**3GPP TSG-RAN WG3 Meeting #115-e R3-222942**

**Feb.21-Mar.03. 2022, E-meeting**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.413** | **CR** | **0615** | **rev** | **8** | **Current version:** | **16.8.0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **X** | Core Network | **X** |

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|  | | | | | | | | | | |
| ***Title:*** | CR to 38.413 on QoE measurement configuration | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, China Mobile, China Unicom, Ericsson, Samsung, CATT, ZTE | | | | | | | | | |
| ***Source to TSG:*** | R3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_QoE-Core | | | | |  | ***Date:*** | | | 2022-02-21 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | To introduce the support of NR QoE measurement over NG interface | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | To introduce the support of (de)activation of NR QoE measurement procedure.  To add the support of NR QoE measurement configuration, including :  - introduce Application layer measurement conifguration including, the radio related measurement results required, the slice info, service type, etc.  - introduce the application layer measurement release in the deactivate trace message.  To add RAN visible QoE metrics over NG  To add MDT alignment related configuration  To reflect the support of QoE measurement during mobility | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | NR QoE measurement is not supported | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 8.3.1,8.4.2,8.11.1,8.11.3,9.2.10.3,9.3.1.14,9.3.1.xx1(new), 9.3.1.xx2(new), 9.3.1.xx3(new), 9.3.1.xxx5 (new) , 9.3.1.xxx7 (new), 9.4.4, 9,4.5, 9.4.6, 9.4.7 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 38.423 CR 0639  TS 38.473CR0826 | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | Rev#3 (R3-214380)   * This version was approved as base line CR in RAN3#113e   Rev#4 (R3-214633)   * Submit to the RAN3-114e meeting, rebase the v16.7.0 of the latest spec.   Rev#5 (R3-216279)   * To capture the agreements achieved in RAN3#114e, merging the TP agreed in R3-216202   Rev#6 (R3-220080)   * Submit to the RAN3-114bis emeeting, rebase the v16.8.0 of the latest spec.   Rev#7 (R3-221595)   * To merge TP in R3-221461 agreed in RAN3#114bis-e, with the addition of ASN.1   Rev#8 (R3-222942)   * To merge TPs in R3-222227 and R3-222891 agreed in RAN3#115 emeeting. | | | | | | | | |

First change

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 38.401: "NG-RAN; Architecture description".

[3] 3GPP TS 38.410: "NG-RAN; NG general aspects and principles".

[4] ITU-T Recommendation X.691 (07/2002): "Information technology – ASN.1 encoding rules: Specification of Packed Encoding Rules (PER)".

[5] ITU-T Recommendation X.680 (07/2002): "Information technology – Abstract Syntax Notation One (ASN.1): Specification of basic notation".

[6] ITU-T Recommendation X.681 (07/2002): "Information technology – Abstract Syntax Notation One (ASN.1): Information object specification".

[7] 3GPP TR 25.921 (version.7.0.0): "Guidelines and principles for protocol description and error handling".

[8] 3GPP TS 38.300: "NR; NR and NG-RAN Overall Description; Stage 2".

[9] 3GPP TS 23.501: "System Architecture for the 5G System; Stage 2".

[10] 3GPP TS 23.502: "Procedures for the 5G System; Stage 2".

[11] 3GPP TS 32.422: "Trace control and configuration management".

[12] 3GPP TS 38.304: "NR; User Equipment (UE) procedures in idle mode and in RRC inactive state".

[13] 3GPP TS 33.501: "Security architecture and procedures for 5G System".

[14] 3GPP TS 38.414: "NG-RAN; NG data transport".

[15] 3GPP TS 29.281: "General Packet Radio System (GPRS); Tunnelling Protocol User Plane (GTPv1-U)".

[16] 3GPP TS 36.413: "Evolved Universal Terrestrial Radio Access Network (E-UTRAN); S1 Application Protocol (S1AP)".

[17] 3GPP TS 36.300: "Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Universal Terrestrial Radio Access Network (E-UTRAN); Overall description; Stage 2".

[18] 3GPP TS 38.331: "NG-RAN; Radio Resource Control (RRC) Protocol Specification".

[19] 3GPP TS 38.455: "NG-RAN; NR Positioning Protocol A (NRPPa)".

[20] 3GPP TS 23.007: "Technical Specification Group Core Network Terminals; Restoration procedures".

[21] 3GPP TS 36.331: "Evolved Universal Terrestrial Radio Access (E-UTRA) Radio Resource Control (RRC); Protocol specification".

[22] 3GPP TS 23.041: "Technical realization of Cell Broadcast Service (CBS)".

[23] 3GPP TS 23.003: "Numbering, addressing and identification".

[24] 3GPP TS 38.423: "NG-RAN; Xn Application Protocol (XnAP)".

[25] IETF RFC 5905 (2010-06): "Network Time Protocol Version 4: Protocol and Algorithms Specification".

[26] 3GPP TS 24.501: "Non-Access-Stratum (NAS) protocol for 5G System (5GS); Stage 3".

[27] 3GPP TS 33.401: "3GPP System Architecture Evolution (SAE); Security architecture".

[28] 3GPP TS 25.413: "UTRAN Iu interface RANAP signalling".

[29] 3GPP TS 36.304: "Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) procedures in idle mode".

[30] 3GPP TS 29.531: "5G System; Network Slice Selection Services; Stage 3".

[31] 3GPP TS 23.216: "Single Radio Voice Call Continuity (SRVCC); Stage 2".

[32] 3GPP TS 37.340: " Evolved Universal Terrestrial Radio Access (E-UTRA) and NR; Multi-connectivity; Stage 2".

[33] 3GPP TS 23.287: "Architecture enhancements for 5G System (5GS) to support Vehicle-to-Everything (V2X) services".

[34] 3GPP TS 23.316: "Wireless and wireline convergence access support for the 5G System (5GS)".

[35] 3GPP TS 29.571: "5G System; Common Data Types for Service Based Interfaces; Stage 3".

[36] 3GPP TS 29.510: "5G System; Network Function Repository Services; Stage 3".

[37] CableLabs WR-TR-5WWC-ARCH: "5G Wireless Wireline Converged Core Architecture".

[38] 3GPP TS 36.401: "E-UTRAN Architecture Description".

[39] 3GPP TS 38.104: "NR; Base Station (BS) radio transmission and reception".

[40] 3GPP TS 36.423: "Evolved Universal Terrestrial Radio Access Network (E-UTRAN); X2 Application Protocol (X2AP) ".

[41] 3GPP TS 37.320: "Universal Terrestrial Radio Access (UTRA), Evolved Universal Terrestrial Radio Access (E-UTRA) and NR; Radio measurement collection for Minimization of Drive Tests (MDT); Overall description; Stage 2".

[42] 3GPP TS 36.306: "Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) radio access capabilities".

[43] 3GPP TS 29.244: "Interface between the Control Plane and the User Plane Nodes; Stage 3".

[X] 3GPP TS 28.405: "Telecommunication management; Quality of Experience (QoE) measurement collection; Control and configuration".

[XX] 3GPP TS 26.247: "Transparent end-to-end Packet-switched Streaming Service (PSS); Progressive Download and Dynamic Adaptive Streaming over HTTP (3GP-DASH)".

Next change

8.3.1 Initial Context Setup

8.3.1.1 General

The purpose of the Initial Context Setup procedure is to establish the necessary overall initial UE context at the NG-RAN node, when required, including PDU session context, the Security Key, Mobility Restriction List, UE Radio Capability and UE Security Capabilities, etc. The AMF may initiate the Initial Context Setup procedure if a UE-associated logical NG-connection exists for the UE or if the AMF has received the *RAN UE NGAP ID* IE in an INITIAL UE MESSAGE message or if the NG-RAN node has already initiated a UE-associated logical NG-connection by sending an INITIAL UE MESSAGE message via another NG interface instance. The procedure uses UE-associated signalling.

For signalling only connections and if the *UE Context Request* IE is not received in the Initial UE Message, the AMF may be configured to trigger the procedure for all NAS procedures or on a per NAS procedure basis depending on operator’s configuration.

8.3.1.2 Successful Operation

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**Figure 8.3.1.2-1: Initial context setup: successful operation**

In case of the establishment of a PDU session the 5GC shall be prepared to receive user data before the INITIAL CONTEXT SETUP RESPONSE message has been received by the AMF. If no UE-associated logical NG-connection exists, the UE-associated logical NG-connection shall be established at reception of the INITIAL CONTEXT SETUP REQUEST message.

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If the *Trace Activation* IE is included in the INITIAL CONTEXT SETUP REQUEST message the NG-RAN node shall, if supported, initiate the requested trace function as described in TS 32.422 [11]. In particular, the NG-RAN node shall, if supported:

- if the *Trace Activation* IE includes the *MDT Activation* IE set to "Immediate MDT and Trace", initiate the requested trace session and MDT session as described in TS 32.422 [11];

- if the *Trace Activation* IE includes the *MDT Activation* IE set to "Immediate MDT Only", "Logged MDT only", initiate the requested MDT session as described in TS 32.422 [11] and the NG-RAN node shall ignore the *Interfaces To Trace* IE and the *Trace Depth* IE;

- if the *Trace Activation* IE includes the *MDT Location Information* IE within the *MDT Configuration* IE, store this information and take it into account in the requested MDT session;

- if the *Trace Activation* IE includes the *Signalling Based MDT PLMN List* IE within the *MDT Configuration* IE, the NG-RAN node may use it to propagate the MDT Configuration as described in TS 37.320 [41].

- if the *Trace Activation* IE includes the *Bluetooth Measurement Configuration* IE within the *MDT Configuration* IE, take it into account for MDT Configuration as described in TS 37.320 [41].

- if the *Trace Activation* IE includes the *WLAN Measurement Configuration* IE within the *MDT Configuration* IE, take it into account for MDT Configuration as described in TS 37.320 [41].

- if the *Trace Activation* IE includes the *Sensor Measurement Configuration* IE within the *MDT Configuration* IE, take it into account for MDT Configuration as described in TS 37.320 [41].

- if the *Trace Activation* IE includes the *MDT Configuration* IE and if the NG-RAN node is a gNB at least the *MDT Configuration-NR* IE shall be present, while if the NG-RAN node is an ng-eNB at least the *MDT Configuration-EUTRA* IE shall be present.

If the *UE Security Capabilities* IE included in the INITIAL CONTEXT SETUP REQUEST message only contains the EIA0 or NIA0 algorithm as defined in TS 33.501 [13] and if the EIA0 or NIA0 algorithm is defined in the configured list of allowed integrity protection algorithms in the NG-RAN node (TS 33.501 [13]), the NG-RAN node shall take it into use and ignore the keys received in the *Security Key* IE.

If the *QMC Configuration Information* IE is included in the INITIAL CONTEXT SETUP REQUEST message, the NG-RAN node shall, if supported, use it for QoE management, as described in TS 38.300 [8].

Next change

### 8.3.4 UE Context Modification

#### 8.3.4.1 General

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

#### 8.3.4.2 Successful Operation



Figure 8.3.4.2-1: UE context modification: successful operation

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

- if supported, store the received IAB Authorization information in the UE context.

If the *Security Key* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node shall store it and perform AS key re-keying according to TS 33.501 [13].

If the *UE Security Capabilities* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node shall store them and take them into use together with the received keys according to TS 33.501 [13].

If the *Index to RAT/Frequency Selection Priority* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node shall, if supported, use it as defined in TS 23.501 [9].

If the *RAN Paging Priority* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node may use it to determine a priority for paging the UE in RRC\_INACTIVE state.

If the *UE Aggregate Maximum Bit Rate* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node shall

- replace the previously provided UE Aggregate Maximum Bit Rate by the received UE Aggregate Maximum Bit Rate in the UE context;

- use the received UE Aggregate Maximum Bit Rate for all Non-GBR QoS flows for the concerned UE as specified in TS 23.501 [9].

If the *Core Network Assistance Information for RRC INACTIVE* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node shall, if supported, replace the previously provided Core Network Assistance Information for RRC INACTIVE and use it for the RRC\_INACTIVE state decision and RNA configuration for the UE and RAN paging if any for a UE in RRC\_INACTIVE state, as specified in TS 38.300 [8]. If the *MICO All PLMN* IE is included in the *Core Network Assistance Information* *for RRC INACTIVE* IE the NG-RAN node shall, if supported, consider that the registration area for the UE is the full PLMN and ignore the *TAI List for RRC Inactive* IE.

If the *CN Assisted RAN Parameters Tuning* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node may use it as described in TS 23.501 [9].

If the *RRC Inactive Transition Report Request* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node shall, if supported, store this information in the UE context and report to the AMF the *User Location Information* IE and the *RRC State* IE in the UE CONTEXT MODIFICATION RESPONSE message.

If the *RRC Inactive Transition Report Request* IE is included in the UE CONTEXT MODIFICATION REQUEST message and set to "cancel report", the NG-RAN node shall, if supported, stop reporting to the AMF the RRC state of the UE.

The NG-RAN node shall report, in the UE CONTEXT MODIFICATION RESPONSE message to the AMF, the successful update of the UE context.

If the *Emergency Fallback Indicator* IE is included in the UE CONTEXT MODIFICATION REQUEST message, it indicates that the concerned UE context is subject to emergency service fallback as described in TS 23.501 [9] and the NG-RAN node may, if supported, take the appropriate mobility actions taking into account the *Emergency Service Target CN* IE if provided.

If the *New AMF UE NGAP ID* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node shall use the received value for future signalling with the AMF.

If the *New GUAMI* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node shall replace the previously stored GUAMI as specified in TS 23.501 [9].

If the *SRVCC Operation Possible* IE is included in UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node shall, if supported, store the content of the received *SRVCC Operation Possible* IE in the UE context and use it as defined in TS 23.216 [31].

If the *NR V2X Services Authorized* IE is contained in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node shall, if supported, update its V2X services authorization information for the UE accordingly. If the *NR V2X Services Authorized* IE includes one or more IEs set to "not authorized", the NG-RAN node shall, if supported, initiate actions to ensure that the UE is no longer accessing the relevant service(s).

If the *LTE V2X Services Authorized* IE is contained in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node shall, if supported, update its V2X services authorization information for the UE accordingly. If the *LTE V2X Services Authorized* IE includes one or more IEs set to "not authorized", the NG-RAN node shall, if supported, initiate actions to ensure that the UE is no longer accessing the relevant service(s).

If the *NR UE Sidelink Aggregate Maximum Bit Rate* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node shall, if supported:

- replace the previously provided NR UE Sidelink Aggregate Maximum Bit Rate, if available in the UE context, with the received value;

* use the received value for the concerned UE’s sidelink communication in network scheduled mode for NR V2X services.

If the *LTE UE Sidelink Aggregate Maximum Bit Rate* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node shall, if supported:

- replace the previously provided LTE UE Sidelink Aggregate Maximum Bit Rate, if available in the UE context, with the received value;

- use the received value for the concerned UE’s sidelink communication in network scheduled mode for LTE V2X services.

If the *PC5 QoS Parameters* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node shall, if supported, use it as defined in TS 23.287 [33].

If the UE CONTEXT MODIFICATION REQUEST message contains the *UE Radio Capability ID* IE, the NG-RAN node shall, if supported, use it as specified in TS 23.501 [9] and TS 23.502 [10].

If the *QMC Configuration Information* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node shall, if supported, use it for QoE management, as described in TS 38.300 [8].

If the *QMC Deactivation* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node shall, if supported, deactivate the QMC configurations therein.

Next change

## 8.4 UE Mobility Management Procedures

### 8.4.1 Handover Preparation

#### 8.4.1.1 General

The purpose of the Handover Preparation procedure is to request the preparation of resources at the target side via the 5GC. There is only one Handover Preparation procedure ongoing at the same time for a certain UE. The procedure uses UE-associated signalling.

#### 8.4.1.2 Successful Operation



Figure 8.4.1.2-1: Handover preparation: successful operation

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

If the *DAPS Request Information* IE is included for a DRB in the *Source NG-RAN Node to Target NG-RAN Node Transparent Container* IE within the HANDOVER REQUIRED message, it indicates that the request concerns a DAPS Handover for that DRB, as described in TS 38.300 [8].

Next change

8.4.2 Handover Resource Allocation

8.4.2.1 General

The purpose of the Handover Resource Allocation procedure is to reserve resources at the target NG-RAN node for the handover of a UE. The procedure uses UE-associated signalling.

8.4.2.2 Successful Operation

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**Figure 8.4.2.2-1: Handover resource allocation: successful operation**

The AMF initiates the procedure by sending the HANDOVER REQUEST message to the target NG-RAN node.

If the *Masked IMEISV* IE is contained in the HANDOVER REQUEST message the target NG-RAN node shall, if supported, use it to determine the characteristics of the UE for subsequent handling.

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If the *Trace Activation* IE is included in the HANDOVER REQUEST message the target NG-RAN node shall, if supported, initiate the requested trace function as described in TS 32.422 [11]. In particular, the NG-RAN node shall, if supported:

- if the *Trace Activation* IE includes the *MDT Activation* IE set to "Immediate MDT and Trace", initiate the requested trace session and MDT session as described in TS 32.422 [11];

- if the *Trace Activation* IE includes the *MDT Activation* IE set to "Immediate MDT Only", "Logged MDT only", initiate the requested MDT session as described in TS 32.422 [11] and the target NG-RAN node shall ignore the *Interfaces To Trace* IE and the *Trace Depth* IE;

- if the *Trace Activation* IE includes the *MDT Location Information* IE within the *MDT Configuration* IE, store this information and take it into account in the requested MDT session;

- if the *Trace Activation* IE includes the *Signalling Based MDT PLMN List* IE within the *MDT Configuration* IE, the NG-RAN node may use it to propagate the MDT Configuration as described in TS 37.320 [41].

- if the *Trace Activation* IE includes the *Bluetooth Measurement Configuration* IE within the *MDT Configuration* IE, take it into account for MDT Configuration as described in TS 37.320 [41].

- if the *Trace Activation* IE includes the *WLAN Measurement Configuration* IE within the *MDT Configuration* IE, take it into account for MDT Configuration as described in TS 37.320 [41].

- if the *Trace Activation* IE includes the *Sensor Measurement Configuration* IE within the *MDT Configuration* IE, take it into account for MDT Configuration as described in TS 37.320 [41].

- if the *Trace Activation* IE includes the *MDT Configuration* IE and if the NG-RAN node is a gNB at least the *MDT Configuration-NR* IE shall be present, while if the NG-RAN node is an ng-eNB at least the *MDT Configuration-EUTRA* IE shall be present.

If the *Location Reporting Request Type* IE is included in the HANDOVER REQUEST message, the target NG-RAN node should perform the requested location reporting functionality for the UE as described in subclause 8.12.

If the *Core Network Assistance Information for RRC INACTIVE* IE is included in the HANDOVER REQUEST message, the target NG-RAN node shall, if supported, store this information in the UE context and use it for the RRC\_INACTIVE state decision and RNA configuration for the UE and RAN paging if any for a UE in RRC\_INACTIVE state, as specified in TS 38.300 [8]. If the *MICO All PLMN* IE is included in the *Core Network Assistance Information* *for RRC INACTIVE* IE the NG-RAN node shall, if supported, consider that the registration area for the UE is the full PLMN and ignore the *TAI List for RRC Inactive* IE.

If the *CN Assisted RAN Parameters Tuning* IE is included in the HANDOVER REQUEST message, the NG-RAN node may use it as described in TS 23.501 [9].

If the *New Security Context Indicator* IE is included in the HANDOVER REQUEST message, the target NG-RAN node shall use the information as specified in TS 33.501 [13].

Next change

8.11.1 Trace Start

8.11.1.1 General

The purpose of the Trace Start procedure is to allow the AMF to request the NG-RAN node to initiate a trace session for a UE. The procedure uses UE-associated signalling. If no UE-associated logical NG-connection exists, the UE-associated logical NG-connection shall be established as part of the procedure.

8.11.1.2 Successful Operation

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**Figure 8.11.1.2-1: Trace start**

The AMF initiates the procedure by sending a TRACE START message. Upon reception of the TRACE START message, the NG-RAN node shall initiate the requested trace session as described in TS 32.422 [11].

If the *Trace Activation* IE is included in the TRACE START message which includes the *MDT Activation* IE set to "Immediate MDT and Trace", the NG-RAN node shall, if supported, initiate the requested trace session and MDT session as described in TS 32.422 [11].

If the *Trace Activation* IE is included in the TRACE START message which includes the *MDT Activation* IE set to "Immediate MDT Only", "Logged MDT only", the NG-RAN node shall, if supported, initiate the requested MDT session as described in TS 32.422 [11] and the NG-RAN node shall ignore the *Interfaces To Trace* IE and the *Trace Depth* IE.

If the *Trace Activation* IE includes the *MDT Location Information* IE within the *MDT Configuration* IE, the NG-RAN node shall, if supported, store this information and take it into account in the requested MDT session.

If the *Trace Activation* IE is included in the TRACE START message which includes the *MDT Activation* IE set to "Immediate MDT Only", "Logged MDT only" and if the *Signalling Based MDT PLMN List* IE is included in the *MDT Configuration* IE, the NG-RAN node may use it to propagate the MDT Configuration as described in TS 37.320 [41].

If the *Trace Activation* IE includes the *Bluetooth Measurement Configuration* IE within the *MDT Configuration* IE, the NG-RAN node shall, if supported, take it into account for MDT Configuration as described in TS 37.320 [41].

If the *Trace Activation* IE includes the *WLAN Measurement Configuration* IE within the *MDT Configuration* IE, the NG-RAN node shall, if supported, take it into account for MDT Configuration as described in TS 37.320 [41].

If the *Trace Activation* IE includes the *Sensor Measurement Configuration* IE within the *MDT Configuration* IE, the NG-RAN node shall, if supported, take it into account for MDT Configuration as described in TS 37.320 [41].

If the *Trace Activation* IE includes the *MDT Configuration* IE and if the NG-RAN node is a gNB at least the *MDT Configuration-NR* IE shall be present, while if the NG-RAN node is an ng-eNB at least the *MDT Configuration-EUTRA* IE shall be present.

**Interactions with other procedures:**

If the NG-RAN node is not able to initiate the trace session due to ongoing handover of the UE to another NG-RAN node, the NG-RAN node shall initiate a Trace Failure Indication procedure with the appropriate cause value.

Next change

8.11.3 Deactivate Trace

8.11.3.1 General

The purpose of the Deactivate Trace procedure is to allow the AMF to request the NG-RAN node to stop the trace session for the indicated trace reference. The procedure uses UE-associated signalling.

8.11.3.2 Successful Operation

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**Figure 8.11.3.2-1: Deactivate trace**

The AMF initiates the procedure by sending a DEACTIVATE TRACE message to the NG-RAN node as described in TS 32.422 [11]. Upon reception of the DEACTIVATE TRACE message, the NG-RAN node shall stop the trace session for the indicated trace reference in the *NG-RAN Trace ID* IE.

**Interactions with other procedures:**

If the NG-RAN node is not able to stop the trace session due to ongoing handover of the UE to another NG-RAN node, the NG-RAN node shall initiate a Trace Failure Indication procedure with the appropriate cause value.

Next change

9.2.10.3 DEACTIVATE TRACE

This message is sent by the AMF to deactivate a trace session.

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 UE NGAP ID | M |  | 9.3.3.1 |  | YES | reject |
| RAN UE NGAP ID | M |  | 9.3.3.2 |  | YES | reject |
| NG-RAN Trace ID | M |  | OCTET STRING (SIZE(8)) | As per NG-RAN Trace ID in *Trace Activation* IE | YES | ignore |

Next change

9.3.1.14 Trace Activation

This IE defines parameters related to a trace session activation.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** | **Criticality** | **Assigned Criticality** |
| NG-RAN Trace ID | M |  | OCTET STRING (SIZE(8)) | This IE is composed of the following:  Trace Reference defined in TS 32.422 [11] (leftmost 6 octets, with PLMN information encoded as in 9.3.3.1), and  Trace Recording Session Reference defined in TS 32.422 [11] (last 2 octets). | - |  |
| Interfaces to Trace | M |  | BIT STRING (SIZE(8)) | Each position in the bitmap represents an NG-RAN node interface:  first bit = NG-C, second bit = Xn-C, third bit = Uu, fourth bit = F1-C, fifth bit = E1:  other bits reserved for future use. Value '1' indicates 'should be traced'. Value '0' indicates 'should not be traced'. | - |  |
| Trace Depth | M |  | ENUMERATED (minimum, medium, maximum, minimumWithoutVendorSpecificExtension,  mediumWithoutVendorSpecificExtension,  maximumWithoutVendorSpecificExtension, …) | Defined in TS 32.422 [11]. | - |  |
| Trace Collection Entity IP Address | M |  | Transport Layer Address  9.3.2.4 | For File based Reporting. Defined in TS 32.422 [11].  This IE is ignored if the *Trace Collection Entity URI* IE is present. | - |  |
| MDT Configuration | O |  | 9.3.1.167 |  | YES | ignore |
| Trace Collection Entity URI | O |  | URI  9.3.2.14 | For Streaming based Reporting.  Defined in TS 32.422 [11]. | YES | ignore |

Next change

### 9.2.2 UE Context Management Messages

#### 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 Name  9.3.3.21 |  | 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-PDU  9.3.3.4 |  | - |  |
| >>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 Behaviour  9.3.1.94 | 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 List  9.3.1.168 |  | YES | ignore |
| UE Radio Capability ID | O |  | 9.3.1.142 |  | YES | reject |
| QMC Configuration Information | O |  | 9.3.1.xx2 |  | YES | ignore |

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

|  |  |
| --- | --- |
| Condition | Explanation |
| ifPDUsessionResourceSetup | This IE shall be present if the *PDU Session Resource Setup List* IE is present. |

Next change

#### 9.2.2.7 UE CONTEXT MODIFICATION REQUEST

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

Direction: AMF → NG-RAN node

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.3.1.1 |  | YES | reject |
| AMF UE NGAP ID | M |  | 9.3.3.1 |  | YES | reject |
| RAN UE NGAP ID | M |  | 9.3.3.2 |  | YES | reject |
| RAN Paging Priority | O |  | 9.3.3.15 |  | YES | ignore |
| Security Key | O |  | 9.3.1.87 |  | YES | reject |
| Index to RAT/Frequency Selection Priority | O |  | 9.3.1.61 |  | YES | ignore |
| UE Aggregate Maximum Bit Rate | O |  | 9.3.1.58 |  | YES | ignore |
| UE Security Capabilities | O |  | 9.3.1.86 |  | YES | reject |
| Core Network Assistance Information for RRC INACTIVE | O |  | 9.3.1.15 |  | YES | ignore |
| Emergency Fallback Indicator | O |  | 9.3.1.26 |  | YES | reject |
| New AMF UE NGAP ID | O |  | AMF UE NGAP ID  9.3.3.1 |  | YES | reject |
| RRC Inactive Transition Report Request | O |  | 9.3.1.91 |  | YES | ignore |
| New GUAMI | O |  | GUAMI  9.3.3.3 |  | YES | reject |
| CN Assisted RAN Parameters Tuning | O |  | 9.3.1.119 |  | YES | ignore |
| SRVCC Operation Possible | O |  | 9.3.1.128 |  | YES | ignore |
| IAB Authorized | O |  | 9.3.1.129 |  | YES | ignore |
| NR V2X Services Authorized | O |  | 9.3.1.146 |  | YES | ignore |
| LTE V2X Services Authorized | O |  | 9.3.1.147 |  | YES | ignore |
| NR UE Sidelink Aggregate Maximum Bit Rate | O |  | 9.3.1.148 | This IE applies only if the UE is authorized for NR V2X services. | YES | ignore |
| LTE UE Sidelink Aggregate Maximum Bit Rate | O |  | 9.3.1.149 | This IE applies only if the UE is authorized for LTE V2X services. | YES | ignore |
| PC5 QoS Parameters | O |  | 9.3.1.150 | This IE applies only if the UE is authorized for NR V2X services. | YES | ignore |
| UE Radio Capability ID | O |  | 9.3.1.142 |  | YES | reject |
| RG Level Wireline Access Characteristics | O |  | OCTET STRING | Specified in TS 23. 316 [34]. Indicates the wireline access technology specific QoS information corresponding to a specific wireline access subscription. | YES | ignore |
| QMC Configuration Information | O |  | 9.3.1.xx2 |  | YES | ignore |
| QMC Deactivation | O |  | 9.3.1.xx1 |  | YES | ignore |

Next change

#### 9.2.3.1 HANDOVER REQUIRED

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

Direction: NG-RAN node → AMF.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.3.1.1 |  | YES | reject |
| AMF UE NGAP ID | M |  | 9.3.3.1 |  | YES | reject |
| RAN UE NGAP ID | M |  | 9.3.3.2 |  | YES | reject |
| Handover Type | M |  | 9.3.1.22 |  | YES | reject |
| Cause | M |  | 9.3.1.2 |  | YES | ignore |
| Target ID | M |  | 9.3.1.25 |  | YES | reject |
| Direct Forwarding Path Availability | O |  | 9.3.1.64 |  | YES | ignore |
| **PDU Session Resource List** |  | *1* |  |  | YES | reject |
| **>PDU Session Resource Item** |  | *1..<maxnoofPDUSessions>* |  |  | - |  |
| >>PDU Session ID | M |  | 9.3.1.50 |  | - |  |
| >>Handover Required Transfer | M |  | OCTET STRING | Containing the *Handover Required Transfer* IE specified in subclause 9.3.4.14. | - |  |
| Source to Target Transparent Container | M |  | 9.3.1.20 |  | YES | Reject |

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

Next change

#### 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-PDU  9.3.3.4 | 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 Behaviour  9.3.1.94 | 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 List  9.3.1.168 |  | YES | ignore |
| UE Radio Capability ID | O |  | 9.3.1.142 |  | YES | reject |
| Extended Connected Time | O |  | 9.3.3.31 |  | YES | ignore |

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

Next change

9.2.13.1 UE RADIO CAPABILITY INFO INDICATION

This message is sent by the NG-RAN node to provide UE radio capability related information to the AMF.

