause9.3.1.111 |  | YES | ignore |
| RedCap Indication | O |  | 9.3.1.228 |  | YES | ignore |
| eRedCap Indication | O |  | ENUMERATED (true, ...) |  | YES | ignore |
| Source AMF GUAMI | O |  | GUAMI9.3.3.3 | This IE indicates the source AMF. | YES | ignore |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxnoofPDUSessions | Maximum no. of PDU sessions allowed towards one UE. Value is 256. |

<<<<<<<<<<<<<<<<<<<< Unmodified Text Omitted >>>>>>>>>>>>>>>>>>>>

#### 9.2.3.9 PATH SWITCH REQUEST ACKNOWLEDGE

This message is sent by the AMF to inform the NG-RAN node that the path switch has been successfully completed in the 5GC.

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 | ignore |
| RAN UE NGAP ID | M |  | 9.3.3.2 |  | YES | ignore |
| UE Security Capabilities | O |  | 9.3.1.86 |  | YES | reject |
| Security Context | M |  | 9.3.1.88 |  | YES | reject |
| New Security Context Indicator | O |  | 9.3.1.55 |  | YES | reject |
| **PDU Session Resource Switched List** |  | *1*  |  |  | YES | ignore |
| **>PDU Session Resource Switched Item** |  | *1..<maxnoofPDUSessions>* |  |  | - |  |
| >>PDU Session ID  | M |  | 9.3.1.50 |  | - |  |
| >>Path Switch Request Acknowledge Transfer | M |  | OCTET STRING | Containing the *Path Switch Request Acknowledge Transfer* IE specified in subclause 9.3.4.9. | - |  |
| >>PDU Session Expected UE Activity Behaviour | O |  | Expected UE Activity Behaviour9.3.1.94 | Expected UE Activity Behaviour for the PDU Session. | YES | ignore |
| **PDU Session Resource Released List** |  | *0..1* |  |  | YES | ignore |
| **>PDU Session Resource Released Item** |  | *1..<maxnoofPDUSessions>* |  |  | - |  |
| >>PDU Session ID | M |  | 9.3.1.50 |  | - |  |
| >>Path Switch Request Unsuccessful Transfer | M |  | OCTET STRING | Containing the *Path Switch Request Unsuccessful Transfer* IE specified in subclause 9.3.4.20. | - |  |
| Allowed NSSAI | M |  | 9.3.1.31 | Indicates the S-NSSAIs permitted by the network. | YES | reject |
| Core Network Assistance Information for RRC INACTIVE | O |  | 9.3.1.15 |  | YES | ignore |
| RRC Inactive Transition Report Request | O |  | 9.3.1.91 |  | YES | ignore |
| Criticality Diagnostics | O |  | 9.3.1.3 |  | YES | ignore |
| Redirection for Voice EPS Fallback  | O |  | 9.3.1.116 |  | YES | ignore |
| CN Assisted RAN Parameters Tuning | O |  | 9.3.1.119 |  | YES | ignore |
| SRVCC Operation Possible | O |  | 9.3.1.128 |  | YES | ignore |
| Enhanced Coverage Restriction | O |  | 9.3.1.140 |  | YES | ignore |
| Extended Connected Time | O |  | 9.3.3.31 |  | YES | ignore |
| UE Differentiation Information | O |  | 9.3.1.144 |  | 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 |
| CE-mode-B Restricted | O |  | 9.3.1.155 |  | YES | ignore |
| UE User Plane CIoT Support Indicator | O |  | 9.3.1.160 |  | YES | ignore |
| UE Radio Capability ID | O |  | 9.3.1.142 |  | YES | reject |
| Management Based MDT PLMN List | O |  | MDT PLMN List9.3.1.168 | This IE is ignored if the *Management Based MDT PLMN Modification List* IE is present. | YES | ignore |
| Time Synchronisation Assistance Information | O |  | 9.3.1.220 |  | 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 |
| Management Based MDT PLMN Modification List | O |  | MDT PLMN Modification List9.3.1.243 |  | YES | ignore |
| IAB Authorized | O |  | 9.3.1.129 |  | YES | ignore |
| Aerial UE Subscription Information | O |  | 9.3.1.246 |  | YES | ignore |
| NR A2X Services Authorized | O |  | 9.3.1.247 |  | YES | ignore |
| LTE A2X Services Authorized | O |  | 9.3.1.248 |  | YES | ignore |
| NR A2X 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 NR A2X services. | YES | ignore |
| LTE A2X UE PC5 Aggregate Maximum Bit Rate | O |  | LTE UE Sidelink Aggregate Maximum Bit Rate9.3.1.149 | This IE applies only if the UE is authorized for LTE A2X services. | YES | ignore |
| A2X PC5 QoS Parameters | O |  | 9.3.1.249 | This IE applies only if the UE is authorized for A2X services. | YES | ignore |
| Mobile IAB Authorized | O |  | 9.3.1.259 |  | YES | ignore |
| Partially Allowed NSSAI | O |  | 9.3.1.261 | Indicates the S-NSSAIs partially permitted by the network. | YES | ignore |
| Ranging and Sidelink Positioning Service Information | O |  | 9.3.1.269 | This IE applies only if the UE is authorized for NR V2X services and/or 5G ProSe services. | YES | ignore |
| AMF UE NGAP ID 2 | O |  | AMF UE NGAP ID 9.3.3.1 | This IE indicates the AMF UE NGAP ID assigned by the AMF. | YES | ignore |

<<<<<<<<<<<<<<<<<<<< Unmodified Text Omitted >>>>>>>>>>>>>>>>>>>>

#### 9.2.5.1 INITIAL UE MESSAGE

This message is sent by the NG-RAN node to transfer the initial layer 3 message to the AMF over the NG interface.

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 | ignore |
| RAN UE NGAP ID | M |  | 9.3.3.2 |  | YES | reject |
| NAS-PDU | M |  | 9.3.3.4 |  | YES | reject |
| User Location Information | M |  | 9.3.1.16 |  | YES | reject |
| RRC Establishment Cause | M |  | 9.3.1.111 |  | YES | ignore |
| 5G-S-TMSI | O |  | 9.3.3.20 |  | YES | reject |
| AMF Set ID | O |  | 9.3.3.12 |  | YES | ignore |
| UE Context Request | O |  | ENUMERATED (requested, ...) |  | YES | ignore |
| Allowed NSSAI | O |  | 9.3.1.31 |  | YES | reject |
| Source to Target AMF Information Reroute | O |  | 9.3.3.27 |  | YES | ignore |
| Selected PLMN Identity | O |  | PLMN Identity9.3.3.5 | Indicates the selected PLMN id for the non-3GPP access. | YES | ignore |
| IAB Node Indication | O |  | ENUMERATED (true, ...) | Indication of an IAB node | YES | reject |
| CE-mode-B Support Indicator | O |  | 9.3.1.156 |  | YES | reject |
| LTE-M Indication | O |  | 9.3.1.157 |  | YES | ignore |
| EDT Session | O |  | ENUMERATED (true, …) |  | YES | ignore |
| Authenticated Indication | O |  | ENUMERATED (true, …) | Indicates the FN-RG has been authenticated by the access network. | YES | ignore |
| NPN Access Information | O |  | 9.3.3.46 |  | YES | reject |
| RedCap Indication | O |  | 9.3.1.228 |  | YES | ignore |
| Selected NID | O |  | NID9.3.3.42 | Indicates together with the *Selected PLMN Identity* IE, the selected SNPN Identity for the non-3GPP access. | YES | ignore |
| Mobile IAB Node Indication | O |  | ENUMERATED (true, ...) | Indicates that the UE is a mobile IAB-node | YES | reject |
| Partially Allowed NSSAI | O |  | 9.3.1.261 | Indicates the S-NSSAIs partially permitted by the network. | YES | ignore |
| eRedCap Indication | O |  | ENUMERATED (true, ...) |  | YES | ignore |
| GUAMI | O |  | GUAMI9.3.3.3 |  | YES | ignore |
| GUAMI Type | O |  | ENUMERATED (native, mapped, …) |  | YES | ignore |
| Requested S-NSSAI | O |  | 9.3.1.y | Indicates the S-NSSAIs requested by the UE. | YES | ignore |

<<<<<<<<<<<<<<<<<<<< Unmodified Text Omitted >>>>>>>>>>>>>>>>>>>>

#### 9.2.6.14 OVERLOAD START

This message is sent by the AMF and is used to indicate to the NG-RAN node that the AMF is overloaded.

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 | ignore |
| AMF Overload Response | O |  | Overload Response9.3.1.104 |  | YES | reject |
| AMF Traffic Load Reduction Indication | O |  | Traffic Load Reduction Indication 9.3.1.106 |  | YES | ignore |
| **Overload Start NSSAI List** |  | *0..1* |  |  | YES | ignore |
| **>Overload Start NSSAI Item** |  | *1..<maxnoofSliceItems>* |  |  | - |  |
| >>Slice Overload List | M |  | 9.3.1.107 |  | - |  |
| >>Slice Overload Response | O |  | Overload Response9.3.1.104 |  | - |  |
| >>Slice Traffic Load Reduction Indication | O |  | Traffic Load Reduction Indication 9.3.1.106 |  | - |  |
| **GUAMI List** |  | *0..1* |  |  | YES | ignore |
| **>GUAMI List Item** |  | *1..<maxnoofGUAMIs>* |  |  | - |  |
| >>GUAMI | M |  | 9.3.3.3 |  | - |  |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxnoofSliceItems | Maximum no. of signalled slice support items. Value is 1024. |
| maxnoofGUAMIs | Maximum no. of GUAMIs. Value is 1024. |

#### 9.2.6.15 OVERLOAD STOP

This message is sent by the AMF and is used to indicate that the AMF is no longer overloaded.

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 |
| **GUAMI List** |  | *0..1* |  |  | YES | ignore |
| **>GUAMI List Item** |  | *1..<maxnoofGUAMIs>* |  |  | - |  |
| >>GUAMI | M |  | 9.3.3.3 |  | - |  |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxnoofGUAMIs | Maximum no. of GUAMIs. Value is 1024. |

<<<<<<<<<<<<<<<<<<<< Unmodified Text Omitted >>>>>>>>>>>>>>>>>>>>

#### 9.3.1.x GW Context Release Indication

This information element is set by the gNB to provide an indication that the AMF may release any resources related to the signalled NG UE context (see TS 38.300 [8]).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| GW Context Release Indication | M |  | ENUMERATED(true, …) | This IE indicates to the AMF that the gNB has successfully performed an Xn HO for the UE to a target gNB. |

<<<<<<<<<<<<<<<<<<<< Unmodified Text Omitted >>>>>>>>>>>>>>>>>>>>

#### 9.3.1.y Requested S-NSSAI

This IE indicates the S-NSSAI requested by the UE.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| **Requested S-NSSAI Item** |  | *1..<maxnoofRequestedS-NSSAIs>* |  |  |
| >S-NSSAI | M |  | 9.3.1.24 |  |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxnoofRequestedS-NSSAIs | Maximum no. of S-NSSAIs requested by the UE. Value is 8. |

*Next Change*

### 9.4.4 PDU Definitions

-- ASN1START

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- PDU definitions for NGAP.

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

NGAP-PDU-Contents {

itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)

ngran-Access (22) modules (3) ngap (1) version1 (1) ngap-PDU-Contents (1) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- IE parameter types from other modules.

