**3GPP TSG RAN Meeting #88e RP-201335**

**Electronic Meeting, June 29 - July 3, 2020**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.413** | **CR** | **0156** | **rev** | **11** | **Current version:** | **16.1.0** |  |
|  | | | | | | | | |
| *For* [***HELP***](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:*** | Introduction of NB-IoT related NG-AP procedures | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** |  | | | | | | | | | |
| ***Source to TSG:*** | Huawei, ZTE | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NB\_IOTenh3-Core | | | | |  | ***Date:*** | | | 2020-07-02 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) Rel-12 (Release 12) Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | To support NB-IoT inter UE QoS when connecting to 5GC, it is needed to introduce NGAP: Retrieve UE Information, UE Information Transfer and RAN CP Relocation Indication.  To support network slicing, it is needed to introduce S-NSSAI and allowed NSSAI in NGAP: UE Information Transfer procedure. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | * Introduce Retrieve UE Information procedure * Introduce UE Information Transfer procedure * Introduce RAN CP Relocation Indication procedure * Introduce *NB-IoT UE Priority* IE * Introduce *UL CP Security Information* IE * Introduce *DL CP Security Information* IE * Introduce *S-NSSAI* IE and *Allowed NSSAI* IE * Introduce inter UE QoS Parameter(NB-IoT UE Priority) in Connection Establishment Indication * Introduce S-TMSI in Error Indication | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Cannot support NB-IoT connecting to 5GC. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 3.1, 3.2, 8.1, 8.3.x, 8.3.x.1, 8.3.x.2, 8.3.x.3, 8.3.y, 8.3.y.1, 8.3.y.2, 8.3.y.3, 8.3.z, 8.3.z.1, 8.3.z.2, 8.3.z.3, 9.2.2.x, 9.2.2.y, 9.2.2.z, 9.2.6.13, 9.3.1.a, 9.3.3.b, 9.4.3, 9.4.4, 9.4.5, 9.4.7. | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **x** |  | Other core specifications | | | | TS 38.410 CR 0018 | | |
| ***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 2: include the changes in R3-193409.  Rev 4: include the changes in R3-196237, R3-195139;  Rev 6: add asn.1 part.  Rev 7: update based on latest version of spec.  Rev 8: include the changes in R3-201747, R3-201802;  Rev 10: include R3-203225, final check.  Rev 11: typos update, remove section 8.3.x.3, 8.3.y.3 and 8.3.z.3, move the procedual text in 8.3.z.3 to 8.3.z.2 | | | | | | | | |

***---Start of the First Change----***

## 3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TR 21.905 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in 3GPP TR 21.905 [1].

**ACL functionality:** as defined in TS 36.413 [16].

**Elementary Procedure:** NGAP consists of Elementary Procedures (EPs). An Elementary Procedure is a unit of interaction between the NG-RAN node and the AMF. These Elementary Procedures are defined separately and are intended to be used to build up complete sequences in a flexible manner. If the independence between some EPs is restricted, it is described under the relevant EP description. Unless otherwise stated by the restrictions, the EPs may be invoked independently of each other as standalone procedures, which can be active in parallel. The usage of several NGAP EPs together or together with EPs from other interfaces is specified in stage 2 specifications (e.g., TS 38.401 [2], TS 38.410 [3] and TS 38.300 [8]).

An EP consists of an initiating message and possibly a response message. Two kinds of EPs are used:

- **Class 1:** Elementary Procedures with response (success and/or failure).

- **Class 2:** Elementary Procedures without response.

For Class 1 EPs, the types of responses can be as follows:

Successful:

- A signalling message explicitly indicates that the elementary procedure successfully completed with the receipt of the response.

Unsuccessful:

- A signalling message explicitly indicates that the EP failed.

- On time supervision expiry (i.e., absence of expected response).

Successful and Unsuccessful:

- One signalling message reports both successful and unsuccessful outcome for the different included requests. The response message used is the one defined for successful outcome.

Class 2 EPs are considered always successful.

**gNB:** as defined in TS 38.300 [8].

**NB-IoT:** as defined in TS 36.300 [17].

**ng-eNB:** as defined in TS 38.300 [8].

**NG-RAN node:** as defined in TS 38.300 [8].

**PDU session resource:** as defined in TS 38.401 [2].

**en-gNB**: as defined in TS 37.340 [32].

## 3.2 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in 3GPP TR 21.905 [1].

5GC 5G Core Network

5QI 5G QoS Identifier

ACL Access Control List

AMF Access and Mobility Management Function

CGI Cell Global Identifier

CP Control Plane

DC Dual Connectivity

DL Downlink

EPC Evolved Packet Core

GUAMI Globally Unique AMF Identifier

IMEISV International Mobile station Equipment Identity and Software Version number