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 |
| UE Radio Capability | M |  | 9.3.1.74 |  | YES | ignore |
| UE Radio Capability for Paging | O |  | 9.3.1.68 |  | YES | ignore |
| UE Radio Capability – E-UTRA Format | O |  | 9.3.1.74a |  | YES | ignore |
| UE QMC Capability | O |  | 9.3.1.xx7 |  | YES | ignore |

Next change

9.3.1.xx1 QMC Deactivation

This IE indicates the QMC configurations to be deactivated.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** |
| QoE Reference List |  | *1 ..* < *maxnoofUEAppLayerMeas* > |  |  |
| >QoE Reference | M |  | OCTET STRING (SIZE(6)) | *QoE Reference*, as defined in clause 5.2 of TS 28.405 [x]. It consists of MCC+MNC+QMC ID, where the MCC and MNC are coming with the trace activation request from the management system to identify one PLMN containing the management system, and QMC ID is a 3-bytes Octet String. |

|  |  |
| --- | --- |
| **Range bound** | **Explanation** |
| maxnoofUEAppLayerMeas | Maximum no. of UE application layer measurement. Value is 16. |

9.3.1.xx2 QMC Configuration Information

This IE contains the configuration information for the QoE Measurement Collection (QMC) functionality.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** |
| **UE Application Layer Measurement Information List** |  | *1* |  |  |
| >**UE Application Layer Measurement Information Item** |  | *1..<* *maxnoofUEAppLayerMeas >* |  |  |
| >>UE Application Layer Measurement Information | M |  | 9.3.1.xx3 |  |

|  |  |
| --- | --- |
| **Range bound** | **Explanation** |
| maxnoofUEAppLayerMeas | Maximum no. of UE application layer measurements. Value is 16. |

9.3.1.xx3 UE Application Layer Measurement Information

This IE defines configuration information for the QoE Measurement Collection (QMC) functionality.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** |
| QoE Reference | M |  | OCTET STRING (SIZE(6)) | *QoE Reference*, as defined in clause 5.2 of TS 28.405 [x]. It consists of MCC+MNC+QMC ID, where the MCC and MNC are coming with the trace activation request from the management system to identify one PLMN containing the management system, and QMC ID is a 3-bytes Octet String. |
| Service Type | M |  | ENUMERATED  (QMC for DASH streaming, QMC for MTSI, QMC for VR, ...) | This IE indicates the service type of QoE measurements. |
| Container for Application Layer Measurement Configuration | O |  | OCTET STRING (SIZE(1.. 8000)) | Contains application layer measurement configuration, see Annex L in 26.247 [xx]. Present in case of initial QoE configuration, and shall be included in *Source to Target Transparent Container* for signalling-based QMC during NG-based handover IE. |
| Measurement Configuration Application Layer ID | O |  | INTEGER (0..61, …) | This IE is present only when the message containing it is NG-based handover related. Otherwise, this IE is not needed.  The IE indicates the identity of the application layer measurement configuration, as defined in TS 38.331 [18]. |
| CHOICE *Area Scope of QMC* | M |  |  |  |
| >*Cell based* |  |  |  |  |
| >>**Cell ID List for QMC** |  | *1 .. <maxnoofCellIDforQMC>* |  |  |
| >>>NG-RAN CGI | M |  | 9.3.1.73 |  |
| >*TA based* |  |  |  |  |
| >>**TA List for QMC** |  | *1 .. <maxnoofTAforQMC>* |  |  |
| >>>TAC | M |  | 9.3.3.10 | The TAI is derived using the current serving PLMN. |
| >*TAI based* |  |  |  |  |
| >>**TAI List for QMC** |  | *1 .. <maxnoofTAforQMC>* |  |  |
| >>>TAI | M |  | 9.3.3.11 |  |
| >*PLMN area based* |  |  |  |  |
| >>**PLMN List for QMC** |  | *1 .. <maxnoofPLMNforQMC>* |  |  |
| >>>PLMN Identity | M |  | 9.3.3.5 |  |
| Measurement Collection Entity IP Address | M |  | Transport Layer Address  9.3.2.4 | The IP address of the entity receiving the QoE measurement report. |
| Slice Support Listfor QMC |  | *0..1* |  |  |
| >Slice Support QMC Item |  | *1 .. <* *maxnoofSliceQMC >* |  |  |
| >>S-NSSAI | M |  | 9.3.1.24 |  |
| CHOICE *MDT Alignment Information* | O |  |  | Indicates the MDT measurements with which alignment is required. |
| >*S-based MDT* |  |  |  |  |
| >>NG-RAN Trace ID | M |  | OCTET STRING (SIZE(8)) | This IE is composed of the following: Trace Reference defined in TS 32.422 [11] (leftmost 6 octets, with PLMN information encoded as in 9.3.3.1), and Trace Recording Session Reference defined in TS 32.422 [11] (last 2 octets). |
| Available RAN Visible QoE Metrics | O |  | 9.3.1.xx5 | Present in case of initial QoE configuration and in case of NG-based handover for signalling-based QoE measurement. |
| QoE Measurement Status | O |  | ENUMERATED  (ongoing, …) | Indicates whether the QoE measurement has been started. Present in case of NG-based handover for signalling- based QMC measurement. |

|  |  |
| --- | --- |
| **Range bound** | **Explanation** |
| maxnoofCellIDforQMC | Maximum no. of Cell ID subject for QMC scope. Value is 32. |
| maxnoofTAforQMC | Maximum no. of TA subject for QMC scope. Value is 8. |
| maxnoofPLMNforQMC | Maximum no. of PLMNs in the PLMN list for QMC scope. Value is 16. |
| maxnoofSliceQMC | Maximum no. of S-NSSAIs in the S-NSSAI list for QMC scope. Value is 16. |

9.3.1.xx5 Available RAN Visible QoE Metrics

This IE defines which RAN visible QoE metrics can be configured by the NG-RAN in the RAN visible QoE measurement.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** |
| Buffer Level Indication | O |  | ENUMERATED  (true, ...) | The IE defines whether the Buffer Level can be collected as a RAN visible QoE metric by NG-RAN from UE, for DASH streaming and VR service types. |
| Playout Delay Indication | O |  | ENUMERATED  (true, ...) | The IE defines whether the Playout delay can be collected as a RAN visible QoE metric by NG-RAN from UE, for DASH streaming and VR service types. |

Next change

9.3.1.xx7 UE QMC Capability

This IE defines QoE Measurement Collection (QMC) related capabilities for a UE.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** |
| Supported Service Types | M |  | BIT STRING (SIZE(16)) | Each bit in the bitmap indicates an UE Application layer measurement capability, refer to TS 38.331 [18].  Bit 0 = QoE Measurement for streaming service  Bit 1 = QoE Measurement for MTSI service  Bit 2 = QoE Measurement for VR service  Value ‘1’ indicates “Capable” and value ‘0’ indicates “not Capable”.  Unused bits are reserved for future use. |
| Supported RAN Visible QoE Service Types | O |  | BIT STRING (SIZE(16)) | Each bit in the bitmap indicates an UE Application layer measurement capability, refer to TS 38.331 [18].  Bit 0 = RAN Visible QoE Measurement for streaming service  Bit 1 = RAN Visible QoE Measurement for VR service  Value ‘1’ indicates “Capable” and value ‘0’ indicates “not Capable”.  Unused bits are reserved for future use. |

Next change

9.3.1.29 Source NG-RAN Node to Target NG-RAN Node Transparent Container

This IE is produced by the source NG-RAN node and is transmitted to the target NG-RAN node. For inter-system handovers to 5G, the IE is transmitted from the external handover source to the target NG-RAN node.

This IE is transparent to the 5GC.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** | **Criticality** | **Assigned Criticality** |
| RRC Container | M |  | OCTET STRING | Includes the RRC *HandoverPreparationInformation* message as defined in TS 38.331 [18] if the target is a gNB.  Includes the RRC *HandoverPreparationInformation* message as defined in TS 36.331 [21] if the target is an ng-eNB. | - |  |
| **PDU Session Resource Information List** |  | *0..1* |  | For intra-system handovers in NG-RAN. | - |  |
| **>PDU Session Resource Information Item** |  | *1..<maxnoofPDUSessions>* |  |  | - |  |
| >>PDU Session ID | M |  | 9.3.1.50 |  | - |  |
| **>>QoS Flow Information List** |  | *1* |  |  | - |  |
| **>>>QoS Flow Information Item** |  | *1..<maxnoofQoSFlows>* |  |  | - |  |
| >>>>QoS Flow Identifier | M |  | 9.3.1.51 |  | - |  |
| >>>>DL Forwarding | O |  | 9.3.1.33 |  | - |  |
| >>>>UL Forwarding | O |  | 9.3.1.118 |  | YES | ignore |
| >>DRBs to QoS Flows Mapping List | O |  | 9.3.1.34 |  | - |  |
| **E-RAB Information List** |  | *0..1* |  | For inter-system handovers to 5G. | - |  |
| **>E-RAB Information Item** |  | *1..<maxnoofE-RABs>* |  |  | - |  |
| >>E-RAB ID | M |  | 9.3.2.3 |  | - |  |
| >>DL Forwarding | O |  | 9.3.1.33 |  | - |  |
| Target Cell ID | M |  | NG-RAN CGI  9.3.1.73 |  | - |  |
| Index to RAT/Frequency Selection Priority | O |  | 9.3.1.61 |  | - |  |
| UE History Information | M |  | 9.3.1.95 |  | - |  |
| SgNB UE X2AP ID | O |  | 9.3.1.127 | Allocated at the Source en-gNB | - |  |
| UE History Information from UE | O |  | 9.3.1.166 |  | YES | ignore |
| QMC Configuration Information | O |  | 9.3.1.xx2 | Used for passing the signalling based QoE measurement information from the source NG-RAN to the target NG-RAN node in NG-based handover. | YES | ignore |

|  |  |
| --- | --- |
| **Range bound** | **Explanation** |
| maxnoofPDUSessions | Maximum no. of PDU sessions allowed towards one UE. Value is 256. |
| maxnoofQoSFlows | Maximum no. of QoS flows allowed within one PDU session. Value is 64. |
| maxnoofE-RABs | Maximum no. of E-RABs allowed towards one UE. Value is 256. |

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

AllowedNSSAI,

AMFName,

AMFSetID,

AMF-TNLAssociationSetupList,

AMF-TNLAssociationToAddList,

AMF-TNLAssociationToRemoveList,

AMF-TNLAssociationToUpdateList,

AMF-UE-NGAP-ID,

AssistanceDataForPaging,

AuthenticatedIndication,

BroadcastCancelledAreaList,

BroadcastCompletedAreaList,

CancelAllWarningMessages,

Cause,

CellIDListForRestart,

CEmodeBrestricted,

CEmodeBSupport-Indicator,

CNAssistedRANTuning,

ConcurrentWarningMessageInd,

CoreNetworkAssistanceInformationForInactive,

CPTransportLayerInformation,

CriticalityDiagnostics,

DataCodingScheme,

DL-CP-SecurityInformation,

DirectForwardingPathAvailability,

EarlyStatusTransfer-TransparentContainer,

EDT-Session,

EmergencyAreaIDListForRestart,

EmergencyFallbackIndicator,

EN-DCSONConfigurationTransfer,

EndIndication,

Enhanced-CoverageRestriction,

EUTRA-CGI,

Extended-AMFName,

Extended-ConnectedTime,

Extended-RANNodeName,

FiveG-S-TMSI,

GlobalRANNodeID,

GUAMI,

HandoverFlag,

HandoverType,

IAB-Authorized,

IAB-Supported,

IABNodeIndication,

IMSVoiceSupportIndicator,

IndexToRFSP,

InfoOnRecommendedCellsAndRANNodesForPaging,

IntersystemSONConfigurationTransfer,

LAI,

LTEM-Indication,

LocationReportingRequestType,

LTEUESidelinkAggregateMaximumBitrate,

LTEV2XServicesAuthorized,

MaskedIMEISV,

MessageIdentifier,

MDTPLMNList,

MobilityRestrictionList,

NAS-PDU,

NASSecurityParametersFromNGRAN,

NB-IoT-DefaultPagingDRX,

NB-IoT-PagingDRX,

NB-IoT-Paging-eDRXInfo,

NB-IoT-UEPriority,

NewSecurityContextInd,

NGRAN-CGI,

NGRAN-TNLAssociationToRemoveList,

NGRANTraceID,

NotifySourceNGRANNode,

NPN-AccessInformation,

NR-CGI,

NRPPa-PDU,

NumberOfBroadcastsRequested,

NRUESidelinkAggregateMaximumBitrate,

NRV2XServicesAuthorized,

OverloadResponse,

OverloadStartNSSAIList,

PagingAssisDataforCEcapabUE,

PagingDRX,

PagingOrigin,

PagingPriority,

PagingeDRXInformation,

PDUSessionAggregateMaximumBitRate,

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,

PLMNIdentity,

PLMNSupportList,

PrivacyIndicator,

PWSFailedCellIDList,

PC5QoSParameters,

QMCConfigInfo,

QMCDeactivation,

RANNodeName,

RANPagingPriority,

RANStatusTransfer-TransparentContainer,

RAN-UE-NGAP-ID,

RedirectionVoiceFallback,

RelativeAMFCapacity,

RepetitionPeriod,

ResetType,

RGLevelWirelineAccessCharacteristics,

RoutingID,

RRCEstablishmentCause,

RRCInactiveTransitionReportRequest,

RRCState,

SecurityContext,

SecurityKey,

SerialNumber,

ServedGUAMIList,

SliceSupportList,

S-NSSAI,

SONConfigurationTransfer,

SourceToTarget-TransparentContainer,

SourceToTarget-AMFInformationReroute,

SRVCCOperationPossible,

SupportedTAList,

Suspend-Request-Indication,

Suspend-Response-Indication,

TAI,

TAIListForPaging,

TAIListForRestart,

TargetID,

TargetToSource-TransparentContainer,

TargettoSource-Failure-TransparentContainer,

TimeToWait,

TNLAssociationList,

TraceActivation,

TrafficLoadReductionIndication,

TransportLayerAddress,

UEAggregateMaximumBitRate,

UE-associatedLogicalNG-connectionList,

UECapabilityInfoRequest,

UEContextRequest,

UE-DifferentiationInfo,

UE-NGAP-IDs,

UEPagingIdentity,

UEPresenceInAreaOfInterestList,

UE-QMC-Capability,

UERadioCapability,

UERadioCapabilityForPaging,

UERadioCapabilityID,

UERetentionInformation,

UESecurityCapabilities,

UE-UP-CIoT-Support,

UL-CP-SecurityInformation,

UnavailableGUAMIList,

URI-address,

UserLocationInformation,

WarningAreaCoordinates,

WarningAreaList,

WarningMessageContents,

WarningSecurityInfo,

WarningType,

WUS-Assistance-Information,

RIMInformationTransfer

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-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-AssistanceDataForPaging,

id-AuthenticatedIndication,

id-BroadcastCancelledAreaList,

id-BroadcastCompletedAreaList,

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-EarlyStatusTransfer-TransparentContainer,

id-EDT-Session,

id-EmergencyAreaIDListForRestart,

id-EmergencyFallbackIndicator,

id-ENDC-SONConfigurationTransferDL,

id-ENDC-SONConfigurationTransferUL,

id-EndIndication,

id-Enhanced-CoverageRestriction,

id-EUTRA-CGI,

id-Extended-AMFName,

id-Extended-ConnectedTime,

id-Extended-RANNodeName,

id-FiveG-S-TMSI,

id-GlobalRANNodeID,

id-GUAMI,

id-HandoverFlag,

id-HandoverType,

id-IAB-Authorized,

id-IAB-Supported,

id-IABNodeIndication,

id-IMSVoiceSupportIndicator,

id-IndexToRFSP,

id-InfoOnRecommendedCellsAndRANNodesForPaging,

id-IntersystemSONConfigurationTransferDL,

id-IntersystemSONConfigurationTransferUL,

id-LocationReportingRequestType,

id-LTEM-Indication,

id-LTEV2XServicesAuthorized,

id-LTEUESidelinkAggregateMaximumBitrate,

id-ManagementBasedMDTPLMNList,

id-MaskedIMEISV,

id-MessageIdentifier,

id-MobilityRestrictionList,

id-NAS-PDU,

id-NASC,

id-NASSecurityParametersFromNGRAN,

id-NB-IoT-DefaultPagingDRX,

id-NB-IoT-PagingDRX,

id-NB-IoT-Paging-eDRXInfo,

id-NB-IoT-UEPriority,

id-NewAMF-UE-NGAP-ID,

id-NewGUAMI,

id-NewSecurityContextInd,

id-NGAP-Message,

id-NGRAN-CGI,

id-NGRAN-TNLAssociationToRemoveList,

id-NGRANTraceID,

id-NotifySourceNGRANNode,

id-NPN-AccessInformation,

id-NR-CGI,

id-NRPPa-PDU,

id-NRV2XServicesAuthorized,

id-NRUESidelinkAggregateMaximumBitrate,

id-NumberOfBroadcastsRequested,

id-OldAMF,

id-OverloadStartNSSAIList,

id-PagingAssisDataforCEcapabUE,

id-PagingDRX,

id-PagingeDRXInformation,

id-PagingOrigin,

id-PagingPriority,

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-PLMNSupportList,

id-PrivacyIndicator,

id-PWSFailedCellIDList,

id-PC5QoSParameters,

id-QMCConfigInfo,

id-QMCDeactivation,

id-RANNodeName,

id-RANPagingPriority,

id-RANStatusTransfer-TransparentContainer,

id-RAN-UE-NGAP-ID,

id-RedirectionVoiceFallback,

id-RelativeAMFCapacity,

id-RepetitionPeriod,

id-ResetType,

id-RGLevelWirelineAccessCharacteristics,

id-RoutingID,

id-RRCEstablishmentCause,

id-RRCInactiveTransitionReportRequest,

id-RRC-Resume-Cause,

id-RRCState,

id-SecurityContext,

id-SecurityKey,

id-SelectedPLMNIdentity,

id-SerialNumber,

id-ServedGUAMIList,

id-SliceSupportList,

id-S-NSSAI,

id-SONConfigurationTransferDL,

id-SONConfigurationTransferUL,

id-SourceAMF-UE-NGAP-ID,

id-SourceToTarget-TransparentContainer,

id-SourceToTarget-AMFInformationReroute,

id-SRVCCOperationPossible,

id-SupportedTAList,

id-Suspend-Request-Indication,

id-Suspend-Response-Indication,

id-TAI,

id-TAIListForPaging,

id-TAIListForRestart,

id-TargetID,

id-TargetToSource-TransparentContainer,

id-TargettoSource-Failure-TransparentContainer,

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-UERadioCapabilityForPaging,

id-UERadioCapabilityID,

id-UERadioCapability-EUTRA-Format,

id-UERetentionInformation,

id-UESecurityCapabilities,

id-UE-QMC-Capability,

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-RIMInformationTransfer

FROM NGAP-Constants;

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

--

-- PDU SESSION MANAGEMENT ELEMENTARY PROCEDURES

--

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

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

--

-- PDU Session Resource Setup Elementary Procedure

--

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

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

--

-- PDU SESSION RESOURCE SETUP REQUEST

--

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

PDUSessionResourceSetupRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PDUSessionResourceSetupRequestIEs} },

...

}

PDUSessionResourceSetupRequestIEs 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-RANPagingPriority CRITICALITY ignore TYPE RANPagingPriority PRESENCE optional }|

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

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

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

...

}

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

--

-- PDU SESSION RESOURCE SETUP RESPONSE

--

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

PDUSessionResourceSetupResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PDUSessionResourceSetupResponseIEs} },

...

}

PDUSessionResourceSetupResponseIEs 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-PDUSessionResourceSetupListSURes CRITICALITY ignore TYPE PDUSessionResourceSetupListSURes PRESENCE optional }|

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

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

...

}

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

--

-- PDU Session Resource Release Elementary Procedure

--

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

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

--

-- PDU SESSION RESOURCE RELEASE COMMAND

--

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

PDUSessionResourceReleaseCommand ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PDUSessionResourceReleaseCommandIEs} },

...

}

PDUSessionResourceReleaseCommandIEs 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-RANPagingPriority CRITICALITY ignore TYPE RANPagingPriority PRESENCE optional }|

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

{ ID id-PDUSessionResourceToReleaseListRelCmd CRITICALITY reject TYPE PDUSessionResourceToReleaseListRelCmd PRESENCE mandatory },

...

}

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

--

-- PDU SESSION RESOURCE RELEASE RESPONSE

--

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

PDUSessionResourceReleaseResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PDUSessionResourceReleaseResponseIEs} },

...

}

PDUSessionResourceReleaseResponseIEs 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-PDUSessionResourceReleasedListRelRes CRITICALITY ignore TYPE PDUSessionResourceReleasedListRelRes PRESENCE mandatory }|

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

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

...

}

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

--

-- PDU Session Resource Modify Elementary Procedure

--

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

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

--

-- PDU SESSION RESOURCE MODIFY REQUEST

--

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

PDUSessionResourceModifyRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PDUSessionResourceModifyRequestIEs} },

...

}

PDUSessionResourceModifyRequestIEs 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-RANPagingPriority CRITICALITY ignore TYPE RANPagingPriority PRESENCE optional }|

{ ID id-PDUSessionResourceModifyListModReq CRITICALITY reject TYPE PDUSessionResourceModifyListModReq PRESENCE mandatory },

...

}

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

--

-- PDU SESSION RESOURCE MODIFY RESPONSE

--

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

PDUSessionResourceModifyResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PDUSessionResourceModifyResponseIEs} },

...

}

PDUSessionResourceModifyResponseIEs 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-PDUSessionResourceModifyListModRes CRITICALITY ignore TYPE PDUSessionResourceModifyListModRes PRESENCE optional }|

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

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

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

...

}

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

--

-- PDU Session Resource Notify Elementary Procedure

--

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

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

--

-- PDU SESSION RESOURCE NOTIFY

--

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

PDUSessionResourceNotify ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PDUSessionResourceNotifyIEs} },

...

}

PDUSessionResourceNotifyIEs 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-PDUSessionResourceNotifyList CRITICALITY reject TYPE PDUSessionResourceNotifyList PRESENCE optional }|

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

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

...

}

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

--

-- PDU Session Resource Modify Indication Elementary Procedure

--

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

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

--

-- PDU SESSION RESOURCE MODIFY INDICATION

--

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

PDUSessionResourceModifyIndication ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PDUSessionResourceModifyIndicationIEs} },

...

}

PDUSessionResourceModifyIndicationIEs 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-PDUSessionResourceModifyListModInd CRITICALITY reject TYPE PDUSessionResourceModifyListModInd PRESENCE mandatory }|

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

...

}

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

--

-- PDU SESSION RESOURCE MODIFY CONFIRM

--

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

PDUSessionResourceModifyConfirm ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PDUSessionResourceModifyConfirmIEs} },

...

}

PDUSessionResourceModifyConfirmIEs 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-PDUSessionResourceModifyListModCfm CRITICALITY ignore TYPE PDUSessionResourceModifyListModCfm PRESENCE optional }|

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

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

...

}

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

--

-- UE CONTEXT MANAGEMENT ELEMENTARY PROCEDURES

--

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

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

--

-- Initial Context Setup Elementary Procedure

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

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

--

-- 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 }|

{ 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-QMCConfigInfo CRITICALITY ignore TYPE QMCConfigInfo PRESENCE optional },

...

}

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

--

-- INITIAL CONTEXT SETUP RESPONSE

--

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

InitialContextSetupResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {InitialContextSetupResponseIEs} },

...

}

InitialContextSetupResponseIEs 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-PDUSessionResourceSetupListCxtRes CRITICALITY ignore TYPE PDUSessionResourceSetupListCxtRes PRESENCE optional }|

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

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

...

}

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

--

-- INITIAL CONTEXT SETUP FAILURE

--

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

InitialContextSetupFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {InitialContextSetupFailureIEs} },

...

}

InitialContextSetupFailureIEs 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-PDUSessionResourceFailedToSetupListCxtFail CRITICALITY ignore TYPE PDUSessionResourceFailedToSetupListCxtFail PRESENCE optional }|

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

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

...

}

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

--

-- UE Context Release Request Elementary Procedure

--

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

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

--

-- UE CONTEXT RELEASE REQUEST

--

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

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 },

...

}

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

--

-- UE Context Release Elementary Procedure

--

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

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

--

-- UE CONTEXT RELEASE COMMAND

--

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

UEContextReleaseCommand ::= SEQUENCE {

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

...

}

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

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

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

...

}

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

--

-- UE CONTEXT RELEASE COMPLETE

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

UEContextReleaseComplete ::= SEQUENCE {

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

...

}

UEContextReleaseComplete-IEs 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-UserLocationInformation CRITICALITY ignore TYPE UserLocationInformation PRESENCE optional }|

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

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

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

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

...

}

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

--

-- UE Context Resume Elementary Procedure

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

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

--

-- UE CONTEXT RESUME REQUEST

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

UEContextResumeRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UEContextResumeRequestIEs} },

...

}

UEContextResumeRequestIEs 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-RRC-Resume-Cause CRITICALITY ignore TYPE RRCEstablishmentCause PRESENCE mandatory }|

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

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

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

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

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

...

}

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

--

-- UE CONTEXT RESUME RESPONSE

--

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

UEContextResumeResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UEContextResumeResponseIEs} },

...

}

UEContextResumeResponseIEs 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-PDUSessionResourceResumeListRESRes CRITICALITY reject TYPE PDUSessionResourceResumeListRESRes PRESENCE optional }|

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

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

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

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

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

...

}

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

--

-- UE CONTEXT RESUME FAILURE

--

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

UEContextResumeFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { UEContextResumeFailureIEs} },

...

}

UEContextResumeFailureIEs 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-Cause CRITICALITY ignore TYPE Cause PRESENCE mandatory }|

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

...

}

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

--

-- UE Context Suspend Elementary Procedure

--

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

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

--

-- UE CONTEXT SUSPEND REQUEST

--

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

UEContextSuspendRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UEContextSuspendRequestIEs} },

...

}

UEContextSuspendRequestIEs 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-InfoOnRecommendedCellsAndRANNodesForPaging CRITICALITY ignore TYPE InfoOnRecommendedCellsAndRANNodesForPaging PRESENCE optional }|

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

{ ID id-PDUSessionResourceSuspendListSUSReq CRITICALITY reject TYPE PDUSessionResourceSuspendListSUSReq PRESENCE optional }, ...

}

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

--

-- UE CONTEXT SUSPEND RESPONSE

--

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

UEContextSuspendResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UEContextSuspendResponseIEs} },

...

}

UEContextSuspendResponseIEs 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-SecurityContext CRITICALITY reject TYPE SecurityContext PRESENCE optional }|

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

...

}

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

--

-- UE CONTEXT SUSPEND FAILURE

--

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

UEContextSuspendFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { UEContextSuspendFailureIEs} },

...

}

UEContextSuspendFailureIEs 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-Cause CRITICALITY ignore TYPE Cause PRESENCE mandatory }|

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

...

}

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

--

-- UE Context Modification Elementary Procedure

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

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

--

-- UE CONTEXT MODIFICATION REQUEST

--

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

UEContextModificationRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UEContextModificationRequestIEs} },

...

}

UEContextModificationRequestIEs 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-RANPagingPriority CRITICALITY ignore TYPE RANPagingPriority PRESENCE optional }|

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

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

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

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

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

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

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

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

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

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

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

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

...

}

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

--

-- UE CONTEXT MODIFICATION RESPONSE

--

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

UEContextModificationResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UEContextModificationResponseIEs} },

...

}

UEContextModificationResponseIEs 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-RRCState CRITICALITY ignore TYPE RRCState PRESENCE optional }|

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

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

...

}

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

--

-- UE CONTEXT MODIFICATION FAILURE

--

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

UEContextModificationFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UEContextModificationFailureIEs} },

...

}

UEContextModificationFailureIEs 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-Cause CRITICALITY ignore TYPE Cause PRESENCE mandatory }|

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

...

}

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

--

-- RRC INACTIVE TRANSITION REPORT

--

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

RRCInactiveTransitionReport ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {RRCInactiveTransitionReportIEs} },

...

}

RRCInactiveTransitionReportIEs 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-RRCState CRITICALITY ignore TYPE RRCState PRESENCE mandatory }|

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

...

}

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

--

-- Retrieve UE Information

--

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

RetrieveUEInformation ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { RetrieveUEInformationIEs} },

...

}

RetrieveUEInformationIEs NGAP-PROTOCOL-IES ::= {

{ ID id-FiveG-S-TMSI CRITICALITY reject TYPE FiveG-S-TMSI PRESENCE mandatory },

...

}

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

-- UE Information Transfer

--

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

UEInformationTransfer ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { UEInformationTransferIEs} },

...

}

UEInformationTransferIEs NGAP-PROTOCOL-IES ::= {

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

{ ID id-NB-IoT-UEPriority CRITICALITY ignore TYPE NB-IoT-UEPriority PRESENCE optional }|

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

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

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

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

...

}

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

--

-- RAN CP Relocation Indication

--

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

RANCPRelocationIndication ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { RANCPRelocationIndicationIEs} },

...

}

RANCPRelocationIndicationIEs NGAP-PROTOCOL-IES ::= {

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

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

{ ID id-EUTRA-CGI CRITICALITY ignore TYPE EUTRA-CGI PRESENCE mandatory }|

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

{ ID id-UL-CP-SecurityInformation CRITICALITY reject TYPE UL-CP-SecurityInformation PRESENCE mandatory },

...

}

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

--

-- UE MOBILITY MANAGEMENT ELEMENTARY PROCEDURES

--

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

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

--

-- Handover Preparation Elementary Procedure

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

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

--

-- HANDOVER REQUIRED

--

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

HandoverRequired ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {HandoverRequiredIEs} },

...

}

HandoverRequiredIEs 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-HandoverType CRITICALITY reject TYPE HandoverType PRESENCE mandatory }|

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

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

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

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

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

...

}

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

--

-- HANDOVER COMMAND

--

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

HandoverCommand ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {HandoverCommandIEs} },

...

}

HandoverCommandIEs 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-HandoverType CRITICALITY reject TYPE HandoverType PRESENCE mandatory }|

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

-- This IE shall be present if HandoverType IE is set to value "5GStoEPPS" or “5GStoUTRAN” --

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

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

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

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

...

}

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

--

-- HANDOVER PREPARATION FAILURE

--

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

HandoverPreparationFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {HandoverPreparationFailureIEs} },

...

}

HandoverPreparationFailureIEs 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-Cause CRITICALITY ignore TYPE Cause PRESENCE mandatory }|

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

{ ID id-TargettoSource-Failure-TransparentContainer CRITICALITY ignore TYPE TargettoSource-Failure-TransparentContainer PRESENCE optional },

...

}

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

--

-- Handover Resource Allocation Elementary Procedure

--

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

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

--

-- HANDOVER REQUEST

--

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

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-QMCConfigInfo CRITICALITY ignore TYPE QMCConfigInfo PRESENCE optional },

...

}

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

--

-- HANDOVER REQUEST ACKNOWLEDGE

--

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

HandoverRequestAcknowledge ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {HandoverRequestAcknowledgeIEs} },

...

}

HandoverRequestAcknowledgeIEs 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-PDUSessionResourceAdmittedList CRITICALITY ignore TYPE PDUSessionResourceAdmittedList PRESENCE mandatory }|

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

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

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

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

...

}

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

--

-- HANDOVER FAILURE

--

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

HandoverFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { HandoverFailureIEs} },

...

}

HandoverFailureIEs NGAP-PROTOCOL-IES ::= {

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

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

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

{ ID id-TargettoSource-Failure-TransparentContainer CRITICALITY ignore TYPE TargettoSource-Failure-TransparentContainer PRESENCE optional },

...

}

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

--

-- Handover Notification Elementary Procedure

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

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

--

-- HANDOVER NOTIFY

--

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

HandoverNotify ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { HandoverNotifyIEs} },

...

}

HandoverNotifyIEs 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-UserLocationInformation CRITICALITY ignore TYPE UserLocationInformation PRESENCE mandatory }|

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

...

}

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

--

-- Path Switch Request Elementary Procedure

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

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

--

-- PATH SWITCH REQUEST

--

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

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 },

...

}

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

--

-- PATH SWITCH REQUEST ACKNOWLEDGE

--

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

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 },

...

}

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

--

-- PATH SWITCH REQUEST FAILURE

--

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

PathSwitchRequestFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { PathSwitchRequestFailureIEs} },

...

}

PathSwitchRequestFailureIEs 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-PDUSessionResourceReleasedListPSFail CRITICALITY ignore TYPE PDUSessionResourceReleasedListPSFail PRESENCE mandatory }|

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

...

}

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

--

-- Handover Cancellation Elementary Procedure

--

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

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

--

-- HANDOVER CANCEL

--

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

HandoverCancel ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { HandoverCancelIEs} },

...

}

HandoverCancelIEs 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-Cause CRITICALITY ignore TYPE Cause PRESENCE mandatory },

...