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

IMPORTS

 A2X-PC5-QoS-Parameters,

 AerialUEsubscriptionInformation,

 AllowedNSSAI,

 AMFName,

 AMFSetID,

 AMF-TNLAssociationSetupList,

 AMF-TNLAssociationToAddList,

 AMF-TNLAssociationToRemoveList,

 AMF-TNLAssociationToUpdateList,

 AMF-UE-NGAP-ID,

 AssistanceDataForPaging,

 AssociatedSessionID,

 AuthenticatedIndication,

 BroadcastCancelledAreaList,

 BroadcastCompletedAreaList,

 BroadcastTransportFailureTransfer,

 BroadcastTransportRequestTransfer,

 BroadcastTransportResponseTransfer,

 CancelAllWarningMessages,

 Cause,

 CellIDListForRestart,

 CEmodeBrestricted,

 CEmodeBSupport-Indicator,

 CNAssistedRANTuning,

 ConcurrentWarningMessageInd,

 CoreNetworkAssistanceInformationForInactive,

 CPTransportLayerInformation,

 CriticalityDiagnostics,

 DataCodingScheme,

 DirectForwardingPathAvailability,

 DL-CP-SecurityInformation,

 DL-Signalling,

 EarlyStatusTransfer-TransparentContainer,

 EDT-Session,

 EmergencyAreaIDListForRestart,

 EmergencyFallbackIndicator,

 EN-DCSONConfigurationTransfer,

 EndIndication,

 Enhanced-CoverageRestriction,

 ERedCapIndication,

 EUTRA-CGI,

 EUTRA-PagingeDRXInformation,

 Extended-AMFName,

 Extended-ConnectedTime,

 Extended-RANNodeName,

 FiveGCAction,

 FiveG-ProSeAuthorized,

 FiveG-ProSePC5QoSParameters,

 FiveG-S-TMSI,

 GlobalRANNodeID,

 GUAMI,

 GUAMIList,

 GUAMIType,

 GW-Context-Release-Indication,

 HandoverFlag,

 HandoverType,

 IAB-Authorized,

 IABNodeIndication,

 IAB-Supported,

 IMSVoiceSupportIndicator,

 IndexToRFSP,

 InfoOnRecommendedCellsAndRANNodesForPaging,

 IntersystemSONConfigurationTransfer,

 LAI,

 LocationReportingRequestType,

 LTE-A2X-ServicesAuthorized,

 LTEM-Indication,

 LTEUESidelinkAggregateMaximumBitrate,

 LTEV2XServicesAuthorized,

 MaskedIMEISV,

 MBS-AreaSessionID,

 MBS-DistributionReleaseRequestTransfer,

 MBS-DistributionSetupRequestTransfer,

 MBS-DistributionSetupResponseTransfer,

 MBS-DistributionSetupUnsuccessfulTransfer,

 MBS-ServiceArea,

 MBS-SessionID,

 MBSSessionReleaseResponseTransfer,

 MBSSessionSetupOrModFailureTransfer,

 MBSSessionSetupOrModRequestTransfer,

 MBSSessionSetupOrModResponseTransfer,

 MDTPLMNList,

 MDTPLMNModificationList,

 MessageIdentifier,

 MobileIAB-Authorized,

 MobileIABNodeIndication,

 MobileIAB-Supported,

 MobilityRestrictionList,

 MulticastGroupPagingAreaList,

 MulticastSessionActivationRequestTransfer,

 MulticastSessionDeactivationRequestTransfer,

 MulticastSessionUpdateRequestTransfer,

 NAS-PDU,

 NASSecurityParametersFromNGRAN,

 NB-IoT-DefaultPagingDRX,

 NB-IoT-PagingDRX,

 NB-IoT-Paging-eDRXInfo,

 NB-IoT-UEPriority,

 NetworkControlledRepeaterAuthorized,

 NewSecurityContextInd,

 NGRAN-CGI,

 NGRAN-TNLAssociationToRemoveList,

 NGRANTraceID,

 NID,

 NoPDUSessionIndication,

 NotifySourceNGRANNode,

 NPN-AccessInformation,

 NR-A2X-ServicesAuthorized,

 NR-CGI,

 NR-PagingeDRXInformation,

 NRPPa-PDU,

 NRUESidelinkAggregateMaximumBitrate,

 NRV2XServicesAuthorized,

 NumberOfBroadcastsRequested,

 OverloadResponse,

 OverloadStartNSSAIList,

 PagingAssisDataforCEcapabUE,

 PagingCause,

 PagingDRX,

 PagingOrigin,

 PagingPolicyDifferentiation,

 PagingPriority,

 Partially-Allowed-NSSAI,

 PC5QoSParameters,

 PDUSessionAggregateMaximumBitRate,

 PDUSessionListMTCommHReq,

 PDUSessionResourceAdmittedList,

 PDUSessionResourceFailedToModifyListModCfm,

 PDUSessionResourceFailedToModifyListModRes,

 PDUSessionResourceFailedToResumeListRESReq,

 PDUSessionResourceFailedToResumeListRESRes,

 PDUSessionResourceFailedToSetupListCxtFail,

 PDUSessionResourceFailedToSetupListCxtRes,

 PDUSessionResourceFailedToSetupListHOAck,

 PDUSessionResourceFailedToSetupListPSReq,

 PDUSessionResourceFailedToSetupListSURes,

 PDUSessionResourceHandoverList,

 PDUSessionResourceListCxtRelCpl,

 PDUSessionResourceListCxtRelReq,

 PDUSessionResourceListHORqd,

 PDUSessionResourceModifyListModCfm,

 PDUSessionResourceModifyListModInd,

 PDUSessionResourceModifyListModReq,

 PDUSessionResourceModifyListModRes,

 PDUSessionResourceNotifyList,

 PDUSessionResourceReleasedListNot,

 PDUSessionResourceReleasedListPSAck,

 PDUSessionResourceReleasedListPSFail,

 PDUSessionResourceReleasedListRelRes,

 PDUSessionResourceResumeListRESReq,

 PDUSessionResourceResumeListRESRes,

 PDUSessionResourceSecondaryRATUsageList,

 PDUSessionResourceSetupListCxtReq,

 PDUSessionResourceSetupListCxtRes,

 PDUSessionResourceSetupListHOReq,

 PDUSessionResourceSetupListSUReq,

 PDUSessionResourceSetupListSURes,

 PDUSessionResourceSuspendListSUSReq,

 PDUSessionResourceSwitchedList,

 PDUSessionResourceToBeSwitchedDLList,

 PDUSessionResourceToReleaseListHOCmd,

 PDUSessionResourceToReleaseListRelCmd,

 PEIPSassistanceInformation,

 PLMNIdentity,

 PLMNSupportList,

 PrivacyIndicator,

 PWSFailedCellIDList,

 QMCConfigInfo,

 QMCDeactivation,

 RANNodeName,

 RANPagingPriority,

 RANStatusTransfer-TransparentContainer,

 RANTimingSynchronisationStatusInfo,

 RAN-TSSRequestType,

 RAN-TSSScope,

 RAN-UE-NGAP-ID,

 RedCapIndication,

 RedirectionVoiceFallback,

 RelativeAMFCapacity,

 RepetitionPeriod,

 RequestedSNSSAI,

 ResetType,

 RGLevelWirelineAccessCharacteristics,

 RIMInformationTransfer,

 RoutingID,

 RRCEstablishmentCause,

 RRCInactiveTransitionReportRequest,

 RRCState,

 SecurityContext,

 SecurityKey,

 SerialNumber,

 ServedGUAMIList,

 SliceSupportList,

 SLPositioningRangingServiceInfo,

 S-NSSAI,

 SONConfigurationTransfer,

 SourceToTarget-AMFInformationReroute,

 SourceToTarget-TransparentContainer,

 SRVCCOperationPossible,

 SupportedTAList,

 Suspend-Request-Indication,

 Suspend-Response-Indication,

 TAI,

 TAIListForPaging,

 TAIListForRestart,

 TargetID,

 TargetNSSAIInformation,

 TargettoSource-Failure-TransparentContainer,

 TargetToSource-TransparentContainer,

 TimeSyncAssistanceInfo,

 TimeToWait,

 TNLAssociationList,

 TraceActivation,

 TrafficLoadReductionIndication,

 TransportLayerAddress,

 UEAggregateMaximumBitRate,

 UE-associatedLogicalNG-connectionList,

 UECapabilityInfoRequest,

 UEContextRequest,

 UE-DifferentiationInfo,

 UE-NGAP-IDs,

 UEPagingIdentity,

 UEPresenceInAreaOfInterestList,

 UERadioCapability,

 UERadioCapabilityForPaging,

 UERadioCapabilityID,

 UERetentionInformation,

 UESecurityCapabilities,

 UESliceMaximumBitRateList,

 UE-UP-CIoT-Support,

 UL-CP-SecurityInformation,

 UnavailableGUAMIList,

 URI-address,

 UserLocationInformation,

 WarningAreaCoordinates,

 WarningAreaList,

 WarningMessageContents,

 WarningSecurityInfo,

 WarningType,

 WUS-Assistance-Information,

 XrDeviceWith2Rx

FROM NGAP-IEs

 PrivateIE-Container{},

 ProtocolExtensionContainer{},

 ProtocolIE-Container{},

 ProtocolIE-ContainerList{},

 ProtocolIE-ContainerPair{},

 ProtocolIE-SingleContainer{},

 NGAP-PRIVATE-IES,

 NGAP-PROTOCOL-EXTENSION,

 NGAP-PROTOCOL-IES,

 NGAP-PROTOCOL-IES-PAIR

FROM NGAP-Containers

 id-A2X-PC5-QoS-Parameters,

 id-AerialUEsubscriptionInformation,

 id-AllowedNSSAI,

 id-AMFName,

 id-AMFOverloadResponse,

 id-AMFSetID,

 id-AMF-TNLAssociationFailedToSetupList,

 id-AMF-TNLAssociationSetupList,

 id-AMF-TNLAssociationToAddList,

 id-AMF-TNLAssociationToRemoveList,

 id-AMF-TNLAssociationToUpdateList,

 id-AMFTrafficLoadReductionIndication,

 id-AMF-UE-NGAP-ID,

 id-AMF-UE-NGAP-ID2,

 id-AssistanceDataForPaging,

 id-AssociatedSessionID,

 id-AuthenticatedIndication,

 id-BroadcastCancelledAreaList,

 id-BroadcastCompletedAreaList,

 id-BroadcastTransportFailureTransfer,

 id-BroadcastTransportRequestTransfer,

 id-BroadcastTransportResponseTransfer,

 id-CancelAllWarningMessages,

 id-Cause,

 id-CellIDListForRestart,

 id-CEmodeBrestricted,

 id-CEmodeBSupport-Indicator,

 id-CNAssistedRANTuning,

 id-ConcurrentWarningMessageInd,

 id-CoreNetworkAssistanceInformationForInactive,

 id-CriticalityDiagnostics,

 id-DataCodingScheme,

 id-DefaultPagingDRX,

 id-DirectForwardingPathAvailability,

 id-DL-CP-SecurityInformation,

 id-DL-Signalling,

 id-EarlyStatusTransfer-TransparentContainer,

 id-EDT-Session,

 id-EmergencyAreaIDListForRestart,

 id-EmergencyFallbackIndicator,

 id-ENDC-SONConfigurationTransferDL,

 id-ENDC-SONConfigurationTransferUL,

 id-EndIndication,

 id-Enhanced-CoverageRestriction,

 id-ERedCapIndication,

 id-EUTRA-CGI,

 id-EUTRA-PagingeDRXInformation,

 id-Extended-AMFName,

 id-Extended-ConnectedTime,

 id-Extended-RANNodeName,

 id-FiveGCAction,

 id-FiveG-ProSeAuthorized,

 id-FiveG-ProSePC5QoSParameters,

 id-FiveG-ProSeUEPC5AggregateMaximumBitRate,

 id-FiveG-S-TMSI,

 id-GlobalRANNodeID,

 id-GUAMI,

 id-GUAMIList,

 id-GUAMIType,

 id-GW-Context-Release-Indication,

 id-HandoverFlag,

 id-HandoverType,

 id-IAB-Authorized,

 id-IABNodeIndication,

 id-IAB-Supported,

 id-IMSVoiceSupportIndicator,

 id-IndexToRFSP,

 id-InfoOnRecommendedCellsAndRANNodesForPaging,

 id-IntersystemSONConfigurationTransferDL,

 id-IntersystemSONConfigurationTransferUL,

 id-LocationReportingRequestType,

 id-LTE-A2X-ServicesAuthorized,

 id-LTE-A2X-UE-PC5-AggregateMaximumBitRate,

 id-LTEM-Indication,

 id-LTEUESidelinkAggregateMaximumBitrate,

 id-LTEV2XServicesAuthorized,

 id-ManagementBasedMDTPLMNList,

 id-ManagementBasedMDTPLMNModificationList,

 id-MaskedIMEISV,

 id-MBS-AreaSessionID,

 id-MBS-DistributionReleaseRequestTransfer,

 id-MBS-DistributionSetupRequestTransfer,

 id-MBS-DistributionSetupResponseTransfer,

 id-MBS-DistributionSetupUnsuccessfulTransfer,

 id-MBS-ServiceArea,

 id-MBS-SessionID,

 id-MBSSessionModificationFailureTransfer,

 id-MBSSessionModificationRequestTransfer,

 id-MBSSessionModificationResponseTransfer,

 id-MBSSessionReleaseResponseTransfer,

 id-MBSSessionSetupFailureTransfer,

 id-MBSSessionSetupRequestTransfer,

 id-MBSSessionSetupResponseTransfer,

 id-MessageIdentifier,

 id-MobileIAB-Authorized,

 id-MobileIABNodeIndication,

 id-MobileIAB-Supported,

 id-MobilityRestrictionList,

 id-MulticastGroupPagingAreaList,

 id-MulticastSessionActivationRequestTransfer,

 id-MulticastSessionDeactivationRequestTransfer,

 id-MulticastSessionUpdateRequestTransfer,

 id-NASC,

 id-NAS-PDU,

 id-NASSecurityParametersFromNGRAN,

 id-NB-IoT-DefaultPagingDRX,

 id-NB-IoT-PagingDRX,

 id-NB-IoT-Paging-eDRXInfo,

 id-NB-IoT-UEPriority,

 id-NetworkControlledRepeaterAuthorized,

 id-NewAMF-UE-NGAP-ID,

 id-NewGUAMI,

 id-NewSecurityContextInd,

 id-NGAP-Message,

 id-NGRAN-CGI,

 id-NGRAN-TNLAssociationToRemoveList,

 id-NGRANTraceID,

 id-NoPDUSessionIndication,

 id-NotifySourceNGRANNode,

 id-NPN-AccessInformation,

 id-NR-A2X-ServicesAuthorized,

 id-NR-A2X-UE-PC5-AggregateMaximumBitRate,

 id-NR-PagingeDRXInformation,

 id-NRPPa-PDU,

 id-NRUESidelinkAggregateMaximumBitrate,

 id-NRV2XServicesAuthorized,

 id-NumberOfBroadcastsRequested,

 id-OldAMF,

 id-OverloadStartNSSAIList,

 id-PagingAssisDataforCEcapabUE,

 id-PagingCause,

 id-PagingDRX,

 id-PagingOrigin,

 id-PagingPolicyDifferentiation,

 id-PagingPriority,

 id-Partially-Allowed-NSSAI,

 id-PC5QoSParameters,

 id-PDUSessionListMTCommHReq,

 id-PDUSessionResourceAdmittedList,

 id-PDUSessionResourceFailedToModifyListModCfm,

 id-PDUSessionResourceFailedToModifyListModRes,

 id-PDUSessionResourceFailedToResumeListRESReq,

 id-PDUSessionResourceFailedToResumeListRESRes,

 id-PDUSessionResourceFailedToSetupListCxtFail,

 id-PDUSessionResourceFailedToSetupListCxtRes,

 id-PDUSessionResourceFailedToSetupListHOAck,

 id-PDUSessionResourceFailedToSetupListPSReq,

 id-PDUSessionResourceFailedToSetupListSURes,

 id-PDUSessionResourceHandoverList,

 id-PDUSessionResourceListCxtRelCpl,

 id-PDUSessionResourceListCxtRelReq,

 id-PDUSessionResourceListHORqd,

 id-PDUSessionResourceModifyListModCfm,

 id-PDUSessionResourceModifyListModInd,

 id-PDUSessionResourceModifyListModReq,

 id-PDUSessionResourceModifyListModRes,

 id-PDUSessionResourceNotifyList,

 id-PDUSessionResourceReleasedListNot,

 id-PDUSessionResourceReleasedListPSAck,

 id-PDUSessionResourceReleasedListPSFail,

 id-PDUSessionResourceReleasedListRelRes,

 id-PDUSessionResourceResumeListRESReq,

 id-PDUSessionResourceResumeListRESRes,

 id-PDUSessionResourceSecondaryRATUsageList,

 id-PDUSessionResourceSetupListCxtReq,

 id-PDUSessionResourceSetupListCxtRes,

 id-PDUSessionResourceSetupListHOReq,

 id-PDUSessionResourceSetupListSUReq,

 id-PDUSessionResourceSetupListSURes,

 id-PDUSessionResourceSuspendListSUSReq,

 id-PDUSessionResourceSwitchedList,

 id-PDUSessionResourceToBeSwitchedDLList,

 id-PDUSessionResourceToReleaseListHOCmd,

 id-PDUSessionResourceToReleaseListRelCmd,

 id-PEIPSassistanceInformation,

 id-PLMNSupportList,

 id-PrivacyIndicator,

 id-PWSFailedCellIDList,

 id-QMCConfigInfo,

 id-QMCDeactivation,

 id-RANNodeName,

 id-RANPagingPriority,

 id-RANStatusTransfer-TransparentContainer,

 id-RANTimingSynchronisationStatusInfo,

 id-RAN-TSSRequestType,

 id-RAN-TSSScope,

 id-RAN-UE-NGAP-ID,

 id-RedCapIndication,

 id-RedirectionVoiceFallback,

 id-RelativeAMFCapacity,

 id-RepetitionPeriod,

 id-RequestedSNSSAI,

 id-ResetType,

 id-RGLevelWirelineAccessCharacteristics,

 id-RIMInformationTransfer,

 id-RoutingID,

 id-RRCEstablishmentCause,

 id-RRCInactiveTransitionReportRequest,

 id-RRC-Resume-Cause,

 id-RRCState,

 id-SecurityContext,

 id-SecurityKey,

 id-SelectedNID,

 id-SelectedPLMNIdentity,

 id-SerialNumber,

 id-ServedGUAMIList,

 id-SliceSupportList,

 id-S-NSSAI,

 id-SONConfigurationTransferDL,

 id-SONConfigurationTransferUL,

 id-SourceAMF-GUAMI,

 id-SourceAMF-UE-NGAP-ID,

 id-SourceToTarget-AMFInformationReroute,

 id-SourceToTarget-TransparentContainer,

 id-SRVCCOperationPossible,

 id-SupportedTAList,

 id-Suspend-Request-Indication,

 id-Suspend-Response-Indication,

 id-TAI,

 id-TAIListForPaging,

 id-TAIListForRestart,

 id-TargetID,

 id-TargetNSSAIInformation,

 id-TargettoSource-Failure-TransparentContainer,

 id-TargetToSource-TransparentContainer,

 id-TimeSyncAssistanceInfo,

 id-TimeToWait,

 id-TNGFIdentityInformation,

 id-TraceActivation,

 id-TraceCollectionEntityIPAddress,

 id-TraceCollectionEntityURI,

 id-TWIFIdentityInformation,

 id-UEAggregateMaximumBitRate,

 id-UE-associatedLogicalNG-connectionList,

 id-UECapabilityInfoRequest,

 id-UEContextRequest,

 id-UE-DifferentiationInfo,

 id-UE-NGAP-IDs,

 id-UEPagingIdentity,

 id-UEPresenceInAreaOfInterestList,

 id-UERadioCapability,

 id-UERadioCapability-EUTRA-Format,

 id-UERadioCapabilityForPaging,

 id-UERadioCapabilityID,

 id-UERetentionInformation,

 id-UESecurityCapabilities,

 id-UESliceMaximumBitRateList,

 id-UE-UP-CIoT-Support,

 id-UL-CP-SecurityInformation,

 id-UnavailableGUAMIList,

 id-UserLocationInformation,

 id-W-AGFIdentityInformation,

 id-WarningAreaCoordinates,

 id-WarningAreaList,

 id-WarningMessageContents,

 id-WarningSecurityInfo,

 id-WarningType,

 id-WUS-Assistance-Information,

 id-XrDeviceWith2Rx,

 id-SLPositioningRangingServiceInfo

FROM NGAP-Constants;

<<<<<<<<<<<<<<<<<<<< Unmodified Text Omitted >>>>>>>>>>>>>>>>>>>>

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- INITIAL CONTEXT SETUP REQUEST

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

InitialContextSetupRequest ::= SEQUENCE {

 protocolIEs ProtocolIE-Container { {InitialContextSetupRequestIEs} },

 ...

}

InitialContextSetupRequestIEs NGAP-PROTOCOL-IES ::= {

 { ID id-AMF-UE-NGAP-ID CRITICALITY reject TYPE AMF-UE-NGAP-ID PRESENCE mandatory }|

 { ID id-RAN-UE-NGAP-ID CRITICALITY reject TYPE RAN-UE-NGAP-ID PRESENCE mandatory }|

 { ID id-OldAMF CRITICALITY reject TYPE AMFName PRESENCE optional }|

 { ID id-UEAggregateMaximumBitRate CRITICALITY reject TYPE UEAggregateMaximumBitRate PRESENCE conditional }|

-- The above IE shall be present if the PDU Session Resource Setup List IE is present

 { ID id-CoreNetworkAssistanceInformationForInactive CRITICALITY ignore TYPE CoreNetworkAssistanceInformationForInactive PRESENCE optional }|

 { ID id-GUAMI CRITICALITY reject TYPE GUAMI PRESENCE mandatory }|

 { ID id-PDUSessionResourceSetupListCxtReq CRITICALITY reject TYPE PDUSessionResourceSetupListCxtReq PRESENCE optional }|

 { ID id-AllowedNSSAI CRITICALITY reject TYPE AllowedNSSAI PRESENCE mandatory }|

 { ID id-UESecurityCapabilities CRITICALITY reject TYPE UESecurityCapabilities PRESENCE mandatory }|

 { ID id-SecurityKey CRITICALITY reject TYPE SecurityKey PRESENCE mandatory }|

 { ID id-TraceActivation CRITICALITY ignore TYPE TraceActivation PRESENCE optional }|

 { ID id-MobilityRestrictionList CRITICALITY ignore TYPE MobilityRestrictionList PRESENCE optional }|

 { ID id-UERadioCapability CRITICALITY ignore TYPE UERadioCapability PRESENCE optional }|

 { ID id-IndexToRFSP CRITICALITY ignore TYPE IndexToRFSP PRESENCE optional }|

 { ID id-MaskedIMEISV CRITICALITY ignore TYPE MaskedIMEISV PRESENCE optional }|

 { ID id-NAS-PDU CRITICALITY ignore TYPE NAS-PDU PRESENCE optional }|

 { ID id-EmergencyFallbackIndicator CRITICALITY reject TYPE EmergencyFallbackIndicator PRESENCE optional }|

 { ID id-RRCInactiveTransitionReportRequest CRITICALITY ignore TYPE RRCInactiveTransitionReportRequest PRESENCE optional }|

 { ID id-UERadioCapabilityForPaging CRITICALITY ignore TYPE UERadioCapabilityForPaging PRESENCE optional }|

 { ID id-RedirectionVoiceFallback CRITICALITY ignore TYPE RedirectionVoiceFallback PRESENCE optional }|

 { ID id-LocationReportingRequestType CRITICALITY ignore TYPE LocationReportingRequestType PRESENCE optional }|

 { ID id-CNAssistedRANTuning CRITICALITY ignore TYPE CNAssistedRANTuning PRESENCE optional }|

 { ID id-SRVCCOperationPossible CRITICALITY ignore TYPE SRVCCOperationPossible PRESENCE optional }|

 { ID id-IAB-Authorized CRITICALITY ignore TYPE IAB-Authorized PRESENCE optional }|

 { ID id-Enhanced-CoverageRestriction CRITICALITY ignore TYPE Enhanced-CoverageRestriction PRESENCE optional }|

 { ID id-Extended-ConnectedTime CRITICALITY ignore TYPE Extended-ConnectedTime PRESENCE optional }|

 { ID id-UE-DifferentiationInfo CRITICALITY ignore TYPE UE-DifferentiationInfo PRESENCE optional }|

 { ID id-NRV2XServicesAuthorized CRITICALITY ignore TYPE NRV2XServicesAuthorized PRESENCE optional }|

 { ID id-LTEV2XServicesAuthorized CRITICALITY ignore TYPE LTEV2XServicesAuthorized PRESENCE optional }|

 { ID id-NRUESidelinkAggregateMaximumBitrate CRITICALITY ignore TYPE NRUESidelinkAggregateMaximumBitrate PRESENCE optional }|

 { ID id-LTEUESidelinkAggregateMaximumBitrate CRITICALITY ignore TYPE LTEUESidelinkAggregateMaximumBitrate PRESENCE optional }|

 { ID id-PC5QoSParameters CRITICALITY ignore TYPE PC5QoSParameters PRESENCE optional }|

 { ID id-CEmodeBrestricted CRITICALITY ignore TYPE CEmodeBrestricted PRESENCE optional }|

 { ID id-UE-UP-CIoT-Support CRITICALITY ignore TYPE UE-UP-CIoT-Support PRESENCE optional }|

 { ID id-RGLevelWirelineAccessCharacteristics CRITICALITY ignore TYPE RGLevelWirelineAccessCharacteristics PRESENCE optional }|

 { ID id-ManagementBasedMDTPLMNList CRITICALITY ignore TYPE MDTPLMNList PRESENCE optional }|

 { ID id-UERadioCapabilityID CRITICALITY reject TYPE UERadioCapabilityID PRESENCE optional }|

 { ID id-TimeSyncAssistanceInfo CRITICALITY ignore TYPE TimeSyncAssistanceInfo PRESENCE optional }|

 { ID id-QMCConfigInfo CRITICALITY ignore TYPE QMCConfigInfo PRESENCE optional }|

 { ID id-TargetNSSAIInformation CRITICALITY ignore TYPE TargetNSSAIInformation PRESENCE optional }|

 { ID id-UESliceMaximumBitRateList CRITICALITY ignore TYPE UESliceMaximumBitRateList PRESENCE optional }|

 { ID id-FiveG-ProSeAuthorized CRITICALITY ignore TYPE FiveG-ProSeAuthorized PRESENCE optional }|

 { ID id-FiveG-ProSeUEPC5AggregateMaximumBitRate CRITICALITY ignore TYPE NRUESidelinkAggregateMaximumBitrate PRESENCE optional }|

 { ID id-FiveG-ProSePC5QoSParameters CRITICALITY ignore TYPE FiveG-ProSePC5QoSParameters PRESENCE optional }|

 { ID id-NetworkControlledRepeaterAuthorized CRITICALITY ignore TYPE NetworkControlledRepeaterAuthorized PRESENCE optional }|

 { ID id-AerialUEsubscriptionInformation CRITICALITY ignore TYPE AerialUEsubscriptionInformation PRESENCE optional }|

 { ID id-NR-A2X-ServicesAuthorized CRITICALITY ignore TYPE NR-A2X-ServicesAuthorized PRESENCE optional }|

 { ID id-LTE-A2X-ServicesAuthorized CRITICALITY ignore TYPE LTE-A2X-ServicesAuthorized PRESENCE optional }|

 { ID id-NR-A2X-UE-PC5-AggregateMaximumBitRate CRITICALITY ignore TYPE NRUESidelinkAggregateMaximumBitrate PRESENCE optional }|

 { ID id-LTE-A2X-UE-PC5-AggregateMaximumBitRate CRITICALITY ignore TYPE LTEUESidelinkAggregateMaximumBitrate PRESENCE optional }|

 { ID id-A2X-PC5-QoS-Parameters CRITICALITY ignore TYPE A2X-PC5-QoS-Parameters PRESENCE optional }|

 { ID id-MobileIAB-Authorized CRITICALITY ignore TYPE MobileIAB-Authorized PRESENCE optional }|

 { ID id-Partially-Allowed-NSSAI CRITICALITY ignore TYPE Partially-Allowed-NSSAI PRESENCE optional }|

 { ID id-SLPositioningRangingServiceInfo CRITICALITY ignore TYPE SLPositioningRangingServiceInfo PRESENCE optional }|

 { ID id-AMF-UE-NGAP-ID2 CRITICALITY ignore TYPE AMF-UE-NGAP-ID PRESENCE optional },

 ...

}

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-- UE CONTEXT RELEASE REQUEST

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-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

UEContextReleaseRequest ::= SEQUENCE {

 protocolIEs ProtocolIE-Container { {UEContextReleaseRequest-IEs} },

 ...

}

UEContextReleaseRequest-IEs NGAP-PROTOCOL-IES ::= {

 { ID id-AMF-UE-NGAP-ID CRITICALITY reject TYPE AMF-UE-NGAP-ID PRESENCE mandatory }|

 { ID id-RAN-UE-NGAP-ID CRITICALITY reject TYPE RAN-UE-NGAP-ID PRESENCE mandatory }|

 { ID id-PDUSessionResourceListCxtRelReq CRITICALITY reject TYPE PDUSessionResourceListCxtRelReq PRESENCE optional }|

 { ID id-Cause CRITICALITY ignore TYPE Cause PRESENCE mandatory }|

 { ID id-GW-Context-Release-Indication CRITICALITY ignore TYPE GW-Context-Release-Indication PRESENCE optional },

 ...

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

<<<<<<<<<<<<<<<<<<<< Unmodified Text Omitted >>>>>>>>>>>>>>>>>>>>

-- HANDOVER REQUEST

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-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

HandoverRequest ::= SEQUENCE {

 protocolIEs ProtocolIE-Container { {HandoverRequestIEs} },

 ...

}

HandoverRequestIEs NGAP-PROTOCOL-IES ::= {

 { ID id-AMF-UE-NGAP-ID CRITICALITY reject TYPE AMF-UE-NGAP-ID PRESENCE mandatory }|

 { ID id-HandoverType CRITICALITY reject TYPE HandoverType PRESENCE mandatory }|

 { ID id-Cause CRITICALITY ignore TYPE Cause PRESENCE mandatory }|

 { ID id-UEAggregateMaximumBitRate CRITICALITY reject TYPE UEAggregateMaximumBitRate PRESENCE mandatory }|

 { ID id-CoreNetworkAssistanceInformationForInactive CRITICALITY ignore TYPE CoreNetworkAssistanceInformationForInactive PRESENCE optional }|

 { ID id-UESecurityCapabilities CRITICALITY reject TYPE UESecurityCapabilities PRESENCE mandatory }|

 { ID id-SecurityContext CRITICALITY reject TYPE SecurityContext PRESENCE mandatory }|

 { ID id-NewSecurityContextInd CRITICALITY reject TYPE NewSecurityContextInd PRESENCE optional }|

 { ID id-NASC CRITICALITY reject TYPE NAS-PDU PRESENCE optional }|

 { ID id-PDUSessionResourceSetupListHOReq CRITICALITY reject TYPE PDUSessionResourceSetupListHOReq PRESENCE mandatory }|

 { ID id-AllowedNSSAI CRITICALITY reject TYPE AllowedNSSAI PRESENCE mandatory }|

 { ID id-TraceActivation CRITICALITY ignore TYPE TraceActivation PRESENCE optional }|

 { ID id-MaskedIMEISV CRITICALITY ignore TYPE MaskedIMEISV PRESENCE optional }|

 { ID id-SourceToTarget-TransparentContainer CRITICALITY reject TYPE SourceToTarget-TransparentContainer PRESENCE mandatory }|

 { ID id-MobilityRestrictionList CRITICALITY ignore TYPE MobilityRestrictionList PRESENCE optional }|

 { ID id-LocationReportingRequestType CRITICALITY ignore TYPE LocationReportingRequestType PRESENCE optional }|

 { ID id-RRCInactiveTransitionReportRequest CRITICALITY ignore TYPE RRCInactiveTransitionReportRequest PRESENCE optional }|

 { ID id-GUAMI CRITICALITY reject TYPE GUAMI PRESENCE mandatory }|

 { ID id-RedirectionVoiceFallback CRITICALITY ignore TYPE RedirectionVoiceFallback PRESENCE optional }|

 { ID id-CNAssistedRANTuning CRITICALITY ignore TYPE CNAssistedRANTuning PRESENCE optional }|

 { ID id-SRVCCOperationPossible CRITICALITY ignore TYPE SRVCCOperationPossible PRESENCE optional }|

 { ID id-IAB-Authorized CRITICALITY reject TYPE IAB-Authorized PRESENCE optional }|

 { ID id-Enhanced-CoverageRestriction CRITICALITY ignore TYPE Enhanced-CoverageRestriction PRESENCE optional }|

 { ID id-UE-DifferentiationInfo CRITICALITY ignore TYPE UE-DifferentiationInfo PRESENCE optional }|

 { ID id-NRV2XServicesAuthorized CRITICALITY ignore TYPE NRV2XServicesAuthorized PRESENCE optional }|

 { ID id-LTEV2XServicesAuthorized CRITICALITY ignore TYPE LTEV2XServicesAuthorized PRESENCE optional }|

 { ID id-NRUESidelinkAggregateMaximumBitrate CRITICALITY ignore TYPE NRUESidelinkAggregateMaximumBitrate PRESENCE optional }|

 { ID id-LTEUESidelinkAggregateMaximumBitrate CRITICALITY ignore TYPE LTEUESidelinkAggregateMaximumBitrate PRESENCE optional }|

 { ID id-PC5QoSParameters CRITICALITY ignore TYPE PC5QoSParameters PRESENCE optional }|

 { ID id-CEmodeBrestricted CRITICALITY ignore TYPE CEmodeBrestricted PRESENCE optional }|

 { ID id-UE-UP-CIoT-Support CRITICALITY ignore TYPE UE-UP-CIoT-Support PRESENCE optional }|

 { ID id-ManagementBasedMDTPLMNList CRITICALITY ignore TYPE MDTPLMNList PRESENCE optional }|

 { ID id-UERadioCapabilityID CRITICALITY reject TYPE UERadioCapabilityID PRESENCE optional }|

 { ID id-Extended-ConnectedTime CRITICALITY ignore TYPE Extended-ConnectedTime PRESENCE optional }|

 { ID id-TimeSyncAssistanceInfo CRITICALITY ignore TYPE TimeSyncAssistanceInfo PRESENCE optional }|

 { ID id-UESliceMaximumBitRateList CRITICALITY ignore TYPE UESliceMaximumBitRateList PRESENCE optional }|

 { ID id-FiveG-ProSeAuthorized CRITICALITY ignore TYPE FiveG-ProSeAuthorized PRESENCE optional }|

 { ID id-FiveG-ProSeUEPC5AggregateMaximumBitRate CRITICALITY ignore TYPE NRUESidelinkAggregateMaximumBitrate PRESENCE optional }|

 { ID id-FiveG-ProSePC5QoSParameters CRITICALITY ignore TYPE FiveG-ProSePC5QoSParameters PRESENCE optional }|

 { ID id-AerialUEsubscriptionInformation CRITICALITY ignore TYPE AerialUEsubscriptionInformation PRESENCE optional }|

 { ID id-NR-A2X-ServicesAuthorized CRITICALITY ignore TYPE NR-A2X-ServicesAuthorized PRESENCE optional }|

 { ID id-LTE-A2X-ServicesAuthorized CRITICALITY ignore TYPE LTE-A2X-ServicesAuthorized PRESENCE optional }|

 { ID id-NR-A2X-UE-PC5-AggregateMaximumBitRate CRITICALITY ignore TYPE NRUESidelinkAggregateMaximumBitrate PRESENCE optional }|

 { ID id-LTE-A2X-UE-PC5-AggregateMaximumBitRate CRITICALITY ignore TYPE LTEUESidelinkAggregateMaximumBitrate PRESENCE optional }|

 { ID id-A2X-PC5-QoS-Parameters CRITICALITY ignore TYPE A2X-PC5-QoS-Parameters PRESENCE optional }|

 { ID id-MobileIAB-Authorized CRITICALITY ignore TYPE MobileIAB-Authorized PRESENCE optional }|

 { ID id-NoPDUSessionIndication CRITICALITY ignore TYPE NoPDUSessionIndication PRESENCE optional }|

 { ID id-Partially-Allowed-NSSAI CRITICALITY ignore TYPE Partially-Allowed-NSSAI PRESENCE optional }|

 { ID id-SLPositioningRangingServiceInfo CRITICALITY ignore TYPE SLPositioningRangingServiceInfo PRESENCE optional }|

 { ID id-AMF-UE-NGAP-ID2 CRITICALITY ignore TYPE AMF-UE-NGAP-ID PRESENCE optional },

 ...

}

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-- PATH SWITCH REQUEST

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-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

PathSwitchRequest ::= SEQUENCE {

 protocolIEs ProtocolIE-Container { { PathSwitchRequestIEs} },

 ...

}

PathSwitchRequestIEs NGAP-PROTOCOL-IES ::= {

 { ID id-RAN-UE-NGAP-ID CRITICALITY reject TYPE RAN-UE-NGAP-ID PRESENCE mandatory }|

 { ID id-SourceAMF-UE-NGAP-ID CRITICALITY reject TYPE AMF-UE-NGAP-ID PRESENCE mandatory }|

 { ID id-UserLocationInformation CRITICALITY ignore TYPE UserLocationInformation PRESENCE mandatory }|

 { ID id-UESecurityCapabilities CRITICALITY ignore TYPE UESecurityCapabilities PRESENCE mandatory }|

 { ID id-PDUSessionResourceToBeSwitchedDLList CRITICALITY reject TYPE PDUSessionResourceToBeSwitchedDLList PRESENCE mandatory }|

 { ID id-PDUSessionResourceFailedToSetupListPSReq CRITICALITY ignore TYPE PDUSessionResourceFailedToSetupListPSReq PRESENCE optional }|

 { ID id-RRC-Resume-Cause CRITICALITY ignore TYPE RRCEstablishmentCause PRESENCE optional }|

 { ID id-RedCapIndication CRITICALITY ignore TYPE RedCapIndication PRESENCE optional }|

 { ID id-ERedCapIndication CRITICALITY ignore TYPE ERedCapIndication PRESENCE optional }|

 { ID id-SourceAMF-GUAMI CRITICALITY ignore TYPE GUAMI PRESENCE optional },

 ...

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

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-- PATH SWITCH REQUEST ACKNOWLEDGE

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-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

PathSwitchRequestAcknowledge ::= SEQUENCE {

 protocolIEs ProtocolIE-Container { { PathSwitchRequestAcknowledgeIEs} },

 ...