}

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

--

-- HANDOVER CANCEL ACKNOWLEDGE

--

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

HandoverCancelAcknowledge ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { HandoverCancelAcknowledgeIEs} },

...

}

HandoverCancelAcknowledgeIEs 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-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },

...

}

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

--

-- HANDOVER SUCCESS ELEMENTARY PROCEDURE

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

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

--

-- HANDOVER SUCCESS

--

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

HandoverSuccess ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { HandoverSuccessIEs} },

...

}

HandoverSuccessIEs 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 },

...

}

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

--

-- UPLINK RAN EARLY STATUS TRANSFER ELEMENTARY PROCEDURE

--

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

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

--

-- Uplink RAN Early Status Transfer

--

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

UplinkRANEarlyStatusTransfer ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UplinkRANEarlyStatusTransferIEs} },

...

}

UplinkRANEarlyStatusTransferIEs 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-EarlyStatusTransfer-TransparentContainer CRITICALITY reject TYPE EarlyStatusTransfer-TransparentContainer PRESENCE mandatory},

...

}

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

--

-- DOWNLINK RAN EARLY STATUS TRANSFER ELEMENTARY PROCEDURE

--

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

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

--

-- Downlink RAN Early Status Transfer

--

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

DownlinkRANEarlyStatusTransfer ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {DownlinkRANEarlyStatusTransferIEs} },

...

}

DownlinkRANEarlyStatusTransferIEs 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-EarlyStatusTransfer-TransparentContainer CRITICALITY reject TYPE EarlyStatusTransfer-TransparentContainer PRESENCE mandatory},

...

}

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

--

-- Uplink RAN Status Transfer Elementary Procedure

--

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

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

--

-- UPLINK RAN STATUS TRANSFER

--

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

UplinkRANStatusTransfer ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UplinkRANStatusTransferIEs} },

...

}

UplinkRANStatusTransferIEs 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-RANStatusTransfer-TransparentContainer CRITICALITY reject TYPE RANStatusTransfer-TransparentContainer PRESENCE mandatory },

...

}

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

--

-- Downlink RAN Status Transfer Elementary Procedure

--

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

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

--

-- DOWNLINK RAN STATUS TRANSFER

--

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

DownlinkRANStatusTransfer ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {DownlinkRANStatusTransferIEs} },

...

}

DownlinkRANStatusTransferIEs 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-RANStatusTransfer-TransparentContainer CRITICALITY reject TYPE RANStatusTransfer-TransparentContainer PRESENCE mandatory },

...

}

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

--

-- PAGING ELEMENTARY PROCEDURE

--

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

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

--

-- PAGING

--

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

Paging ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PagingIEs} },

...

}

PagingIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

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

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

{ ID id-NB-IoT-Paging-eDRXInfo CRITICALITY ignore TYPE NB-IoT-Paging-eDRXInfo PRESENCE optional }|

{ ID id-NB-IoT-PagingDRX CRITICALITY ignore TYPE NB-IoT-PagingDRX PRESENCE optional }|

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

{ ID id-WUS-Assistance-Information CRITICALITY ignore TYPE WUS-Assistance-Information PRESENCE optional }|

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

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

...

}

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

--

-- NAS TRANSPORT ELEMENTARY PROCEDURES

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

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

--

-- INITIAL UE MESSAGE

--

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

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 },

...

}

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

--

-- DOWNLINK NAS TRANSPORT

--

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

DownlinkNASTransport ::= SEQUENCE {

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

...

}

DownlinkNASTransport-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-OldAMF CRITICALITY reject TYPE AMFName PRESENCE optional }|

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

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

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

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

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

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

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

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

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

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

...

}

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

--

-- UPLINK NAS TRANSPORT

--

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

UplinkNASTransport ::= SEQUENCE {

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

...

}

UplinkNASTransport-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-NAS-PDU CRITICALITY reject TYPE NAS-PDU PRESENCE mandatory }|

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

{ ID id-W-AGFIdentityInformation CRITICALITY reject TYPE OCTET STRING PRESENCE optional }|

{ ID id-TNGFIdentityInformation CRITICALITY reject TYPE OCTET STRING PRESENCE optional }|

{ ID id-TWIFIdentityInformation CRITICALITY reject TYPE OCTET STRING PRESENCE optional },

...

}

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

--

-- NAS NON DELIVERY INDICATION

--

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

NASNonDeliveryIndication ::= SEQUENCE {

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

...

}

NASNonDeliveryIndication-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-NAS-PDU CRITICALITY ignore TYPE NAS-PDU PRESENCE mandatory }|

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

...

}

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

--

-- REROUTE NAS REQUEST

--

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

RerouteNASRequest ::= SEQUENCE {

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

...

}

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

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

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

{ ID id-NGAP-Message CRITICALITY reject TYPE OCTET STRING PRESENCE mandatory }|

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

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

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

...

}

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

--

-- INTERFACE MANAGEMENT ELEMENTARY PROCEDURES

--

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

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

--

-- NG Setup Elementary Procedure

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

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

--

-- NG SETUP REQUEST

--

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

NGSetupRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {NGSetupRequestIEs} },

...

}

NGSetupRequestIEs NGAP-PROTOCOL-IES ::= {

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

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

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

{ ID id-DefaultPagingDRX CRITICALITY ignore TYPE PagingDRX PRESENCE mandatory }|

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

{ ID id-NB-IoT-DefaultPagingDRX CRITICALITY ignore TYPE NB-IoT-DefaultPagingDRX PRESENCE optional }|

{ ID id-Extended-RANNodeName CRITICALITY ignore TYPE Extended-RANNodeName PRESENCE optional },

...

}

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

--

-- NG SETUP RESPONSE

--

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

NGSetupResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {NGSetupResponseIEs} },

...

}

NGSetupResponseIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

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

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

{ ID id-Extended-AMFName CRITICALITY ignore TYPE Extended-AMFName PRESENCE optional },

...

}

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

--

-- NG SETUP FAILURE

--

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

NGSetupFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {NGSetupFailureIEs} },

...

}

NGSetupFailureIEs NGAP-PROTOCOL-IES ::= {

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

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

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

...

}

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

--

-- RAN Configuration Update Elementary Procedure

--

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

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

--

-- RAN CONFIGURATION UPDATE

--

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

RANConfigurationUpdate ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {RANConfigurationUpdateIEs} },

...

}

RANConfigurationUpdateIEs NGAP-PROTOCOL-IES ::= {

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

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

{ ID id-DefaultPagingDRX CRITICALITY ignore TYPE PagingDRX PRESENCE optional }|

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

{ ID id-NGRAN-TNLAssociationToRemoveList CRITICALITY reject TYPE NGRAN-TNLAssociationToRemoveList PRESENCE optional }|

{ ID id-NB-IoT-DefaultPagingDRX CRITICALITY ignore TYPE NB-IoT-DefaultPagingDRX PRESENCE optional }|

{ ID id-Extended-RANNodeName CRITICALITY ignore TYPE Extended-RANNodeName PRESENCE optional },

...

}

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

--

-- RAN CONFIGURATION UPDATE ACKNOWLEDGE

--

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

RANConfigurationUpdateAcknowledge ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {RANConfigurationUpdateAcknowledgeIEs} },

...

}

RANConfigurationUpdateAcknowledgeIEs NGAP-PROTOCOL-IES ::= {

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

...

}

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

--

-- RAN CONFIGURATION UPDATE FAILURE

--

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

RANConfigurationUpdateFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {RANConfigurationUpdateFailureIEs} },

...

}

RANConfigurationUpdateFailureIEs NGAP-PROTOCOL-IES ::= {

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

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

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

...

}

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

--

-- AMF Configuration Update Elementary Procedure

--

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

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

--

-- AMF CONFIGURATION UPDATE

--

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

AMFConfigurationUpdate ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {AMFConfigurationUpdateIEs} },

...

}

AMFConfigurationUpdateIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

{ ID id-AMF-TNLAssociationToAddList CRITICALITY ignore TYPE AMF-TNLAssociationToAddList PRESENCE optional }|

{ ID id-AMF-TNLAssociationToRemoveList CRITICALITY ignore TYPE AMF-TNLAssociationToRemoveList PRESENCE optional }|

{ ID id-AMF-TNLAssociationToUpdateList CRITICALITY ignore TYPE AMF-TNLAssociationToUpdateList PRESENCE optional }|

{ ID id-Extended-AMFName CRITICALITY ignore TYPE Extended-AMFName PRESENCE optional },

...

}

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

--

-- AMF CONFIGURATION UPDATE ACKNOWLEDGE

--

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

AMFConfigurationUpdateAcknowledge ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {AMFConfigurationUpdateAcknowledgeIEs} },

...

}

AMFConfigurationUpdateAcknowledgeIEs NGAP-PROTOCOL-IES ::= {

{ ID id-AMF-TNLAssociationSetupList CRITICALITY ignore TYPE AMF-TNLAssociationSetupList PRESENCE optional }|

{ ID id-AMF-TNLAssociationFailedToSetupList CRITICALITY ignore TYPE TNLAssociationList PRESENCE optional }|

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

...

}

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

--

-- AMF CONFIGURATION UPDATE FAILURE

--

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

AMFConfigurationUpdateFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {AMFConfigurationUpdateFailureIEs} },

...

}

AMFConfigurationUpdateFailureIEs NGAP-PROTOCOL-IES ::= {

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

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

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

...

}

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

--

-- AMF Status Indication Elementary Procedure

--

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

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

--

-- AMF STATUS INDICATION

--

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

AMFStatusIndication ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {AMFStatusIndicationIEs} },

...

}

AMFStatusIndicationIEs NGAP-PROTOCOL-IES ::= {

{ ID id-UnavailableGUAMIList CRITICALITY reject TYPE UnavailableGUAMIList PRESENCE mandatory },

...

}

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

--

-- NG Reset Elementary Procedure

--

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

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

--

-- NG RESET

--

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

NGReset ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {NGResetIEs} },

...

}

NGResetIEs NGAP-PROTOCOL-IES ::= {

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

{ ID id-ResetType CRITICALITY reject TYPE ResetType PRESENCE mandatory },

...

}

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

--

-- NG RESET ACKNOWLEDGE

--

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

NGResetAcknowledge ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {NGResetAcknowledgeIEs} },

...

}

NGResetAcknowledgeIEs NGAP-PROTOCOL-IES ::= {

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

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

...

}

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

--

-- Error Indication Elementary Procedure

--

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

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

--

-- ERROR INDICATION

--

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

ErrorIndication ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {ErrorIndicationIEs} },

...

}

ErrorIndicationIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

{ ID id-FiveG-S-TMSI CRITICALITY ignore TYPE FiveG-S-TMSI PRESENCE optional },

...

}

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

--

-- 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 },

...

}

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

--

-- OVERLOAD STOP

--

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

OverloadStop ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {OverloadStopIEs} },

...

}

OverloadStopIEs NGAP-PROTOCOL-IES ::= {

...

}

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

--

-- CONFIGURATION TRANSFER ELEMENTARY PROCEDURES

--

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

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

--

-- UPLINK RAN CONFIGURATION TRANSFER

--

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

UplinkRANConfigurationTransfer ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UplinkRANConfigurationTransferIEs} },

...

}

UplinkRANConfigurationTransferIEs NGAP-PROTOCOL-IES ::= {

{ ID id-SONConfigurationTransferUL CRITICALITY ignore TYPE SONConfigurationTransfer PRESENCE optional }|

{ ID id-ENDC-SONConfigurationTransferUL CRITICALITY ignore TYPE EN-DCSONConfigurationTransfer PRESENCE optional }|

{ ID id-IntersystemSONConfigurationTransferUL CRITICALITY ignore TYPE IntersystemSONConfigurationTransfer PRESENCE optional },

...

}

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

--

-- DOWNLINK RAN CONFIGURATION TRANSFER

--

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

DownlinkRANConfigurationTransfer ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {DownlinkRANConfigurationTransferIEs} },

...

}

DownlinkRANConfigurationTransferIEs NGAP-PROTOCOL-IES ::= {

{ ID id-SONConfigurationTransferDL CRITICALITY ignore TYPE SONConfigurationTransfer PRESENCE optional }|

{ ID id-ENDC-SONConfigurationTransferDL CRITICALITY ignore TYPE EN-DCSONConfigurationTransfer PRESENCE optional }|

{ ID id-IntersystemSONConfigurationTransferDL CRITICALITY ignore TYPE IntersystemSONConfigurationTransfer PRESENCE optional },

...

}

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

--

-- WARNING MESSAGE TRANSMISSION ELEMENTARY PROCEDURES

--

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

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

--

-- Write-Replace Warning Elementary Procedure

--

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

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

--

-- WRITE-REPLACE WARNING REQUEST

--

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

WriteReplaceWarningRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {WriteReplaceWarningRequestIEs} },

...

}

WriteReplaceWarningRequestIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

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

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

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

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

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

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

...

}

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

--

-- WRITE-REPLACE WARNING RESPONSE

--

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

WriteReplaceWarningResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {WriteReplaceWarningResponseIEs} },

...

}

WriteReplaceWarningResponseIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

...

}

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

--

-- PWS Cancel Elementary Procedure

--

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

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

--

-- PWS CANCEL REQUEST

--

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

PWSCancelRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PWSCancelRequestIEs} },

...

}

PWSCancelRequestIEs NGAP-PROTOCOL-IES ::= {

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

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

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

{ ID id-CancelAllWarningMessages CRITICALITY reject TYPE CancelAllWarningMessages PRESENCE optional },

...

}

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

--

-- PWS CANCEL RESPONSE

--

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

PWSCancelResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PWSCancelResponseIEs} },

...

}

PWSCancelResponseIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

...

}

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

--

-- PWS Restart Indication Elementary Procedure

--

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

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

--

-- PWS RESTART INDICATION

--

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

PWSRestartIndication ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PWSRestartIndicationIEs} },

...

}

PWSRestartIndicationIEs NGAP-PROTOCOL-IES ::= {

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

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

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

{ ID id-EmergencyAreaIDListForRestart CRITICALITY reject TYPE EmergencyAreaIDListForRestart PRESENCE optional },

...

}

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

--

-- PWS Failure Indication Elementary Procedure

--

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

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

--

-- PWS FAILURE INDICATION

--

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

PWSFailureIndication ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PWSFailureIndicationIEs} },

...

}

PWSFailureIndicationIEs NGAP-PROTOCOL-IES ::= {

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

{ ID id-GlobalRANNodeID CRITICALITY reject TYPE GlobalRANNodeID PRESENCE mandatory },

...

}

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

--

-- NRPPA TRANSPORT ELEMENTARY PROCEDURES

--

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

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

--

-- DOWNLINK UE ASSOCIATED NRPPA TRANSPORT

--

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

DownlinkUEAssociatedNRPPaTransport ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {DownlinkUEAssociatedNRPPaTransportIEs} },

...

}

DownlinkUEAssociatedNRPPaTransportIEs 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-RoutingID CRITICALITY reject TYPE RoutingID PRESENCE mandatory }|

{ ID id-NRPPa-PDU CRITICALITY reject TYPE NRPPa-PDU PRESENCE mandatory },

...

}

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

--

-- UPLINK UE ASSOCIATED NRPPA TRANSPORT

--

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

UplinkUEAssociatedNRPPaTransport ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UplinkUEAssociatedNRPPaTransportIEs} },

...

}

UplinkUEAssociatedNRPPaTransportIEs 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-RoutingID CRITICALITY reject TYPE RoutingID PRESENCE mandatory }|

{ ID id-NRPPa-PDU CRITICALITY reject TYPE NRPPa-PDU PRESENCE mandatory },

...

}

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

--

-- DOWNLINK NON UE ASSOCIATED NRPPA TRANSPORT

--

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

DownlinkNonUEAssociatedNRPPaTransport ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {DownlinkNonUEAssociatedNRPPaTransportIEs} },

...

}

DownlinkNonUEAssociatedNRPPaTransportIEs NGAP-PROTOCOL-IES ::= {

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

{ ID id-NRPPa-PDU CRITICALITY reject TYPE NRPPa-PDU PRESENCE mandatory },

...

}

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

--

-- UPLINK NON UE ASSOCIATED NRPPA TRANSPORT

--

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

UplinkNonUEAssociatedNRPPaTransport ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UplinkNonUEAssociatedNRPPaTransportIEs} },

...

}

UplinkNonUEAssociatedNRPPaTransportIEs NGAP-PROTOCOL-IES ::= {

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

{ ID id-NRPPa-PDU CRITICALITY reject TYPE NRPPa-PDU PRESENCE mandatory },

...

}

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

--

-- TRACE ELEMENTARY PROCEDURES

--

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

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

--

-- TRACE START

--

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

TraceStart ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {TraceStartIEs} },

...

}

TraceStartIEs 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-TraceActivation CRITICALITY ignore TYPE TraceActivation PRESENCE mandatory },

...

}

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

--

-- TRACE FAILURE INDICATION

--

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

TraceFailureIndication ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {TraceFailureIndicationIEs} },

...

}

TraceFailureIndicationIEs 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-NGRANTraceID CRITICALITY ignore TYPE NGRANTraceID PRESENCE mandatory }|

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

...

}

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

--

-- DEACTIVATE TRACE

--

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

DeactivateTrace ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {DeactivateTraceIEs} },

...

}

DeactivateTraceIEs 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-NGRANTraceID CRITICALITY ignore TYPE NGRANTraceID PRESENCE mandatory },

...

}

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

--

-- CELL TRAFFIC TRACE

--

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

CellTrafficTrace ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {CellTrafficTraceIEs} },

...

}

CellTrafficTraceIEs 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-NGRANTraceID CRITICALITY ignore TYPE NGRANTraceID PRESENCE mandatory }|

{ID id-NGRAN-CGI CRITICALITY ignore TYPE NGRAN-CGI PRESENCE mandatory }|

{ID id-TraceCollectionEntityIPAddress CRITICALITY ignore TYPE TransportLayerAddress PRESENCE mandatory }|

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

{ID id-TraceCollectionEntityURI CRITICALITY ignore TYPE URI-address PRESENCE optional },

...

}

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

--

-- LOCATION REPORTING ELEMENTARY PROCEDURES

--

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

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

--

-- LOCATION REPORTING CONTROL

--

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

LocationReportingControl ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {LocationReportingControlIEs} },

...

}

LocationReportingControlIEs 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-LocationReportingRequestType CRITICALITY ignore TYPE LocationReportingRequestType PRESENCE mandatory },

...

}

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

--

-- LOCATION REPORTING FAILURE INDICATION

--

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

LocationReportingFailureIndication ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {LocationReportingFailureIndicationIEs} },

...

}

LocationReportingFailureIndicationIEs 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-Cause CRITICALITY ignore TYPE Cause PRESENCE mandatory },

...

}

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

--

-- LOCATION REPORT

--

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

LocationReport ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {LocationReportIEs} },

...

}

LocationReportIEs 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-UserLocationInformation CRITICALITY ignore TYPE UserLocationInformation PRESENCE mandatory }|

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

{ ID id-LocationReportingRequestType CRITICALITY ignore TYPE LocationReportingRequestType PRESENCE mandatory },

...

}

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

--

-- UE TNLA BINDING ELEMENTARY PROCEDURES

--

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

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

--

-- UE TNLA BINDING RELEASE REQUEST

--

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

UETNLABindingReleaseRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UETNLABindingReleaseRequestIEs} },

...

}

UETNLABindingReleaseRequestIEs 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 },

...

}

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

--

-- UE RADIO CAPABILITY MANAGEMENT ELEMENTARY PROCEDURES

--

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

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

--

-- UE RADIO CAPABILITY INFO INDICATION

--

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

UERadioCapabilityInfoIndication ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UERadioCapabilityInfoIndicationIEs} },

...

}

UERadioCapabilityInfoIndicationIEs 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-UERadioCapability CRITICALITY ignore TYPE UERadioCapability PRESENCE mandatory }|

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

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

{ ID id-UE-QMC-Capability CRITICALITY ignore TYPE UE-QMC-Capability PRESENCE optional },

...

}

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

--

-- UE Radio Capability Check Elementary Procedure

--

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

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

--

-- UE RADIO CAPABILITY CHECK REQUEST

--

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

UERadioCapabilityCheckRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UERadioCapabilityCheckRequestIEs} },

...

}

UERadioCapabilityCheckRequestIEs 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-UERadioCapability CRITICALITY ignore TYPE UERadioCapability PRESENCE optional }|

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

...

}

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

--

-- UE RADIO CAPABILITY CHECK RESPONSE

--

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

UERadioCapabilityCheckResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UERadioCapabilityCheckResponseIEs} },

...

}

UERadioCapabilityCheckResponseIEs 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-IMSVoiceSupportIndicator CRITICALITY reject TYPE IMSVoiceSupportIndicator PRESENCE mandatory }|

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

...

}

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

--

-- PRIVATE MESSAGE ELEMENTARY PROCEDURE

--

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

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

--

-- PRIVATE MESSAGE

--

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

PrivateMessage ::= SEQUENCE {

privateIEs PrivateIE-Container { { PrivateMessageIEs } },

...

}

PrivateMessageIEs NGAP-PRIVATE-IES ::= {

...

}

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

--

-- DATA USAGE REPORTING ELEMENTARY PROCEDURES

--

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

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

--

-- SECONDARY RAT DATA USAGE REPORT

--

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

SecondaryRATDataUsageReport ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {SecondaryRATDataUsageReportIEs} },

...

}

SecondaryRATDataUsageReportIEs 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-PDUSessionResourceSecondaryRATUsageList CRITICALITY ignore TYPE PDUSessionResourceSecondaryRATUsageList PRESENCE mandatory }|

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

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

...

}

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

--

-- RIM INFORMATION TRANSFER ELEMENTARY PROCEDURES

--

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

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

--

-- UPLINK RIM INFORMATION TRANSFER

--

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

UplinkRIMInformationTransfer ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UplinkRIMInformationTransferIEs} },

...

}

UplinkRIMInformationTransferIEs NGAP-PROTOCOL-IES ::= {

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

...

}

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

--

-- DOWNLINK RIM INFORMATION TRANSFER

--

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

DownlinkRIMInformationTransfer ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {DownlinkRIMInformationTransferIEs} },

...

}

DownlinkRIMInformationTransferIEs NGAP-PROTOCOL-IES ::= {

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

...

}

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

--

-- Connection Establishment Indication

--

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

ConnectionEstablishmentIndication::= SEQUENCE {

protocolIEs ProtocolIE-Container { {ConnectionEstablishmentIndicationIEs} },

...

}

ConnectionEstablishmentIndicationIEs 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-UERadioCapability CRITICALITY ignore TYPE UERadioCapability PRESENCE optional }|

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

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

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

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

{ ID id-DL-CP-SecurityInformation CRITICALITY ignore TYPE DL-CP-SecurityInformation PRESENCE optional }|

{ ID id-NB-IoT-UEPriority CRITICALITY ignore TYPE NB-IoT-UEPriority PRESENCE optional }|

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

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

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

...

}

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

--

-- UE RADIO CAPABILITY ID MAPPING ELEMENTARY PROCEDURES

--

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

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

--

-- UE RADIO CAPABILITY ID MAPPING REQUEST

--

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

UERadioCapabilityIDMappingRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UERadioCapabilityIDMappingRequestIEs} },

...

}

UERadioCapabilityIDMappingRequestIEs NGAP-PROTOCOL-IES ::= {

{ ID id-UERadioCapabilityID CRITICALITY reject TYPE UERadioCapabilityID PRESENCE mandatory },

...

}

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

--

-- UE RADIO CAPABILITY ID MAPPING RESPONSE

--

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

UERadioCapabilityIDMappingResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UERadioCapabilityIDMappingResponseIEs} },

...

}

UERadioCapabilityIDMappingResponseIEs NGAP-PROTOCOL-IES ::= {

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

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

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

...

}

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

--

-- AMF CP Relocation Indication

--

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

AMFCPRelocationIndication ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { AMFCPRelocationIndicationIEs} },

...

}

AMFCPRelocationIndicationIEs 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-S-NSSAI CRITICALITY ignore TYPE S-NSSAI PRESENCE optional }|

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

...

}

END

-- ASN1STOP

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-BurstArrivalTimeDownlink,

id-Cause,

id-CNPacketDelayBudgetDL,

id-CNPacketDelayBudgetUL,

id-CNTypeRestrictionsForEquivalent,

id-CNTypeRestrictionsForServing,

id-CommonNetworkInstance,

id-ConfiguredTACIndication,

id-CurrentQoSParaSetIndex,

id-DAPSRequestInfo,

id-DAPSResponseInfoList,

id-DataForwardingNotPossible,

id-DataForwardingResponseERABList,

id-DirectForwardingPathAvailability,

id-DL-NGU-UP-TNLInformation,

id-EndpointIPAddressAndPort,

id-ExtendedPacketDelayBudget,

id-ExtendedRATRestrictionInformation,

id-ExtendedSliceSupportList,

id-ExtendedTAISliceSupportList,

id-ExtendedUEIdentityIndexValue,

id-GlobalCable-ID,

id-GlobalRANNodeID,

id-GlobalTNGF-ID,

id-GlobalTWIF-ID,

id-GlobalW-AGF-ID,

id-GUAMIType,

id-LastEUTRAN-PLMNIdentity,

id-LocationReportingAdditionalInfo,

id-MaximumIntegrityProtectedDataRate-DL,

id-MDTConfiguration,

id-MicoAllPLMN,

id-NetworkInstance,

id-NID,

id-NPN-MobilityInformation,

id-NPN-PagingAssistanceInformation,

id-NPN-Support,

id-OldAssociatedQosFlowList-ULendmarkerexpected,

id-PagingAssisDataforCEcapabUE,

id-PagingeDRXInformation,

id-PDUSessionAggregateMaximumBitRate,

id-PduSessionExpectedUEActivityBehaviour,

id-PDUSessionResourceFailedToSetupListCxtFail,

id-PDUSessionResourceReleaseResponseTransfer,

id-PDUSessionType,

id-PSCellInformation,

id-QosFlowAddOrModifyRequestList,

id-QosFlowFailedToSetupList,

id-QosFlowFeedbackList,

id-QosFlowParametersList,

id-QosFlowSetupRequestList,

id-QosFlowToReleaseList,

id-QosMonitoringRequest,

id-QosMonitoringReportingFrequency,

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-TNLAssociationTransportLayerAddressNGRAN,

id-TargetRNC-ID,

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-UsedRSNInformation,

id-UserLocationInformationTNGF,

id-UserLocationInformationTWIF,

id-UserLocationInformationW-AGF,

id-QMCConfigInfo,

maxnoofAllowedAreas,

maxnoofAllowedCAGsperPLMN,

maxnoofAllowedS-NSSAIs,

maxnoofBluetoothName,

maxnoofBPLMNs,

maxnoofCAGSperCell,

maxnoofCandidateCells,

maxnoofCellIDforMDT,

maxnoofCellIDforQMC,

maxnoofCellIDforWarning,

maxnoofCellinAoI,

maxnoofCellinEAI,

maxnoofCellsingNB,

maxnoofCellsinngeNB,

maxnoofCellinTAI,

maxnoofCellsinUEHistoryInfo,

maxnoofCellsUEMovingTrajectory,

maxnoofDRBs,

maxnoofEmergencyAreaID,

maxnoofEAIforRestart,

maxnoofEPLMNs,

maxnoofEPLMNsPlusOne,

maxnoofE-RABs,

maxnoofErrors,

maxnoofExtSliceItems,

maxnoofForbTACs,

maxnoofFreqforMDT,

maxnoofMDTPLMNs,

maxnoofMultiConnectivity,

maxnoofMultiConnectivityMinusOne,

maxnoofNeighPCIforMDT,

maxnoofNGConnectionsToReset,

maxNRARFCN,

maxnoofNRCellBands,

maxnoofPC5QoSFlows,

maxnoofPDUSessions,

maxnoofPLMNs,

maxnoofPLMNforQMC,

maxnoofQosFlows,

maxnoofQosParaSets,

maxnoofRANNodeinAoI,

maxnoofRecommendedCells,

maxnoofRecommendedRANNodes,

maxnoofAoI,

maxnoofSensorName,

maxnoofServedGUAMIs,

maxnoofSliceItems,

maxnoofSliceQMC,

maxnoofTACs,

maxnoofTAforMDT,

maxnoofTAIforInactive,

maxnoofTAforQMC,

maxnoofTAIforPaging,

maxnoofTAIforRestart,

maxnoofTAIforWarning,

maxnoofTAIinAoI,

maxnoofTimePeriods,

maxnoofTNLAssociations,

maxnoofUEAppLayerMeas,

maxnoofWLANName,

maxnoofXnExtTLAs,

maxnoofXnGTP-TLAs,

maxnoofXnTLAs

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;

-- A

AdditionalDLUPTNLInformationForHOList ::= SEQUENCE (SIZE(1..maxnoofMultiConnectivityMinusOne)) OF AdditionalDLUPTNLInformationForHOItem

AdditionalDLUPTNLInformationForHOItem ::= SEQUENCE {

additionalDL-NGU-UP-TNLInformation UPTransportLayerInformation,

additionalQosFlowSetupResponseList QosFlowListWithDataForwarding,

additionalDLForwardingUPTNLInformation UPTransportLayerInformation OPTIONAL,

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

...

}

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

{ ID id-AdditionalRedundantDL-NGU-UP-TNLInformation CRITICALITY ignore EXTENSION UPTransportLayerInformation PRESENCE optional },

...

}

AdditionalQosFlowInformation ::= ENUMERATED {

more-likely,

...

}

AllocationAndRetentionPriority ::= SEQUENCE {

priorityLevelARP PriorityLevelARP,

pre-emptionCapability Pre-emptionCapability,

pre-emptionVulnerability Pre-emptionVulnerability,

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

...

}

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

...

}

Allowed-CAG-List-per-PLMN ::= SEQUENCE (SIZE(1..maxnoofAllowedCAGsperPLMN)) OF CAG-ID

AllowedNSSAI ::= SEQUENCE (SIZE(1..maxnoofAllowedS-NSSAIs)) OF AllowedNSSAI-Item

AllowedNSSAI-Item ::= SEQUENCE {

s-NSSAI S-NSSAI,

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

...

}

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

...

}

Allowed-PNI-NPN-List ::= SEQUENCE (SIZE(1..maxnoofEPLMNsPlusOne)) OF Allowed-PNI-NPN-Item

Allowed-PNI-NPN-Item ::= SEQUENCE {

pLMNIdentity PLMNIdentity,

pNI-NPN-restricted ENUMERATED {restricted, not-restricted, ...},

allowed-CAG-List-per-PLMN Allowed-CAG-List-per-PLMN,

iE-Extensions ProtocolExtensionContainer { {Allowed-PNI-NPN-Item-ExtIEs} } OPTIONAL,

...

}

Allowed-PNI-NPN-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

AllowedTACs ::= SEQUENCE (SIZE(1..maxnoofAllowedAreas)) OF TAC

AlternativeQoSParaSetIndex ::= INTEGER (1..8, ...)

AlternativeQoSParaSetNotifyIndex ::= INTEGER (0..8, ...)

AlternativeQoSParaSetList ::= SEQUENCE (SIZE(1..maxnoofQosParaSets)) OF AlternativeQoSParaSetItem

AlternativeQoSParaSetItem ::= SEQUENCE {

alternativeQoSParaSetIndex AlternativeQoSParaSetIndex,

guaranteedFlowBitRateDL BitRate OPTIONAL,

guaranteedFlowBitRateUL BitRate OPTIONAL,

packetDelayBudget PacketDelayBudget OPTIONAL,

packetErrorRate PacketErrorRate OPTIONAL,

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

...

}

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

...