}

PathSwitchRequestAcknowledgeIEs NGAP-PROTOCOL-IES ::= {

 { ID id-AMF-UE-NGAP-ID CRITICALITY ignore TYPE AMF-UE-NGAP-ID PRESENCE mandatory }|

 { ID id-RAN-UE-NGAP-ID CRITICALITY ignore TYPE RAN-UE-NGAP-ID PRESENCE mandatory }|

 { ID id-UESecurityCapabilities CRITICALITY reject TYPE UESecurityCapabilities PRESENCE optional }|

 { ID id-SecurityContext CRITICALITY reject TYPE SecurityContext PRESENCE mandatory }|

 { ID id-NewSecurityContextInd CRITICALITY reject TYPE NewSecurityContextInd PRESENCE optional }|

 { ID id-PDUSessionResourceSwitchedList CRITICALITY ignore TYPE PDUSessionResourceSwitchedList PRESENCE mandatory }|

 { ID id-PDUSessionResourceReleasedListPSAck CRITICALITY ignore TYPE PDUSessionResourceReleasedListPSAck PRESENCE optional }|

 { ID id-AllowedNSSAI CRITICALITY reject TYPE AllowedNSSAI PRESENCE mandatory }|

 { ID id-CoreNetworkAssistanceInformationForInactive CRITICALITY ignore TYPE CoreNetworkAssistanceInformationForInactive PRESENCE optional }|

 { ID id-RRCInactiveTransitionReportRequest CRITICALITY ignore TYPE RRCInactiveTransitionReportRequest PRESENCE optional }|

 { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional }|

 { ID id-RedirectionVoiceFallback CRITICALITY ignore TYPE RedirectionVoiceFallback PRESENCE optional }|

 { ID id-CNAssistedRANTuning CRITICALITY ignore TYPE CNAssistedRANTuning PRESENCE optional }|

 { ID id-SRVCCOperationPossible CRITICALITY ignore TYPE SRVCCOperationPossible PRESENCE optional }|

 { ID id-Enhanced-CoverageRestriction CRITICALITY ignore TYPE Enhanced-CoverageRestriction PRESENCE optional }|

 { ID id-Extended-ConnectedTime CRITICALITY ignore TYPE Extended-ConnectedTime PRESENCE optional }|

 { ID id-UE-DifferentiationInfo CRITICALITY ignore TYPE UE-DifferentiationInfo PRESENCE optional }|

 { ID id-NRV2XServicesAuthorized CRITICALITY ignore TYPE NRV2XServicesAuthorized PRESENCE optional }|

 { ID id-LTEV2XServicesAuthorized CRITICALITY ignore TYPE LTEV2XServicesAuthorized PRESENCE optional }|

 { ID id-NRUESidelinkAggregateMaximumBitrate CRITICALITY ignore TYPE NRUESidelinkAggregateMaximumBitrate PRESENCE optional }|

 { ID id-LTEUESidelinkAggregateMaximumBitrate CRITICALITY ignore TYPE LTEUESidelinkAggregateMaximumBitrate PRESENCE optional }|

 { ID id-PC5QoSParameters CRITICALITY ignore TYPE PC5QoSParameters PRESENCE optional }|

 { ID id-CEmodeBrestricted CRITICALITY ignore TYPE CEmodeBrestricted PRESENCE optional }|

 { ID id-UE-UP-CIoT-Support CRITICALITY ignore TYPE UE-UP-CIoT-Support PRESENCE optional }|

 { ID id-UERadioCapabilityID CRITICALITY reject TYPE UERadioCapabilityID PRESENCE optional }|

 { ID id-ManagementBasedMDTPLMNList CRITICALITY ignore TYPE MDTPLMNList PRESENCE optional }|

 { ID id-TimeSyncAssistanceInfo CRITICALITY ignore TYPE TimeSyncAssistanceInfo PRESENCE optional }|

 { ID id-FiveG-ProSeAuthorized CRITICALITY ignore TYPE FiveG-ProSeAuthorized PRESENCE optional }|

 { ID id-FiveG-ProSeUEPC5AggregateMaximumBitRate CRITICALITY ignore TYPE NRUESidelinkAggregateMaximumBitrate PRESENCE optional }|

 { ID id-FiveG-ProSePC5QoSParameters CRITICALITY ignore TYPE FiveG-ProSePC5QoSParameters PRESENCE optional }|

 { ID id-ManagementBasedMDTPLMNModificationList CRITICALITY ignore TYPE MDTPLMNModificationList PRESENCE optional }|

 { ID id-IAB-Authorized CRITICALITY ignore TYPE IAB-Authorized PRESENCE optional }|

 { ID id-AerialUEsubscriptionInformation CRITICALITY ignore TYPE AerialUEsubscriptionInformation PRESENCE optional }|

 { ID id-NR-A2X-ServicesAuthorized CRITICALITY ignore TYPE NR-A2X-ServicesAuthorized PRESENCE optional }|

 { ID id-LTE-A2X-ServicesAuthorized CRITICALITY ignore TYPE LTE-A2X-ServicesAuthorized PRESENCE optional }|

 { ID id-NR-A2X-UE-PC5-AggregateMaximumBitRate CRITICALITY ignore TYPE NRUESidelinkAggregateMaximumBitrate  PRESENCE optional }|

 { ID id-LTE-A2X-UE-PC5-AggregateMaximumBitRate CRITICALITY ignore TYPE LTEUESidelinkAggregateMaximumBitrate PRESENCE optional }|

 { ID id-A2X-PC5-QoS-Parameters CRITICALITY ignore TYPE A2X-PC5-QoS-Parameters PRESENCE optional }|

 { ID id-MobileIAB-Authorized CRITICALITY ignore TYPE MobileIAB-Authorized PRESENCE optional }|

 { ID id-Partially-Allowed-NSSAI CRITICALITY ignore TYPE Partially-Allowed-NSSAI PRESENCE optional }|

 { ID id-SLPositioningRangingServiceInfo CRITICALITY ignore TYPE SLPositioningRangingServiceInfo PRESENCE optional }|

 { ID id-AMF-UE-NGAP-ID2 CRITICALITY ignore TYPE AMF-UE-NGAP-ID PRESENCE optional },

 ...

}

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-- INITIAL UE MESSAGE

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-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

InitialUEMessage ::= SEQUENCE {

 protocolIEs ProtocolIE-Container { {InitialUEMessage-IEs} },

 ...

}

InitialUEMessage-IEs NGAP-PROTOCOL-IES ::= {

 { ID id-RAN-UE-NGAP-ID CRITICALITY reject TYPE RAN-UE-NGAP-ID PRESENCE mandatory }|

 { ID id-NAS-PDU CRITICALITY reject TYPE NAS-PDU PRESENCE mandatory }|

 { ID id-UserLocationInformation CRITICALITY reject TYPE UserLocationInformation PRESENCE mandatory }|

 { ID id-RRCEstablishmentCause CRITICALITY ignore TYPE RRCEstablishmentCause PRESENCE mandatory }|

 { ID id-FiveG-S-TMSI CRITICALITY reject TYPE FiveG-S-TMSI PRESENCE optional }|

 { ID id-AMFSetID CRITICALITY ignore TYPE AMFSetID PRESENCE optional }|

 { ID id-UEContextRequest CRITICALITY ignore TYPE UEContextRequest PRESENCE optional }|

 { ID id-AllowedNSSAI CRITICALITY reject TYPE AllowedNSSAI PRESENCE optional }|

 { ID id-SourceToTarget-AMFInformationReroute CRITICALITY ignore TYPE SourceToTarget-AMFInformationReroute PRESENCE optional }|

 { ID id-SelectedPLMNIdentity CRITICALITY ignore TYPE PLMNIdentity PRESENCE optional }|

 { ID id-IABNodeIndication CRITICALITY reject TYPE IABNodeIndication PRESENCE optional }|

 { ID id-CEmodeBSupport-Indicator CRITICALITY reject TYPE CEmodeBSupport-Indicator PRESENCE optional }|

 { ID id-LTEM-Indication CRITICALITY ignore TYPE LTEM-Indication PRESENCE optional }|

 { ID id-EDT-Session CRITICALITY ignore TYPE EDT-Session PRESENCE optional }|

 { ID id-AuthenticatedIndication CRITICALITY ignore TYPE AuthenticatedIndication PRESENCE optional }|

 { ID id-NPN-AccessInformation CRITICALITY reject TYPE NPN-AccessInformation PRESENCE optional }|

 { ID id-RedCapIndication CRITICALITY ignore TYPE RedCapIndication PRESENCE optional }|

 { ID id-SelectedNID CRITICALITY ignore TYPE NID PRESENCE optional }|

 { ID id-MobileIABNodeIndication CRITICALITY reject TYPE MobileIABNodeIndication PRESENCE optional }|

 { ID id-Partially-Allowed-NSSAI CRITICALITY ignore TYPE Partially-Allowed-NSSAI PRESENCE optional }|

 { ID id-ERedCapIndication CRITICALITY ignore TYPE ERedCapIndication PRESENCE optional }|

 { ID id-GUAMI CRITICALITY ignore TYPE GUAMI PRESENCE optional }|

 { ID id-GUAMIType CRITICALITY ignore TYPE GUAMIType PRESENCE optional }|

 { ID id-RequestedSNSSAI CRITICALITY ignore TYPE RequestedSNSSAI PRESENCE optional },

 ...

}

<<<<<<<<<<<<<<<<<<<< Unmodified Text Omitted >>>>>>>>>>>>>>>>>>>>

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- OVERLOAD START

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

OverloadStart ::= SEQUENCE {

 protocolIEs ProtocolIE-Container { {OverloadStartIEs} },

 ...

}

OverloadStartIEs NGAP-PROTOCOL-IES ::= {

 { ID id-AMFOverloadResponse CRITICALITY reject TYPE OverloadResponse PRESENCE optional }|

 { ID id-AMFTrafficLoadReductionIndication CRITICALITY ignore TYPE TrafficLoadReductionIndication PRESENCE optional }|

 { ID id-OverloadStartNSSAIList CRITICALITY ignore TYPE OverloadStartNSSAIList PRESENCE optional }|

 { ID id-GUAMIList CRITICALITY ignore TYPE GUAMIList PRESENCE optional },

 ...

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- OVERLOAD STOP

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

OverloadStop ::= SEQUENCE {

 protocolIEs ProtocolIE-Container { {OverloadStopIEs} },

 ...

}

OverloadStopIEs NGAP-PROTOCOL-IES ::= {

{ ID id-GUAMIList CRITICALITY ignore TYPE GUAMIList PRESENCE optional },

 ...

}

<<<<<<<<<<<<<<<<<<<< Unmodified Text Omitted >>>>>>>>>>>>>>>>>>>>

### 9.4.5 Information Element Definitions

-- ASN1START

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Information Element Definitions

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

NGAP-IEs {

itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)

ngran-Access (22) modules (3) ngap (1) version1 (1) ngap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS

 id-AdditionalDLForwardingUPTNLInformation,

 id-AdditionalULForwardingUPTNLInformation,

 id-AdditionalDLQosFlowPerTNLInformation,

 id-AdditionalDLUPTNLInformationForHOList,

 id-AdditionalNGU-UP-TNLInformation,

 id-AdditionalRedundantDL-NGU-UP-TNLInformation,

 id-AdditionalRedundantDLQosFlowPerTNLInformation,

 id-AdditionalRedundantNGU-UP-TNLInformation,

 id-AdditionalRedundantUL-NGU-UP-TNLInformation,

 id-AdditionalUL-NGU-UP-TNLInformation,

 id-AlternativeQoSParaSetList,

 id-AssistanceInformationQoE-Meas,

 id-AdditionalCancelledlocationReportingReferenceIDList,

 id-BurstArrivalTimeDownlink,

 id-Cause,

 id-CNPacketDelayBudgetDL,

 id-CNPacketDelayBudgetUL,

 id-CNTypeRestrictionsForEquivalent,

 id-CNTypeRestrictionsForServing,

 id-CommonNetworkInstance,

 id-ConfiguredTACIndication,

 id-CN-MT-CommunicationHandling,

 id-CurrentQoSParaSetIndex,

 id-DAPSRequestInfo,

 id-DAPSResponseInfoList,

 id-DataForwardingNotPossible,

 id-DataForwardingResponseERABList,

 id-DirectForwardingPathAvailability,

 id-DL-NGU-UP-TNLInformation,

 id-DownlinkTLContainer,

 id-EndpointIPAddressAndPort,

 id-EnergySavingIndication,

 id-ExtendedMobilityInformation,

 id-ExtendedPacketDelayBudget,

 id-ExtendedRATRestrictionInformation,

 id-ExtendedReportIntervalMDT,

 id-ExtendedSliceSupportList,

 id-ExtendedTAISliceSupportList,

 id-ExtendedUEIdentityIndexValue,

 id-EUTRA-PagingeDRXInformation,

 id-EquivalentSNPNsList,

 id-GlobalCable-ID,

 id-GlobalRANNodeID,

 id-GlobalTNGF-ID,

 id-GlobalTWIF-ID,

 id-GlobalW-AGF-ID,

 id-GUAMIType,

 id-HashedUEIdentityIndexValue,

 id-IncludeBeamMeasurementsIndication,

 id-IntersystemSONInformationRequest,

 id-IntersystemSONInformationReply,

 id-IntersystemResourceStatusUpdate,

 id-IntersystemMobilityFailureforVoiceFallback,

 id-LastEUTRAN-PLMNIdentity,

 id-LastVisitedPSCellList,

 id-LocationReportingAdditionalInfo,

 id-M4ReportAmount,

 id-M5ReportAmount,

 id-M6ReportAmount,

 id-ExcessPacketDelayThresholdConfiguration,

 id-M7ReportAmount,

 id-MaximumIntegrityProtectedDataRate-DL,

 id-MBS-AreaSessionID,

 id-MBS-QoSFlowsToBeSetupList,

 id-MBS-QoSFlowsToBeSetupModList,

 id-MBS-QoSFlowToReleaseList,

 id-MBS-ServiceArea,

 id-MBS-SessionFSAIDList,

 id-MBS-SessionID,

 id-MBS-ActiveSessionInformation-SourcetoTargetList,

 id-MBS-ActiveSessionInformation-TargettoSourceList,

 id-MBS-AssistanceInformation,

 id-MBS-SessionTNLInfo5GC,

 id-MBS-SupportIndicator,

 id-MBSSessionFailedtoSetupList,

 id-MBSSessionFailedtoSetuporModifyList,

 id-MBSSessionSetupResponseList,

 id-MBSSessionSetuporModifyResponseList,

 id-MBSSessionToReleaseList,

 id-MBSSessionSetupRequestList,

 id-MBSSessionSetuporModifyRequestList,

 id-MDTConfiguration,

 id-MicoAllPLMN,

 id-NetworkInstance,

 id-NGAPIESupportInformationRequestList,

 id-NGAPIESupportInformationResponseList,

 id-NID,

 id-NR-CGI,

 id-NRNTNTAIInformation,

 id-NPN-MobilityInformation,

 id-NPN-PagingAssistanceInformation,

 id-NPN-Support,

 id-NR-PagingeDRXInformation,

 id-OldAssociatedQosFlowList-ULendmarkerexpected,

 id-OnboardingSupport,

 id-PagingAssisDataforCEcapabUE,

 id-PagingCauseIndicationForVoiceService,

 id-PDUSessionAggregateMaximumBitRate,

 id-PduSessionExpectedUEActivityBehaviour,

 id-PDUSessionPairID,

 id-PDUSessionResourceFailedToSetupListCxtFail,

 id-PDUSessionResourceReleaseResponseTransfer,

 id-PDUSessionType,

 id-PEIPSassistanceInformation,

 id-PSCellInformation,

 id-PNI-NPNBasedMDT,

 id-PNI-NPN-AreaScopeofMDT,

 id-QMCConfigInfo,

 id-QosFlowAdditionalInfoList,

 id-QosFlowAddOrModifyRequestList,

 id-QosFlowFailedToSetupList,

 id-QosFlowFeedbackList,

 id-QosFlowParametersList,

 id-QosFlowSetupRequestList,

 id-QosFlowToReleaseList,

 id-QosMonitoringRequest,

 id-QosMonitoringReportingFrequency,

 id-SNPN-CellBasedMDT,

 id-SNPN-TAIBasedMDT,

 id-SNPN-BasedMDT,

 id-SuccessfulHandoverReportList,

 id-SupportedUETypeList,

 id-UEContextReferenceAtSource,

 id-RAT-Information,

 id-RedundantCommonNetworkInstance,

 id-RedundantDL-NGU-TNLInformationReused,

 id-RedundantDL-NGU-UP-TNLInformation,

 id-RedundantDLQosFlowPerTNLInformation,

 id-RedundantPDUSessionInformation,

 id-RedundantQosFlowIndicator,

 id-RedundantUL-NGU-UP-TNLInformation,

 id-SCTP-TLAs,

 id-SecondaryRATUsageInformation,

 id-SecurityIndication,

 id-SecurityResult,

 id-SgNB-UE-X2AP-ID,

 id-S-NSSAI,

 id-SONInformationReport,

 id-SourceNodeID,

 id-SourceNodeTNLAddrInfo,

 id-SourceSN-to-TargetSN-QMCInfo,

 id-SourceTNLAddrInfo,

 id-SurvivalTime,

 id-Selected-Target-SNPN-Identity,

 id-TNLAssociationTransportLayerAddressNGRAN,

 id-TAINSAGSupportList,

 id-TargetHomeENB-ID,

 id-TargetRNC-ID,

 id-TimeBasedHandoverInformation,

 id-TraceCollectionEntityURI,

 id-TSCTrafficCharacteristics,

 id-UEHistoryInformationFromTheUE,

 id-UERadioCapabilityForPaging,

 id-UERadioCapabilityForPagingOfNB-IoT,

 id-UL-NGU-UP-TNLInformation,

 id-UL-NGU-UP-TNLModifyList,

 id-ULForwarding,

 id-ULForwardingUP-TNLInformation,

 id-UplinkTLContainer,

 id-UsedRSNInformation,

 id-UserLocationInformationTNGF,

 id-UserLocationInformationTWIF,

 id-UserLocationInformationW-AGF,

 id-UserPlaneErrorIndicator,

 id-EarlyMeasurement,

 id-BeamMeasurementsReportConfiguration,

 id-DLDiscarding,

 id-TAI,

 id-HFCNode-ID-new,

 id-GlobalCable-ID-new,

 id-FiveGProSeLayer2Multipath,

 id-CandidateRelayUEInformationList,

 id-FiveGProSeLayer2UEtoUERelay,

 id-FiveGProSeLayer2UEtoUERemote,

 id-SuccessfulPSCellChangeReportList,

 id-TargetCellCRNTI,

 id-TimeSinceFailure,

 id-ClockQualityReportingControlInfo,

 id-RANfeedbacktype,

 id-QoSFlowTSCList,

 id-TSCTrafficCharacteristicsFeedback,

 id-ANPacketDelayBudgetUL,

 id-MBSCommServiceType,

 id-MobileIAB-MTUserLocationInformation,

 id-PDUsetQoSParameters,

 id-PDUSetbasedHandlingIndicator,

 id-N6JitterInformation,

 id-ECNMarkingorCongestionInformationReportingRequest,

 id-ECNMarkingorCongestionInformationReportingStatus,

 id-MN-only-MDT-collection,

 id-XrDeviceWith2Rx,

 id-MaximumDataBurstVolume,

 id-MBS-NGUFailureIndication,

 id-UserPlaneFailureIndication,

 id-UserPlaneFailureIndicationReport,

 id-QoERVQoEReportingPaths,

 maxnoofAllowedAreas,

 maxnoofAllowedCAGsperPLMN,

 maxnoofAllowedS-NSSAIs,

 maxnoofAoIMinusOne,

 maxnoofBluetoothName,

 maxnoofBPLMNs,

 maxnoofCAGforMDT,

 maxnoofCAGSperCell,

 maxnoofCandidateCells,

 maxnoofCellIDforMDT,

 maxnoofCellIDforQMC,

 maxnoofCellIDforWarning,

 maxnoofCellinAoI,

 maxnoofCellinEAI,

 maxnoofCellsforMBS,

 maxnoofCellsingNB,

 maxnoofCellsinngeNB,

 maxnoofCellsinNGRANNode,

 maxnoofCellinTAI,

 maxnoofCellsinUEHistoryInfo,

 maxnoofCellsUEMovingTrajectory,

 maxnoofDRBs,

 maxnoofEmergencyAreaID,

 maxnoofEAIforRestart,

 maxnoofEPLMNs,

 maxnoofEPLMNsPlusOne,

 maxnoofE-RABs,

 maxnoofErrors,

 maxnoofExtSliceItems,

 maxnoofESNPNs,

 maxnoofForbTACs,

 maxnoofFreqforMDT,

 maxnoofGUAMIs,

 maxnoofMBSFSAs,

 maxnoofMBSQoSFlows,

 maxnoofMBSServiceAreaInformation,

 maxnoofMBSAreaSessionIDs,

 maxnoofMBSSessions,

 maxnoofMBSSessionsofUE,

 maxnoofMDTPLMNs,

 maxnoofMRBs,

 maxnoofMultiConnectivity,

 maxnoofMultiConnectivityMinusOne,

 maxnoofNeighPCIforMDT,

 maxnoofNGAPIESupportInfo,

 maxnoofNGConnectionsToReset,

 maxNRARFCN,

 maxnoofNRCellBands,

 maxnoofNSAGs,

 maxnoofPagingAreas,

 maxnoofPC5QoSFlows,

 maxnoofPDUSessions,

 maxnoofPLMNs,

 maxnoofPLMNforQMC,

 maxnoofQosFlows,

 maxnoofQosParaSets,

 maxnoofRANNodeinAoI,

 maxnoofRecommendedCells,

 maxnoofRecommendedRANNodes,

 maxnoofAoI,

 maxnoofPSCellsPerPrimaryCellinUEHistoryInfo,

 maxnoofReportedCells,

 maxnoofSensorName,

 maxnoofServedGUAMIs,

 maxnoofSliceItems,

 maxnoofMDTSNPNs,

 maxnoofSNSSAIforQMC,

 maxnoofSuccessfulHOReports,

 maxnoofTACs,

 maxnoofTACsinNTN,

 maxnoofTAforMDT,

 maxnoofTAforQMC,

 maxnoofTAIforInactive,

 maxnoofTAIforMBS,

 maxnoofTAIforPaging,

 maxnoofTAIforRestart,

 maxnoofTAIforWarning,

 maxnoofTAIinAoI,

 maxnoofTargetS-NSSAIs,

 maxnoofTimePeriods,

 maxnoofTNLAssociations,

 maxnoofUEAppLayerMeas,

 maxnoofUEsforPaging,

 maxnoofUETypes,

 maxnoofWLANName,

 maxnoofXnExtTLAs,

 maxnoofXnGTP-TLAs,

 maxnoofXnTLAs,

 maxnoofThresholdsForExcessPacketDelay,

 maxnoofCandidateRelayUEs,

 maxnoofSuccessfulPSCellChangeReports,

 maxnoofCellsTSS,

 maxnoofPeriodicities,

 maxnoofPartiallyAllowedS-NSSAIs,

 maxnoofRSPPQoSFlows,

 maxnoofRequestedSNSSAIs

FROM NGAP-Constants

 Criticality,

 ProcedureCode,

 ProtocolIE-ID,

 TriggeringMessage

FROM NGAP-CommonDataTypes

 ProtocolExtensionContainer{},

 ProtocolIE-Container{},

 NGAP-PROTOCOL-EXTENSION,

 ProtocolIE-SingleContainer{},

 NGAP-PROTOCOL-IES

FROM NGAP-Containers;

<<<<<<<<<<<<<<<<<<<< Unmodified Text Omitted >>>>>>>>>>>>>>>>>>>>

-- G

GBR-QosInformation ::= SEQUENCE {

 maximumFlowBitRateDL BitRate,

 maximumFlowBitRateUL BitRate,

 guaranteedFlowBitRateDL BitRate,

 guaranteedFlowBitRateUL BitRate,

 notificationControl NotificationControl OPTIONAL,

 maximumPacketLossRateDL PacketLossRate OPTIONAL,

 maximumPacketLossRateUL PacketLossRate OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { {GBR-QosInformation-ExtIEs} } OPTIONAL,

 ...

}

GBR-QosInformation-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 { ID id-AlternativeQoSParaSetList CRITICALITY ignore EXTENSION AlternativeQoSParaSetList PRESENCE optional },

 ...

}

GlobalCable-ID ::= OCTET STRING

GlobalCable-ID-new ::= SEQUENCE {

 globalCable-ID GlobalCable-ID,

 tAI TAI,

 iE-Extensions ProtocolExtensionContainer { { GlobalCable-ID-new-ExtIEs} } OPTIONAL,

 ...

}

GlobalCable-ID-new-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

GlobalENB-ID ::= SEQUENCE {

 pLMNidentity PLMNIdentity,

 eNB-ID ENB-ID,

 iE-Extensions ProtocolExtensionContainer { {GlobalENB-ID-ExtIEs} } OPTIONAL,

 ...

}

GlobalENB-ID-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

GlobalGNB-ID ::= SEQUENCE {

 pLMNIdentity PLMNIdentity,

 gNB-ID GNB-ID,

 iE-Extensions ProtocolExtensionContainer { {GlobalGNB-ID-ExtIEs} } OPTIONAL,

 ...

}

GlobalGNB-ID-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

GlobalN3IWF-ID ::= SEQUENCE {

 pLMNIdentity PLMNIdentity,

 n3IWF-ID N3IWF-ID,

 iE-Extensions ProtocolExtensionContainer { {GlobalN3IWF-ID-ExtIEs} } OPTIONAL,

 ...

}

GlobalN3IWF-ID-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

GlobalLine-ID ::= SEQUENCE {

 globalLineIdentity GlobalLineIdentity,

 lineType LineType OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { {GlobalLine-ID-ExtIEs} } OPTIONAL,

 ...

}

GlobalLine-ID-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 { ID id-TAI CRITICALITY ignore EXTENSION TAI PRESENCE optional },

 ...

}

GlobalLineIdentity ::= OCTET STRING

GlobalNgENB-ID ::= SEQUENCE {

 pLMNIdentity PLMNIdentity,

 ngENB-ID NgENB-ID,

 iE-Extensions ProtocolExtensionContainer { {GlobalNgENB-ID-ExtIEs} } OPTIONAL,

 ...

}

GlobalNgENB-ID-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

GlobalRANNodeID ::= CHOICE {

 globalGNB-ID GlobalGNB-ID,

 globalNgENB-ID GlobalNgENB-ID,

 globalN3IWF-ID GlobalN3IWF-ID,

 choice-Extensions ProtocolIE-SingleContainer { {GlobalRANNodeID-ExtIEs} }

}

GlobalRANNodeID-ExtIEs NGAP-PROTOCOL-IES ::= {

 { ID id-GlobalTNGF-ID CRITICALITY reject TYPE GlobalTNGF-ID PRESENCE mandatory }|

 { ID id-GlobalTWIF-ID CRITICALITY reject TYPE GlobalTWIF-ID PRESENCE mandatory }|

 { ID id-GlobalW-AGF-ID CRITICALITY reject TYPE GlobalW-AGF-ID PRESENCE mandatory },

 ...

}

GlobalTNGF-ID ::= SEQUENCE {

 pLMNIdentity PLMNIdentity,

 tNGF-ID TNGF-ID,

 iE-Extensions ProtocolExtensionContainer { { GlobalTNGF-ID-ExtIEs} } OPTIONAL,

 ...

}

GlobalTNGF-ID-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

GlobalTWIF-ID ::= SEQUENCE {

 pLMNIdentity PLMNIdentity,

 tWIF-ID TWIF-ID,

 iE-Extensions ProtocolExtensionContainer { { GlobalTWIF-ID-ExtIEs} } OPTIONAL,

 ...

}

GlobalTWIF-ID-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

GlobalW-AGF-ID ::= SEQUENCE {

 pLMNIdentity PLMNIdentity,

 w-AGF-ID W-AGF-ID,

 iE-Extensions ProtocolExtensionContainer { { GlobalW-AGF-ID-ExtIEs} } OPTIONAL,

 ...

}

GlobalW-AGF-ID-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

GNB-ID ::= CHOICE {

 gNB-ID BIT STRING (SIZE(22..32)),

 choice-Extensions ProtocolIE-SingleContainer { {GNB-ID-ExtIEs} }

}

GNB-ID-ExtIEs NGAP-PROTOCOL-IES ::= {

 ...

}

GTP-TEID ::= OCTET STRING (SIZE(4))

GTPTunnel ::= SEQUENCE {

 transportLayerAddress TransportLayerAddress,

 gTP-TEID GTP-TEID,

 iE-Extensions ProtocolExtensionContainer { {GTPTunnel-ExtIEs} } OPTIONAL,

 ...

}

GTPTunnel-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

GUAMI ::= SEQUENCE {

 pLMNIdentity PLMNIdentity,

 aMFRegionID AMFRegionID,

 aMFSetID AMFSetID,

 aMFPointer AMFPointer,

 iE-Extensions ProtocolExtensionContainer { {GUAMI-ExtIEs} } OPTIONAL,

 ...

}

GUAMI-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

GUAMIType ::= ENUMERATED {native, mapped, ...}

GUAMIList ::= SEQUENCE (SIZE(1..maxnoofGUAMIs)) OF GUAMIList-Item

GUAMIList-Item ::= SEQUENCE {

 gUAMI GUAMI,

 iE-Extensions ProtocolExtensionContainer { {GUAMIList-Item-ExtIEs} } OPTIONAL,

 ...

}

GUAMIList-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

GW-Context-Release-Indication ::= ENUMERATED {true, ...}

<<<<<<<<<<<<<<<<<<<< Unmodified Text Omitted >>>>>>>>>>>>>>>>>>>>

-- R

RANfeedbacktype ::= CHOICE {

 proactive RANfeedbacktype-proactive,

 reactive RANfeedbacktype-reactive,

 choice-extensions ProtocolIE-SingleContainer { {RANfeedbacktype-ExtIEs} }

}

RANfeedbacktype-ExtIEs NGAP-PROTOCOL-IES ::= {

 ...

}

RANfeedbacktype-proactive ::= SEQUENCE {

 burstArrivalTimeWindow BurstArrivalTimeWindow,

 periodicityRange PeriodicityRange OPTIONAL,

 iE-Extension ProtocolExtensionContainer { {RANfeedbacktype-proactive-ExtIEs} } OPTIONAL,

 ...

}

RANfeedbacktype-proactive-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

RANfeedbacktype-reactive ::= SEQUENCE {

 capabilityForBATAdaptation ENUMERATED {true, ...},

 iE-Extension ProtocolExtensionContainer { {RANfeedbacktype-reactive-ExtIEs} } OPTIONAL,

 ...

}

RANfeedbacktype-reactive-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

Range ::= ENUMERATED {m50, m80, m180, m200, m350, m400, m500, m700, m1000, ...}

RANNodeName ::= PrintableString (SIZE(1..150, ...))

RANNodeNameVisibleString ::= VisibleString (SIZE(1..150, ...))

RANNodeNameUTF8String ::= UTF8String (SIZE(1..150, ...))

RANPagingPriority ::= INTEGER (1..256)

RANStatusTransfer-TransparentContainer ::= SEQUENCE {

 dRBsSubjectToStatusTransferList DRBsSubjectToStatusTransferList,

 iE-Extensions ProtocolExtensionContainer { {RANStatusTransfer-TransparentContainer-ExtIEs} } OPTIONAL,

 ...

}

RANStatusTransfer-TransparentContainer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

RANTimingSynchronisationStatusInfo ::= SEQUENCE {

 synchronisationState ENUMERATED {locked, holdover, freerun, ...} OPTIONAL,

 traceabletoUTC ENUMERATED {true, false, ...} OPTIONAL,

 traceabletoGNSS ENUMERATED {true, false, ...} OPTIONAL,

 clockFrequencyStability BIT STRING (SIZE(16)) OPTIONAL,

 clockAccuracy ClockAccuracy OPTIONAL,

 parentTImeSource ParentTImeSource OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { {RANTimingSynchronisationStatusInfo-ExtIEs} } OPTIONAL,

 ...

}

RANTimingSynchronisationStatusInfo-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

RAN-TSSRequestType ::= ENUMERATED {start, stop, ...}

RAN-TSSScope ::= CHOICE {

 rANNodeLevel GlobalGNB-ID,

 cellListLevel RANTSSCellList,

 choice-Extensions ProtocolIE-SingleContainer { { RAN-TSSScope-ExtIEs} }

}

RAN-TSSScope-ExtIEs NGAP-PROTOCOL-IES ::= {

 ...

}

RANTSSCellList ::= SEQUENCE (SIZE(1..maxnoofCellsTSS)) OF RANTSSCellItem

RANTSSCellItem ::= SEQUENCE {

 nRCGI NR-CGI,

 iE-Extensions ProtocolExtensionContainer { {RANTSSCellItem-ExtIEs} } OPTIONAL,

 ...

}

RANTSSCellItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

RAN-UE-NGAP-ID ::= INTEGER (0..4294967295)

RAT-Information ::= ENUMERATED {

 unlicensed,

 nb-IoT,

 ...,

 nR-LEO,

 nR-MEO,

 nR-GEO,

 nR-OTHERSAT

}

RATRestrictions ::= SEQUENCE (SIZE(1..maxnoofEPLMNsPlusOne)) OF RATRestrictions-Item

RATRestrictions-Item ::= SEQUENCE {

 pLMNIdentity PLMNIdentity,

 rATRestrictionInformation RATRestrictionInformation,

 iE-Extensions ProtocolExtensionContainer { {RATRestrictions-Item-ExtIEs} } OPTIONAL,

 ...

}

RATRestrictions-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 { ID id-ExtendedRATRestrictionInformation CRITICALITY ignore EXTENSION ExtendedRATRestrictionInformation PRESENCE optional },

 ...

}

RATRestrictionInformation ::= BIT STRING (SIZE(8, ...))

RecommendedCellsForPaging ::= SEQUENCE {

 recommendedCellList RecommendedCellList,

 iE-Extensions ProtocolExtensionContainer { {RecommendedCellsForPaging-ExtIEs} } OPTIONAL,

 ...

}

RecommendedCellsForPaging-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

RecommendedCellList ::= SEQUENCE (SIZE(1..maxnoofRecommendedCells)) OF RecommendedCellItem

RecommendedCellItem ::= SEQUENCE {

 nGRAN-CGI NGRAN-CGI,

 timeStayedInCell INTEGER (0..4095) OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { {RecommendedCellItem-ExtIEs} } OPTIONAL,

 ...