}

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

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

AMFNameUTF8String ::= UTF8String (SIZE(1..150, ...))

AMFPagingTarget ::= CHOICE {

globalRANNodeID GlobalRANNodeID,

tAI TAI,

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

}

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

...

}

AMFPointer ::= BIT STRING (SIZE(6))

AMFRegionID ::= BIT STRING (SIZE(8))

AMFSetID ::= BIT STRING (SIZE(10))

AMF-TNLAssociationSetupList ::= SEQUENCE (SIZE(1..maxnoofTNLAssociations)) OF AMF-TNLAssociationSetupItem

AMF-TNLAssociationSetupItem ::= SEQUENCE {

aMF-TNLAssociationAddress CPTransportLayerInformation,

iE-Extensions ProtocolExtensionContainer { {AMF-TNLAssociationSetupItem-ExtIEs} } OPTIONAL,

...

}

AMF-TNLAssociationSetupItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

AMF-TNLAssociationToAddList ::= SEQUENCE (SIZE(1..maxnoofTNLAssociations)) OF AMF-TNLAssociationToAddItem

AMF-TNLAssociationToAddItem ::= SEQUENCE {

aMF-TNLAssociationAddress CPTransportLayerInformation,

tNLAssociationUsage TNLAssociationUsage OPTIONAL,

tNLAddressWeightFactor TNLAddressWeightFactor,

iE-Extensions ProtocolExtensionContainer { {AMF-TNLAssociationToAddItem-ExtIEs} } OPTIONAL,

...

}

AMF-TNLAssociationToAddItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

AMF-TNLAssociationToRemoveList ::= SEQUENCE (SIZE(1..maxnoofTNLAssociations)) OF AMF-TNLAssociationToRemoveItem

AMF-TNLAssociationToRemoveItem ::= SEQUENCE {

aMF-TNLAssociationAddress CPTransportLayerInformation,

iE-Extensions ProtocolExtensionContainer { {AMF-TNLAssociationToRemoveItem-ExtIEs} } OPTIONAL,

...

}

AMF-TNLAssociationToRemoveItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ID id-TNLAssociationTransportLayerAddressNGRAN CRITICALITY reject EXTENSION CPTransportLayerInformation PRESENCE optional},

...

}

AMF-TNLAssociationToUpdateList ::= SEQUENCE (SIZE(1..maxnoofTNLAssociations)) OF AMF-TNLAssociationToUpdateItem

AMF-TNLAssociationToUpdateItem ::= SEQUENCE {

aMF-TNLAssociationAddress CPTransportLayerInformation,

tNLAssociationUsage TNLAssociationUsage OPTIONAL,

tNLAddressWeightFactor TNLAddressWeightFactor OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {AMF-TNLAssociationToUpdateItem-ExtIEs} } OPTIONAL,

...

}

AMF-TNLAssociationToUpdateItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

AMF-UE-NGAP-ID ::= INTEGER (0..1099511627775)

AreaOfInterest ::= SEQUENCE {

areaOfInterestTAIList AreaOfInterestTAIList OPTIONAL,

areaOfInterestCellList AreaOfInterestCellList OPTIONAL,

areaOfInterestRANNodeList AreaOfInterestRANNodeList OPTIONAL,

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

...

}

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

...

}

AreaOfInterestCellList ::= SEQUENCE (SIZE(1..maxnoofCellinAoI)) OF AreaOfInterestCellItem

AreaOfInterestCellItem ::= SEQUENCE {

nGRAN-CGI NGRAN-CGI,

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

...

}

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

...

}

AreaOfInterestList ::= SEQUENCE (SIZE(1..maxnoofAoI)) OF AreaOfInterestItem

AreaOfInterestItem ::= SEQUENCE {

areaOfInterest AreaOfInterest,

locationReportingReferenceID LocationReportingReferenceID,

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

...

}

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

...

}

AreaOfInterestRANNodeList ::= SEQUENCE (SIZE(1..maxnoofRANNodeinAoI)) OF AreaOfInterestRANNodeItem

AreaOfInterestRANNodeItem ::= SEQUENCE {

globalRANNodeID GlobalRANNodeID,

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

...

}

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

...

}

AreaOfInterestTAIList ::= SEQUENCE (SIZE(1..maxnoofTAIinAoI)) OF AreaOfInterestTAIItem

AreaOfInterestTAIItem ::= SEQUENCE {

tAI TAI,

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

...

}

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

...

}

AssistanceDataForPaging ::= SEQUENCE {

assistanceDataForRecommendedCells AssistanceDataForRecommendedCells OPTIONAL,

pagingAttemptInformation PagingAttemptInformation OPTIONAL,

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

...

}

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

{ ID id-NPN-PagingAssistanceInformation CRITICALITY ignore EXTENSION NPN-PagingAssistanceInformation PRESENCE optional }|

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

...

}

AssistanceDataForRecommendedCells ::= SEQUENCE {

recommendedCellsForPaging RecommendedCellsForPaging,

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

...

}

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

...

}

AssociatedQosFlowList ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF AssociatedQosFlowItem

AssociatedQosFlowItem ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

qosFlowMappingIndication ENUMERATED {ul, dl, ...} OPTIONAL,

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

...

}

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

{ ID id-CurrentQoSParaSetIndex CRITICALITY ignore EXTENSION AlternativeQoSParaSetIndex PRESENCE optional },

...

}

AuthenticatedIndication ::= ENUMERATED {true, ...}

AveragingWindow ::= INTEGER (0..4095, ...)

AreaScopeOfMDT-NR ::= CHOICE {

cellBased CellBasedMDT-NR,

tABased TABasedMDT,

pLMNWide NULL,

tAIBased TAIBasedMDT,

choice-Extensions ProtocolIE-SingleContainer { {AreaScopeOfMDT-NR-ExtIEs} }

}

AreaScopeOfMDT-NR-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

AreaScopeOfMDT-EUTRA ::= CHOICE {

cellBased CellBasedMDT-EUTRA,

tABased TABasedMDT,

pLMNWide NULL,

tAIBased TAIBasedMDT,

choice-Extensions ProtocolIE-SingleContainer { {AreaScopeOfMDT-EUTRA-ExtIEs} }

}

AreaScopeOfMDT-EUTRA-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

AreaScopeOfNeighCellsList ::= SEQUENCE (SIZE(1..maxnoofFreqforMDT)) OF AreaScopeOfNeighCellsItem

AreaScopeOfNeighCellsItem ::= SEQUENCE {

nrFrequencyInfo NRFrequencyInfo,

pciListForMDT PCIListForMDT OPTIONAL,

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

...

}

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

...

}

AreaScopeOfQMC ::= CHOICE {

cellBased CellBasedQMC,

tABased TABasedQMC,

tAIBased TAIBasedQMC,

pLMNAreaBased PLMNAreaBasedQMC,

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

}

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

...

}

AvailableRANVisibleQoEMetrics ::= SEQUENCE {

bufferLevelIndication ENUMERATED {true, ...} OPTIONAL,

playoutDelayIndication ENUMERATED {true, ...} OPTIONAL,

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

...

}

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

...

}

-- B

BitRate ::= INTEGER (0..4000000000000, ...)

BroadcastCancelledAreaList ::= CHOICE {

cellIDCancelledEUTRA CellIDCancelledEUTRA,

tAICancelledEUTRA TAICancelledEUTRA,

emergencyAreaIDCancelledEUTRA EmergencyAreaIDCancelledEUTRA,

cellIDCancelledNR CellIDCancelledNR,

tAICancelledNR TAICancelledNR,

emergencyAreaIDCancelledNR EmergencyAreaIDCancelledNR,

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

}

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

...

}

BroadcastCompletedAreaList ::= CHOICE {

cellIDBroadcastEUTRA CellIDBroadcastEUTRA,

tAIBroadcastEUTRA TAIBroadcastEUTRA,

emergencyAreaIDBroadcastEUTRA EmergencyAreaIDBroadcastEUTRA,

cellIDBroadcastNR CellIDBroadcastNR,

tAIBroadcastNR TAIBroadcastNR,

emergencyAreaIDBroadcastNR EmergencyAreaIDBroadcastNR,

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

}

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

...

}

BroadcastPLMNList ::= SEQUENCE (SIZE(1..maxnoofBPLMNs)) OF BroadcastPLMNItem

BroadcastPLMNItem ::= SEQUENCE {

pLMNIdentity PLMNIdentity,

tAISliceSupportList SliceSupportList,

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

...

}

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

{ID id-NPN-Support CRITICALITY reject EXTENSION NPN-Support PRESENCE optional}|

{ID id-ExtendedTAISliceSupportList CRITICALITY reject EXTENSION ExtendedSliceSupportList PRESENCE optional},

...

}

BluetoothMeasurementConfiguration ::= SEQUENCE {

bluetoothMeasConfig BluetoothMeasConfig,

bluetoothMeasConfigNameList BluetoothMeasConfigNameList OPTIONAL,

bt-rssi ENUMERATED {true, ...} OPTIONAL,

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

...

}

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

...

}

BluetoothMeasConfigNameList ::= SEQUENCE (SIZE(1..maxnoofBluetoothName)) OF BluetoothMeasConfigNameItem

BluetoothMeasConfigNameItem ::= SEQUENCE {

bluetoothName BluetoothName,

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

...

}

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

...

}

BluetoothMeasConfig::= ENUMERATED {setup,...}

BluetoothName ::= OCTET STRING (SIZE (1..248))

BurstArrivalTime ::= OCTET STRING

-- C

CAG-ID ::= BIT STRING (SIZE(32))

CancelAllWarningMessages ::= ENUMERATED {

true,

...

}

CancelledCellsInEAI-EUTRA ::= SEQUENCE (SIZE(1..maxnoofCellinEAI)) OF CancelledCellsInEAI-EUTRA-Item

CancelledCellsInEAI-EUTRA-Item ::= SEQUENCE {

eUTRA-CGI EUTRA-CGI,

numberOfBroadcasts NumberOfBroadcasts,

iE-Extensions ProtocolExtensionContainer { {CancelledCellsInEAI-EUTRA-Item-ExtIEs} } OPTIONAL,

...

}

CancelledCellsInEAI-EUTRA-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CancelledCellsInEAI-NR ::= SEQUENCE (SIZE(1..maxnoofCellinEAI)) OF CancelledCellsInEAI-NR-Item

CancelledCellsInEAI-NR-Item ::= SEQUENCE {

nR-CGI NR-CGI,

numberOfBroadcasts NumberOfBroadcasts,

iE-Extensions ProtocolExtensionContainer { {CancelledCellsInEAI-NR-Item-ExtIEs} } OPTIONAL,

...

}

CancelledCellsInEAI-NR-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CancelledCellsInTAI-EUTRA ::= SEQUENCE (SIZE(1..maxnoofCellinTAI)) OF CancelledCellsInTAI-EUTRA-Item

CancelledCellsInTAI-EUTRA-Item ::= SEQUENCE {

eUTRA-CGI EUTRA-CGI,

numberOfBroadcasts NumberOfBroadcasts,

iE-Extensions ProtocolExtensionContainer { {CancelledCellsInTAI-EUTRA-Item-ExtIEs} } OPTIONAL,

...

}

CancelledCellsInTAI-EUTRA-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CancelledCellsInTAI-NR ::= SEQUENCE (SIZE(1..maxnoofCellinTAI)) OF CancelledCellsInTAI-NR-Item

CancelledCellsInTAI-NR-Item ::= SEQUENCE{

nR-CGI NR-CGI,

numberOfBroadcasts NumberOfBroadcasts,

iE-Extensions ProtocolExtensionContainer { {CancelledCellsInTAI-NR-Item-ExtIEs} } OPTIONAL,

...

}

CancelledCellsInTAI-NR-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CandidateCellList ::= SEQUENCE (SIZE(1.. maxnoofCandidateCells)) OF CandidateCellItem

CandidateCellItem ::= SEQUENCE{

candidateCell CandidateCell,

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

...

}

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

...

}

CandidateCell::= CHOICE {

candidateCGI CandidateCellID,

candidatePCI CandidatePCI,

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

}

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

...

}

CandidateCellID::= SEQUENCE {

candidateCellID NR-CGI,

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

...

}

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

...

}

CandidatePCI::= SEQUENCE {

candidatePCI INTEGER (0..1007, ...),

candidateNRARFCN INTEGER (0..3279165),

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

...

}

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

...

}

Cause ::= CHOICE {

radioNetwork CauseRadioNetwork,

transport CauseTransport,

nas CauseNas,

protocol CauseProtocol,

misc CauseMisc,

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

}

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

...

}

CauseMisc ::= ENUMERATED {

control-processing-overload,

not-enough-user-plane-processing-resources,

hardware-failure,

om-intervention,

unknown-PLMN-or-SNPN,

unspecified,

...

}

CauseNas ::= ENUMERATED {

normal-release,

authentication-failure,

deregister,

unspecified,

...

}

CauseProtocol ::= ENUMERATED {

transfer-syntax-error,

abstract-syntax-error-reject,

abstract-syntax-error-ignore-and-notify,

message-not-compatible-with-receiver-state,

semantic-error,

abstract-syntax-error-falsely-constructed-message,

unspecified,

...

}

CauseRadioNetwork ::= ENUMERATED {

unspecified,

txnrelocoverall-expiry,

successful-handover,

release-due-to-ngran-generated-reason,

release-due-to-5gc-generated-reason,

handover-cancelled,

partial-handover,

ho-failure-in-target-5GC-ngran-node-or-target-system,

ho-target-not-allowed,

tngrelocoverall-expiry,

tngrelocprep-expiry,

cell-not-available,

unknown-targetID,

no-radio-resources-available-in-target-cell,

unknown-local-UE-NGAP-ID,

inconsistent-remote-UE-NGAP-ID,

handover-desirable-for-radio-reason,

time-critical-handover,

resource-optimisation-handover,

reduce-load-in-serving-cell,

user-inactivity,

radio-connection-with-ue-lost,

radio-resources-not-available,

invalid-qos-combination,

failure-in-radio-interface-procedure,

interaction-with-other-procedure,

unknown-PDU-session-ID,

unkown-qos-flow-ID,

multiple-PDU-session-ID-instances,

multiple-qos-flow-ID-instances,

encryption-and-or-integrity-protection-algorithms-not-supported,

ng-intra-system-handover-triggered,

ng-inter-system-handover-triggered,

xn-handover-triggered,

not-supported-5QI-value,

ue-context-transfer,

ims-voice-eps-fallback-or-rat-fallback-triggered,

up-integrity-protection-not-possible,

up-confidentiality-protection-not-possible,

slice-not-supported,

ue-in-rrc-inactive-state-not-reachable,

redirection,

resources-not-available-for-the-slice,

ue-max-integrity-protected-data-rate-reason,

release-due-to-cn-detected-mobility,

...,

n26-interface-not-available,

release-due-to-pre-emption,

multiple-location-reporting-reference-ID-instances,

rsn-not-available-for-the-up,

npn-access-denied,

cag-only-access-denied,

insufficient-ue-capabilities

}

CauseTransport ::= ENUMERATED {

transport-resource-unavailable,

unspecified,

...

}

Cell-CAGInformation ::= SEQUENCE {

nGRAN-CGI NGRAN-CGI,

cellCAGList CellCAGList,

iE-Extensions ProtocolExtensionContainer { {Cell-CAGInformation-ExtIEs} } OPTIONAL,

...

}

Cell-CAGInformation-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CellCAGList ::= SEQUENCE (SIZE(1..maxnoofCAGSperCell)) OF CAG-ID

CellIDBroadcastEUTRA ::= SEQUENCE (SIZE(1..maxnoofCellIDforWarning)) OF CellIDBroadcastEUTRA-Item

CellIDBroadcastEUTRA-Item ::= SEQUENCE {

eUTRA-CGI EUTRA-CGI,

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

...

}

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

...

}

CellIDBroadcastNR ::= SEQUENCE (SIZE(1..maxnoofCellIDforWarning)) OF CellIDBroadcastNR-Item

CellIDBroadcastNR-Item ::= SEQUENCE {

nR-CGI NR-CGI,

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

...

}

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

...

}

CellIDCancelledEUTRA ::= SEQUENCE (SIZE(1..maxnoofCellIDforWarning)) OF CellIDCancelledEUTRA-Item

CellIDCancelledEUTRA-Item ::= SEQUENCE {

eUTRA-CGI EUTRA-CGI,

numberOfBroadcasts NumberOfBroadcasts,

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

...

}

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

...

}

CellIDCancelledNR ::= SEQUENCE (SIZE(1..maxnoofCellIDforWarning)) OF CellIDCancelledNR-Item

CellIDCancelledNR-Item ::= SEQUENCE {

nR-CGI NR-CGI,

numberOfBroadcasts NumberOfBroadcasts,

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

...

}

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

...

}

CellIDListForRestart ::= CHOICE {

eUTRA-CGIListforRestart EUTRA-CGIList,

nR-CGIListforRestart NR-CGIList,

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

}

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

...

}

CellSize ::= ENUMERATED {verysmall, small, medium, large, ...}

CellType ::= SEQUENCE {

cellSize CellSize,

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

...

}

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

...

}

CEmodeBSupport-Indicator ::= ENUMERATED {supported,...}

CEmodeBrestricted ::= ENUMERATED {

restricted,

not-restricted,

...

}

CNAssistedRANTuning ::= SEQUENCE {

expectedUEBehaviour ExpectedUEBehaviour OPTIONAL,

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

...

}

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

...

}

CNTypeRestrictionsForEquivalent ::= SEQUENCE (SIZE(1..maxnoofEPLMNs)) OF CNTypeRestrictionsForEquivalentItem

CNTypeRestrictionsForEquivalentItem ::= SEQUENCE {

plmnIdentity PLMNIdentity,

cn-Type ENUMERATED {epc-forbidden, fiveGC-forbidden, ...},

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

...

}

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

...

}

CNTypeRestrictionsForServing ::= ENUMERATED {

epc-forbidden,

...

}

CommonNetworkInstance ::= OCTET STRING

CompletedCellsInEAI-EUTRA ::= SEQUENCE (SIZE(1..maxnoofCellinEAI)) OF CompletedCellsInEAI-EUTRA-Item

CompletedCellsInEAI-EUTRA-Item ::= SEQUENCE {

eUTRA-CGI EUTRA-CGI,

iE-Extensions ProtocolExtensionContainer { {CompletedCellsInEAI-EUTRA-Item-ExtIEs} } OPTIONAL,

...

}

CompletedCellsInEAI-EUTRA-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CompletedCellsInEAI-NR ::= SEQUENCE (SIZE(1..maxnoofCellinEAI)) OF CompletedCellsInEAI-NR-Item

CompletedCellsInEAI-NR-Item ::= SEQUENCE {

nR-CGI NR-CGI,

iE-Extensions ProtocolExtensionContainer { {CompletedCellsInEAI-NR-Item-ExtIEs} } OPTIONAL,

...

}

CompletedCellsInEAI-NR-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CompletedCellsInTAI-EUTRA ::= SEQUENCE (SIZE(1..maxnoofCellinTAI)) OF CompletedCellsInTAI-EUTRA-Item

CompletedCellsInTAI-EUTRA-Item ::= SEQUENCE{

eUTRA-CGI EUTRA-CGI,

iE-Extensions ProtocolExtensionContainer { {CompletedCellsInTAI-EUTRA-Item-ExtIEs} } OPTIONAL,

...

}

CompletedCellsInTAI-EUTRA-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CompletedCellsInTAI-NR ::= SEQUENCE (SIZE(1..maxnoofCellinTAI)) OF CompletedCellsInTAI-NR-Item

CompletedCellsInTAI-NR-Item ::= SEQUENCE{

nR-CGI NR-CGI,

iE-Extensions ProtocolExtensionContainer { {CompletedCellsInTAI-NR-Item-ExtIEs} } OPTIONAL,

...

}

CompletedCellsInTAI-NR-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

ConcurrentWarningMessageInd ::= ENUMERATED {

true,

...

}

ConfidentialityProtectionIndication ::= ENUMERATED {

required,

preferred,

not-needed,

...

}

ConfidentialityProtectionResult ::= ENUMERATED {

performed,

not-performed,

...

}

ConfiguredTACIndication ::= ENUMERATED {

true,

...

}

CoreNetworkAssistanceInformationForInactive ::= SEQUENCE {

uEIdentityIndexValue UEIdentityIndexValue,

uESpecificDRX PagingDRX OPTIONAL,

periodicRegistrationUpdateTimer PeriodicRegistrationUpdateTimer,

mICOModeIndication MICOModeIndication OPTIONAL,

tAIListForInactive TAIListForInactive,

expectedUEBehaviour ExpectedUEBehaviour OPTIONAL,

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

...

}

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

{ ID id-PagingeDRXInformation CRITICALITY ignore EXTENSION PagingeDRXInformation PRESENCE optional }|

{ ID id-ExtendedUEIdentityIndexValue CRITICALITY ignore EXTENSION ExtendedUEIdentityIndexValue PRESENCE optional }|

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

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

...

}

COUNTValueForPDCP-SN12 ::= SEQUENCE {

pDCP-SN12 INTEGER (0..4095),

hFN-PDCP-SN12 INTEGER (0..1048575),

iE-Extensions ProtocolExtensionContainer { {COUNTValueForPDCP-SN12-ExtIEs} } OPTIONAL,

...

}

COUNTValueForPDCP-SN12-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

COUNTValueForPDCP-SN18 ::= SEQUENCE {

pDCP-SN18 INTEGER (0..262143),

hFN-PDCP-SN18 INTEGER (0..16383),

iE-Extensions ProtocolExtensionContainer { {COUNTValueForPDCP-SN18-ExtIEs} } OPTIONAL,

...

}

COUNTValueForPDCP-SN18-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CoverageEnhancementLevel ::= OCTET STRING

CPTransportLayerInformation ::= CHOICE {

endpointIPAddress TransportLayerAddress,

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

}

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

{ ID id-EndpointIPAddressAndPort CRITICALITY reject TYPE EndpointIPAddressAndPort PRESENCE mandatory },

...

}

CriticalityDiagnostics ::= SEQUENCE {

procedureCode ProcedureCode OPTIONAL,

triggeringMessage TriggeringMessage OPTIONAL,

procedureCriticality Criticality OPTIONAL,

iEsCriticalityDiagnostics CriticalityDiagnostics-IE-List OPTIONAL,

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

...

}

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

...

}

CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE(1..maxnoofErrors)) OF CriticalityDiagnostics-IE-Item

CriticalityDiagnostics-IE-Item ::= SEQUENCE {

iECriticality Criticality,

iE-ID ProtocolIE-ID,

typeOfError TypeOfError,

iE-Extensions ProtocolExtensionContainer {{CriticalityDiagnostics-IE-Item-ExtIEs}} OPTIONAL,

...

}

CriticalityDiagnostics-IE-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CellBasedMDT-NR::= SEQUENCE {

cellIdListforMDT CellIdListforMDT-NR,

iE-Extensions ProtocolExtensionContainer { {CellBasedMDT-NR-ExtIEs} } OPTIONAL,

...

}

CellBasedMDT-NR-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CellIdListforMDT-NR ::= SEQUENCE (SIZE(1..maxnoofCellIDforMDT)) OF NR-CGI

CellBasedMDT-EUTRA::= SEQUENCE {

cellIdListforMDT CellIdListforMDT-EUTRA,

iE-Extensions ProtocolExtensionContainer { {CellBasedMDT-EUTRA-ExtIEs} } OPTIONAL,

...

}

CellBasedMDT-EUTRA-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CellBasedQMC ::= SEQUENCE {

cellIdListforQMC CellIdListforQMC,

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

...

}

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

...

}

CellIdListforQMC ::= SEQUENCE (SIZE(1..maxnoofCellIDforQMC)) OF NR-CGI

CellIdListforMDT-EUTRA ::= SEQUENCE (SIZE(1..maxnoofCellIDforMDT)) OF EUTRA-CGI

-- D

DataCodingScheme ::= BIT STRING (SIZE(8))

DataForwardingAccepted ::= ENUMERATED {

data-forwarding-accepted,

...

}

DataForwardingNotPossible ::= ENUMERATED {

data-forwarding-not-possible,

...

}

DataForwardingResponseDRBList ::= SEQUENCE (SIZE(1..maxnoofDRBs)) OF DataForwardingResponseDRBItem

DataForwardingResponseDRBItem ::= SEQUENCE {

dRB-ID DRB-ID,

dLForwardingUP-TNLInformation UPTransportLayerInformation OPTIONAL,

uLForwardingUP-TNLInformation UPTransportLayerInformation OPTIONAL,

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

...

}

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

...

}

DAPSRequestInfo ::= SEQUENCE {

dAPSIndicator ENUMERATED {daps-ho-required, ...},

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

...

}

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

...

}

DAPSResponseInfoList ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DAPSResponseInfoItem

DAPSResponseInfoItem ::= SEQUENCE {

dRB-ID DRB-ID,

dAPSResponseInfo DAPSResponseInfo,

iE-Extension ProtocolExtensionContainer { {DAPSResponseInfoItem-ExtIEs} } OPTIONAL,

...

}

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

...

}

DAPSResponseInfo ::= SEQUENCE {

dapsresponseindicator ENUMERATED {daps-ho-accepted, daps-ho-not-accepted, ...},

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

...

}

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

...

}

DataForwardingResponseERABList ::= SEQUENCE (SIZE(1..maxnoofE-RABs)) OF DataForwardingResponseERABListItem

DataForwardingResponseERABListItem ::= SEQUENCE {

e-RAB-ID E-RAB-ID,

dLForwardingUP-TNLInformation UPTransportLayerInformation,

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

...

}

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

...

}

DelayCritical ::= ENUMERATED {

delay-critical,

non-delay-critical,

...

}

DL-CP-SecurityInformation ::= SEQUENCE {

dl-NAS-MAC DL-NAS-MAC,

iE-Extensions ProtocolExtensionContainer { { DL-CP-SecurityInformation-ExtIEs} } OPTIONAL,

...

}

DL-CP-SecurityInformation-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

DL-NAS-MAC ::= BIT STRING (SIZE (16))

DLForwarding ::= ENUMERATED {

dl-forwarding-proposed,

...

}

DL-NGU-TNLInformationReused ::= ENUMERATED {

true,

...

}

DirectForwardingPathAvailability ::= ENUMERATED {

direct-path-available,

...

}

DRB-ID ::= INTEGER (1..32, ...)

DRBsSubjectToStatusTransferList ::= SEQUENCE (SIZE(1..maxnoofDRBs)) OF DRBsSubjectToStatusTransferItem

DRBsSubjectToStatusTransferItem ::= SEQUENCE {

dRB-ID DRB-ID,

dRBStatusUL DRBStatusUL,

dRBStatusDL DRBStatusDL,

iE-Extension ProtocolExtensionContainer { {DRBsSubjectToStatusTransferItem-ExtIEs} } OPTIONAL,

...

}

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

{ ID id-OldAssociatedQosFlowList-ULendmarkerexpected CRITICALITY ignore EXTENSION AssociatedQosFlowList PRESENCE optional },

...

}

DRBStatusDL ::= CHOICE {

dRBStatusDL12 DRBStatusDL12,

dRBStatusDL18 DRBStatusDL18,

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

}

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

...

}

DRBStatusDL12 ::= SEQUENCE {

dL-COUNTValue COUNTValueForPDCP-SN12,

iE-Extension ProtocolExtensionContainer { {DRBStatusDL12-ExtIEs} } OPTIONAL,

...

}

DRBStatusDL12-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

DRBStatusDL18 ::= SEQUENCE {

dL-COUNTValue COUNTValueForPDCP-SN18,

iE-Extension ProtocolExtensionContainer { {DRBStatusDL18-ExtIEs} } OPTIONAL,

...

}

DRBStatusDL18-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

DRBStatusUL ::= CHOICE {

dRBStatusUL12 DRBStatusUL12,

dRBStatusUL18 DRBStatusUL18,

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

}

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

...

}

DRBStatusUL12 ::= SEQUENCE {

uL-COUNTValue COUNTValueForPDCP-SN12,

receiveStatusOfUL-PDCP-SDUs BIT STRING (SIZE(1..2048)) OPTIONAL,

iE-Extension ProtocolExtensionContainer { {DRBStatusUL12-ExtIEs} } OPTIONAL,

...

}

DRBStatusUL12-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

DRBStatusUL18 ::= SEQUENCE {

uL-COUNTValue COUNTValueForPDCP-SN18,

receiveStatusOfUL-PDCP-SDUs BIT STRING (SIZE(1..131072)) OPTIONAL,

iE-Extension ProtocolExtensionContainer { {DRBStatusUL18-ExtIEs} } OPTIONAL,

...

}

DRBStatusUL18-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

DRBsToQosFlowsMappingList ::= SEQUENCE (SIZE(1..maxnoofDRBs)) OF DRBsToQosFlowsMappingItem

DRBsToQosFlowsMappingItem ::= SEQUENCE {

dRB-ID DRB-ID,

associatedQosFlowList AssociatedQosFlowList,

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

...

}

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

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

...

}

Dynamic5QIDescriptor ::= SEQUENCE {

priorityLevelQos PriorityLevelQos,

packetDelayBudget PacketDelayBudget,

packetErrorRate PacketErrorRate,

fiveQI FiveQI OPTIONAL,

delayCritical DelayCritical OPTIONAL,

-- The above IE shall be present in case of GBR QoS flow

averagingWindow AveragingWindow OPTIONAL,

-- The above IE shall be present in case of GBR QoS flow

maximumDataBurstVolume MaximumDataBurstVolume OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {Dynamic5QIDescriptor-ExtIEs} } OPTIONAL,

...

}

Dynamic5QIDescriptor-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-ExtendedPacketDelayBudget CRITICALITY ignore EXTENSION ExtendedPacketDelayBudget PRESENCE optional }|

{ ID id-CNPacketDelayBudgetDL CRITICALITY ignore EXTENSION ExtendedPacketDelayBudget PRESENCE optional }|

{ ID id-CNPacketDelayBudgetUL CRITICALITY ignore EXTENSION ExtendedPacketDelayBudget PRESENCE optional },

...

}

-- E

EarlyStatusTransfer-TransparentContainer ::= SEQUENCE {

procedureStage ProcedureStageChoice,

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

...

}

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

...

}

ProcedureStageChoice ::= CHOICE {

first-dl-count FirstDLCount,

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

}

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

...

}

FirstDLCount ::= SEQUENCE {

dRBsSubjectToEarlyStatusTransfer DRBsSubjectToEarlyStatusTransfer-List,

iE-Extension ProtocolExtensionContainer { {FirstDLCount-ExtIEs} } OPTIONAL,

...

}

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

...

}

DRBsSubjectToEarlyStatusTransfer-List ::= SEQUENCE (SIZE (1.. maxnoofDRBs)) OF DRBsSubjectToEarlyStatusTransfer-Item

DRBsSubjectToEarlyStatusTransfer-Item ::= SEQUENCE {

dRB-ID DRB-ID,

firstDLCOUNT DRBStatusDL,

iE-Extension ProtocolExtensionContainer { { DRBsSubjectToEarlyStatusTransfer-Item-ExtIEs} } OPTIONAL,

...

}

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

...

}

EDT-Session ::= ENUMERATED {

true,

...

}

EmergencyAreaID ::= OCTET STRING (SIZE(3))

EmergencyAreaIDBroadcastEUTRA ::= SEQUENCE (SIZE(1..maxnoofEmergencyAreaID)) OF EmergencyAreaIDBroadcastEUTRA-Item

EmergencyAreaIDBroadcastEUTRA-Item ::= SEQUENCE {

emergencyAreaID EmergencyAreaID,

completedCellsInEAI-EUTRA CompletedCellsInEAI-EUTRA,

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

...

}

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

...

}

EmergencyAreaIDBroadcastNR ::= SEQUENCE (SIZE(1..maxnoofEmergencyAreaID)) OF EmergencyAreaIDBroadcastNR-Item

EmergencyAreaIDBroadcastNR-Item ::= SEQUENCE {

emergencyAreaID EmergencyAreaID,

completedCellsInEAI-NR CompletedCellsInEAI-NR,

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

...

}

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

...

}

EmergencyAreaIDCancelledEUTRA ::= SEQUENCE (SIZE(1..maxnoofEmergencyAreaID)) OF EmergencyAreaIDCancelledEUTRA-Item

EmergencyAreaIDCancelledEUTRA-Item ::= SEQUENCE {

emergencyAreaID EmergencyAreaID,

cancelledCellsInEAI-EUTRA CancelledCellsInEAI-EUTRA,

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

...

}

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

...

}

EmergencyAreaIDCancelledNR ::= SEQUENCE (SIZE(1..maxnoofEmergencyAreaID)) OF EmergencyAreaIDCancelledNR-Item

EmergencyAreaIDCancelledNR-Item ::= SEQUENCE {

emergencyAreaID EmergencyAreaID,

cancelledCellsInEAI-NR CancelledCellsInEAI-NR,

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

...

}

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

...

}

EmergencyAreaIDList ::= SEQUENCE (SIZE(1..maxnoofEmergencyAreaID)) OF EmergencyAreaID

EmergencyAreaIDListForRestart ::= SEQUENCE (SIZE(1..maxnoofEAIforRestart)) OF EmergencyAreaID

EmergencyFallbackIndicator ::= SEQUENCE {

emergencyFallbackRequestIndicator EmergencyFallbackRequestIndicator,

emergencyServiceTargetCN EmergencyServiceTargetCN OPTIONAL,

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

...

}

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

...

}

EmergencyFallbackRequestIndicator ::= ENUMERATED {

emergency-fallback-requested,

...

}

EmergencyServiceTargetCN ::= ENUMERATED {

fiveGC,

epc,

...

}

ENB-ID ::= CHOICE {

macroENB-ID BIT STRING (SIZE(20)),

homeENB-ID BIT STRING (SIZE(28)),

short-macroENB-ID BIT STRING (SIZE(18)),

long-macroENB-ID BIT STRING (SIZE(21)),

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

}

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

...

}

Enhanced-CoverageRestriction ::= ENUMERATED {restricted, ... }

Extended-ConnectedTime ::= INTEGER (0..255)

EN-DCSONConfigurationTransfer ::= OCTET STRING

EndpointIPAddressAndPort ::=SEQUENCE {

endpointIPAddress TransportLayerAddress,

portNumber PortNumber,

iE-Extensions ProtocolExtensionContainer { { EndpointIPAddressAndPort-ExtIEs} } OPTIONAL

}

EndIndication ::= ENUMERATED {

no-further-data,

further-data-exists,

...

}

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

...

}

EquivalentPLMNs ::= SEQUENCE (SIZE(1..maxnoofEPLMNs)) OF PLMNIdentity

EPS-TAC ::= OCTET STRING (SIZE(2))

EPS-TAI ::= SEQUENCE {

pLMNIdentity PLMNIdentity,

ePS-TAC EPS-TAC,

iE-Extensions ProtocolExtensionContainer { {EPS-TAI-ExtIEs} } OPTIONAL,

...

}

EPS-TAI-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

E-RAB-ID ::= INTEGER (0..15, ...)

E-RABInformationList ::= SEQUENCE (SIZE(1..maxnoofE-RABs)) OF E-RABInformationItem

E-RABInformationItem ::= SEQUENCE {

e-RAB-ID E-RAB-ID,

dLForwarding DLForwarding OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {E-RABInformationItem-ExtIEs} } OPTIONAL,

...

}

E-RABInformationItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

EUTRACellIdentity ::= BIT STRING (SIZE(28))

EUTRA-CGI ::= SEQUENCE {

pLMNIdentity PLMNIdentity,

eUTRACellIdentity EUTRACellIdentity,

iE-Extensions ProtocolExtensionContainer { {EUTRA-CGI-ExtIEs} } OPTIONAL,

...

}

EUTRA-CGI-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

EUTRA-CGIList ::= SEQUENCE (SIZE(1..maxnoofCellsinngeNB)) OF EUTRA-CGI

EUTRA-CGIListForWarning ::= SEQUENCE (SIZE(1..maxnoofCellIDforWarning)) OF EUTRA-CGI

EUTRAencryptionAlgorithms ::= BIT STRING (SIZE(16, ...))

EUTRAintegrityProtectionAlgorithms ::= BIT STRING (SIZE(16, ...))

EventType ::= ENUMERATED {

direct,

change-of-serve-cell,

ue-presence-in-area-of-interest,

stop-change-of-serve-cell,

stop-ue-presence-in-area-of-interest,

cancel-location-reporting-for-the-ue,

...

}

ExpectedActivityPeriod ::= INTEGER (1..30|40|50|60|80|100|120|150|180|181, ...)

ExpectedHOInterval ::= ENUMERATED {

sec15, sec30, sec60, sec90, sec120, sec180, long-time,

...

}

ExpectedIdlePeriod ::= INTEGER (1..30|40|50|60|80|100|120|150|180|181, ...)

ExpectedUEActivityBehaviour ::= SEQUENCE {

expectedActivityPeriod ExpectedActivityPeriod OPTIONAL,

expectedIdlePeriod ExpectedIdlePeriod OPTIONAL,

sourceOfUEActivityBehaviourInformation SourceOfUEActivityBehaviourInformation OPTIONAL,

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

...

}

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

...

}

ExpectedUEBehaviour ::= SEQUENCE {

expectedUEActivityBehaviour ExpectedUEActivityBehaviour OPTIONAL,

expectedHOInterval ExpectedHOInterval OPTIONAL,

expectedUEMobility ExpectedUEMobility OPTIONAL,

expectedUEMovingTrajectory ExpectedUEMovingTrajectory OPTIONAL,

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

...

}

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

...

}

ExpectedUEMobility ::= ENUMERATED {

stationary,

mobile,

...

}

ExpectedUEMovingTrajectory ::= SEQUENCE (SIZE(1..maxnoofCellsUEMovingTrajectory)) OF ExpectedUEMovingTrajectoryItem

ExpectedUEMovingTrajectoryItem ::= SEQUENCE {

nGRAN-CGI NGRAN-CGI,

timeStayedInCell INTEGER (0..4095) OPTIONAL,

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

...

}

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

...

}

Extended-AMFName ::= SEQUENCE {

aMFNameVisibleString AMFNameVisibleString OPTIONAL,

aMFNameUTF8String AMFNameUTF8String OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { Extended-AMFName-ExtIEs } } OPTIONAL,

...

}

Extended-AMFName-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

ExtendedPacketDelayBudget ::= INTEGER (1..65535, ...)

Extended-RANNodeName ::= SEQUENCE {

rANNodeNameVisibleString RANNodeNameVisibleString OPTIONAL,

rANNodeNameUTF8String RANNodeNameUTF8String OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { Extended-RANNodeName-ExtIEs } } OPTIONAL, ...

}

Extended-RANNodeName-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

ExtendedRATRestrictionInformation ::= SEQUENCE {

primaryRATRestriction BIT STRING (SIZE(8, ...)),

secondaryRATRestriction BIT STRING (SIZE(8, ...)),

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

...

}

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

...

}

ExtendedRNC-ID ::= INTEGER (4096..65535)

ExtendedSliceSupportList ::= SEQUENCE (SIZE(1..maxnoofExtSliceItems)) OF SliceSupportItem

ExtendedUEIdentityIndexValue ::= BIT STRING (SIZE(16))

EventTrigger::= CHOICE {

outOfCoverage ENUMERATED {true, ...},

eventL1LoggedMDTConfig EventL1LoggedMDTConfig,

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

}

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

...

}

EventL1LoggedMDTConfig ::= SEQUENCE {

l1Threshold MeasurementThresholdL1LoggedMDT,

hysteresis Hysteresis,

timeToTrigger TimeToTrigger,

iE-Extensions ProtocolExtensionContainer { { EventL1LoggedMDTConfig-ExtIEs} } OPTIONAL,

...

}

EventL1LoggedMDTConfig-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

MeasurementThresholdL1LoggedMDT ::= CHOICE {

threshold-RSRP Threshold-RSRP,

threshold-RSRQ Threshold-RSRQ,

choice-Extensions ProtocolIE-SingleContainer { { MeasurementThresholdL1LoggedMDT-ExtIEs} }

}

MeasurementThresholdL1LoggedMDT-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

-- F

FailureIndication ::= SEQUENCE {

uERLFReportContainer UERLFReportContainer,

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

...

}

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

...

}

FiveG-S-TMSI ::= SEQUENCE {

aMFSetID AMFSetID,

aMFPointer AMFPointer,

fiveG-TMSI FiveG-TMSI,

iE-Extensions ProtocolExtensionContainer { {FiveG-S-TMSI-ExtIEs} } OPTIONAL,

...

}

FiveG-S-TMSI-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

FiveG-TMSI ::= OCTET STRING (SIZE(4))

FiveQI ::= INTEGER (0..255, ...)

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

ForbiddenAreaInformation-Item ::= SEQUENCE {

pLMNIdentity PLMNIdentity,

forbiddenTACs ForbiddenTACs,

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

...

}

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

...

}

ForbiddenTACs ::= SEQUENCE (SIZE(1..maxnoofForbTACs)) OF TAC

FromEUTRANtoNGRAN ::= SEQUENCE {

sourceeNBID IntersystemSONeNBID,

targetNGRANnodeID IntersystemSONNGRANnodeID,

iE-Extensions ProtocolExtensionContainer { { FromEUTRANtoNGRAN-ExtIEs} } OPTIONAL

}

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

...

}

FromNGRANtoEUTRAN ::= SEQUENCE {

sourceNGRANnodeID IntersystemSONNGRANnodeID,

targeteNBID IntersystemSONeNBID,

iE-Extensions ProtocolExtensionContainer { { FromNGRANtoEUTRAN-ExtIEs} } OPTIONAL

}

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

...

}

-- 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

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 ::= {

...

}

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, ...}

-- H

HandoverCommandTransfer ::= SEQUENCE {

dLForwardingUP-TNLInformation UPTransportLayerInformation OPTIONAL,

qosFlowToBeForwardedList QosFlowToBeForwardedList OPTIONAL,

dataForwardingResponseDRBList DataForwardingResponseDRBList OPTIONAL,

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

...

}

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

{ ID id-AdditionalDLForwardingUPTNLInformation CRITICALITY ignore EXTENSION QosFlowPerTNLInformationList PRESENCE optional }|

{ ID id-ULForwardingUP-TNLInformation CRITICALITY reject EXTENSION UPTransportLayerInformation PRESENCE optional }|

{ ID id-AdditionalULForwardingUPTNLInformation CRITICALITY reject EXTENSION UPTransportLayerInformationList PRESENCE optional }|

{ ID id-DataForwardingResponseERABList CRITICALITY ignore EXTENSION DataForwardingResponseERABList PRESENCE optional }|

{ ID id-QosFlowFailedToSetupList CRITICALITY ignore EXTENSION QosFlowListWithCause PRESENCE optional },

...

}

HandoverFlag ::= ENUMERATED {

handover-preparation,

...

}

HandoverPreparationUnsuccessfulTransfer ::= SEQUENCE {

cause Cause,

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

...

}

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

...

}

HandoverRequestAcknowledgeTransfer ::= SEQUENCE {

dL-NGU-UP-TNLInformation UPTransportLayerInformation,

dLForwardingUP-TNLInformation UPTransportLayerInformation OPTIONAL,

securityResult SecurityResult OPTIONAL,

qosFlowSetupResponseList QosFlowListWithDataForwarding,

qosFlowFailedToSetupList QosFlowListWithCause OPTIONAL,

dataForwardingResponseDRBList DataForwardingResponseDRBList OPTIONAL,

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

...

}

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

{ ID id-AdditionalDLUPTNLInformationForHOList CRITICALITY ignore EXTENSION AdditionalDLUPTNLInformationForHOList PRESENCE optional }|

{ ID id-ULForwardingUP-TNLInformation CRITICALITY reject EXTENSION UPTransportLayerInformation PRESENCE optional }|

{ ID id-AdditionalULForwardingUPTNLInformation CRITICALITY reject EXTENSION UPTransportLayerInformationList PRESENCE optional }|

{ ID id-DataForwardingResponseERABList CRITICALITY ignore EXTENSION DataForwardingResponseERABList PRESENCE optional }|

{ ID id-RedundantDL-NGU-UP-TNLInformation CRITICALITY ignore EXTENSION UPTransportLayerInformation PRESENCE optional }|

{ ID id-UsedRSNInformation CRITICALITY ignore EXTENSION RedundantPDUSessionInformation PRESENCE optional }|

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

...

}

HandoverRequiredTransfer ::= SEQUENCE {

directForwardingPathAvailability DirectForwardingPathAvailability OPTIONAL,

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

...

}

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

...

}

HandoverResourceAllocationUnsuccessfulTransfer ::= SEQUENCE {

cause Cause,

criticalityDiagnostics CriticalityDiagnostics OPTIONAL,

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

...

}

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

...

}

HandoverType ::= ENUMERATED {

intra5gs,

fivegs-to-eps,

eps-to-5gs,

...,

fivegs-to-utran

}

HFCNode-ID ::= OCTET STRING

HOReport::= SEQUENCE {

handoverReportType ENUMERATED {ho-too-early, ho-to-wrong-cell, intersystem-ping-pong, ...},

handoverCause Cause,

sourcecellCGI NGRAN-CGI,

targetcellCGI NGRAN-CGI,

reestablishmentcellCGI NGRAN-CGI OPTIONAL,

-- The above IE shall be present if the Handover Report Type IE is set to the value "HO to wrong cell" --

sourcecellC-RNTI BIT STRING (SIZE(16)) OPTIONAL,

targetcellinE-UTRAN EUTRA-CGI OPTIONAL,

-- The above IE shall be present if the Handover Report Type IE is set to the value "Inter System ping-pong" --

mobilityInformation MobilityInformation OPTIONAL,

uERLFReportContainer UERLFReportContainer OPTIONAL,

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

...

}

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

...

}

Hysteresis ::= INTEGER (0..30)

-- I

IAB-Authorized ::= ENUMERATED {

authorized,

not-authorized,

...

}

IAB-Supported ::= ENUMERATED {

true,

...

}

IABNodeIndication ::= ENUMERATED {

true,

...

}

IMSVoiceSupportIndicator ::= ENUMERATED {

supported,

not-supported,

...

}

IndexToRFSP ::= INTEGER (1..256, ...)

InfoOnRecommendedCellsAndRANNodesForPaging ::= SEQUENCE {

recommendedCellsForPaging RecommendedCellsForPaging,

recommendRANNodesForPaging RecommendedRANNodesForPaging,

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

...

}

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

...

}

IntegrityProtectionIndication ::= ENUMERATED {

required,

preferred,

not-needed,

...

}

IntegrityProtectionResult ::= ENUMERATED {

performed,

not-performed,

...

}

IntendedNumberOfPagingAttempts ::= INTEGER (1..16, ...)

InterfacesToTrace ::= BIT STRING (SIZE(8))

ImmediateMDTNr ::= SEQUENCE {

measurementsToActivate MeasurementsToActivate,

m1Configuration M1Configuration OPTIONAL,

-- The above IE shall be present if the Measurements to Activate IE has the first bit set to “1”

m4Configuration M4Configuration OPTIONAL,

-- The above IE shall be present if the Measurements to Activate IE has the third bit set to “1”

m5Configuration M5Configuration OPTIONAL,

-- The above IE shall be present if the Measurements to Activate IE has the fourth bit set to “1”

m6Configuration M6Configuration OPTIONAL,

-- The above IE shall be present if the Measurements to Activate IE has the fifth bit set to “1”

m7Configuration  M7Configuration OPTIONAL,

-- The above IE shall be present if the Measurements to Activate IE has the sixth bit set to “1”

bluetoothMeasurementConfiguration BluetoothMeasurementConfiguration OPTIONAL,

wLANMeasurementConfiguration WLANMeasurementConfiguration OPTIONAL,

mDT-Location-Info  MDT-Location-Info OPTIONAL,

sensorMeasurementConfiguration SensorMeasurementConfiguration OPTIONAL,

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

...

}

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

...

}

InterSystemFailureIndication ::= SEQUENCE {

uERLFReportContainer UERLFReportContainer OPTIONAL,

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

...

}

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

...

}

IntersystemSONConfigurationTransfer ::= SEQUENCE {

transferType IntersystemSONTransferType,

intersystemSONInformation IntersystemSONInformation,

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

...

}

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

...

}

IntersystemSONTransferType ::= CHOICE {

fromEUTRANtoNGRAN FromEUTRANtoNGRAN,

fromNGRANtoEUTRAN FromNGRANtoEUTRAN,

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

}

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

...

}

IntersystemSONeNBID ::= SEQUENCE {

globaleNBID GlobalENB-ID,

selectedEPSTAI EPS-TAI,

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

...

}

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

...

}

IntersystemSONNGRANnodeID ::= SEQUENCE {

globalRANNodeID GlobalRANNodeID,

selectedTAI TAI,

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

...

}

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

...

}

IntersystemSONInformation ::= CHOICE {

intersystemSONInformationReport IntersystemSONInformationReport,

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

}

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

...

}

IntersystemSONInformationReport::= CHOICE {

hOReportInformation InterSystemHOReport,

failureIndicationInformation InterSystemFailureIndication,

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

}

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

...

}

InterSystemHOReport ::= SEQUENCE {

handoverReportType InterSystemHandoverReportType,

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

...

}

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

...

}

InterSystemHandoverReportType ::= CHOICE {

tooearlyIntersystemHO TooearlyIntersystemHO,

intersystemUnnecessaryHO IntersystemUnnecessaryHO,

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

}

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

...

}

IntersystemUnnecessaryHO ::= SEQUENCE {

sourcecellID NGRAN-CGI,

targetcellID EUTRA-CGI,

earlyIRATHO ENUMERATED {true, false, ...},

candidateCellList CandidateCellList,

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

...

}

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

...

}

-- J

-- K

-- L

LAC ::= OCTET STRING (SIZE (2))

LAI ::= SEQUENCE {

pLMNidentity PLMNIdentity,

lAC LAC,

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

...

}

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

...

}

LastVisitedCellInformation ::= CHOICE {

nGRANCell LastVisitedNGRANCellInformation,

eUTRANCell LastVisitedEUTRANCellInformation,

uTRANCell LastVisitedUTRANCellInformation,

gERANCell LastVisitedGERANCellInformation,

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

}

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

...

}

LastVisitedCellItem ::= SEQUENCE {

lastVisitedCellInformation LastVisitedCellInformation,

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

...

}

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

...

}

LastVisitedEUTRANCellInformation ::= OCTET STRING

LastVisitedGERANCellInformation ::= OCTET STRING

LastVisitedNGRANCellInformation::= SEQUENCE {

globalCellID NGRAN-CGI,

cellType CellType,

timeUEStayedInCell TimeUEStayedInCell,

timeUEStayedInCellEnhancedGranularity TimeUEStayedInCellEnhancedGranularity OPTIONAL,

hOCauseValue Cause OPTIONAL,

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

...

}

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

...

}

LastVisitedUTRANCellInformation ::= OCTET STRING

LineType ::= ENUMERATED {

dsl,

pon,

...

}

LocationReportingAdditionalInfo ::= ENUMERATED {

includePSCell,

...

}

LocationReportingReferenceID ::= INTEGER (1..64, ...)

LocationReportingRequestType ::= SEQUENCE {

eventType EventType,

reportArea ReportArea,

areaOfInterestList AreaOfInterestList OPTIONAL,

locationReportingReferenceIDToBeCancelled LocationReportingReferenceID OPTIONAL,

-- The above IE shall be present if the event type is set to “stop reporting UE presence in the area of interest”

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

...

}

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

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

...

}

LoggedMDTNr ::= SEQUENCE {

loggingInterval LoggingInterval,

loggingDuration LoggingDuration,

loggedMDTTrigger LoggedMDTTrigger,

bluetoothMeasurementConfiguration BluetoothMeasurementConfiguration OPTIONAL,

wLANMeasurementConfiguration WLANMeasurementConfiguration OPTIONAL,

sensorMeasurementConfiguration SensorMeasurementConfiguration OPTIONAL,

areaScopeOfNeighCellsList AreaScopeOfNeighCellsList OPTIONAL,

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

...

}

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

...

}

LoggingInterval ::= ENUMERATED {

ms320, ms640, ms1280, ms2560, ms5120, ms10240, ms20480, ms30720, ms40960, ms61440,

infinity,

...

}

LoggingDuration ::= ENUMERATED {m10, m20, m40, m60, m90, m120, ...}

Links-to-log ::= ENUMERATED {

uplink,

downlink,

both-uplink-and-downlink,

...

}

LoggedMDTTrigger ::= CHOICE{

periodical NULL,

eventTrigger EventTrigger,

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

}

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

...

}

LTEM-Indication ::= ENUMERATED {lte-m,...}

LTEUERLFReportContainer ::= OCTET STRING

LTEV2XServicesAuthorized ::= SEQUENCE {

vehicleUE VehicleUE OPTIONAL,

pedestrianUE PedestrianUE OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {LTEV2XServicesAuthorized-ExtIEs} } OPTIONAL,

...

}

LTEV2XServicesAuthorized-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

LTEUESidelinkAggregateMaximumBitrate ::= SEQUENCE {

uESidelinkAggregateMaximumBitRate BitRate,

iE-Extensions ProtocolExtensionContainer { {LTEUE-Sidelink-Aggregate-MaximumBitrates-ExtIEs} } OPTIONAL,

...

}

LTEUE-Sidelink-Aggregate-MaximumBitrates-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

-- M

MaskedIMEISV ::= BIT STRING (SIZE(64))

MaximumDataBurstVolume ::= INTEGER (0..4095, ..., 4096.. 2000000)

MessageIdentifier ::= BIT STRING (SIZE(16))

MaximumIntegrityProtectedDataRate ::= ENUMERATED {

bitrate64kbs,

maximum-UE-rate,

...

}

MicoAllPLMN ::= ENUMERATED {

true,

...

}

MICOModeIndication ::= ENUMERATED {

true,

...

}

MobilityInformation ::= BIT STRING (SIZE(16))

MobilityRestrictionList ::= SEQUENCE {

servingPLMN PLMNIdentity,

equivalentPLMNs EquivalentPLMNs OPTIONAL,

rATRestrictions RATRestrictions OPTIONAL,

forbiddenAreaInformation ForbiddenAreaInformation OPTIONAL,

serviceAreaInformation ServiceAreaInformation OPTIONAL,

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

...

}

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

{ ID id-LastEUTRAN-PLMNIdentity CRITICALITY ignore EXTENSION PLMNIdentity PRESENCE optional }|

{ ID id-CNTypeRestrictionsForServing CRITICALITY ignore EXTENSION CNTypeRestrictionsForServing PRESENCE optional }|

{ ID id-CNTypeRestrictionsForEquivalent CRITICALITY ignore EXTENSION CNTypeRestrictionsForEquivalent PRESENCE optional }|

{ ID id-NPN-MobilityInformation CRITICALITY reject EXTENSION NPN-MobilityInformation PRESENCE optional },

...

}

MDT-AlignmentInfo ::= CHOICE {

s-basedMDT NGRANTraceID,

choice-Extensions ProtocolIE-SingleContainer { { MDT-AlignmentInfo-ExtIEs} }

}

MDT-AlignmentInfo-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

MDTPLMNList ::= SEQUENCE (SIZE(1..maxnoofMDTPLMNs)) OF PLMNIdentity

MDT-Configuration ::= SEQUENCE {

mdt-Config-NR MDT-Configuration-NR OPTIONAL,

mdt-Config-EUTRA MDT-Configuration-EUTRA OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { MDT-Configuration-ExtIEs} } OPTIONAL,

...

}

MDT-Configuration-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

MDT-Configuration-NR ::= SEQUENCE {

mdt-Activation MDT-Activation,

areaScopeOfMDT AreaScopeOfMDT-NR,

mDTModeNr MDTModeNr,

signallingBasedMDTPLMNList MDTPLMNList OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { MDT-Configuration-NR-ExtIEs} } OPTIONAL,

...

}

MDT-Configuration-NR-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

MDT-Configuration-EUTRA ::= SEQUENCE {

mdt-Activation MDT-Activation,

areaScopeOfMDT  AreaScopeOfMDT-EUTRA,

mDTMode  MDTModeEutra,

signallingBasedMDTPLMNList MDTPLMNList OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { MDT-Configuration-EUTRA-ExtIEs} } OPTIONAL,

...

}

MDT-Configuration-EUTRA-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

MDT-Activation ::= ENUMERATED {

immediate-MDT-only,

logged-MDT-only,

immediate-MDT-and-Trace,

...

}

MDTModeNr ::= CHOICE {

immediateMDTNr ImmediateMDTNr,

loggedMDTNr LoggedMDTNr,

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

}

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

...

}

MDTModeEutra ::= OCTET STRING

MeasurementsToActivate ::= BIT STRING(SIZE(8))

M1Configuration ::= SEQUENCE {

m1reportingTrigger M1ReportingTrigger,

m1thresholdEventA2 M1ThresholdEventA2 OPTIONAL,

-- The above IE shall be present if the M1 Reporting Trigger IE is set to “A2event-triggered” or “A2event-triggered periodic”

m1periodicReporting M1PeriodicReporting OPTIONAL,

-- The above IE shall be present if the M1 Reporting Trigger IE is set to “periodic” or “A2event-triggered periodic”

iE-Extensions ProtocolExtensionContainer { { M1Configuration-ExtIEs} } OPTIONAL,

...

}

M1Configuration-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

M1ReportingTrigger ::= ENUMERATED{

periodic,

a2eventtriggered,

a2eventtriggered-periodic,

...

}

M1ThresholdEventA2 ::= SEQUENCE {

m1ThresholdType M1ThresholdType,

iE-Extensions ProtocolExtensionContainer { { M1ThresholdEventA2-ExtIEs} } OPTIONAL,

...

}

M1ThresholdEventA2-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

M1ThresholdType ::= CHOICE {

threshold-RSRP Threshold-RSRP,

threshold-RSRQ Threshold-RSRQ,

threshold-SINR Threshold-SINR,

choice-Extensions ProtocolIE-SingleContainer { {M1ThresholdType-ExtIEs} }

}

M1ThresholdType-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

M1PeriodicReporting ::= SEQUENCE {

reportInterval ReportIntervalMDT,

reportAmount ReportAmountMDT,

iE-Extensions ProtocolExtensionContainer { { M1PeriodicReporting-ExtIEs} } OPTIONAL,

...

}

M1PeriodicReporting-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

M4Configuration ::= SEQUENCE {

m4period M4period,

m4-links-to-log Links-to-log,

iE-Extensions ProtocolExtensionContainer { { M4Configuration-ExtIEs} } OPTIONAL,

...

}

M4Configuration-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

M4period ::= ENUMERATED {ms1024, ms2048, ms5120, ms10240, min1, ... }

M5Configuration ::= SEQUENCE {

m5period M5period,

m5-links-to-log Links-to-log,

iE-Extensions ProtocolExtensionContainer { { M5Configuration-ExtIEs} } OPTIONAL,

...

}

M5Configuration-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

M5period ::= ENUMERATED {ms1024, ms2048, ms5120, ms10240, min1, ... }

M6Configuration ::= SEQUENCE {

m6report-Interval M6report-Interval,

m6-links-to-log Links-to-log,

iE-Extensions ProtocolExtensionContainer { { M6Configuration-ExtIEs} } OPTIONAL,

...

}

M6Configuration-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

M6report-Interval ::= ENUMERATED {

ms120, ms240, ms480, ms640, ms1024, ms2048, ms5120, ms10240, ms20480, ms40960, min1, min6, min12, min30,

...

}

M7Configuration ::= SEQUENCE {

m7period M7period,

m7-links-to-log Links-to-log,

iE-Extensions ProtocolExtensionContainer { { M7Configuration-ExtIEs} } OPTIONAL,

...

}

M7Configuration-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

M7period ::= INTEGER(1..60, ...)

MDT-Location-Info ::= SEQUENCE {

mDT-Location-Information MDT-Location-Information,

iE-Extensions ProtocolExtensionContainer { { MDT-Location-Info-ExtIEs} } OPTIONAL,

...

}

MDT-Location-Info-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

MDT-Location-Information::= BIT STRING (SIZE (8))

-- N

N3IWF-ID ::= CHOICE {

n3IWF-ID BIT STRING (SIZE(16)),

choice-Extensions ProtocolIE-SingleContainer { {N3IWF-ID-ExtIEs} }

}

N3IWF-ID-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

NAS-PDU ::= OCTET STRING

NASSecurityParametersFromNGRAN ::= OCTET STRING

NB-IoT-DefaultPagingDRX ::= ENUMERATED {

rf128, rf256, rf512, rf1024,

...

}

NB-IoT-PagingDRX ::= ENUMERATED {

rf32, rf64, rf128, rf256, rf512, rf1024,

...

}

NB-IoT-Paging-eDRXCycle ::= ENUMERATED {

hf2, hf4, hf6, hf8, hf10, hf12, hf14, hf16, hf32, hf64, hf128, hf256, hf512, hf1024,

...

}

NB-IoT-Paging-TimeWindow ::= ENUMERATED {

s1, s2, s3, s4, s5, s6, s7, s8, s9, s10, s11, s12, s13, s14, s15, s16,

...

}

NB-IoT-Paging-eDRXInfo ::= SEQUENCE {

nB-IoT-Paging-eDRXCycle NB-IoT-Paging-eDRXCycle,

nB-IoT-Paging-TimeWindow NB-IoT-Paging-TimeWindow OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { NB-IoT-Paging-eDRXInfo-ExtIEs} } OPTIONAL,

...

}

NB-IoT-Paging-eDRXInfo-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

NB-IoT-UEPriority ::= INTEGER (0..255, ...)

NetworkInstance ::= INTEGER (1..256, ...)

NewSecurityContextInd ::= ENUMERATED {

true,

...

}

NextHopChainingCount ::= INTEGER (0..7)

NextPagingAreaScope ::= ENUMERATED {

same,

changed,

...

}

NgENB-ID ::= CHOICE {

macroNgENB-ID BIT STRING (SIZE(20)),

shortMacroNgENB-ID BIT STRING (SIZE(18)),

longMacroNgENB-ID BIT STRING (SIZE(21)),

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

}

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

...

}

NotifySourceNGRANNode ::= ENUMERATED {

notifySource,

...

}

NGRAN-CGI ::= CHOICE {

nR-CGI NR-CGI,

eUTRA-CGI EUTRA-CGI,

choice-Extensions ProtocolIE-SingleContainer { {NGRAN-CGI-ExtIEs} }

}

NGRAN-CGI-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

NGRAN-TNLAssociationToRemoveList ::= SEQUENCE (SIZE(1..maxnoofTNLAssociations)) OF NGRAN-TNLAssociationToRemoveItem

NGRAN-TNLAssociationToRemoveItem::= SEQUENCE {

tNLAssociationTransportLayerAddress CPTransportLayerInformation,

tNLAssociationTransportLayerAddressAMF CPTransportLayerInformation OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { NGRAN-TNLAssociationToRemoveItem-ExtIEs} } OPTIONAL

}

NGRAN-TNLAssociationToRemoveItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

NGRANTraceID ::= OCTET STRING (SIZE(8))

NID ::= BIT STRING (SIZE(44))

NonDynamic5QIDescriptor ::= SEQUENCE {

fiveQI FiveQI,

priorityLevelQos PriorityLevelQos OPTIONAL,

averagingWindow AveragingWindow OPTIONAL,

maximumDataBurstVolume MaximumDataBurstVolume OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {NonDynamic5QIDescriptor-ExtIEs} } OPTIONAL,

...