}

RecommendedCellItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

RecommendedRANNodesForPaging ::= SEQUENCE {

 recommendedRANNodeList RecommendedRANNodeList,

 iE-Extensions ProtocolExtensionContainer { {RecommendedRANNodesForPaging-ExtIEs} } OPTIONAL,

 ...

}

RecommendedRANNodesForPaging-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

RecommendedRANNodeList::= SEQUENCE (SIZE(1..maxnoofRecommendedRANNodes)) OF RecommendedRANNodeItem

RecommendedRANNodeItem ::= SEQUENCE {

 aMFPagingTarget AMFPagingTarget,

 iE-Extensions ProtocolExtensionContainer { {RecommendedRANNodeItem-ExtIEs} } OPTIONAL,

 ...

}

RecommendedRANNodeItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

RedCapIndication ::= ENUMERATED {

 redcap,

 ...

}

RedirectionVoiceFallback ::= ENUMERATED {

 possible,

 not-possible,

 ...

}

RedundantPDUSessionInformation ::= SEQUENCE {

 rSN RSN,

 iE-Extensions ProtocolExtensionContainer { {RedundantPDUSessionInformation-ExtIEs} } OPTIONAL,

 ...

}

RedundantPDUSessionInformation-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 { ID id-PDUSessionPairID CRITICALITY ignore EXTENSION PDUSessionPairID PRESENCE optional },

 ...

}

RedundantQosFlowIndicator ::= ENUMERATED {true, false}

ReflectiveQosAttribute ::= ENUMERATED {

 subject-to,

 ...

}

RelativeAMFCapacity ::= INTEGER (0..255)

ReportArea ::= ENUMERATED {

 cell,

 ...

}

RepetitionPeriod ::= INTEGER (0..131071)

ResetAll ::= ENUMERATED {

 reset-all,

 ...

}

ReportAmountMDT ::= ENUMERATED {

 r1, r2, r4, r8, r16, r32, r64, rinfinity

}

ReportIntervalMDT ::= ENUMERATED {

 ms120, ms240, ms480, ms640, ms1024, ms2048, ms5120, ms10240, min1, min6, min12, min30, min60

}

ExtendedReportIntervalMDT ::= ENUMERATED {

 ms20480, ms40960, ...

}

RequestedSNSSAI ::= SEQUENCE (SIZE(1..maxnoofRequestedSNSSAIs)) OF RequestedSNSSAIItem

RequestedSNSSAIItem ::= SEQUENCE {

 s-NSSAI S-NSSAI,

 iE-Extensions ProtocolExtensionContainer { {RequestedSNSSAIItem-ExtIEs} } OPTIONAL,

 ...

}

RequestedSNSSAIItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

ResetType ::= CHOICE {

 nG-Interface ResetAll,

 partOfNG-Interface UE-associatedLogicalNG-connectionList,

 choice-Extensions ProtocolIE-SingleContainer { {ResetType-ExtIEs} }

}

ResetType-ExtIEs NGAP-PROTOCOL-IES ::= {

 ...

}

RGLevelWirelineAccessCharacteristics ::= OCTET STRING

RNC-ID ::= INTEGER (0..4095)

RoutingID ::= OCTET STRING

RRCContainer ::= OCTET STRING

RRCEstablishmentCause ::= ENUMERATED {

 emergency,

 highPriorityAccess,

 mt-Access,

 mo-Signalling,

 mo-Data,

 mo-VoiceCall,

 mo-VideoCall,

 mo-SMS,

 mps-PriorityAccess,

 mcs-PriorityAccess,

 ...,

 notAvailable,

 mo-ExceptionData

}

RRCInactiveTransitionReportRequest ::= ENUMERATED {

 subsequent-state-transition-report,

 single-rrc-connected-state-report,

 cancel-report,

 ...

}

RRCState ::= ENUMERATED {

 inactive,

 connected,

 ...

}

RSN ::= ENUMERATED {v1, v2, ...}

RIMInformationTransfer ::= SEQUENCE {

 targetRANNodeID-RIM TargetRANNodeID-RIM,

 sourceRANNodeID SourceRANNodeID,

 rIMInformation RIMInformation,

 iE-Extensions ProtocolExtensionContainer { {RIMInformationTransfer-ExtIEs} } OPTIONAL,

 ...

}

RIMInformationTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

RIMInformation ::= SEQUENCE {

 targetgNBSetID GNBSetID,

 rIM-RSDetection ENUMERATED {rs-detected, rs-disappeared, ...},

 iE-Extensions ProtocolExtensionContainer { {RIMInformation-ExtIEs} } OPTIONAL,

 ...

}

RIMInformation-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

GNBSetID ::= BIT STRING (SIZE(22))

RSPPQoSFlowList ::= SEQUENCE (SIZE(1..maxnoofRSPPQoSFlows)) OF RSPPQoSFlowItem

RSPPQoSFlowItem ::= SEQUENCE {

 pQI FiveQI,

 rSPPFlowBitRates RSPPFlowBitRates OPTIONAL,

 range Range OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { RSPPQoSFlowItem-ExtIEs} } OPTIONAL,

 ...

}

RSPPQoSFlowItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

RSPPFlowBitRates ::= SEQUENCE {

 guaranteedFlowBitRate BitRate,

 maximumFlowBitRate BitRate,

 iE-Extensions ProtocolExtensionContainer { { RSPPFlowBitRates-ExtIEs} } OPTIONAL,

 ...

}

RSPPFlowBitRates-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

<<<<<<<<<<<<<<<<<<<< Unmodified Text Omitted >>>>>>>>>>>>>>>>>>>>

### 9.4.7 Constant Definitions

-- ASN1START

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Constant definitions

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

NGAP-Constants {

itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)

ngran-Access (22) modules (3) ngap (1) version1 (1) ngap-Constants (4) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- IE parameter types from other modules.

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

IMPORTS

 ProcedureCode,

 ProtocolIE-ID

FROM NGAP-CommonDataTypes;