}

NonDynamic5QIDescriptor-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-CNPacketDelayBudgetDL CRITICALITY ignore EXTENSION ExtendedPacketDelayBudget PRESENCE optional }|

{ ID id-CNPacketDelayBudgetUL CRITICALITY ignore EXTENSION ExtendedPacketDelayBudget PRESENCE optional },

...

}

NotAllowedTACs ::= SEQUENCE (SIZE(1..maxnoofAllowedAreas)) OF TAC

NotificationCause ::= ENUMERATED {

fulfilled,

not-fulfilled,

...

}

NotificationControl ::= ENUMERATED {

notification-requested,

...

}

NPN-AccessInformation ::= CHOICE {

pNI-NPN-Access-Information CellCAGList,

choice-Extensions ProtocolIE-SingleContainer { {NPN-AccessInformation-ExtIEs} }

}

NPN-AccessInformation-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

NPN-MobilityInformation ::= CHOICE {

sNPN-MobilityInformation SNPN-MobilityInformation,

pNI-NPN-MobilityInformation PNI-NPN-MobilityInformation,

choice-Extensions ProtocolIE-SingleContainer { {NPN-MobilityInformation-ExtIEs} }

}

NPN-MobilityInformation-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

NPN-PagingAssistanceInformation ::= CHOICE {

pNI-NPN-PagingAssistance Allowed-PNI-NPN-List,

choice-Extensions ProtocolIE-SingleContainer { {NPN-PagingAssistanceInformation-ExtIEs} }

}

NPN-PagingAssistanceInformation-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

NPN-Support ::= CHOICE {

sNPN NID,

choice-Extensions ProtocolIE-SingleContainer { {NPN-Support-ExtIEs} }

}

NPN-Support-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

NRCellIdentity ::= BIT STRING (SIZE(36))

NR-CGI ::= SEQUENCE {

pLMNIdentity PLMNIdentity,

nRCellIdentity NRCellIdentity,

iE-Extensions ProtocolExtensionContainer { {NR-CGI-ExtIEs} } OPTIONAL,

...

}

NR-CGI-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

NR-CGIList ::= SEQUENCE (SIZE(1..maxnoofCellsingNB)) OF NR-CGI

NR-CGIListForWarning ::= SEQUENCE (SIZE(1..maxnoofCellIDforWarning)) OF NR-CGI

NRencryptionAlgorithms ::= BIT STRING (SIZE(16, ...))

NRintegrityProtectionAlgorithms ::= BIT STRING (SIZE(16, ...))

NRMobilityHistoryReport ::= OCTET STRING

NRPPa-PDU ::= OCTET STRING

NRUERLFReportContainer ::= OCTET STRING

NumberOfBroadcasts ::= INTEGER (0..65535)

NumberOfBroadcastsRequested ::= INTEGER (0..65535)

NRARFCN ::= INTEGER (0.. maxNRARFCN)

NRFrequencyBand ::= INTEGER (1..1024, ...)

NRFrequencyBand-List ::= SEQUENCE (SIZE(1..maxnoofNRCellBands)) OF NRFrequencyBandItem

NRFrequencyBandItem ::= SEQUENCE {

nr-frequency-band NRFrequencyBand,

iE-Extension ProtocolExtensionContainer { {NRFrequencyBandItem-ExtIEs} } OPTIONAL,

...

}

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

...

}

NRFrequencyInfo ::= SEQUENCE {

nrARFCN NRARFCN,

frequencyBand-List NRFrequencyBand-List,

iE-Extension ProtocolExtensionContainer { {NRFrequencyInfo-ExtIEs} } OPTIONAL,

...

}

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

...

}

NR-PCI ::= INTEGER (0..1007, ...)

NRV2XServicesAuthorized ::= SEQUENCE {

vehicleUE VehicleUE OPTIONAL,

pedestrianUE PedestrianUE OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {NRV2XServicesAuthorized-ExtIEs} } OPTIONAL,

...

}

NRV2XServicesAuthorized-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

VehicleUE ::= ENUMERATED {

authorized,

not-authorized,

...

}

PedestrianUE ::= ENUMERATED {

authorized,

not-authorized,

...

}

NRUESidelinkAggregateMaximumBitrate ::= SEQUENCE {

uESidelinkAggregateMaximumBitRate BitRate,

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

...

}

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

...

}

-- O

OverloadAction ::= ENUMERATED {

reject-non-emergency-mo-dt,

reject-rrc-cr-signalling,

permit-emergency-sessions-and-mobile-terminated-services-only,

permit-high-priority-sessions-and-mobile-terminated-services-only,

...

}

OverloadResponse ::= CHOICE {

overloadAction OverloadAction,

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

}

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

...

}

OverloadStartNSSAIList ::= SEQUENCE (SIZE (1..maxnoofSliceItems)) OF OverloadStartNSSAIItem

OverloadStartNSSAIItem ::= SEQUENCE {

sliceOverloadList SliceOverloadList,

sliceOverloadResponse OverloadResponse OPTIONAL,

sliceTrafficLoadReductionIndication TrafficLoadReductionIndication OPTIONAL,

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

...

}

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

...

}

-- P

PacketDelayBudget ::= INTEGER (0..1023, ...)

PacketErrorRate ::= SEQUENCE {

pERScalar INTEGER (0..9, ...),

pERExponent INTEGER (0..9, ...),

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

...

}

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

...

}

PacketLossRate ::= INTEGER (0..1000, ...)

PagingAssisDataforCEcapabUE ::= SEQUENCE {

eUTRA-CGI EUTRA-CGI,

coverageEnhancementLevel CoverageEnhancementLevel,

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

...

}

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

...

}

PagingAttemptInformation ::= SEQUENCE {

pagingAttemptCount PagingAttemptCount,

intendedNumberOfPagingAttempts IntendedNumberOfPagingAttempts,

nextPagingAreaScope NextPagingAreaScope OPTIONAL,

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

...

}

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

...

}

PagingAttemptCount ::= INTEGER (1..16, ...)

PagingDRX ::= ENUMERATED {

v32,

v64,

v128,

v256,

...

}

PagingOrigin ::= ENUMERATED {

non-3gpp,

...

}

PagingPriority ::= ENUMERATED {

priolevel1,

priolevel2,

priolevel3,

priolevel4,

priolevel5,

priolevel6,

priolevel7,

priolevel8,

...

}

PagingeDRXInformation ::= SEQUENCE {

paging-eDRX-Cycle Paging-eDRX-Cycle,

paging-Time-Window Paging-Time-Window OPTIONAL,

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

...

}

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

...

}

Paging-eDRX-Cycle ::= ENUMERATED {

hfhalf, hf1, hf2, hf4, hf6,

hf8, hf10, hf12, hf14, hf16,

hf32, hf64, hf128, hf256,

...

}

Paging-Time-Window ::= ENUMERATED {

s1, s2, s3, s4, s5,

s6, s7, s8, s9, s10,

s11, s12, s13, s14, s15, s16,

...

}

PagingProbabilityInformation ::= ENUMERATED {

p00, p05, p10, p15, p20, p25, p30, p35, p40, p45, p50, p55, p60, p65, p70, p75, p80, p85, p90, p95, p100,

...

}

PathSwitchRequestAcknowledgeTransfer ::= SEQUENCE {

uL-NGU-UP-TNLInformation UPTransportLayerInformation OPTIONAL,

securityIndication SecurityIndication OPTIONAL,

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

...

}

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

{ ID id-AdditionalNGU-UP-TNLInformation CRITICALITY ignore EXTENSION UPTransportLayerInformationPairList PRESENCE optional }|

{ ID id-RedundantUL-NGU-UP-TNLInformation CRITICALITY ignore EXTENSION UPTransportLayerInformation PRESENCE optional }|

{ ID id-AdditionalRedundantNGU-UP-TNLInformation CRITICALITY ignore EXTENSION UPTransportLayerInformationPairList PRESENCE optional }|

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

...

}

PathSwitchRequestSetupFailedTransfer ::= SEQUENCE {

cause Cause,

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

...

}

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

...

}

PathSwitchRequestTransfer ::= SEQUENCE {

dL-NGU-UP-TNLInformation UPTransportLayerInformation,

dL-NGU-TNLInformationReused DL-NGU-TNLInformationReused OPTIONAL,

userPlaneSecurityInformation UserPlaneSecurityInformation OPTIONAL,

qosFlowAcceptedList QosFlowAcceptedList,

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

...

}

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

{ ID id-AdditionalDLQosFlowPerTNLInformation CRITICALITY ignore EXTENSION QosFlowPerTNLInformationList PRESENCE optional }|

{ ID id-RedundantDL-NGU-UP-TNLInformation CRITICALITY ignore EXTENSION UPTransportLayerInformation PRESENCE optional }|

{ ID id-RedundantDL-NGU-TNLInformationReused CRITICALITY ignore EXTENSION DL-NGU-TNLInformationReused PRESENCE optional }|

{ ID id-AdditionalRedundantDLQosFlowPerTNLInformation CRITICALITY ignore EXTENSION QosFlowPerTNLInformationList PRESENCE optional }|

{ ID id-UsedRSNInformation CRITICALITY ignore EXTENSION RedundantPDUSessionInformation PRESENCE optional }|

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

...

}

PathSwitchRequestUnsuccessfulTransfer ::= SEQUENCE {

cause Cause,

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

...

}

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

...

}

PC5QoSParameters ::= SEQUENCE {

pc5QoSFlowList PC5QoSFlowList,

pc5LinkAggregateBitRates BitRate OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { PC5QoSParameters-ExtIEs} } OPTIONAL,

...

}

PC5QoSParameters-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PC5QoSFlowList ::= SEQUENCE (SIZE(1..maxnoofPC5QoSFlows)) OF PC5QoSFlowItem

PC5QoSFlowItem::= SEQUENCE {

pQI FiveQI,

pc5FlowBitRates PC5FlowBitRates OPTIONAL,

range Range OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { PC5QoSFlowItem-ExtIEs} } OPTIONAL,

...

}

PC5QoSFlowItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PC5FlowBitRates ::= SEQUENCE {

guaranteedFlowBitRate BitRate,

maximumFlowBitRate BitRate,

iE-Extensions ProtocolExtensionContainer { { PC5FlowBitRates-ExtIEs} } OPTIONAL,

...

}

PC5FlowBitRates-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PCIListForMDT ::= SEQUENCE (SIZE(1.. maxnoofNeighPCIforMDT)) OF NR-PCI

PrivacyIndicator ::= ENUMERATED {

immediate-MDT,

logged-MDT,

...

}

PDUSessionAggregateMaximumBitRate ::= SEQUENCE {

pDUSessionAggregateMaximumBitRateDL BitRate,

pDUSessionAggregateMaximumBitRateUL BitRate,

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

...

}

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

...

}

PDUSessionID ::= INTEGER (0..255)

PDUSessionResourceAdmittedList ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceAdmittedItem

PDUSessionResourceAdmittedItem ::= SEQUENCE {

pDUSessionID PDUSessionID,

handoverRequestAcknowledgeTransfer OCTET STRING (CONTAINING HandoverRequestAcknowledgeTransfer),

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

...

}

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

...

}

PDUSessionResourceFailedToModifyListModCfm ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceFailedToModifyItemModCfm

PDUSessionResourceFailedToModifyItemModCfm ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceModifyIndicationUnsuccessfulTransfer OCTET STRING (CONTAINING PDUSessionResourceModifyIndicationUnsuccessfulTransfer),

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

...

}

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

...

}

PDUSessionResourceFailedToModifyListModRes ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceFailedToModifyItemModRes

PDUSessionResourceFailedToModifyItemModRes ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceModifyUnsuccessfulTransfer OCTET STRING (CONTAINING PDUSessionResourceModifyUnsuccessfulTransfer),

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

...

}

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

...

}

PDUSessionResourceFailedToResumeListRESReq ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceFailedToResumeItemRESReq

PDUSessionResourceFailedToResumeItemRESReq ::= SEQUENCE {

pDUSessionID PDUSessionID,

cause Cause,

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

...

}

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

...

}

PDUSessionResourceFailedToResumeListRESRes ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceFailedToResumeItemRESRes

PDUSessionResourceFailedToResumeItemRESRes ::= SEQUENCE {

pDUSessionID PDUSessionID,

cause Cause,

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

...

}

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

...

}

PDUSessionResourceFailedToSetupListCxtFail ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceFailedToSetupItemCxtFail

PDUSessionResourceFailedToSetupItemCxtFail ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceSetupUnsuccessfulTransfer OCTET STRING (CONTAINING PDUSessionResourceSetupUnsuccessfulTransfer),

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

...

}

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

...

}

PDUSessionResourceFailedToSetupListCxtRes ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceFailedToSetupItemCxtRes

PDUSessionResourceFailedToSetupItemCxtRes ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceSetupUnsuccessfulTransfer OCTET STRING (CONTAINING PDUSessionResourceSetupUnsuccessfulTransfer),

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

...

}

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

...

}

PDUSessionResourceFailedToSetupListHOAck ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceFailedToSetupItemHOAck

PDUSessionResourceFailedToSetupItemHOAck ::= SEQUENCE {

pDUSessionID PDUSessionID,

handoverResourceAllocationUnsuccessfulTransfer OCTET STRING (CONTAINING HandoverResourceAllocationUnsuccessfulTransfer),

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

...

}

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

...

}

PDUSessionResourceFailedToSetupListPSReq ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceFailedToSetupItemPSReq

PDUSessionResourceFailedToSetupItemPSReq ::= SEQUENCE {

pDUSessionID PDUSessionID,

pathSwitchRequestSetupFailedTransfer OCTET STRING (CONTAINING PathSwitchRequestSetupFailedTransfer),

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

...

}

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

...

}

PDUSessionResourceFailedToSetupListSURes ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceFailedToSetupItemSURes

PDUSessionResourceFailedToSetupItemSURes ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceSetupUnsuccessfulTransfer OCTET STRING (CONTAINING PDUSessionResourceSetupUnsuccessfulTransfer),

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

...

}

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

...

}

PDUSessionResourceHandoverList ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceHandoverItem

PDUSessionResourceHandoverItem ::= SEQUENCE {

pDUSessionID PDUSessionID,

handoverCommandTransfer OCTET STRING (CONTAINING HandoverCommandTransfer),

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

...

}

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

...

}

PDUSessionResourceInformationList ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceInformationItem

PDUSessionResourceInformationItem ::= SEQUENCE {

pDUSessionID PDUSessionID,

qosFlowInformationList QosFlowInformationList,

dRBsToQosFlowsMappingList DRBsToQosFlowsMappingList OPTIONAL,

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

...

}

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

...

}

PDUSessionResourceListCxtRelCpl ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceItemCxtRelCpl

PDUSessionResourceItemCxtRelCpl ::= SEQUENCE {

pDUSessionID PDUSessionID,

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

...

}

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

{ ID id-PDUSessionResourceReleaseResponseTransfer CRITICALITY ignore EXTENSION OCTET STRING (CONTAINING PDUSessionResourceReleaseResponseTransfer) PRESENCE optional },

...

}

PDUSessionResourceListCxtRelReq ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceItemCxtRelReq

PDUSessionResourceItemCxtRelReq ::= SEQUENCE {

pDUSessionID PDUSessionID,

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

...

}

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

...

}

PDUSessionResourceListHORqd ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceItemHORqd

PDUSessionResourceItemHORqd ::= SEQUENCE {

pDUSessionID PDUSessionID,

handoverRequiredTransfer OCTET STRING (CONTAINING HandoverRequiredTransfer),

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

...

}

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

...

}

PDUSessionResourceModifyConfirmTransfer ::= SEQUENCE {

qosFlowModifyConfirmList QosFlowModifyConfirmList,

uLNGU-UP-TNLInformation UPTransportLayerInformation,

additionalNG-UUPTNLInformation UPTransportLayerInformationPairList OPTIONAL,

qosFlowFailedToModifyList QosFlowListWithCause OPTIONAL,

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

...

}

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

{ ID id-RedundantUL-NGU-UP-TNLInformation CRITICALITY ignore EXTENSION UPTransportLayerInformation PRESENCE optional }|

{ ID id-AdditionalRedundantNGU-UP-TNLInformation CRITICALITY ignore EXTENSION UPTransportLayerInformationPairList PRESENCE optional },

...

}

PDUSessionResourceModifyIndicationUnsuccessfulTransfer ::= SEQUENCE {

cause Cause,

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

...

}

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

...

}

PDUSessionResourceModifyRequestTransfer ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PDUSessionResourceModifyRequestTransferIEs} },

...

}

PDUSessionResourceModifyRequestTransferIEs NGAP-PROTOCOL-IES ::= {

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

{ ID id-UL-NGU-UP-TNLModifyList CRITICALITY reject TYPE UL-NGU-UP-TNLModifyList PRESENCE optional }|

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

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

{ ID id-QosFlowToReleaseList CRITICALITY reject TYPE QosFlowListWithCause PRESENCE optional }|

{ ID id-AdditionalUL-NGU-UP-TNLInformation CRITICALITY reject TYPE UPTransportLayerInformationList PRESENCE optional }|

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

{ ID id-AdditionalRedundantUL-NGU-UP-TNLInformation CRITICALITY ignore TYPE UPTransportLayerInformationList PRESENCE optional }|

{ ID id-RedundantCommonNetworkInstance CRITICALITY ignore TYPE CommonNetworkInstance PRESENCE optional }|

{ ID id-RedundantUL-NGU-UP-TNLInformation CRITICALITY ignore TYPE UPTransportLayerInformation PRESENCE optional }|

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

...

}

PDUSessionResourceModifyResponseTransfer ::= SEQUENCE {

dL-NGU-UP-TNLInformation UPTransportLayerInformation OPTIONAL,

uL-NGU-UP-TNLInformation UPTransportLayerInformation OPTIONAL,

qosFlowAddOrModifyResponseList QosFlowAddOrModifyResponseList OPTIONAL,

additionalDLQosFlowPerTNLInformation QosFlowPerTNLInformationList OPTIONAL,

qosFlowFailedToAddOrModifyList QosFlowListWithCause OPTIONAL,

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

...

}

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

{ ID id-AdditionalNGU-UP-TNLInformation CRITICALITY ignore EXTENSION UPTransportLayerInformationPairList PRESENCE optional }|

{ ID id-RedundantDL-NGU-UP-TNLInformation CRITICALITY ignore EXTENSION UPTransportLayerInformation PRESENCE optional }|

{ ID id-RedundantUL-NGU-UP-TNLInformation CRITICALITY ignore EXTENSION UPTransportLayerInformation PRESENCE optional }|

{ ID id-AdditionalRedundantDLQosFlowPerTNLInformation CRITICALITY ignore EXTENSION QosFlowPerTNLInformationList PRESENCE optional }|

{ ID id-AdditionalRedundantNGU-UP-TNLInformation CRITICALITY ignore EXTENSION UPTransportLayerInformationPairList PRESENCE optional }|

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

...

}

PDUSessionResourceModifyIndicationTransfer ::= SEQUENCE {

dLQosFlowPerTNLInformation QosFlowPerTNLInformation,

additionalDLQosFlowPerTNLInformation QosFlowPerTNLInformationList OPTIONAL,

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

...

}

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

{ ID id-SecondaryRATUsageInformation CRITICALITY ignore EXTENSION SecondaryRATUsageInformation PRESENCE optional }|

{ ID id-SecurityResult CRITICALITY ignore EXTENSION SecurityResult PRESENCE optional }|

{ ID id-RedundantDLQosFlowPerTNLInformation CRITICALITY ignore EXTENSION QosFlowPerTNLInformation PRESENCE optional }|

{ ID id-AdditionalRedundantDLQosFlowPerTNLInformation CRITICALITY ignore EXTENSION QosFlowPerTNLInformationList PRESENCE optional }|

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

...

}

PDUSessionResourceModifyListModCfm ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceModifyItemModCfm

PDUSessionResourceModifyItemModCfm ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceModifyConfirmTransfer OCTET STRING (CONTAINING PDUSessionResourceModifyConfirmTransfer),

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

...

}

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

...

}

PDUSessionResourceModifyListModInd ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceModifyItemModInd

PDUSessionResourceModifyItemModInd ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceModifyIndicationTransfer OCTET STRING (CONTAINING PDUSessionResourceModifyIndicationTransfer),

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

...

}

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

...

}

PDUSessionResourceModifyListModReq ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceModifyItemModReq

PDUSessionResourceModifyItemModReq ::= SEQUENCE {

pDUSessionID PDUSessionID,

nAS-PDU NAS-PDU OPTIONAL,

pDUSessionResourceModifyRequestTransfer OCTET STRING (CONTAINING PDUSessionResourceModifyRequestTransfer),

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

...

}

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

{ ID id-S-NSSAI CRITICALITY reject EXTENSION S-NSSAI PRESENCE optional }|

{ ID id-PduSessionExpectedUEActivityBehaviour CRITICALITY ignore EXTENSION ExpectedUEActivityBehaviour PRESENCE optional },

...

}

PDUSessionResourceModifyListModRes ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceModifyItemModRes

PDUSessionResourceModifyItemModRes ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceModifyResponseTransfer OCTET STRING (CONTAINING PDUSessionResourceModifyResponseTransfer),

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

...

}

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

...

}

PDUSessionResourceModifyUnsuccessfulTransfer ::= SEQUENCE {

cause Cause,

criticalityDiagnostics CriticalityDiagnostics OPTIONAL,

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

...

}

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

...

}

PDUSessionResourceNotifyList ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceNotifyItem

PDUSessionResourceNotifyItem ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceNotifyTransfer OCTET STRING (CONTAINING PDUSessionResourceNotifyTransfer),

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

...

}

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

...

}

PDUSessionResourceNotifyReleasedTransfer ::= SEQUENCE {

cause Cause,

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

...

}

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

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

...

}

PDUSessionResourceNotifyTransfer ::= SEQUENCE {

qosFlowNotifyList QosFlowNotifyList OPTIONAL,

qosFlowReleasedList QosFlowListWithCause OPTIONAL,

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

...

}

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

{ ID id-SecondaryRATUsageInformation CRITICALITY ignore EXTENSION SecondaryRATUsageInformation PRESENCE optional }|

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

...

}

PDUSessionResourceReleaseCommandTransfer ::= SEQUENCE {

cause Cause,

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

...

}

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

...

}

PDUSessionResourceReleasedListNot ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceReleasedItemNot

PDUSessionResourceReleasedItemNot ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceNotifyReleasedTransfer OCTET STRING (CONTAINING PDUSessionResourceNotifyReleasedTransfer),

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

...

}

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

...

}

PDUSessionResourceReleasedListPSAck ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceReleasedItemPSAck

PDUSessionResourceReleasedItemPSAck ::= SEQUENCE {

pDUSessionID PDUSessionID,

pathSwitchRequestUnsuccessfulTransfer OCTET STRING (CONTAINING PathSwitchRequestUnsuccessfulTransfer),

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

...

}

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

...

}

PDUSessionResourceReleasedListPSFail ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceReleasedItemPSFail

PDUSessionResourceReleasedItemPSFail ::= SEQUENCE {

pDUSessionID PDUSessionID,

pathSwitchRequestUnsuccessfulTransfer OCTET STRING (CONTAINING PathSwitchRequestUnsuccessfulTransfer),

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

...

}

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

...

}

PDUSessionResourceReleasedListRelRes ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceReleasedItemRelRes

PDUSessionResourceReleasedItemRelRes ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceReleaseResponseTransfer OCTET STRING (CONTAINING PDUSessionResourceReleaseResponseTransfer),

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

...

}

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

...

}

PDUSessionResourceReleaseResponseTransfer ::= SEQUENCE {

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

...

}

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

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

...

}

PDUSessionResourceResumeListRESReq ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceResumeItemRESReq

PDUSessionResourceResumeItemRESReq ::= SEQUENCE {

pDUSessionID PDUSessionID,

uEContextResumeRequestTransfer OCTET STRING (CONTAINING UEContextResumeRequestTransfer),

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

...

}

PDUSessionResourceResumeItemRESReq-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceResumeListRESRes ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceResumeItemRESRes

PDUSessionResourceResumeItemRESRes ::= SEQUENCE {

pDUSessionID PDUSessionID,

uEContextResumeResponseTransfer OCTET STRING (CONTAINING UEContextResumeResponseTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceResumeItemRESRes-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceResumeItemRESRes-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceSecondaryRATUsageList ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceSecondaryRATUsageItem

PDUSessionResourceSecondaryRATUsageItem ::= SEQUENCE {

pDUSessionID PDUSessionID,

secondaryRATDataUsageReportTransfer OCTET STRING (CONTAINING SecondaryRATDataUsageReportTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceSecondaryRATUsageItem-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceSecondaryRATUsageItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceSetupListCxtReq ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceSetupItemCxtReq

PDUSessionResourceSetupItemCxtReq ::= SEQUENCE {

pDUSessionID PDUSessionID,

nAS-PDU NAS-PDU OPTIONAL,

s-NSSAI S-NSSAI,

pDUSessionResourceSetupRequestTransfer OCTET STRING (CONTAINING PDUSessionResourceSetupRequestTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceSetupItemCxtReq-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceSetupItemCxtReq-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-PduSessionExpectedUEActivityBehaviour CRITICALITY ignore EXTENSION ExpectedUEActivityBehaviour PRESENCE optional },

...

}

PDUSessionResourceSetupListCxtRes ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceSetupItemCxtRes

PDUSessionResourceSetupItemCxtRes ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceSetupResponseTransfer OCTET STRING (CONTAINING PDUSessionResourceSetupResponseTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceSetupItemCxtRes-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceSetupItemCxtRes-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceSetupListHOReq ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceSetupItemHOReq

PDUSessionResourceSetupItemHOReq ::= SEQUENCE {

pDUSessionID PDUSessionID,

s-NSSAI S-NSSAI,

handoverRequestTransfer OCTET STRING (CONTAINING PDUSessionResourceSetupRequestTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceSetupItemHOReq-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceSetupItemHOReq-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-PduSessionExpectedUEActivityBehaviour CRITICALITY ignore EXTENSION ExpectedUEActivityBehaviour PRESENCE optional },

...

}

PDUSessionResourceSetupListSUReq ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceSetupItemSUReq

PDUSessionResourceSetupItemSUReq ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionNAS-PDU NAS-PDU OPTIONAL,

s-NSSAI S-NSSAI,

pDUSessionResourceSetupRequestTransfer OCTET STRING (CONTAINING PDUSessionResourceSetupRequestTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceSetupItemSUReq-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceSetupItemSUReq-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-PduSessionExpectedUEActivityBehaviour CRITICALITY ignore EXTENSION ExpectedUEActivityBehaviour PRESENCE optional },

...

}

PDUSessionResourceSetupListSURes ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceSetupItemSURes

PDUSessionResourceSetupItemSURes ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceSetupResponseTransfer OCTET STRING (CONTAINING PDUSessionResourceSetupResponseTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceSetupItemSURes-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceSetupItemSURes-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceSetupRequestTransfer ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PDUSessionResourceSetupRequestTransferIEs} },

...

}

PDUSessionResourceSetupRequestTransferIEs NGAP-PROTOCOL-IES ::= {

{ ID id-PDUSessionAggregateMaximumBitRate CRITICALITY reject TYPE PDUSessionAggregateMaximumBitRate PRESENCE optional }|

{ ID id-UL-NGU-UP-TNLInformation CRITICALITY reject TYPE UPTransportLayerInformation PRESENCE mandatory }|

{ ID id-AdditionalUL-NGU-UP-TNLInformation CRITICALITY reject TYPE UPTransportLayerInformationList PRESENCE optional }|

{ ID id-DataForwardingNotPossible CRITICALITY reject TYPE DataForwardingNotPossible PRESENCE optional }|

{ ID id-PDUSessionType CRITICALITY reject TYPE PDUSessionType PRESENCE mandatory }|

{ ID id-SecurityIndication CRITICALITY reject TYPE SecurityIndication PRESENCE optional }|

{ ID id-NetworkInstance CRITICALITY reject TYPE NetworkInstance PRESENCE optional }|

{ ID id-QosFlowSetupRequestList CRITICALITY reject TYPE QosFlowSetupRequestList PRESENCE mandatory }|

{ ID id-CommonNetworkInstance CRITICALITY ignore TYPE CommonNetworkInstance PRESENCE optional }|

{ ID id-DirectForwardingPathAvailability CRITICALITY ignore TYPE DirectForwardingPathAvailability PRESENCE optional }|

{ ID id-RedundantUL-NGU-UP-TNLInformation CRITICALITY ignore TYPE UPTransportLayerInformation PRESENCE optional }|

{ ID id-AdditionalRedundantUL-NGU-UP-TNLInformation CRITICALITY ignore TYPE UPTransportLayerInformationList PRESENCE optional }|

{ ID id-RedundantCommonNetworkInstance CRITICALITY ignore TYPE CommonNetworkInstance PRESENCE optional }|

{ ID id-RedundantPDUSessionInformation CRITICALITY ignore TYPE RedundantPDUSessionInformation PRESENCE optional },

...

}

PDUSessionResourceSetupResponseTransfer ::= SEQUENCE {

dLQosFlowPerTNLInformation QosFlowPerTNLInformation,

additionalDLQosFlowPerTNLInformation QosFlowPerTNLInformationList OPTIONAL,

securityResult SecurityResult OPTIONAL,

qosFlowFailedToSetupList QosFlowListWithCause OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceSetupResponseTransfer-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceSetupResponseTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-RedundantDLQosFlowPerTNLInformation CRITICALITY ignore EXTENSION QosFlowPerTNLInformation PRESENCE optional }|

{ ID id-AdditionalRedundantDLQosFlowPerTNLInformation CRITICALITY ignore EXTENSION QosFlowPerTNLInformationList PRESENCE optional }|

{ ID id-UsedRSNInformation CRITICALITY ignore EXTENSION RedundantPDUSessionInformation PRESENCE optional }|

{ ID id-GlobalRANNodeID CRITICALITY ignore EXTENSION GlobalRANNodeID PRESENCE optional },

...

}

PDUSessionResourceSetupUnsuccessfulTransfer ::= SEQUENCE {

cause Cause,

criticalityDiagnostics CriticalityDiagnostics OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceSetupUnsuccessfulTransfer-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceSetupUnsuccessfulTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceSuspendListSUSReq ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceSuspendItemSUSReq

PDUSessionResourceSuspendItemSUSReq ::= SEQUENCE {

pDUSessionID PDUSessionID,

uEContextSuspendRequestTransfer OCTET STRING (CONTAINING UEContextSuspendRequestTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceSuspendItemSUSReq-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceSuspendItemSUSReq-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceSwitchedList ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceSwitchedItem

PDUSessionResourceSwitchedItem ::= SEQUENCE {

pDUSessionID PDUSessionID,

pathSwitchRequestAcknowledgeTransfer OCTET STRING (CONTAINING PathSwitchRequestAcknowledgeTransfer),

iE-Extensions ProtocolExtensionContainer { { PDUSessionResourceSwitchedItem-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceSwitchedItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-PduSessionExpectedUEActivityBehaviour CRITICALITY ignore EXTENSION ExpectedUEActivityBehaviour PRESENCE optional },

...

}

PDUSessionResourceToBeSwitchedDLList ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceToBeSwitchedDLItem

PDUSessionResourceToBeSwitchedDLItem ::= SEQUENCE {

pDUSessionID PDUSessionID,

pathSwitchRequestTransfer OCTET STRING (CONTAINING PathSwitchRequestTransfer),

iE-Extensions ProtocolExtensionContainer { { PDUSessionResourceToBeSwitchedDLItem-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceToBeSwitchedDLItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceToReleaseListHOCmd ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceToReleaseItemHOCmd

PDUSessionResourceToReleaseItemHOCmd ::= SEQUENCE {

pDUSessionID PDUSessionID,

handoverPreparationUnsuccessfulTransfer OCTET STRING (CONTAINING HandoverPreparationUnsuccessfulTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceToReleaseItemHOCmd-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceToReleaseItemHOCmd-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceToReleaseListRelCmd ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceToReleaseItemRelCmd

PDUSessionResourceToReleaseItemRelCmd ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceReleaseCommandTransfer OCTET STRING (CONTAINING PDUSessionResourceReleaseCommandTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceToReleaseItemRelCmd-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceToReleaseItemRelCmd-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionType ::= ENUMERATED {

ipv4,

ipv6,

ipv4v6,

ethernet,

unstructured,

...

}

PDUSessionUsageReport ::= SEQUENCE {

rATType ENUMERATED {nr, eutra, ..., nr-unlicensed, e-utra-unlicensed},

pDUSessionTimedReportList VolumeTimedReportList,

iE-Extensions ProtocolExtensionContainer { {PDUSessionUsageReport-ExtIEs} } OPTIONAL,

...

}

PDUSessionUsageReport-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

Periodicity ::= INTEGER (0..640000, ...)

PeriodicRegistrationUpdateTimer ::= BIT STRING (SIZE(8))

PLMNIdentity ::= OCTET STRING (SIZE(3))

PLMNAreaBasedQMC ::= SEQUENCE {

plmnListforQMC PLMNListforQMC,

iE-Extensions ProtocolExtensionContainer { {PLMNAreaBasedQMC-ExtIEs} } OPTIONAL,

...

}

PLMNAreaBasedQMC-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PLMNListforQMC ::= SEQUENCE (SIZE(1..maxnoofPLMNforQMC)) OF PLMNIdentity

PLMNSupportList ::= SEQUENCE (SIZE(1..maxnoofPLMNs)) OF PLMNSupportItem

PLMNSupportItem ::= SEQUENCE {

pLMNIdentity PLMNIdentity,

sliceSupportList SliceSupportList,

iE-Extensions ProtocolExtensionContainer { {PLMNSupportItem-ExtIEs} } OPTIONAL,

...

}

PLMNSupportItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-NPN-Support CRITICALITY reject EXTENSION NPN-Support PRESENCE optional }|

{ ID id-ExtendedSliceSupportList CRITICALITY reject EXTENSION ExtendedSliceSupportList PRESENCE optional },

...

}

PNI-NPN-MobilityInformation ::= SEQUENCE {

allowed-PNI-NPI-List Allowed-PNI-NPN-List,

iE-Extensions ProtocolExtensionContainer { {PNI-NPN-MobilityInformation-ExtIEs} } OPTIONAL,

...

}

PNI-NPN-MobilityInformation-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PortNumber ::= OCTET STRING (SIZE(2))

Pre-emptionCapability ::= ENUMERATED {

shall-not-trigger-pre-emption,

may-trigger-pre-emption,

...

}

Pre-emptionVulnerability ::= ENUMERATED {

not-pre-emptable,

pre-emptable,

...

}

PriorityLevelARP ::= INTEGER (1..15)

PriorityLevelQos ::= INTEGER (1..127, ...)

PWSFailedCellIDList ::= CHOICE {

eUTRA-CGI-PWSFailedList EUTRA-CGIList,

nR-CGI-PWSFailedList NR-CGIList,

choice-Extensions ProtocolIE-SingleContainer { {PWSFailedCellIDList-ExtIEs} }

}

PWSFailedCellIDList-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

-- Q

QMCConfigInfo ::= SEQUENCE {

uEAppLayerMeasInfoList UEAppLayerMeasInfoList,

iE-Extensions ProtocolExtensionContainer { { QMCConfigInfo-ExtIEs} } OPTIONAL,

...

}

QMCConfigInfo-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

QMCDeactivation ::= SEQUENCE {

qoEReferenceList QoEReferenceList,

iE-Extensions ProtocolExtensionContainer { { QMCDeactivation-ExtIEs} } OPTIONAL,

...

}

QMCDeactivation-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

QoEReferenceList ::= SEQUENCE (SIZE(1.. maxnoofUEAppLayerMeas)) OF QoEReference

QoEReference ::= OCTET STRING (SIZE(6))

QosCharacteristics ::= CHOICE {

nonDynamic5QI NonDynamic5QIDescriptor,

dynamic5QI Dynamic5QIDescriptor,

choice-Extensions ProtocolIE-SingleContainer { {QosCharacteristics-ExtIEs} }

}

QosCharacteristics-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

QosFlowAcceptedList ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QosFlowAcceptedItem

QosFlowAcceptedItem ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

iE-Extensions ProtocolExtensionContainer { {QosFlowAcceptedItem-ExtIEs} } OPTIONAL,

...

}

QosFlowAcceptedItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-CurrentQoSParaSetIndex CRITICALITY ignore EXTENSION AlternativeQoSParaSetIndex PRESENCE optional },

...

}

QosFlowAddOrModifyRequestList ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QosFlowAddOrModifyRequestItem

QosFlowAddOrModifyRequestItem ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

qosFlowLevelQosParameters QosFlowLevelQosParameters OPTIONAL,

e-RAB-ID E-RAB-ID OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {QosFlowAddOrModifyRequestItem-ExtIEs} } OPTIONAL,

...

}

QosFlowAddOrModifyRequestItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ID id-TSCTrafficCharacteristics CRITICALITY ignore EXTENSION TSCTrafficCharacteristics PRESENCE optional }|

{ID id-RedundantQosFlowIndicator CRITICALITY ignore EXTENSION RedundantQosFlowIndicator PRESENCE optional },

...

}

QosFlowAddOrModifyResponseList ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QosFlowAddOrModifyResponseItem

QosFlowAddOrModifyResponseItem ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

iE-Extensions ProtocolExtensionContainer { {QosFlowAddOrModifyResponseItem-ExtIEs} } OPTIONAL,

...

}

QosFlowAddOrModifyResponseItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-CurrentQoSParaSetIndex CRITICALITY ignore EXTENSION AlternativeQoSParaSetIndex PRESENCE optional },

...

}

QosFlowFeedbackList ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QosFlowFeedbackItem

QosFlowFeedbackItem ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

updateFeedback UpdateFeedback OPTIONAL,

cNpacketDelayBudgetDL ExtendedPacketDelayBudget OPTIONAL,

cNpacketDelayBudgetUL ExtendedPacketDelayBudget OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {QosFlowFeedbackItem-ExtIEs} } OPTIONAL,

...

}

QosFlowFeedbackItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

QosFlowIdentifier ::= INTEGER (0..63, ...)

QosFlowInformationList ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QosFlowInformationItem

QosFlowInformationItem ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

dLForwarding DLForwarding OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {QosFlowInformationItem-ExtIEs} } OPTIONAL,

...

}

QosFlowInformationItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ID id-ULForwarding CRITICALITY ignore EXTENSION ULForwarding PRESENCE optional},

...

}

QosFlowLevelQosParameters ::= SEQUENCE {

qosCharacteristics QosCharacteristics,

allocationAndRetentionPriority AllocationAndRetentionPriority,

gBR-QosInformation GBR-QosInformation OPTIONAL,

reflectiveQosAttribute ReflectiveQosAttribute OPTIONAL,

additionalQosFlowInformation AdditionalQosFlowInformation OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {QosFlowLevelQosParameters-ExtIEs} } OPTIONAL,

...

}

QosFlowLevelQosParameters-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ID id-QosMonitoringRequest CRITICALITY ignore EXTENSION QosMonitoringRequest PRESENCE optional}|

{ID id-QosMonitoringReportingFrequency CRITICALITY ignore EXTENSION QosMonitoringReportingFrequency PRESENCE optional},

...

}

QosMonitoringRequest ::= ENUMERATED {ul, dl, both, ..., stop}

QosMonitoringReportingFrequency ::= INTEGER (1..1800, ...)

QosFlowListWithCause ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QosFlowWithCauseItem

QosFlowWithCauseItem ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

cause Cause,

iE-Extensions ProtocolExtensionContainer { {QosFlowWithCauseItem-ExtIEs} } OPTIONAL,

...

}

QosFlowWithCauseItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

QosFlowModifyConfirmList ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QosFlowModifyConfirmItem

QosFlowModifyConfirmItem ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

iE-Extensions ProtocolExtensionContainer { {QosFlowModifyConfirmItem-ExtIEs} } OPTIONAL,

...

}

QosFlowModifyConfirmItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

QosFlowNotifyList ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QosFlowNotifyItem

QosFlowNotifyItem ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

notificationCause NotificationCause,

iE-Extensions ProtocolExtensionContainer { {QosFlowNotifyItem-ExtIEs} } OPTIONAL,

...

}

QosFlowNotifyItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-CurrentQoSParaSetIndex CRITICALITY ignore EXTENSION AlternativeQoSParaSetNotifyIndex PRESENCE optional },

...

}

QosFlowParametersList ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QosFlowParametersItem

QosFlowParametersItem ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

alternativeQoSParaSetList AlternativeQoSParaSetList OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {QosFlowParametersItem-ExtIEs} } OPTIONAL,

...

}

QosFlowParametersItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-CNPacketDelayBudgetDL CRITICALITY ignore EXTENSION ExtendedPacketDelayBudget PRESENCE optional }|

{ ID id-CNPacketDelayBudgetUL CRITICALITY ignore EXTENSION ExtendedPacketDelayBudget PRESENCE optional }|

{ ID id-BurstArrivalTimeDownlink CRITICALITY ignore EXTENSION BurstArrivalTime PRESENCE optional },

...

}

QosFlowPerTNLInformation ::= SEQUENCE {

uPTransportLayerInformation UPTransportLayerInformation,

associatedQosFlowList AssociatedQosFlowList,

iE-Extensions ProtocolExtensionContainer { { QosFlowPerTNLInformation-ExtIEs} } OPTIONAL,

...

}

QosFlowPerTNLInformation-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

QosFlowPerTNLInformationList ::= SEQUENCE (SIZE(1..maxnoofMultiConnectivityMinusOne)) OF QosFlowPerTNLInformationItem

QosFlowPerTNLInformationItem ::= SEQUENCE {

qosFlowPerTNLInformation QosFlowPerTNLInformation,

iE-Extensions ProtocolExtensionContainer { { QosFlowPerTNLInformationItem-ExtIEs} } OPTIONAL,

...

}

QosFlowPerTNLInformationItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

QosFlowSetupRequestList ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QosFlowSetupRequestItem

QosFlowSetupRequestItem ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

qosFlowLevelQosParameters QosFlowLevelQosParameters,

e-RAB-ID E-RAB-ID OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {QosFlowSetupRequestItem-ExtIEs} } OPTIONAL,

...

}

QosFlowSetupRequestItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ID id-TSCTrafficCharacteristics CRITICALITY ignore EXTENSION TSCTrafficCharacteristics PRESENCE optional }|

{ID id-RedundantQosFlowIndicator CRITICALITY ignore EXTENSION RedundantQosFlowIndicator PRESENCE optional },

...

}

QosFlowListWithDataForwarding ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QosFlowItemWithDataForwarding

QosFlowItemWithDataForwarding ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

dataForwardingAccepted DataForwardingAccepted OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {QosFlowItemWithDataForwarding-ExtIEs} } OPTIONAL,

...

}

QosFlowItemWithDataForwarding-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-CurrentQoSParaSetIndex CRITICALITY ignore EXTENSION AlternativeQoSParaSetIndex PRESENCE optional },

...

}

QosFlowToBeForwardedList ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QosFlowToBeForwardedItem

QosFlowToBeForwardedItem ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

iE-Extensions ProtocolExtensionContainer { {QosFlowToBeForwardedItem-ExtIEs} } OPTIONAL,

...

}

QosFlowToBeForwardedItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

QoSFlowsUsageReportList ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QoSFlowsUsageReport-Item

QoSFlowsUsageReport-Item ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

rATType ENUMERATED {nr, eutra, ..., nr-unlicensed, e-utra-unlicensed},

qoSFlowsTimedReportList VolumeTimedReportList,

iE-Extensions ProtocolExtensionContainer { {QoSFlowsUsageReport-Item-ExtIEs} } OPTIONAL,

...

}

QoSFlowsUsageReport-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

-- R

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 ::= {

...

}

RAN-UE-NGAP-ID ::= INTEGER (0..4294967295)

RAT-Information ::= ENUMERATED {

unlicensed,

nb-IoT,

...

}

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 ::= {

...

}

RedirectionVoiceFallback ::= ENUMERATED {

possible,

not-possible,

...

}

RedundantPDUSessionInformation ::= SEQUENCE {

rSN RSN,

iE-Extensions ProtocolExtensionContainer { {RedundantPDUSessionInformation-ExtIEs} } OPTIONAL,

...

}

RedundantPDUSessionInformation-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

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

}

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 TargetRANNodeID,

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))

-- S

ScheduledCommunicationTime ::= SEQUENCE {

dayofWeek BIT STRING (SIZE(7)) OPTIONAL,

timeofDayStart INTEGER (0..86399, ...) OPTIONAL,

timeofDayEnd INTEGER (0..86399, ...) OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { ScheduledCommunicationTime-ExtIEs}} OPTIONAL,

...

}

ScheduledCommunicationTime-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

SCTP-TLAs ::= SEQUENCE (SIZE(1..maxnoofXnTLAs)) OF TransportLayerAddress

SD ::= OCTET STRING (SIZE(3))

SecondaryRATUsageInformation ::= SEQUENCE {

pDUSessionUsageReport PDUSessionUsageReport OPTIONAL,

qosFlowsUsageReportList QoSFlowsUsageReportList OPTIONAL,

iE-Extension ProtocolExtensionContainer { {SecondaryRATUsageInformation-ExtIEs} } OPTIONAL,

...

}

SecondaryRATUsageInformation-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

SecondaryRATDataUsageReportTransfer ::= SEQUENCE {

secondaryRATUsageInformation SecondaryRATUsageInformation OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {SecondaryRATDataUsageReportTransfer-ExtIEs} } OPTIONAL,

...

}

SecondaryRATDataUsageReportTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

SecurityContext ::= SEQUENCE {

nextHopChainingCount NextHopChainingCount,

nextHopNH SecurityKey,

iE-Extensions ProtocolExtensionContainer { {SecurityContext-ExtIEs} } OPTIONAL,

...

}

SecurityContext-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

SecurityIndication ::= SEQUENCE {

integrityProtectionIndication IntegrityProtectionIndication,

confidentialityProtectionIndication ConfidentialityProtectionIndication,

maximumIntegrityProtectedDataRate-UL MaximumIntegrityProtectedDataRate OPTIONAL,

-- The above IE shall be present if integrity protection is required or preferred

iE-Extensions ProtocolExtensionContainer { {SecurityIndication-ExtIEs} } OPTIONAL,

...

}

SecurityIndication-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-MaximumIntegrityProtectedDataRate-DL CRITICALITY ignore EXTENSION MaximumIntegrityProtectedDataRate PRESENCE optional },

...

}

SecurityKey ::= BIT STRING (SIZE(256))

SecurityResult ::= SEQUENCE {

integrityProtectionResult IntegrityProtectionResult,

confidentialityProtectionResult ConfidentialityProtectionResult,

iE-Extensions ProtocolExtensionContainer { {SecurityResult-ExtIEs} } OPTIONAL,

...

}

SecurityResult-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

SensorMeasurementConfiguration ::= SEQUENCE {

sensorMeasConfig SensorMeasConfig,

sensorMeasConfigNameList SensorMeasConfigNameList OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {SensorMeasurementConfiguration-ExtIEs} } OPTIONAL,

...

}

SensorMeasurementConfiguration-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

SensorMeasConfigNameList ::= SEQUENCE (SIZE(1..maxnoofSensorName)) OF SensorMeasConfigNameItem

SensorMeasConfigNameItem ::= SEQUENCE {

sensorNameConfig SensorNameConfig,

iE-Extensions ProtocolExtensionContainer { { SensorMeasConfigNameItem-ExtIEs } } OPTIONAL,

...

}

SensorMeasConfigNameItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

SensorMeasConfig::= ENUMERATED {setup,...}

SensorNameConfig ::= CHOICE {

uncompensatedBarometricConfig ENUMERATED {true, ...},

ueSpeedConfig ENUMERATED {true, ...},

ueOrientationConfig ENUMERATED {true, ...},

choice-Extensions ProtocolIE-SingleContainer { {SensorNameConfig-ExtIEs} }

}

SensorNameConfig-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

SerialNumber ::= BIT STRING (SIZE(16))

ServedGUAMIList ::= SEQUENCE (SIZE(1..maxnoofServedGUAMIs)) OF ServedGUAMIItem

ServedGUAMIItem ::= SEQUENCE {

gUAMI GUAMI,

backupAMFName AMFName OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {ServedGUAMIItem-ExtIEs} } OPTIONAL,

...

}

ServedGUAMIItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ID id-GUAMIType CRITICALITY ignore EXTENSION GUAMIType PRESENCE optional },

...

}

ServiceAreaInformation ::= SEQUENCE (SIZE(1.. maxnoofEPLMNsPlusOne)) OF ServiceAreaInformation-Item

ServiceAreaInformation-Item ::= SEQUENCE {

pLMNIdentity PLMNIdentity,

allowedTACs AllowedTACs OPTIONAL,

notAllowedTACs NotAllowedTACs OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {ServiceAreaInformation-Item-ExtIEs} } OPTIONAL,

...

}

ServiceAreaInformation-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

ServiceType ::= ENUMERATED {streaming, mTSI, vR, ...}

SgNB-UE-X2AP-ID ::= INTEGER (0..4294967295)

SliceOverloadList ::= SEQUENCE (SIZE(1..maxnoofSliceItems)) OF SliceOverloadItem

SliceOverloadItem ::= SEQUENCE {

s-NSSAI S-NSSAI,

iE-Extensions ProtocolExtensionContainer { {SliceOverloadItem-ExtIEs} } OPTIONAL,

...

}

SliceOverloadItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

SliceSupportList ::= SEQUENCE (SIZE(1..maxnoofSliceItems)) OF SliceSupportItem

SliceSupportItem ::= SEQUENCE {

s-NSSAI S-NSSAI,

iE-Extensions ProtocolExtensionContainer { {SliceSupportItem-ExtIEs} } OPTIONAL,

...

}

SliceSupportItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

SliceSupportListQMC ::= SEQUENCE (SIZE(1..maxnoofSliceQMC)) OF SliceSupportQMC-Item

SliceSupportQMC-Item ::= SEQUENCE {

s-NSSAI S-NSSAI,

iE-Extensions ProtocolExtensionContainer { {SliceSupportQMC-Item-ExtIEs} } OPTIONAL,

...

}

SliceSupportQMC-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

SNPN-MobilityInformation ::= SEQUENCE {

serving-NID NID,

iE-Extensions ProtocolExtensionContainer { {SNPN-MobilityInformation-ExtIEs} } OPTIONAL,

...

}

SNPN-MobilityInformation-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

S-NSSAI ::= SEQUENCE {

sST SST,

sD SD OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { S-NSSAI-ExtIEs} } OPTIONAL,

...

}

S-NSSAI-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

SONConfigurationTransfer ::= SEQUENCE {

targetRANNodeID TargetRANNodeID,

sourceRANNodeID SourceRANNodeID,

sONInformation SONInformation,

xnTNLConfigurationInfo XnTNLConfigurationInfo OPTIONAL,

-- The above IE shall be present if the SON Information IE contains the SON Information Request IE set to “Xn TNL Configuration Info”

iE-Extensions ProtocolExtensionContainer { {SONConfigurationTransfer-ExtIEs} } OPTIONAL,

...

}

SONConfigurationTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

SONInformation ::= CHOICE {

sONInformationRequest SONInformationRequest,

sONInformationReply SONInformationReply,

choice-Extensions ProtocolIE-SingleContainer { {SONInformation-ExtIEs} }

}

SONInformation-ExtIEs NGAP-PROTOCOL-IES ::= {

{ ID id-SONInformationReport CRITICALITY ignore TYPE SONInformationReport PRESENCE mandatory },

...

}

SONInformationReply ::= SEQUENCE {

xnTNLConfigurationInfo XnTNLConfigurationInfo OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {SONInformationReply-ExtIEs} } OPTIONAL,

...

}

SONInformationReply-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

SONInformationReport::= CHOICE {

failureIndicationInformation FailureIndication,

hOReportInformation HOReport,

choice-Extensions ProtocolIE-SingleContainer { { SONInformationReport-ExtIEs} }

}

SONInformationReport-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

SONInformationRequest ::= ENUMERATED {

xn-TNL-configuration-info,

...

}

SourceNGRANNode-ToTargetNGRANNode-TransparentContainer ::= SEQUENCE {

rRCContainer RRCContainer,

pDUSessionResourceInformationList PDUSessionResourceInformationList OPTIONAL,

e-RABInformationList E-RABInformationList OPTIONAL,

targetCell-ID NGRAN-CGI,

indexToRFSP IndexToRFSP OPTIONAL,

uEHistoryInformation UEHistoryInformation,

iE-Extensions ProtocolExtensionContainer { {SourceNGRANNode-ToTargetNGRANNode-TransparentContainer-ExtIEs} } OPTIONAL,

...

}

SourceNGRANNode-ToTargetNGRANNode-TransparentContainer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-SgNB-UE-X2AP-ID CRITICALITY ignore EXTENSION SgNB-UE-X2AP-ID PRESENCE optional }|

{ ID id-UEHistoryInformationFromTheUE CRITICALITY ignore EXTENSION UEHistoryInformationFromTheUE PRESENCE optional }|

{ ID id-QMCConfigInfo CRITICALITY ignore EXTENSION QMCConfigInfo PRESENCE optional },

...

}

SourceOfUEActivityBehaviourInformation ::= ENUMERATED {

subscription-information,

statistics,

...

}

SourceRANNodeID ::= SEQUENCE {

globalRANNodeID GlobalRANNodeID,

selectedTAI TAI,

iE-Extensions ProtocolExtensionContainer { {SourceRANNodeID-ExtIEs} } OPTIONAL,

...

}

SourceRANNodeID-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

SourceToTarget-TransparentContainer ::= OCTET STRING

-- This IE includes a transparent container from the source RAN node to the target RAN node.

-- The octets of the OCTET STRING are encoded according to the specifications of the target system.

SourceToTarget-AMFInformationReroute ::= SEQUENCE {

configuredNSSAI ConfiguredNSSAI OPTIONAL,

rejectedNSSAIinPLMN RejectedNSSAIinPLMN OPTIONAL,

rejectedNSSAIinTA RejectedNSSAIinTA OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {SourceToTarget-AMFInformationReroute-ExtIEs} } OPTIONAL,

...

}

SourceToTarget-AMFInformationReroute-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

-- This IE includes information from the source Core node to the target Core node for reroute information provide by NSSF.

-- The octets of the OCTET STRING are encoded according to the specifications of the Core network.

SRVCCOperationPossible ::= ENUMERATED {

possible,

notPossible,

...

}

ConfiguredNSSAI ::= OCTET STRING (SIZE(128))

RejectedNSSAIinPLMN ::= OCTET STRING (SIZE(32))

RejectedNSSAIinTA ::= OCTET STRING (SIZE(32))

SST ::= OCTET STRING (SIZE(1))

SupportedServiceTypes ::= BIT STRING (SIZE(16))

SupportedRANVisibleQoEServiceTypes ::= BIT STRING (SIZE(16))

SupportedTAList ::= SEQUENCE (SIZE(1..maxnoofTACs)) OF SupportedTAItem

SupportedTAItem ::= SEQUENCE {

tAC TAC,

broadcastPLMNList BroadcastPLMNList,

iE-Extensions ProtocolExtensionContainer { {SupportedTAItem-ExtIEs} } OPTIONAL,

...

}

SupportedTAItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ID id-ConfiguredTACIndication CRITICALITY ignore EXTENSION ConfiguredTACIndication PRESENCE optional }|

{ID id-RAT-Information CRITICALITY reject EXTENSION RAT-Information PRESENCE optional },

...

}

SuspendIndicator ::= ENUMERATED {

true,

...

}

Suspend-Request-Indication ::= ENUMERATED {

suspend-requested,

...

}

Suspend-Response-Indication ::= ENUMERATED {

suspend-indicated,

...

}

-- T

TAC ::= OCTET STRING (SIZE(3))

TAI ::= SEQUENCE {

pLMNIdentity PLMNIdentity,

tAC TAC,

iE-Extensions ProtocolExtensionContainer { {TAI-ExtIEs} } OPTIONAL,

...

}

TAI-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TAIBroadcastEUTRA ::= SEQUENCE (SIZE(1..maxnoofTAIforWarning)) OF TAIBroadcastEUTRA-Item

TAIBroadcastEUTRA-Item ::= SEQUENCE {

tAI TAI,

completedCellsInTAI-EUTRA CompletedCellsInTAI-EUTRA,

iE-Extensions ProtocolExtensionContainer { {TAIBroadcastEUTRA-Item-ExtIEs} } OPTIONAL,

...

}

TAIBroadcastEUTRA-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TAIBroadcastNR ::= SEQUENCE (SIZE(1..maxnoofTAIforWarning)) OF TAIBroadcastNR-Item

TAIBroadcastNR-Item ::= SEQUENCE {

tAI TAI,

completedCellsInTAI-NR CompletedCellsInTAI-NR,

iE-Extensions ProtocolExtensionContainer { {TAIBroadcastNR-Item-ExtIEs} } OPTIONAL,

...

}

TAIBroadcastNR-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TAICancelledEUTRA ::= SEQUENCE (SIZE(1..maxnoofTAIforWarning)) OF TAICancelledEUTRA-Item

TAICancelledEUTRA-Item ::= SEQUENCE {

tAI TAI,

cancelledCellsInTAI-EUTRA CancelledCellsInTAI-EUTRA,

iE-Extensions ProtocolExtensionContainer { {TAICancelledEUTRA-Item-ExtIEs} } OPTIONAL,

...

}

TAICancelledEUTRA-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TAICancelledNR ::= SEQUENCE (SIZE(1..maxnoofTAIforWarning)) OF TAICancelledNR-Item

TAICancelledNR-Item ::= SEQUENCE {

tAI TAI,

cancelledCellsInTAI-NR CancelledCellsInTAI-NR,

iE-Extensions ProtocolExtensionContainer { {TAICancelledNR-Item-ExtIEs} } OPTIONAL,

...

}

TAICancelledNR-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TAIListForInactive ::= SEQUENCE (SIZE(1..maxnoofTAIforInactive)) OF TAIListForInactiveItem

TAIListForInactiveItem ::= SEQUENCE {

tAI TAI,

iE-Extensions ProtocolExtensionContainer { {TAIListForInactiveItem-ExtIEs} } OPTIONAL,

...

}

TAIListForInactiveItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TAIListForPaging ::= SEQUENCE (SIZE(1..maxnoofTAIforPaging)) OF TAIListForPagingItem

TAIListForPagingItem ::= SEQUENCE {

tAI TAI,

iE-Extensions ProtocolExtensionContainer { {TAIListForPagingItem-ExtIEs} } OPTIONAL,

...

}

TAIListForPagingItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TAIListForRestart ::= SEQUENCE (SIZE(1..maxnoofTAIforRestart)) OF TAI

TAIListForWarning ::= SEQUENCE (SIZE(1..maxnoofTAIforWarning)) OF TAI

TargeteNB-ID ::= SEQUENCE {

globalENB-ID GlobalNgENB-ID,

selected-EPS-TAI EPS-TAI,

iE-Extensions ProtocolExtensionContainer { {TargeteNB-ID-ExtIEs} } OPTIONAL,

...

}

TargeteNB-ID-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TargetID ::= CHOICE {

targetRANNodeID TargetRANNodeID,

targeteNB-ID TargeteNB-ID,

choice-Extensions ProtocolIE-SingleContainer { {TargetID-ExtIEs} }

}

TargetID-ExtIEs NGAP-PROTOCOL-IES ::= {

{ID id-TargetRNC-ID CRITICALITY reject TYPE TargetRNC-ID PRESENCE mandatory },

...

}

TargetNGRANNode-ToSourceNGRANNode-TransparentContainer ::= SEQUENCE {

rRCContainer RRCContainer,

iE-Extensions ProtocolExtensionContainer { {TargetNGRANNode-ToSourceNGRANNode-TransparentContainer-ExtIEs} } OPTIONAL,

...

}

TargetNGRANNode-ToSourceNGRANNode-TransparentContainer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-DAPSResponseInfoList CRITICALITY ignore EXTENSION DAPSResponseInfoList PRESENCE optional },

...

}

TargetNGRANNode-ToSourceNGRANNode-FailureTransparentContainer ::= SEQUENCE {

cell-CAGInformation Cell-CAGInformation OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {TargetNGRANNode-ToSourceNGRANNode-FailureTransparentContainer-ExtIEs} } OPTIONAL,

...

}

TargetNGRANNode-ToSourceNGRANNode-FailureTransparentContainer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TargetRANNodeID ::= SEQUENCE {

globalRANNodeID GlobalRANNodeID,

selectedTAI TAI,

iE-Extensions ProtocolExtensionContainer { {TargetRANNodeID-ExtIEs} } OPTIONAL,

...

}

TargetRANNodeID-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TargetRNC-ID ::= SEQUENCE {

lAI LAI,

rNC-ID RNC-ID,

extendedRNC-ID ExtendedRNC-ID OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {TargetRNC-ID-ExtIEs} } OPTIONAL,

...

}

TargetRNC-ID-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TargetToSource-TransparentContainer ::= OCTET STRING

-- This IE includes a transparent container from the target RAN node to the source RAN node.

-- The octets of the OCTET STRING are encoded according to the specifications of the target system.

TargettoSource-Failure-TransparentContainer ::= OCTET STRING

-- This IE includes a transparent container from the target RAN node to the source RAN node.

-- The octets of the OCTET STRING are encoded according to the specifications of the target system (if applicable).

TimerApproachForGUAMIRemoval ::= ENUMERATED {

apply-timer,

...

}

TimeStamp ::= OCTET STRING (SIZE(4))

TimeToWait ::= ENUMERATED {v1s, v2s, v5s, v10s, v20s, v60s, ...}

TimeUEStayedInCell ::= INTEGER (0..4095)

TimeUEStayedInCellEnhancedGranularity ::= INTEGER (0..40950)

TNAP-ID ::= OCTET STRING

TNGF-ID ::= CHOICE {

tNGF-ID BIT STRING (SIZE(32, ...)),

choice-Extensions ProtocolIE-SingleContainer { {TNGF-ID-ExtIEs} }

}

TNGF-ID-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

TNLAddressWeightFactor ::= INTEGER (0..255)

TNLAssociationList ::= SEQUENCE (SIZE(1..maxnoofTNLAssociations)) OF TNLAssociationItem

TNLAssociationItem ::= SEQUENCE {

tNLAssociationAddress CPTransportLayerInformation,

cause Cause,

iE-Extensions ProtocolExtensionContainer { {TNLAssociationItem-ExtIEs} } OPTIONAL,

...