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Elementary Procedures

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

id-AMFConfigurationUpdate ProcedureCode ::= 0

id-AMFStatusIndication ProcedureCode ::= 1

id-CellTrafficTrace ProcedureCode ::= 2

id-DeactivateTrace ProcedureCode ::= 3

id-DownlinkNASTransport ProcedureCode ::= 4

id-DownlinkNonUEAssociatedNRPPaTransport ProcedureCode ::= 5

id-DownlinkRANConfigurationTransfer ProcedureCode ::= 6

id-DownlinkRANStatusTransfer ProcedureCode ::= 7

id-DownlinkUEAssociatedNRPPaTransport ProcedureCode ::= 8

id-ErrorIndication ProcedureCode ::= 9

id-HandoverCancel ProcedureCode ::= 10

id-HandoverNotification ProcedureCode ::= 11

id-HandoverPreparation ProcedureCode ::= 12

id-HandoverResourceAllocation ProcedureCode ::= 13

id-InitialContextSetup ProcedureCode ::= 14

id-InitialUEMessage ProcedureCode ::= 15

id-LocationReportingControl ProcedureCode ::= 16

id-LocationReportingFailureIndication ProcedureCode ::= 17

id-LocationReport ProcedureCode ::= 18

id-NASNonDeliveryIndication ProcedureCode ::= 19

id-NGReset ProcedureCode ::= 20

id-NGSetup ProcedureCode ::= 21

id-OverloadStart ProcedureCode ::= 22

id-OverloadStop ProcedureCode ::= 23

id-Paging ProcedureCode ::= 24

id-PathSwitchRequest ProcedureCode ::= 25

id-PDUSessionResourceModify ProcedureCode ::= 26

id-PDUSessionResourceModifyIndication ProcedureCode ::= 27

id-PDUSessionResourceRelease ProcedureCode ::= 28

id-PDUSessionResourceSetup ProcedureCode ::= 29

id-PDUSessionResourceNotify ProcedureCode ::= 30

id-PrivateMessage ProcedureCode ::= 31

id-PWSCancel ProcedureCode ::= 32

id-PWSFailureIndication ProcedureCode ::= 33

id-PWSRestartIndication ProcedureCode ::= 34

id-RANConfigurationUpdate ProcedureCode ::= 35

id-RerouteNASRequest ProcedureCode ::= 36

id-RRCInactiveTransitionReport ProcedureCode ::= 37

id-TraceFailureIndication ProcedureCode ::= 38

id-TraceStart ProcedureCode ::= 39

id-UEContextModification ProcedureCode ::= 40

id-UEContextRelease ProcedureCode ::= 41

id-UEContextReleaseRequest ProcedureCode ::= 42

id-UERadioCapabilityCheck ProcedureCode ::= 43

id-UERadioCapabilityInfoIndication ProcedureCode ::= 44

id-UETNLABindingRelease ProcedureCode ::= 45

id-UplinkNASTransport ProcedureCode ::= 46

id-UplinkNonUEAssociatedNRPPaTransport ProcedureCode ::= 47

id-UplinkRANConfigurationTransfer ProcedureCode ::= 48

id-UplinkRANStatusTransfer ProcedureCode ::= 49

id-UplinkUEAssociatedNRPPaTransport ProcedureCode ::= 50

id-WriteReplaceWarning ProcedureCode ::= 51

id-SecondaryRATDataUsageReport ProcedureCode ::= 52

id-UplinkRIMInformationTransfer ProcedureCode ::= 53

id-DownlinkRIMInformationTransfer ProcedureCode ::= 54

id-RetrieveUEInformation ProcedureCode ::= 55

id-UEInformationTransfer ProcedureCode ::= 56

id-RANCPRelocationIndication ProcedureCode ::= 57

id-UEContextResume ProcedureCode ::= 58

id-UEContextSuspend ProcedureCode ::= 59

id-UERadioCapabilityIDMapping ProcedureCode ::= 60

id-HandoverSuccess ProcedureCode ::= 61

id-UplinkRANEarlyStatusTransfer ProcedureCode ::= 62

id-DownlinkRANEarlyStatusTransfer ProcedureCode ::= 63

id-AMFCPRelocationIndication ProcedureCode ::= 64

id-ConnectionEstablishmentIndication ProcedureCode ::= 65

id-BroadcastSessionModification ProcedureCode ::= 66

id-BroadcastSessionRelease ProcedureCode ::= 67

id-BroadcastSessionSetup ProcedureCode ::= 68

id-DistributionSetup ProcedureCode ::= 69

id-DistributionRelease ProcedureCode ::= 70

id-MulticastSessionActivation ProcedureCode ::= 71

id-MulticastSessionDeactivation ProcedureCode ::= 72

id-MulticastSessionUpdate ProcedureCode ::= 73

id-MulticastGroupPaging ProcedureCode ::= 74

id-BroadcastSessionReleaseRequired ProcedureCode ::= 75

id-TimingSynchronisationStatus ProcedureCode ::= 76

id-TimingSynchronisationStatusReport ProcedureCode ::= 77

id-MTCommunicationHandling ProcedureCode ::= 78

id-RANPagingRequest ProcedureCode ::= 79

id-BroadcastSessionTransport ProcedureCode ::= 80

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Extension constants

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

maxPrivateIEs INTEGER ::= 65535

maxProtocolExtensions INTEGER ::= 65535

maxProtocolIEs INTEGER ::= 65535

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Lists

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

 maxnoofAllowedAreas INTEGER ::= 16

 maxnoofAllowedCAGsperPLMN INTEGER ::= 256

 maxnoofAllowedS-NSSAIs INTEGER ::= 8

 maxnoofBluetoothName INTEGER ::= 4

 maxnoofBPLMNs INTEGER ::= 12

 maxnoofCAGSperCell INTEGER ::= 64

 maxnoofCellIDforMDT INTEGER ::= 32

 maxnoofCellIDforWarning INTEGER ::= 65535

 maxnoofCellinAoI INTEGER ::= 256

 maxnoofCellinEAI INTEGER ::= 65535

 maxnoofCellinTAI INTEGER ::= 65535

 maxnoofCellsforMBS INTEGER ::= 8192

 maxnoofCellsingNB INTEGER ::= 16384

 maxnoofCellsinngeNB INTEGER ::= 256

 maxnoofCellsinNGRANNode INTEGER ::= 16384

 maxnoofCellsinUEHistoryInfo INTEGER ::= 16

 maxnoofCellsUEMovingTrajectory INTEGER ::= 16

 maxnoofDRBs INTEGER ::= 32

 maxnoofEmergencyAreaID INTEGER ::= 65535

 maxnoofEAIforRestart INTEGER ::= 256

 maxnoofEPLMNs INTEGER ::= 15

 maxnoofEPLMNsPlusOne INTEGER ::= 16

 maxnoofE-RABs INTEGER ::= 256

 maxnoofErrors INTEGER ::= 256

 maxnoofExtSliceItems INTEGER ::= 65535

 maxnoofForbTACs INTEGER ::= 4096

 maxnoofFreqforMDT INTEGER ::= 8

 maxnoofGUAMIs INTEGER ::= 1024

 maxnoofMBSAreaSessionIDs INTEGER ::= 256

 maxnoofMBSFSAs INTEGER ::= 64

 maxnoofMBSQoSFlows INTEGER ::= 64

 maxnoofMBSSessions INTEGER ::= 32

 maxnoofMBSSessionsofUE INTEGER ::= 256

 maxnoofMBSServiceAreaInformation INTEGER ::= 256

 maxnoofMDTPLMNs INTEGER ::= 16

 maxnoofMRBs INTEGER ::= 32

 maxnoofMultiConnectivity INTEGER ::= 4

 maxnoofMultiConnectivityMinusOne INTEGER ::= 3

 maxnoofNeighPCIforMDT INTEGER ::= 32

 maxnoofNGAPIESupportInfo INTEGER ::= 32

 maxnoofNGConnectionsToReset INTEGER ::= 65536

 maxnoofNRCellBands INTEGER ::= 32

 maxnoofNSAGs INTEGER ::= 256

 maxnoofPagingAreas INTEGER ::= 64

 maxnoofPC5QoSFlows INTEGER ::= 2048

 maxnoofPDUSessions INTEGER ::= 256

 maxnoofPLMNs INTEGER ::= 12

 maxnoofPSCellsPerPrimaryCellinUEHistoryInfo INTEGER ::= 8

 maxnoofQosFlows INTEGER ::= 64

 maxnoofQosParaSets INTEGER ::= 8

 maxnoofRANNodeinAoI INTEGER ::= 64

 maxnoofRecommendedCells INTEGER ::= 16

 maxnoofRecommendedRANNodes INTEGER ::= 16

 maxnoofAoI INTEGER ::= 64

 maxnoofAoIMinusOne INTEGER ::= 63

 maxnoofReportedCells INTEGER ::= 256

 maxnoofSensorName INTEGER ::= 3

 maxnoofServedGUAMIs INTEGER ::= 256

 maxnoofSliceItems INTEGER ::= 1024

 maxnoofSuccessfulHOReports INTEGER ::= 64

 maxnoofTACs INTEGER ::= 256

 maxnoofTACsinNTN INTEGER ::= 12

 maxnoofTAforMDT INTEGER ::= 8

 maxnoofTAIforInactive INTEGER ::= 16

 maxnoofTAIforMBS INTEGER ::= 1024

 maxnoofTAIforPaging INTEGER ::= 16

 maxnoofTAIforRestart INTEGER ::= 2048

 maxnoofTAIforWarning INTEGER ::= 65535

 maxnoofTAIinAoI INTEGER ::= 16

 maxnoofTimePeriods INTEGER ::= 2

 maxnoofTNLAssociations INTEGER ::= 32

 maxnoofUEsforPaging INTEGER ::= 4096

 maxnoofUETypes INTEGER ::= 8

 maxnoofWLANName INTEGER ::= 4

 maxnoofXnExtTLAs INTEGER ::= 16

 maxnoofXnGTP-TLAs INTEGER ::= 16

 maxnoofXnTLAs INTEGER ::= 2

 maxnoofCandidateCells INTEGER ::= 32

 maxnoofTargetS-NSSAIs INTEGER ::= 8

 maxNRARFCN INTEGER ::= 3279165

 maxnoofCellIDforQMC INTEGER ::= 32

 maxnoofPLMNforQMC INTEGER ::= 16

 maxnoofUEAppLayerMeas INTEGER ::= 16

 maxnoofSNSSAIforQMC INTEGER ::= 16

 maxnoofTAforQMC INTEGER ::= 8

 maxnoofThresholdsForExcessPacketDelay INTEGER ::= 255

 maxnoofESNPNs INTEGER ::= 15

 maxnoofCandidateRelayUEs INTEGER ::= 32

 maxnoofSuccessfulPSCellChangeReports INTEGER ::= 64

 maxnoofCellsTSS INTEGER ::= 16384

 maxnoofPeriodicities INTEGER ::= 8

 maxnoofCAGforMDT INTEGER ::= 256

 maxnoofMDTSNPNs INTEGER ::= 16

 maxnoofPartiallyAllowedS-NSSAIs INTEGER ::= 8

 maxnoofRSPPQoSFlows INTEGER ::= 2048

 maxnoofRequestedSNSSAIs INTEGER ::= 8

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- IEs

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

 id-AllowedNSSAI ProtocolIE-ID ::= 0

 id-AMFName ProtocolIE-ID ::= 1

 id-AMFOverloadResponse ProtocolIE-ID ::= 2

 id-AMFSetID ProtocolIE-ID ::= 3

 id-AMF-TNLAssociationFailedToSetupList ProtocolIE-ID ::= 4

 id-AMF-TNLAssociationSetupList ProtocolIE-ID ::= 5

 id-AMF-TNLAssociationToAddList ProtocolIE-ID ::= 6

 id-AMF-TNLAssociationToRemoveList ProtocolIE-ID ::= 7

 id-AMF-TNLAssociationToUpdateList ProtocolIE-ID ::= 8

 id-AMFTrafficLoadReductionIndication ProtocolIE-ID ::= 9

 id-AMF-UE-NGAP-ID ProtocolIE-ID ::= 10

 id-AssistanceDataForPaging ProtocolIE-ID ::= 11

 id-BroadcastCancelledAreaList ProtocolIE-ID ::= 12

 id-BroadcastCompletedAreaList ProtocolIE-ID ::= 13

 id-CancelAllWarningMessages ProtocolIE-ID ::= 14

 id-Cause ProtocolIE-ID ::= 15

 id-CellIDListForRestart ProtocolIE-ID ::= 16

 id-ConcurrentWarningMessageInd ProtocolIE-ID ::= 17

 id-CoreNetworkAssistanceInformationForInactive ProtocolIE-ID ::= 18

 id-CriticalityDiagnostics ProtocolIE-ID ::= 19

 id-DataCodingScheme ProtocolIE-ID ::= 20

 id-DefaultPagingDRX ProtocolIE-ID ::= 21

 id-DirectForwardingPathAvailability ProtocolIE-ID ::= 22

 id-EmergencyAreaIDListForRestart ProtocolIE-ID ::= 23

 id-EmergencyFallbackIndicator ProtocolIE-ID ::= 24

 id-EUTRA-CGI ProtocolIE-ID ::= 25

 id-FiveG-S-TMSI ProtocolIE-ID ::= 26

 id-GlobalRANNodeID ProtocolIE-ID ::= 27

 id-GUAMI ProtocolIE-ID ::= 28

 id-HandoverType ProtocolIE-ID ::= 29

 id-IMSVoiceSupportIndicator ProtocolIE-ID ::= 30

 id-IndexToRFSP ProtocolIE-ID ::= 31

 id-InfoOnRecommendedCellsAndRANNodesForPaging ProtocolIE-ID ::= 32

 id-LocationReportingRequestType ProtocolIE-ID ::= 33

 id-MaskedIMEISV ProtocolIE-ID ::= 34

 id-MessageIdentifier ProtocolIE-ID ::= 35

 id-MobilityRestrictionList ProtocolIE-ID ::= 36

 id-NASC ProtocolIE-ID ::= 37

 id-NAS-PDU ProtocolIE-ID ::= 38

 id-NASSecurityParametersFromNGRAN ProtocolIE-ID ::= 39

 id-NewAMF-UE-NGAP-ID ProtocolIE-ID ::= 40

 id-NewSecurityContextInd ProtocolIE-ID ::= 41

 id-NGAP-Message ProtocolIE-ID ::= 42

 id-NGRAN-CGI ProtocolIE-ID ::= 43

 id-NGRANTraceID ProtocolIE-ID ::= 44

 id-NR-CGI ProtocolIE-ID ::= 45

 id-NRPPa-PDU ProtocolIE-ID ::= 46

 id-NumberOfBroadcastsRequested ProtocolIE-ID ::= 47

 id-OldAMF ProtocolIE-ID ::= 48

 id-OverloadStartNSSAIList ProtocolIE-ID ::= 49

 id-PagingDRX ProtocolIE-ID ::= 50

 id-PagingOrigin ProtocolIE-ID ::= 51

 id-PagingPriority ProtocolIE-ID ::= 52

 id-PDUSessionResourceAdmittedList ProtocolIE-ID ::= 53

 id-PDUSessionResourceFailedToModifyListModRes ProtocolIE-ID ::= 54

 id-PDUSessionResourceFailedToSetupListCxtRes ProtocolIE-ID ::= 55

 id-PDUSessionResourceFailedToSetupListHOAck ProtocolIE-ID ::= 56

 id-PDUSessionResourceFailedToSetupListPSReq ProtocolIE-ID ::= 57

 id-PDUSessionResourceFailedToSetupListSURes ProtocolIE-ID ::= 58

 id-PDUSessionResourceHandoverList ProtocolIE-ID ::= 59

 id-PDUSessionResourceListCxtRelCpl ProtocolIE-ID ::= 60

 id-PDUSessionResourceListHORqd ProtocolIE-ID ::= 61

 id-PDUSessionResourceModifyListModCfm ProtocolIE-ID ::= 62

 id-PDUSessionResourceModifyListModInd ProtocolIE-ID ::= 63

 id-PDUSessionResourceModifyListModReq ProtocolIE-ID ::= 64

 id-PDUSessionResourceModifyListModRes ProtocolIE-ID ::= 65

 id-PDUSessionResourceNotifyList ProtocolIE-ID ::= 66

 id-PDUSessionResourceReleasedListNot ProtocolIE-ID ::= 67

 id-PDUSessionResourceReleasedListPSAck ProtocolIE-ID ::= 68

 id-PDUSessionResourceReleasedListPSFail ProtocolIE-ID ::= 69

 id-PDUSessionResourceReleasedListRelRes ProtocolIE-ID ::= 70

 id-PDUSessionResourceSetupListCxtReq ProtocolIE-ID ::= 71

 id-PDUSessionResourceSetupListCxtRes ProtocolIE-ID ::= 72

 id-PDUSessionResourceSetupListHOReq ProtocolIE-ID ::= 73

 id-PDUSessionResourceSetupListSUReq ProtocolIE-ID ::= 74

 id-PDUSessionResourceSetupListSURes ProtocolIE-ID ::= 75

 id-PDUSessionResourceToBeSwitchedDLList ProtocolIE-ID ::= 76

 id-PDUSessionResourceSwitchedList ProtocolIE-ID ::= 77

 id-PDUSessionResourceToReleaseListHOCmd ProtocolIE-ID ::= 78

 id-PDUSessionResourceToReleaseListRelCmd ProtocolIE-ID ::= 79

 id-PLMNSupportList ProtocolIE-ID ::= 80

 id-PWSFailedCellIDList ProtocolIE-ID ::= 81

 id-RANNodeName ProtocolIE-ID ::= 82

 id-RANPagingPriority ProtocolIE-ID ::= 83

 id-RANStatusTransfer-TransparentContainer ProtocolIE-ID ::= 84

 id-RAN-UE-NGAP-ID ProtocolIE-ID ::= 85

 id-RelativeAMFCapacity ProtocolIE-ID ::= 86

 id-RepetitionPeriod ProtocolIE-ID ::= 87

 id-ResetType ProtocolIE-ID ::= 88

 id-RoutingID ProtocolIE-ID ::= 89

 id-RRCEstablishmentCause ProtocolIE-ID ::= 90

 id-RRCInactiveTransitionReportRequest ProtocolIE-ID ::= 91

 id-RRCState ProtocolIE-ID ::= 92

 id-SecurityContext ProtocolIE-ID ::= 93

 id-SecurityKey ProtocolIE-ID ::= 94

 id-SerialNumber ProtocolIE-ID ::= 95

 id-ServedGUAMIList ProtocolIE-ID ::= 96

 id-SliceSupportList ProtocolIE-ID ::= 97

 id-SONConfigurationTransferDL ProtocolIE-ID ::= 98

 id-SONConfigurationTransferUL ProtocolIE-ID ::= 99

 id-SourceAMF-UE-NGAP-ID ProtocolIE-ID ::= 100

 id-SourceToTarget-TransparentContainer ProtocolIE-ID ::= 101

 id-SupportedTAList ProtocolIE-ID ::= 102

 id-TAIListForPaging ProtocolIE-ID ::= 103

 id-TAIListForRestart ProtocolIE-ID ::= 104

 id-TargetID ProtocolIE-ID ::= 105

 id-TargetToSource-TransparentContainer ProtocolIE-ID ::= 106

 id-TimeToWait ProtocolIE-ID ::= 107

 id-TraceActivation ProtocolIE-ID ::= 108

 id-TraceCollectionEntityIPAddress ProtocolIE-ID ::= 109

 id-UEAggregateMaximumBitRate ProtocolIE-ID ::= 110

 id-UE-associatedLogicalNG-connectionList ProtocolIE-ID ::= 111

 id-UEContextRequest ProtocolIE-ID ::= 112

 id-UE-NGAP-IDs ProtocolIE-ID ::= 114

 id-UEPagingIdentity ProtocolIE-ID ::= 115

 id-UEPresenceInAreaOfInterestList ProtocolIE-ID ::= 116

 id-UERadioCapability ProtocolIE-ID ::= 117

 id-UERadioCapabilityForPaging ProtocolIE-ID ::= 118

 id-UESecurityCapabilities ProtocolIE-ID ::= 119

 id-UnavailableGUAMIList ProtocolIE-ID ::= 120

 id-UserLocationInformation ProtocolIE-ID ::= 121

 id-WarningAreaList ProtocolIE-ID ::= 122

 id-WarningMessageContents ProtocolIE-ID ::= 123

 id-WarningSecurityInfo ProtocolIE-ID ::= 124

 id-WarningType ProtocolIE-ID ::= 125

 id-AdditionalUL-NGU-UP-TNLInformation ProtocolIE-ID ::= 126

 id-DataForwardingNotPossible ProtocolIE-ID ::= 127

 id-DL-NGU-UP-TNLInformation ProtocolIE-ID ::= 128

 id-NetworkInstance ProtocolIE-ID ::= 129

 id-PDUSessionAggregateMaximumBitRate ProtocolIE-ID ::= 130

 id-PDUSessionResourceFailedToModifyListModCfm ProtocolIE-ID ::= 131

 id-PDUSessionResourceFailedToSetupListCxtFail ProtocolIE-ID ::= 132

 id-PDUSessionResourceListCxtRelReq ProtocolIE-ID ::= 133

 id-PDUSessionType ProtocolIE-ID ::= 134

 id-QosFlowAddOrModifyRequestList ProtocolIE-ID ::= 135

 id-QosFlowSetupRequestList ProtocolIE-ID ::= 136

 id-QosFlowToReleaseList ProtocolIE-ID ::= 137

 id-SecurityIndication ProtocolIE-ID ::= 138

 id-UL-NGU-UP-TNLInformation ProtocolIE-ID ::= 139

 id-UL-NGU-UP-TNLModifyList ProtocolIE-ID ::= 140

 id-WarningAreaCoordinates ProtocolIE-ID ::= 141

 id-PDUSessionResourceSecondaryRATUsageList ProtocolIE-ID ::= 142

 id-HandoverFlag ProtocolIE-ID ::= 143

 id-SecondaryRATUsageInformation ProtocolIE-ID ::= 144

 id-PDUSessionResourceReleaseResponseTransfer ProtocolIE-ID ::= 145

 id-RedirectionVoiceFallback ProtocolIE-ID ::= 146

 id-UERetentionInformation ProtocolIE-ID ::= 147