}

TNLAssociationItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TNLAssociationUsage ::= ENUMERATED {

ue,

non-ue,

both,

...

}

TooearlyIntersystemHO::= SEQUENCE {

sourcecellID EUTRA-CGI,

failurecellID NGRAN-CGI,

uERLFReportContainer UERLFReportContainer OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { TooearlyIntersystemHO-ExtIEs} } OPTIONAL,

...

}

TooearlyIntersystemHO-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TraceActivation ::= SEQUENCE {

nGRANTraceID NGRANTraceID,

interfacesToTrace InterfacesToTrace,

traceDepth TraceDepth,

traceCollectionEntityIPAddress TransportLayerAddress,

iE-Extensions ProtocolExtensionContainer { {TraceActivation-ExtIEs} } OPTIONAL,

...

}

TraceActivation-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-MDTConfiguration CRITICALITY ignore EXTENSION MDT-Configuration PRESENCE optional }|

{ ID id-TraceCollectionEntityURI CRITICALITY ignore EXTENSION URI-address PRESENCE optional },

...

}

TraceDepth ::= ENUMERATED {

minimum,

medium,

maximum,

minimumWithoutVendorSpecificExtension,

mediumWithoutVendorSpecificExtension,

maximumWithoutVendorSpecificExtension,

...

}

TrafficLoadReductionIndication ::= INTEGER (1..99)

TransportLayerAddress ::= BIT STRING (SIZE(1..160, ...))

TypeOfError ::= ENUMERATED {

not-understood,

missing,

...

}

TAIBasedMDT ::= SEQUENCE {

tAIListforMDT TAIListforMDT,

iE-Extensions ProtocolExtensionContainer { {TAIBasedMDT-ExtIEs} } OPTIONAL,

...

}

TAIBasedMDT-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TAIListforMDT ::= SEQUENCE (SIZE(1..maxnoofTAforMDT)) OF TAI

TAIBasedQMC ::= SEQUENCE {

tAIListforQMC TAIListforQMC,

iE-Extensions ProtocolExtensionContainer { {TAIBasedQMC-ExtIEs} } OPTIONAL,

...

}

TAIBasedQMC-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TAIListforQMC ::= SEQUENCE (SIZE(1..maxnoofTAforQMC)) OF TAI

TABasedMDT ::= SEQUENCE {

tAListforMDT TAListforMDT,

iE-Extensions ProtocolExtensionContainer { {TABasedMDT-ExtIEs} } OPTIONAL,

...

}

TABasedMDT-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TAListforMDT ::= SEQUENCE (SIZE(1..maxnoofTAforMDT)) OF TAC

Threshold-RSRP ::= INTEGER(0..127)

Threshold-RSRQ ::= INTEGER(0..127)

Threshold-SINR ::= INTEGER(0..127)

TimeToTrigger ::= ENUMERATED {ms0, ms40, ms64, ms80, ms100, ms128, ms160, ms256, ms320, ms480, ms512, ms640, ms1024, ms1280, ms2560, ms5120}

TWAP-ID ::= OCTET STRING

TWIF-ID ::= CHOICE {

tWIF-ID BIT STRING (SIZE(32, ...)),

choice-Extensions ProtocolIE-SingleContainer { {TWIF-ID-ExtIEs} }

}

TWIF-ID-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

TSCAssistanceInformation ::= SEQUENCE {

periodicity Periodicity,

burstArrivalTime BurstArrivalTime OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {TSCAssistanceInformation-ExtIEs} } OPTIONAL,

...

}

TSCAssistanceInformation-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TSCTrafficCharacteristics ::= SEQUENCE {

tSCAssistanceInformationDL TSCAssistanceInformation OPTIONAL,

tSCAssistanceInformationUL TSCAssistanceInformation OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {TSCTrafficCharacteristics-ExtIEs} } OPTIONAL,

...

}

TSCTrafficCharacteristics-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

-- U

UEAggregateMaximumBitRate ::= SEQUENCE {

uEAggregateMaximumBitRateDL BitRate,

uEAggregateMaximumBitRateUL BitRate,

iE-Extensions ProtocolExtensionContainer { {UEAggregateMaximumBitRate-ExtIEs} } OPTIONAL,

...

}

UEAggregateMaximumBitRate-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

UEAppLayerMeasInfoList ::= SEQUENCE (SIZE(1.. maxnoofUEAppLayerMeas)) OF UEAppLayerMeasInfoItem

UEAppLayerMeasInfoItem ::= SEQUENCE {

uEAppLayerMeasInfo UEAppLayerMeasInfo,

iE-Extensions ProtocolExtensionContainer { { UEAppLayerMeasInfoItem-ExtIEs} } OPTIONAL,

...

}

UEAppLayerMeasInfoItem-ExtIEs NGAP-PROTOCOL-EXTENSION::= {

...

}

UEAppLayerMeasInfo ::= SEQUENCE {

qoEReference QoEReference,

serviceType ServiceType,

containerForAppLayerMeasConfig OCTET STRING (SIZE(1..8000)) OPTIONAL,

measConfigAppLayerID INTEGER (0..61, ...) OPTIONAL,

areaScopeOfQMC AreaScopeOfQMC,

measCollEntityIPAddress TransportLayerAddress,

sliceSupportListQMC SliceSupportListQMC OPTIONAL,

mDT-AlignmentInfo MDT-AlignmentInfo OPTIONAL,

availableRANVisibleQoEMetrics AvailableRANVisibleQoEMetrics OPTIONAL,

qoEMeasurementStatus ENUMERATED {ongoing,...} OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { UEAppLayerMeasInfo-ExtIEs} } OPTIONAL,

...

}

UEAppLayerMeasInfo-ExtIEs NGAP-PROTOCOL-EXTENSION::= {

...

}

UE-associatedLogicalNG-connectionList ::= SEQUENCE (SIZE(1..maxnoofNGConnectionsToReset)) OF UE-associatedLogicalNG-connectionItem

UE-associatedLogicalNG-connectionItem ::= SEQUENCE {

aMF-UE-NGAP-ID AMF-UE-NGAP-ID OPTIONAL,

rAN-UE-NGAP-ID RAN-UE-NGAP-ID OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {UE-associatedLogicalNG-connectionItem-ExtIEs} } OPTIONAL,

...

}

UE-associatedLogicalNG-connectionItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

UECapabilityInfoRequest ::= ENUMERATED {

requested,

...

}

UEContextRequest ::= ENUMERATED {requested, ...}

UEContextResumeRequestTransfer ::= SEQUENCE {

qosFlowFailedToResumeList QosFlowListWithCause OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {UEContextResumeRequestTransfer-ExtIEs} } OPTIONAL,

...

}

UEContextResumeRequestTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

UEContextResumeResponseTransfer ::= SEQUENCE {

qosFlowFailedToResumeList QosFlowListWithCause OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {UEContextResumeResponseTransfer-ExtIEs} } OPTIONAL,

...

}

UEContextResumeResponseTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

UEContextSuspendRequestTransfer ::= SEQUENCE {

suspendIndicator SuspendIndicator OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {UEContextSuspendRequestTransfer-ExtIEs} } OPTIONAL,

...

}

UEContextSuspendRequestTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

UE-DifferentiationInfo ::= SEQUENCE {

periodicCommunicationIndicator ENUMERATED {periodically, ondemand, ... } OPTIONAL,

periodicTime INTEGER (1..3600, ...) OPTIONAL,

scheduledCommunicationTime ScheduledCommunicationTime OPTIONAL,

stationaryIndication ENUMERATED {stationary, mobile, ...} OPTIONAL,

trafficProfile ENUMERATED {single-packet, dual-packets, multiple-packets, ...} OPTIONAL,

batteryIndication ENUMERATED {battery-powered, battery-powered-not-rechargeable-or-replaceable, not-battery-powered, ...} OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { UE-DifferentiationInfo-ExtIEs} } OPTIONAL,

...

}

UE-DifferentiationInfo-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

UEHistoryInformation ::= SEQUENCE (SIZE(1..maxnoofCellsinUEHistoryInfo)) OF LastVisitedCellItem

UEHistoryInformationFromTheUE ::= CHOICE {

nR NRMobilityHistoryReport,

choice-Extensions ProtocolIE-SingleContainer { {UEHistoryInformationFromTheUE-ExtIEs} }

}

UEHistoryInformationFromTheUE-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

UEIdentityIndexValue ::= CHOICE {

indexLength10 BIT STRING (SIZE(10)),

choice-Extensions ProtocolIE-SingleContainer { {UEIdentityIndexValue-ExtIEs} }

}

UEIdentityIndexValue-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

UE-NGAP-IDs ::= CHOICE {

uE-NGAP-ID-pair UE-NGAP-ID-pair,

aMF-UE-NGAP-ID AMF-UE-NGAP-ID,

choice-Extensions ProtocolIE-SingleContainer { {UE-NGAP-IDs-ExtIEs} }

}

UE-NGAP-IDs-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

UE-NGAP-ID-pair ::= SEQUENCE{

aMF-UE-NGAP-ID AMF-UE-NGAP-ID,

rAN-UE-NGAP-ID RAN-UE-NGAP-ID,

iE-Extensions ProtocolExtensionContainer { {UE-NGAP-ID-pair-ExtIEs} } OPTIONAL,

...

}

UE-NGAP-ID-pair-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

UEPagingIdentity ::= CHOICE {

fiveG-S-TMSI FiveG-S-TMSI,

choice-Extensions ProtocolIE-SingleContainer { {UEPagingIdentity-ExtIEs} }

}

UEPagingIdentity-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

UEPresence ::= ENUMERATED {in, out, unknown, ...}

UEPresenceInAreaOfInterestList ::= SEQUENCE (SIZE(1..maxnoofAoI)) OF UEPresenceInAreaOfInterestItem

UEPresenceInAreaOfInterestItem ::= SEQUENCE {

locationReportingReferenceID LocationReportingReferenceID,

uEPresence UEPresence,

iE-Extensions ProtocolExtensionContainer { {UEPresenceInAreaOfInterestItem-ExtIEs} } OPTIONAL,

...

}

UEPresenceInAreaOfInterestItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

UERadioCapability ::= OCTET STRING

UERadioCapabilityForPaging ::= SEQUENCE {

uERadioCapabilityForPagingOfNR UERadioCapabilityForPagingOfNR OPTIONAL,

uERadioCapabilityForPagingOfEUTRA UERadioCapabilityForPagingOfEUTRA OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {UERadioCapabilityForPaging-ExtIEs} } OPTIONAL,

...

}

UERadioCapabilityForPaging-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-UERadioCapabilityForPagingOfNB-IoT CRITICALITY ignore EXTENSION UERadioCapabilityForPagingOfNB-IoT PRESENCE optional },

...

}

UERadioCapabilityForPagingOfNB-IoT ::= OCTET STRING

UERadioCapabilityForPagingOfNR ::= OCTET STRING

UERadioCapabilityForPagingOfEUTRA ::= OCTET STRING

UERadioCapabilityID ::= OCTET STRING

UERetentionInformation ::= ENUMERATED {

ues-retained,

...

}

UERLFReportContainer ::= CHOICE {

nR NRUERLFReportContainer,

lTE LTEUERLFReportContainer,

choice-Extensions ProtocolIE-SingleContainer { {UERLFReportContainer-ExtIEs} }

}

UERLFReportContainer-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

UESecurityCapabilities ::= SEQUENCE {

nRencryptionAlgorithms NRencryptionAlgorithms,

nRintegrityProtectionAlgorithms NRintegrityProtectionAlgorithms,

eUTRAencryptionAlgorithms EUTRAencryptionAlgorithms,

eUTRAintegrityProtectionAlgorithms EUTRAintegrityProtectionAlgorithms,

iE-Extensions ProtocolExtensionContainer { {UESecurityCapabilities-ExtIEs} } OPTIONAL,

...

}

UESecurityCapabilities-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

UE-UP-CIoT-Support ::= ENUMERATED {supported, ...}

UE-QMC-Capability ::= SEQUENCE {

supportedServiceTypes SupportedServiceTypes,

supportedRANVisibleQoEServiceTypes SupportedRANVisibleQoEServiceTypes OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { UE-QMC-Capability-ExtIEs} } OPTIONAL,

...

}

UE-QMC-Capability-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

UL-CP-SecurityInformation ::= SEQUENCE {

ul-NAS-MAC UL-NAS-MAC,

ul-NAS-Count UL-NAS-Count,

iE-Extensions ProtocolExtensionContainer { { UL-CP-SecurityInformation-ExtIEs} } OPTIONAL,

...

}

UL-CP-SecurityInformation-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

UL-NAS-MAC ::= BIT STRING (SIZE (16))

UL-NAS-Count ::= BIT STRING (SIZE (5))

UL-NGU-UP-TNLModifyList ::= SEQUENCE (SIZE(1..maxnoofMultiConnectivity)) OF UL-NGU-UP-TNLModifyItem

UL-NGU-UP-TNLModifyItem ::= SEQUENCE {

uL-NGU-UP-TNLInformation UPTransportLayerInformation,

dL-NGU-UP-TNLInformation UPTransportLayerInformation,

iE-Extensions ProtocolExtensionContainer { {UL-NGU-UP-TNLModifyItem-ExtIEs} } OPTIONAL,

...

}

UL-NGU-UP-TNLModifyItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-RedundantUL-NGU-UP-TNLInformation CRITICALITY ignore EXTENSION UPTransportLayerInformation PRESENCE optional }|

{ ID id-RedundantDL-NGU-UP-TNLInformation CRITICALITY ignore EXTENSION UPTransportLayerInformation PRESENCE optional },

...

}

UnavailableGUAMIList ::= SEQUENCE (SIZE(1..maxnoofServedGUAMIs)) OF UnavailableGUAMIItem

UnavailableGUAMIItem ::= SEQUENCE {

gUAMI GUAMI,

timerApproachForGUAMIRemoval TimerApproachForGUAMIRemoval OPTIONAL,

backupAMFName AMFName OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {UnavailableGUAMIItem-ExtIEs} } OPTIONAL,

...

}

UnavailableGUAMIItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

ULForwarding ::= ENUMERATED {

ul-forwarding-proposed,

...

}

UpdateFeedback ::= BIT STRING (SIZE(8, ...))

UPTransportLayerInformation ::= CHOICE {

gTPTunnel GTPTunnel,

choice-Extensions ProtocolIE-SingleContainer { {UPTransportLayerInformation-ExtIEs} }

}

UPTransportLayerInformation-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

UPTransportLayerInformationList ::= SEQUENCE (SIZE(1..maxnoofMultiConnectivityMinusOne)) OF UPTransportLayerInformationItem

UPTransportLayerInformationItem ::= SEQUENCE {

nGU-UP-TNLInformation UPTransportLayerInformation,

iE-Extensions ProtocolExtensionContainer { {UPTransportLayerInformationItem-ExtIEs} } OPTIONAL,

...

}

UPTransportLayerInformationItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-CommonNetworkInstance CRITICALITY ignore EXTENSION CommonNetworkInstance PRESENCE optional },

...

}

UPTransportLayerInformationPairList ::= SEQUENCE (SIZE(1..maxnoofMultiConnectivityMinusOne)) OF UPTransportLayerInformationPairItem

UPTransportLayerInformationPairItem ::= SEQUENCE {

uL-NGU-UP-TNLInformation UPTransportLayerInformation,

dL-NGU-UP-TNLInformation UPTransportLayerInformation,

iE-Extensions ProtocolExtensionContainer { {UPTransportLayerInformationPairItem-ExtIEs} } OPTIONAL,

...

}

UPTransportLayerInformationPairItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

URI-address ::= VisibleString

UserLocationInformation ::= CHOICE {

userLocationInformationEUTRA UserLocationInformationEUTRA,

userLocationInformationNR UserLocationInformationNR,

userLocationInformationN3IWF UserLocationInformationN3IWF,

choice-Extensions ProtocolIE-SingleContainer { {UserLocationInformation-ExtIEs} }

}

UserLocationInformation-ExtIEs NGAP-PROTOCOL-IES ::= {

{ ID id-UserLocationInformationTNGF CRITICALITY ignore TYPE UserLocationInformationTNGF PRESENCE mandatory }|

{ ID id-UserLocationInformationTWIF CRITICALITY ignore TYPE UserLocationInformationTWIF PRESENCE mandatory }|

{ ID id-UserLocationInformationW-AGF CRITICALITY ignore TYPE UserLocationInformationW-AGF PRESENCE mandatory },

...

}

UserLocationInformationEUTRA ::= SEQUENCE {

eUTRA-CGI EUTRA-CGI,

tAI TAI,

timeStamp TimeStamp OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {UserLocationInformationEUTRA-ExtIEs} } OPTIONAL,

...

}

UserLocationInformationEUTRA-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-PSCellInformation CRITICALITY ignore EXTENSION NGRAN-CGI PRESENCE optional},

...

}

UserLocationInformationN3IWF ::= SEQUENCE {

iPAddress TransportLayerAddress,

portNumber PortNumber,

iE-Extensions ProtocolExtensionContainer { {UserLocationInformationN3IWF-ExtIEs} } OPTIONAL,

...

}

UserLocationInformationN3IWF-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

UserLocationInformationTNGF ::= SEQUENCE {

tNAP-ID TNAP-ID,

iPAddress TransportLayerAddress,

portNumber PortNumber OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {UserLocationInformationTNGF-ExtIEs} } OPTIONAL,

...

}

UserLocationInformationTNGF-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

UserLocationInformationTWIF ::= SEQUENCE {

tWAP-ID TWAP-ID,

iPAddress TransportLayerAddress,

portNumber PortNumber OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {UserLocationInformationTWIF-ExtIEs} } OPTIONAL,

...

}

UserLocationInformationTWIF-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

UserLocationInformationW-AGF ::= CHOICE {

globalLine-ID GlobalLine-ID,

hFCNode-ID HFCNode-ID,

choice-Extensions ProtocolIE-SingleContainer { { UserLocationInformationW-AGF-ExtIEs} }

}

UserLocationInformationW-AGF-ExtIEs NGAP-PROTOCOL-IES ::= {

{ ID id-GlobalCable-ID CRITICALITY ignore TYPE GlobalCable-ID PRESENCE mandatory },

...

}

UserLocationInformationNR ::= SEQUENCE {

nR-CGI NR-CGI,

tAI TAI,

timeStamp TimeStamp OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {UserLocationInformationNR-ExtIEs} } OPTIONAL,

...

}

UserLocationInformationNR-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-PSCellInformation CRITICALITY ignore EXTENSION NGRAN-CGI PRESENCE optional }|

{ ID id-NID CRITICALITY reject EXTENSION NID PRESENCE optional },

...

}

UserPlaneSecurityInformation ::= SEQUENCE {

securityResult SecurityResult,

securityIndication SecurityIndication,

iE-Extensions ProtocolExtensionContainer { {UserPlaneSecurityInformation-ExtIEs} } OPTIONAL,

...

}

UserPlaneSecurityInformation-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

-- V

VolumeTimedReportList ::= SEQUENCE (SIZE(1..maxnoofTimePeriods)) OF VolumeTimedReport-Item

VolumeTimedReport-Item ::= SEQUENCE {

startTimeStamp OCTET STRING (SIZE(4)),

endTimeStamp OCTET STRING (SIZE(4)),

usageCountUL INTEGER (0..18446744073709551615),

usageCountDL INTEGER (0..18446744073709551615),

iE-Extensions ProtocolExtensionContainer { {VolumeTimedReport-Item-ExtIEs} } OPTIONAL,

...

}

VolumeTimedReport-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

-- W

W-AGF-ID ::= CHOICE {

w-AGF-ID BIT STRING (SIZE(16, ...)),

choice-Extensions ProtocolIE-SingleContainer { {W-AGF-ID-ExtIEs} }

}

W-AGF-ID-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

WarningAreaCoordinates ::= OCTET STRING (SIZE(1..1024))

WarningAreaList ::= CHOICE {

eUTRA-CGIListForWarning EUTRA-CGIListForWarning,

nR-CGIListForWarning NR-CGIListForWarning,

tAIListForWarning TAIListForWarning,

emergencyAreaIDList EmergencyAreaIDList,

choice-Extensions ProtocolIE-SingleContainer { {WarningAreaList-ExtIEs} }

}

WarningAreaList-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

WarningMessageContents ::= OCTET STRING (SIZE(1..9600))

WarningSecurityInfo ::= OCTET STRING (SIZE(50))

WarningType ::= OCTET STRING (SIZE(2))

WLANMeasurementConfiguration ::= SEQUENCE {

wlanMeasConfig WLANMeasConfig,

wlanMeasConfigNameList WLANMeasConfigNameList OPTIONAL,

wlan-rssi ENUMERATED {true, ...} OPTIONAL,

wlan-rtt ENUMERATED {true, ...} OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { WLANMeasurementConfiguration-ExtIEs } } OPTIONAL,

...

}

WLANMeasurementConfiguration-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

WLANMeasConfigNameList ::= SEQUENCE (SIZE(1..maxnoofWLANName)) OF WLANMeasConfigNameItem

WLANMeasConfigNameItem ::= SEQUENCE {

wLANName WLANName,

iE-Extensions ProtocolExtensionContainer { { WLANMeasConfigNameItem-ExtIEs } } OPTIONAL,

...

}

WLANMeasConfigNameItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

WLANMeasConfig::= ENUMERATED {setup,...}

WLANName ::= OCTET STRING (SIZE (1..32))

WUS-Assistance-Information ::= SEQUENCE {

pagingProbabilityInformation PagingProbabilityInformation,

iE-Extensions ProtocolExtensionContainer { { WUS-Assistance-Information-ExtIEs } } OPTIONAL,

...

}

WUS-Assistance-Information-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

-- X

XnExtTLAs ::= SEQUENCE (SIZE(1..maxnoofXnExtTLAs)) OF XnExtTLA-Item

XnExtTLA-Item ::= SEQUENCE {

iPsecTLA TransportLayerAddress OPTIONAL,

gTP-TLAs XnGTP-TLAs OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {XnExtTLA-Item-ExtIEs} } OPTIONAL,

...

}

XnExtTLA-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-SCTP-TLAs CRITICALITY ignore EXTENSION SCTP-TLAs PRESENCE optional },

...

}

XnGTP-TLAs ::= SEQUENCE (SIZE(1..maxnoofXnGTP-TLAs)) OF TransportLayerAddress

XnTLAs ::= SEQUENCE (SIZE(1..maxnoofXnTLAs)) OF TransportLayerAddress

XnTNLConfigurationInfo ::= SEQUENCE {

xnTransportLayerAddresses XnTLAs,

xnExtendedTransportLayerAddresses XnExtTLAs OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {XnTNLConfigurationInfo-ExtIEs} } OPTIONAL,

...

}

XnTNLConfigurationInfo-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

-- Y

-- Z

END

-- ASN1STOP

9.4.6 Common Definitions

-- ASN1START

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Common definitions

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

NGAP-CommonDataTypes {

itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)

ngran-Access (22) modules (3) ngap (1) version1 (1) ngap-CommonDataTypes (3) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

Criticality ::= ENUMERATED { reject, ignore, notify }

Presence ::= ENUMERATED { optional, conditional, mandatory }

PrivateIE-ID ::= CHOICE {

local INTEGER (0..65535),

global OBJECT IDENTIFIER

}

ProcedureCode ::= INTEGER (0..255)

ProtocolExtensionID ::= INTEGER (0..65535)

ProtocolIE-ID ::= INTEGER (0..65535)

TriggeringMessage ::= ENUMERATED { initiating-message, successful-outcome, unsuccessfull-outcome }

END

-- ASN1STOP

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

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- 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

maxnoofCellsingNB INTEGER ::= 16384

maxnoofCellsinngeNB INTEGER ::= 256

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

maxnoofMDTPLMNs INTEGER ::= 16

maxnoofMultiConnectivity INTEGER ::= 4

maxnoofMultiConnectivityMinusOne INTEGER ::= 3

maxnoofNeighPCIforMDT INTEGER ::= 32

maxnoofNGConnectionsToReset INTEGER ::= 65536

maxnoofNRCellBands INTEGER ::= 32

maxnoofPC5QoSFlows INTEGER ::= 2048

maxnoofPDUSessions INTEGER ::= 256

maxnoofPLMNs INTEGER ::= 12

maxnoofQosFlows INTEGER ::= 64

maxnoofQosParaSets INTEGER ::= 8

maxnoofRANNodeinAoI INTEGER ::= 64

maxnoofRecommendedCells INTEGER ::= 16

maxnoofRecommendedRANNodes INTEGER ::= 16

maxnoofAoI INTEGER ::= 64

maxnoofSensorName INTEGER ::= 3

maxnoofServedGUAMIs INTEGER ::= 256

maxnoofSliceItems INTEGER ::= 1024

maxnoofTACs INTEGER ::= 256

maxnoofTAforMDT INTEGER ::= 8

maxnoofTAIforInactive INTEGER ::= 16

maxnoofTAIforPaging INTEGER ::= 16

maxnoofTAIforRestart INTEGER ::= 2048

maxnoofTAIforWarning INTEGER ::= 65535

maxnoofTAIinAoI INTEGER ::= 16

maxnoofTimePeriods INTEGER ::= 2

maxnoofTNLAssociations INTEGER ::= 32

maxnoofWLANName INTEGER ::= 4

maxnoofXnExtTLAs INTEGER ::= 16

maxnoofXnGTP-TLAs INTEGER ::= 16

maxnoofXnTLAs INTEGER ::= 2

maxnoofCandidateCells INTEGER ::= 32

maxNRARFCN INTEGER ::= 3279165

maxnoofCellIDforQMC INTEGER ::= 32

maxnoofPLMNforQMC INTEGER ::= 16

maxnoofUEAppLayerMeas INTEGER ::= 16

maxnoofSliceQMC INTEGER ::= 16

maxnoofTAforQMC 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-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-QMCConfigInfo ProtocolIE-ID ::= xxx

id-QMCDeactivation ProtocolIE-ID ::= yyy

id-UE-QMC-Capability ProtocolIE-ID ::= zzz

END

-- ASN1STOP

9.4.8 Container Definitions

-- ASN1START

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Container definitions

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

NGAP-Containers {

itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)

ngran-Access (22) modules (3) ngap (1) version1 (1) ngap-Containers (5) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- IE parameter types from other modules.

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

IMPORTS

Criticality,

Presence,

PrivateIE-ID,

ProtocolExtensionID,

ProtocolIE-ID

FROM NGAP-CommonDataTypes

maxPrivateIEs,

maxProtocolExtensions,

maxProtocolIEs

FROM NGAP-Constants;

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Class Definition for Protocol IEs

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

NGAP-PROTOCOL-IES ::= CLASS {

&id ProtocolIE-ID UNIQUE,

&criticality Criticality,

&Value,

&presence Presence

}

WITH SYNTAX {

ID &id

CRITICALITY &criticality

TYPE &Value

PRESENCE &presence

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Class Definition for Protocol IEs

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

NGAP-PROTOCOL-IES-PAIR ::= CLASS {

&id ProtocolIE-ID UNIQUE,

&firstCriticality Criticality,

&FirstValue,

&secondCriticality Criticality,

&SecondValue,

&presence Presence

}

WITH SYNTAX {

ID &id

FIRST CRITICALITY &firstCriticality

FIRST TYPE &FirstValue

SECOND CRITICALITY &secondCriticality

SECOND TYPE &SecondValue

PRESENCE &presence

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Class Definition for Protocol Extensions

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

NGAP-PROTOCOL-EXTENSION ::= CLASS {

&id ProtocolExtensionID UNIQUE,

&criticality Criticality,

&Extension,

&presence Presence

}

WITH SYNTAX {

ID &id

CRITICALITY &criticality

EXTENSION &Extension

PRESENCE &presence

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Class Definition for Private IEs

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

NGAP-PRIVATE-IES ::= CLASS {

&id PrivateIE-ID,

&criticality Criticality,

&Value,

&presence Presence

}

WITH SYNTAX {

ID &id

CRITICALITY &criticality

TYPE &Value

PRESENCE &presence

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Container for Protocol IEs

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

ProtocolIE-Container {NGAP-PROTOCOL-IES : IEsSetParam} ::=

SEQUENCE (SIZE (0..maxProtocolIEs)) OF

ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-SingleContainer {NGAP-PROTOCOL-IES : IEsSetParam} ::=

ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-Field {NGAP-PROTOCOL-IES : IEsSetParam} ::= SEQUENCE {

id NGAP-PROTOCOL-IES.&id ({IEsSetParam}),

criticality NGAP-PROTOCOL-IES.&criticality ({IEsSetParam}{@id}),

value NGAP-PROTOCOL-IES.&Value ({IEsSetParam}{@id})

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Container for Protocol IE Pairs

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

ProtocolIE-ContainerPair {NGAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=

SEQUENCE (SIZE (0..maxProtocolIEs)) OF

ProtocolIE-FieldPair {{IEsSetParam}}

ProtocolIE-FieldPair {NGAP-PROTOCOL-IES-PAIR : IEsSetParam} ::= SEQUENCE {

id NGAP-PROTOCOL-IES-PAIR.&id ({IEsSetParam}),

firstCriticality NGAP-PROTOCOL-IES-PAIR.&firstCriticality ({IEsSetParam}{@id}),

firstValue NGAP-PROTOCOL-IES-PAIR.&FirstValue ({IEsSetParam}{@id}),

secondCriticality NGAP-PROTOCOL-IES-PAIR.&secondCriticality ({IEsSetParam}{@id}),

secondValue NGAP-PROTOCOL-IES-PAIR.&SecondValue ({IEsSetParam}{@id})

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Container Lists for Protocol IE Containers

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

ProtocolIE-ContainerList {INTEGER : lowerBound, INTEGER : upperBound, NGAP-PROTOCOL-IES : IEsSetParam} ::=

SEQUENCE (SIZE (lowerBound..upperBound)) OF

ProtocolIE-SingleContainer {{IEsSetParam}}

ProtocolIE-ContainerPairList {INTEGER : lowerBound, INTEGER : upperBound, NGAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=

SEQUENCE (SIZE (lowerBound..upperBound)) OF

ProtocolIE-ContainerPair {{IEsSetParam}}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Container for Protocol Extensions

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

ProtocolExtensionContainer {NGAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::=

SEQUENCE (SIZE (1..maxProtocolExtensions)) OF

ProtocolExtensionField {{ExtensionSetParam}}

ProtocolExtensionField {NGAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::= SEQUENCE {

id NGAP-PROTOCOL-EXTENSION.&id ({ExtensionSetParam}),

criticality NGAP-PROTOCOL-EXTENSION.&criticality ({ExtensionSetParam}{@id}),

extensionValue NGAP-PROTOCOL-EXTENSION.&Extension ({ExtensionSetParam}{@id})

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Container for Private IEs

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

PrivateIE-Container {NGAP-PRIVATE-IES : IEsSetParam } ::=

SEQUENCE (SIZE (1..maxPrivateIEs)) OF

PrivateIE-Field {{IEsSetParam}}

PrivateIE-Field {NGAP-PRIVATE-IES : IEsSetParam} ::= SEQUENCE {

id NGAP-PRIVATE-IES.&id ({IEsSetParam}),

criticality NGAP-PRIVATE-IES.&criticality ({IEsSetParam}{@id}),

value NGAP-PRIVATE-IES.&Value ({IEsSetParam}{@id})

}

END

-- ASN1STOP

End change