 id-S-NSSAI ProtocolIE-ID ::= 148

 id-PSCellInformation ProtocolIE-ID ::= 149

 id-LastEUTRAN-PLMNIdentity ProtocolIE-ID ::= 150

 id-MaximumIntegrityProtectedDataRate-DL ProtocolIE-ID ::= 151

 id-AdditionalDLForwardingUPTNLInformation ProtocolIE-ID ::= 152

 id-AdditionalDLUPTNLInformationForHOList ProtocolIE-ID ::= 153

 id-AdditionalNGU-UP-TNLInformation ProtocolIE-ID ::= 154

 id-AdditionalDLQosFlowPerTNLInformation ProtocolIE-ID ::= 155

 id-SecurityResult ProtocolIE-ID ::= 156

 id-ENDC-SONConfigurationTransferDL ProtocolIE-ID ::= 157

 id-ENDC-SONConfigurationTransferUL ProtocolIE-ID ::= 158

 id-OldAssociatedQosFlowList-ULendmarkerexpected ProtocolIE-ID ::= 159

 id-CNTypeRestrictionsForEquivalent ProtocolIE-ID ::= 160

 id-CNTypeRestrictionsForServing ProtocolIE-ID ::= 161

 id-NewGUAMI ProtocolIE-ID ::= 162

 id-ULForwarding ProtocolIE-ID ::= 163

 id-ULForwardingUP-TNLInformation ProtocolIE-ID ::= 164

 id-CNAssistedRANTuning ProtocolIE-ID ::= 165

 id-CommonNetworkInstance ProtocolIE-ID ::= 166

 id-NGRAN-TNLAssociationToRemoveList ProtocolIE-ID ::= 167

 id-TNLAssociationTransportLayerAddressNGRAN ProtocolIE-ID ::= 168

 id-EndpointIPAddressAndPort ProtocolIE-ID ::= 169

 id-LocationReportingAdditionalInfo ProtocolIE-ID ::= 170

 id-SourceToTarget-AMFInformationReroute ProtocolIE-ID ::= 171

 id-AdditionalULForwardingUPTNLInformation ProtocolIE-ID ::= 172

 id-SCTP-TLAs ProtocolIE-ID ::= 173

 id-SelectedPLMNIdentity ProtocolIE-ID ::= 174

 id-RIMInformationTransfer ProtocolIE-ID ::= 175

 id-GUAMIType ProtocolIE-ID ::= 176

 id-SRVCCOperationPossible ProtocolIE-ID ::= 177

 id-TargetRNC-ID ProtocolIE-ID ::= 178

 id-RAT-Information ProtocolIE-ID ::= 179

 id-ExtendedRATRestrictionInformation ProtocolIE-ID ::= 180

 id-QosMonitoringRequest ProtocolIE-ID ::= 181

 id-SgNB-UE-X2AP-ID ProtocolIE-ID ::= 182

 id-AdditionalRedundantDL-NGU-UP-TNLInformation ProtocolIE-ID ::= 183

 id-AdditionalRedundantDLQosFlowPerTNLInformation ProtocolIE-ID ::= 184

 id-AdditionalRedundantNGU-UP-TNLInformation ProtocolIE-ID ::= 185

 id-AdditionalRedundantUL-NGU-UP-TNLInformation ProtocolIE-ID ::= 186

 id-CNPacketDelayBudgetDL ProtocolIE-ID ::= 187

 id-CNPacketDelayBudgetUL ProtocolIE-ID ::= 188

 id-ExtendedPacketDelayBudget ProtocolIE-ID ::= 189

 id-RedundantCommonNetworkInstance ProtocolIE-ID ::= 190

 id-RedundantDL-NGU-TNLInformationReused ProtocolIE-ID ::= 191

 id-RedundantDL-NGU-UP-TNLInformation ProtocolIE-ID ::= 192

 id-RedundantDLQosFlowPerTNLInformation ProtocolIE-ID ::= 193

 id-RedundantQosFlowIndicator ProtocolIE-ID ::= 194

 id-RedundantUL-NGU-UP-TNLInformation ProtocolIE-ID ::= 195

 id-TSCTrafficCharacteristics ProtocolIE-ID ::= 196

 id-RedundantPDUSessionInformation ProtocolIE-ID ::= 197

 id-UsedRSNInformation ProtocolIE-ID ::= 198

 id-IAB-Authorized ProtocolIE-ID ::= 199

 id-IAB-Supported ProtocolIE-ID ::= 200

 id-IABNodeIndication ProtocolIE-ID ::= 201

 id-NB-IoT-PagingDRX ProtocolIE-ID ::= 202

 id-NB-IoT-Paging-eDRXInfo ProtocolIE-ID ::= 203

 id-NB-IoT-DefaultPagingDRX ProtocolIE-ID ::= 204

 id-Enhanced-CoverageRestriction ProtocolIE-ID ::= 205

 id-Extended-ConnectedTime ProtocolIE-ID ::= 206

 id-PagingAssisDataforCEcapabUE ProtocolIE-ID ::= 207

 id-WUS-Assistance-Information ProtocolIE-ID ::= 208

 id-UE-DifferentiationInfo ProtocolIE-ID ::= 209

 id-NB-IoT-UEPriority ProtocolIE-ID ::= 210

 id-UL-CP-SecurityInformation ProtocolIE-ID ::= 211

 id-DL-CP-SecurityInformation ProtocolIE-ID ::= 212

 id-TAI ProtocolIE-ID ::= 213

 id-UERadioCapabilityForPagingOfNB-IoT ProtocolIE-ID ::= 214

 id-LTEV2XServicesAuthorized ProtocolIE-ID ::= 215

 id-NRV2XServicesAuthorized ProtocolIE-ID ::= 216

 id-LTEUESidelinkAggregateMaximumBitrate ProtocolIE-ID ::= 217

 id-NRUESidelinkAggregateMaximumBitrate ProtocolIE-ID ::= 218

 id-PC5QoSParameters ProtocolIE-ID ::= 219

 id-AlternativeQoSParaSetList ProtocolIE-ID ::= 220

 id-CurrentQoSParaSetIndex ProtocolIE-ID ::= 221

 id-CEmodeBrestricted ProtocolIE-ID ::= 222

 id-EUTRA-PagingeDRXInformation ProtocolIE-ID ::= 223

 id-CEmodeBSupport-Indicator ProtocolIE-ID ::= 224

 id-LTEM-Indication ProtocolIE-ID ::= 225

 id-EndIndication ProtocolIE-ID ::= 226

 id-EDT-Session ProtocolIE-ID ::= 227

 id-UECapabilityInfoRequest ProtocolIE-ID ::= 228

 id-PDUSessionResourceFailedToResumeListRESReq ProtocolIE-ID ::= 229

 id-PDUSessionResourceFailedToResumeListRESRes ProtocolIE-ID ::= 230

 id-PDUSessionResourceSuspendListSUSReq ProtocolIE-ID ::= 231

 id-PDUSessionResourceResumeListRESReq ProtocolIE-ID ::= 232

 id-PDUSessionResourceResumeListRESRes ProtocolIE-ID ::= 233

 id-UE-UP-CIoT-Support ProtocolIE-ID ::= 234

 id-Suspend-Request-Indication ProtocolIE-ID ::= 235

 id-Suspend-Response-Indication ProtocolIE-ID ::= 236

 id-RRC-Resume-Cause ProtocolIE-ID ::= 237

 id-RGLevelWirelineAccessCharacteristics ProtocolIE-ID ::= 238

 id-W-AGFIdentityInformation ProtocolIE-ID ::= 239

 id-GlobalTNGF-ID ProtocolIE-ID ::= 240

 id-GlobalTWIF-ID ProtocolIE-ID ::= 241

 id-GlobalW-AGF-ID ProtocolIE-ID ::= 242

 id-UserLocationInformationW-AGF ProtocolIE-ID ::= 243

 id-UserLocationInformationTNGF ProtocolIE-ID ::= 244

 id-AuthenticatedIndication ProtocolIE-ID ::= 245

 id-TNGFIdentityInformation ProtocolIE-ID ::= 246

 id-TWIFIdentityInformation ProtocolIE-ID ::= 247

 id-UserLocationInformationTWIF ProtocolIE-ID ::= 248

 id-DataForwardingResponseERABList ProtocolIE-ID ::= 249

 id-IntersystemSONConfigurationTransferDL ProtocolIE-ID ::= 250

 id-IntersystemSONConfigurationTransferUL ProtocolIE-ID ::= 251

 id-SONInformationReport ProtocolIE-ID ::= 252

 id-UEHistoryInformationFromTheUE ProtocolIE-ID ::= 253

 id-ManagementBasedMDTPLMNList ProtocolIE-ID ::= 254

 id-MDTConfiguration ProtocolIE-ID ::= 255

 id-PrivacyIndicator ProtocolIE-ID ::= 256

 id-TraceCollectionEntityURI ProtocolIE-ID ::= 257

 id-NPN-Support ProtocolIE-ID ::= 258

 id-NPN-AccessInformation ProtocolIE-ID ::= 259

 id-NPN-PagingAssistanceInformation ProtocolIE-ID ::= 260

 id-NPN-MobilityInformation ProtocolIE-ID ::= 261

 id-TargettoSource-Failure-TransparentContainer ProtocolIE-ID ::= 262

 id-NID ProtocolIE-ID ::= 263

 id-UERadioCapabilityID ProtocolIE-ID ::= 264

 id-UERadioCapability-EUTRA-Format ProtocolIE-ID ::= 265

 id-DAPSRequestInfo ProtocolIE-ID ::= 266

 id-DAPSResponseInfoList ProtocolIE-ID ::= 267

 id-EarlyStatusTransfer-TransparentContainer ProtocolIE-ID ::= 268

 id-NotifySourceNGRANNode ProtocolIE-ID ::= 269

 id-ExtendedSliceSupportList ProtocolIE-ID ::= 270

 id-ExtendedTAISliceSupportList ProtocolIE-ID ::= 271

 id-ConfiguredTACIndication ProtocolIE-ID ::= 272

 id-Extended-RANNodeName ProtocolIE-ID ::= 273

 id-Extended-AMFName ProtocolIE-ID ::= 274

 id-GlobalCable-ID ProtocolIE-ID ::= 275

 id-QosMonitoringReportingFrequency ProtocolIE-ID ::= 276

 id-QosFlowParametersList ProtocolIE-ID ::= 277

 id-QosFlowFeedbackList ProtocolIE-ID ::= 278

 id-BurstArrivalTimeDownlink ProtocolIE-ID ::= 279

 id-ExtendedUEIdentityIndexValue ProtocolIE-ID ::= 280

 id-PduSessionExpectedUEActivityBehaviour ProtocolIE-ID ::= 281

 id-MicoAllPLMN ProtocolIE-ID ::= 282

 id-QosFlowFailedToSetupList ProtocolIE-ID ::= 283

 id-SourceTNLAddrInfo ProtocolIE-ID ::= 284

 id-ExtendedReportIntervalMDT ProtocolIE-ID ::= 285

 id-SourceNodeID ProtocolIE-ID ::= 286

 id-NRNTNTAIInformation ProtocolIE-ID ::= 287

 id-UEContextReferenceAtSource ProtocolIE-ID ::= 288

 id-LastVisitedPSCellList ProtocolIE-ID ::= 289

 id-IntersystemSONInformationRequest ProtocolIE-ID ::= 290

 id-IntersystemSONInformationReply ProtocolIE-ID ::= 291

 id-EnergySavingIndication ProtocolIE-ID ::= 292

 id-IntersystemResourceStatusUpdate ProtocolIE-ID ::= 293

 id-SuccessfulHandoverReportList ProtocolIE-ID ::= 294

 id-MBS-AreaSessionID ProtocolIE-ID ::= 295

 id-MBS-QoSFlowsToBeSetupList ProtocolIE-ID ::= 296

 id-MBS-QoSFlowsToBeSetupModList ProtocolIE-ID ::= 297

 id-MBS-ServiceArea ProtocolIE-ID ::= 298

 id-MBS-SessionID ProtocolIE-ID ::= 299

 id-MBS-DistributionReleaseRequestTransfer ProtocolIE-ID ::= 300

 id-MBS-DistributionSetupRequestTransfer ProtocolIE-ID ::= 301

 id-MBS-DistributionSetupResponseTransfer ProtocolIE-ID ::= 302

 id-MBS-DistributionSetupUnsuccessfulTransfer ProtocolIE-ID ::= 303

 id-MulticastSessionActivationRequestTransfer ProtocolIE-ID ::= 304

 id-MulticastSessionDeactivationRequestTransfer ProtocolIE-ID ::= 305

 id-MulticastSessionUpdateRequestTransfer ProtocolIE-ID ::= 306

 id-MulticastGroupPagingAreaList ProtocolIE-ID ::= 307

 id-MBS-SupportIndicator ProtocolIE-ID ::= 309

 id-MBSSessionFailedtoSetupList ProtocolIE-ID ::= 310

 id-MBSSessionFailedtoSetuporModifyList ProtocolIE-ID ::= 311

 id-MBSSessionSetupResponseList ProtocolIE-ID ::= 312

 id-MBSSessionSetuporModifyResponseList ProtocolIE-ID ::= 313

 id-MBSSessionSetupFailureTransfer ProtocolIE-ID ::= 314

 id-MBSSessionSetupRequestTransfer ProtocolIE-ID ::= 315

 id-MBSSessionSetupResponseTransfer ProtocolIE-ID ::= 316

 id-MBSSessionToReleaseList ProtocolIE-ID ::= 317

 id-MBSSessionSetupRequestList ProtocolIE-ID ::= 318

 id-MBSSessionSetuporModifyRequestList ProtocolIE-ID ::= 319

 id-MBS-ActiveSessionInformation-SourcetoTargetList ProtocolIE-ID ::= 323

 id-MBS-ActiveSessionInformation-TargettoSourceList ProtocolIE-ID ::= 324

 id-OnboardingSupport ProtocolIE-ID ::= 325

 id-TimeSyncAssistanceInfo ProtocolIE-ID ::= 326

 id-SurvivalTime ProtocolIE-ID ::= 327

 id-QMCConfigInfo ProtocolIE-ID ::= 328

 id-QMCDeactivation ProtocolIE-ID ::= 329

 id-PDUSessionPairID ProtocolIE-ID ::= 331

 id-NR-PagingeDRXInformation ProtocolIE-ID ::= 332

 id-RedCapIndication ProtocolIE-ID ::= 333

 id-TargetNSSAIInformation ProtocolIE-ID ::= 334

 id-UESliceMaximumBitRateList ProtocolIE-ID ::= 335

 id-M4ReportAmount ProtocolIE-ID ::= 336

 id-M5ReportAmount ProtocolIE-ID ::= 337

 id-M6ReportAmount ProtocolIE-ID ::= 338

 id-M7ReportAmount ProtocolIE-ID ::= 339

 id-IncludeBeamMeasurementsIndication ProtocolIE-ID ::= 340

 id-ExcessPacketDelayThresholdConfiguration ProtocolIE-ID ::= 341

 id-PagingCause ProtocolIE-ID ::= 342

 id-PagingCauseIndicationForVoiceService ProtocolIE-ID ::= 343

 id-PEIPSassistanceInformation ProtocolIE-ID ::= 344

 id-FiveG-ProSeAuthorized ProtocolIE-ID ::= 345

 id-FiveG-ProSeUEPC5AggregateMaximumBitRate ProtocolIE-ID ::= 346

 id-FiveG-ProSePC5QoSParameters ProtocolIE-ID ::= 347

 id-MBSSessionModificationFailureTransfer ProtocolIE-ID ::= 348

 id-MBSSessionModificationRequestTransfer ProtocolIE-ID ::= 349

 id-MBSSessionModificationResponseTransfer ProtocolIE-ID ::= 350

 id-MBS-QoSFlowToReleaseList ProtocolIE-ID ::= 351

 id-MBS-SessionTNLInfo5GC ProtocolIE-ID ::= 352

 id-TAINSAGSupportList ProtocolIE-ID ::= 353

 id-SourceNodeTNLAddrInfo ProtocolIE-ID ::= 354

 id-NGAPIESupportInformationRequestList ProtocolIE-ID ::= 355

 id-NGAPIESupportInformationResponseList ProtocolIE-ID ::= 356

 id-MBS-SessionFSAIDList ProtocolIE-ID ::= 357

 id-MBSSessionReleaseResponseTransfer ProtocolIE-ID ::= 358

 id-ManagementBasedMDTPLMNModificationList ProtocolIE-ID ::= 359

 id-EarlyMeasurement ProtocolIE-ID ::= 360

 id-BeamMeasurementsReportConfiguration ProtocolIE-ID ::= 361

 id-HFCNode-ID-new ProtocolIE-ID ::= 362

 id-GlobalCable-ID-new ProtocolIE-ID ::= 363

 id-TargetHomeENB-ID ProtocolIE-ID ::= 364

 id-HashedUEIdentityIndexValue ProtocolIE-ID ::= 365

 id-ExtendedMobilityInformation ProtocolIE-ID ::= 366

 id-NetworkControlledRepeaterAuthorized ProtocolIE-ID ::= 367

 id-AdditionalCancelledlocationReportingReferenceIDList ProtocolIE-ID ::= 368

 id-Selected-Target-SNPN-Identity ProtocolIE-ID ::= 369

 id-EquivalentSNPNsList ProtocolIE-ID ::= 370

 id-SelectedNID ProtocolIE-ID ::= 371

 id-SupportedUETypeList ProtocolIE-ID ::= 372

 id-AerialUEsubscriptionInformation ProtocolIE-ID ::= 373

 id-NR-A2X-ServicesAuthorized ProtocolIE-ID ::= 374

 id-LTE-A2X-ServicesAuthorized ProtocolIE-ID ::= 375

 id-NR-A2X-UE-PC5-AggregateMaximumBitRate ProtocolIE-ID ::= 376

 id-LTE-A2X-UE-PC5-AggregateMaximumBitRate ProtocolIE-ID ::= 377

 id-A2X-PC5-QoS-Parameters ProtocolIE-ID ::= 378

 id-FiveGProSeLayer2Multipath ProtocolIE-ID ::= 379

 id-FiveGProSeLayer2UEtoUERelay ProtocolIE-ID ::= 380

 id-FiveGProSeLayer2UEtoUERemote ProtocolIE-ID ::= 381

 id-CandidateRelayUEInformationList ProtocolIE-ID ::= 382

 id-SuccessfulPSCellChangeReportList ProtocolIE-ID ::= 383

 id-IntersystemMobilityFailureforVoiceFallback ProtocolIE-ID ::= 384

 id-TargetCellCRNTI ProtocolIE-ID ::= 385

 id-TimeSinceFailure ProtocolIE-ID ::= 386

 id-RANTimingSynchronisationStatusInfo ProtocolIE-ID ::= 387

 id-RAN-TSSRequestType ProtocolIE-ID ::= 388

 id-RAN-TSSScope ProtocolIE-ID ::= 389

 id-ClockQualityReportingControlInfo ProtocolIE-ID ::= 390

 id-RANfeedbacktype ProtocolIE-ID ::= 391

 id-QoSFlowTSCList ProtocolIE-ID ::= 392

 id-TSCTrafficCharacteristicsFeedback ProtocolIE-ID ::= 393

 id-DownlinkTLContainer ProtocolIE-ID ::= 394

 id-UplinkTLContainer ProtocolIE-ID ::= 395

 id-ANPacketDelayBudgetUL ProtocolIE-ID ::= 396

 id-QosFlowAdditionalInfoList ProtocolIE-ID ::= 397

 id-AssistanceInformationQoE-Meas ProtocolIE-ID ::= 398

 id-MBSCommServiceType ProtocolIE-ID ::= 399

 id-MobileIAB-Authorized ProtocolIE-ID ::= 400

 id-MobileIAB-MTUserLocationInformation ProtocolIE-ID ::= 401

 id-MobileIABNodeIndication ProtocolIE-ID ::= 402

 id-NoPDUSessionIndication ProtocolIE-ID ::= 403

 id-MobileIAB-Supported ProtocolIE-ID ::= 404

 id-CN-MT-CommunicationHandling ProtocolIE-ID ::= 405

 id-FiveGCAction ProtocolIE-ID ::= 406

 id-PagingPolicyDifferentiation ProtocolIE-ID ::= 407

 id-DL-Signalling ProtocolIE-ID ::= 408

 id-PNI-NPN-AreaScopeofMDT ProtocolIE-ID ::= 409

 id-PNI-NPNBasedMDT ProtocolIE-ID ::= 410

 id-SNPN-CellBasedMDT ProtocolIE-ID ::= 411

 id-SNPN-TAIBasedMDT ProtocolIE-ID ::= 412

 id-SNPN-BasedMDT ProtocolIE-ID ::= 413

 id-Partially-Allowed-NSSAI ProtocolIE-ID ::= 414

 id-AssociatedSessionID ProtocolIE-ID ::= 415

 id-MBS-AssistanceInformation ProtocolIE-ID ::= 416

 id-BroadcastTransportFailureTransfer ProtocolIE-ID ::= 417

 id-BroadcastTransportRequestTransfer ProtocolIE-ID ::= 418

 id-BroadcastTransportResponseTransfer ProtocolIE-ID ::= 419

 id-TimeBasedHandoverInformation ProtocolIE-ID ::= 420

 id-DLDiscarding ProtocolIE-ID ::= 421

 id-PDUsetQoSParameters ProtocolIE-ID ::= 422

 id-PDUSetbasedHandlingIndicator ProtocolIE-ID ::= 423

 id-N6JitterInformation ProtocolIE-ID ::= 424

 id-ECNMarkingorCongestionInformationReportingRequest ProtocolIE-ID ::= 425

 id-ECNMarkingorCongestionInformationReportingStatus ProtocolIE-ID ::= 426

 id-ERedCapIndication ProtocolIE-ID ::= 427

 id-XrDeviceWith2Rx ProtocolIE-ID ::= 428

 id-UserPlaneErrorIndicator ProtocolIE-ID ::= 429

 id-SLPositioningRangingServiceInfo ProtocolIE-ID ::= 430

 id-PDUSessionListMTCommHReq ProtocolIE-ID ::= 431

 id-MaximumDataBurstVolume ProtocolIE-ID ::= 432

 id-MN-only-MDT-collection ProtocolIE-ID ::= 433

 id-MBS-NGUFailureIndication ProtocolIE-ID ::= 434

 id-UserPlaneFailureIndication ProtocolIE-ID ::= 435

 id-UserPlaneFailureIndicationReport ProtocolIE-ID ::= 436

 id-SourceSN-to-TargetSN-QMCInfo ProtocolIE-ID ::= 437

 id-QoERVQoEReportingPaths ProtocolIE-ID ::= 438 id-AMF-UE-NGAP-ID2 ProtocolIE-ID ::= xxx

 id-GUAMIList ProtocolIE-ID ::= xxx

 id-GW-Context-Release-Indication ProtocolIE-ID ::= xxx

 id-SourceAMF-GUAMI ProtocolIE-ID ::= xxx

 id-RequestedSNSSAI ProtocolIE-ID ::= xxx

END

-- ASN1STOP

*End of Change*