LMF Location Management Function

N3IWF Non 3GPP InterWorking Function

NB-IoT Narrow Band Internet of Things

NGAP NG Application Protocol

NRPPa NR Positioning Protocol Annex

NSCI New Security Context Indicator

NSSAI Network Slice Selection Assistance Information

OTDOA Observed Time Difference of Arrival

PSCell Primary SCG Cell

RIM Remote Interference Management

RIM-RS RIM Reference Signal

SCG Secondary Cell Group

SCTP Stream Control Transmission Protocol

SgNB Secondary gNB

SMF Session Management Function

S-NG-RAN node Secondary NG-RAN node

S-NSSAI Single Network Slice Selection Assistance Information

TAC Tracking Area Code

TAI Tracking Area Identity

TNLA Transport Network Layer Association

UL Uplink

UP User Plane

UPF User Plane Function

***----Start of the Next Change----***

## 8.1 List of NGAP Elementary Procedures

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

***//skip the unchanged part***

Table 8.1-2: Class 2 procedures

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

***----Start of the Next Change----***

***//Editor’s note: the yellow part will be introduced in CP NGAP CR#0173 with two WI Codes.***

### 8.3.a Connection Establishment Indication

#### 8.3.a.1 General

*[Editor’s Note: it should be confirmed whether there is a need for this procedure to be used after a UE-associated logical NG-connection has been established]*

The purpose of the Connection Establishment Indication procedure is to enable the AMF to complete the establishment of the UE-associated logical NG-connection, and/or trigger the NG-RAN node to obtain and report UE Radio Capability. The procedure uses UE-associated signalling. This procedure applies only if the NG-RAN node is an ng-eNB.

#### 8.3.a.2 Successful Operation



Figure 8.3.a.2-1: Connection Establishment Indication procedure. Successful operation.

The AMF initiates the procedure by sending a CONNECTION ESTABLISHMENT INDICATION message to the NG-RAN node.

If the UE-associated logical NG-connection is not established, the AMF shall allocate a unique AMF UE NGAP ID to be used for the UE and include it in the CONNECTION ESTABLISHMENT INDICATION message.

If the *UE Radio Capability* IE is included in the CONNECTION ESTABLISHMENT INDICATION message, the NG-RAN node shall store this information in the UE context, and use it as defined in TS 38.300 [8].

If the *End Indication* IE is included in the CONNECTION ESTABLISHMENT INDICATION message and set to "no further data", the NG-RAN node shall consider that there are no further NAS PDUs to be transmitted for this UE.

If the *S-NSSAI* IE is contained in the CONNECTION ESTABLISHMENT INDICATION message, the NG-RAN node shall store this information in the UE context, and use it as specified in TS 23.501 [9].

If the *Allowed NSSAI* IE is contained in the CONNECTION ESTABLISHMENT INDICATION message, the NG-RAN node shall store this information in the UE context, and use it as specified in TS 23.501 [9].

If the *DL CP Security Information* IE is included in the CONNECTION ESTABLISHMENT INDICATION message, the NG-RAN node shall forward this information to the UE as described in TS 36.300 [14].

If the NB-IoT UE PriorityIE is contained in the CONNECTION ESTABLISHMENT INDICATION message, the NG-RAN node shall, if supported, store this information in the UE context, and use it as specified in TS 23.501 [9].

***----Start of the Next Change----***

### 8.3.x Retrieve UE Information

#### 8.3.x.1 General

The purpose of the Retrieve UE Information procedure is for the NG-RAN node to request the UE information including NB-IoT UE Priority and UE Radio Capability from the AMF, for a NB-IoT UE using Control Plane CIoT 5GS Optimisation. This procedure applies only if the NG-RAN node is an ng-eNB.

#### 8.3.x.2 Successful Operation



Figure 8.3.x.2-1: Retrieve UE Information

The NG-RAN node initiates the procedure by sending the RETRIEVE UE INFORMATION message to the AMF.

#### 8.3.x.3 Abnormal Conditions

Void.

### 8.3.y UE Information Transfer

#### 8.3.y.1 General

The purpose of the UE Information Transfer procedure is for the AMF to send the UE information including NB-IoT UE Priority and UE Radio Capability to the NG-RAN node, for a NB-IoT UE using Control Plane CIoT 5GS Optimisation. This procedure applies only if the NG-RAN node is an ng-eNB.

#### 8.3.y.2 Successful Operation



Figure 8.3.y.2-1: UE Information Transfer

The AMF initiates the procedure by sending the UE INFORMATION TRANSFER message to the NG-RAN node.

If the NB-IoT UE PriorityIE is contained in the UE INFORMATION TRANSFER message, the NG-RAN node shall store this information in the UE context, and use it as specified in TS 23.501 [9].

If the *UE Radio Capability* IE is contained in the UE INFORMATION TRANSFER message, the NG-RAN node shall store this information in the UE context, and use it as specified in TS 23.501 [9].

If the *S-NSSAI* IE is contained in the UE INFORMATION TRANSFER message, the NG-RAN node shall store this information in the UE context, and use it as specified in TS 23.501 [9].

If the *Allowed NSSAI* IE is contained in the UE INFORMATION TRANSFER message, the NG-RAN node shall store this information in the UE context, and use it as specified in TS 23.501 [9].

#### 8.3.y.3 Abnormal Conditions

Void.

### 8.3.z RAN CP Relocation Indication

#### 8.3.z.1 General

The purpose of the RAN CP Relocation Indication procedure is to request the AMF to authenticate the UE’s re-establishment request, and trigger the establishment of the respective UE-associated logical NG-connection, for a NB-IoT UE using Control Plane CIoT 5GS Optimisation. This procedure applies only if the NG-RAN node is an ng-eNB.

The procedure uses UE-associated signalling.

#### 8.3.z.2 Successful Operation



Figure 8.3.z.2-1: RAN CP Relocation Indication.

The NG-RAN node initiates the procedure by sending a RAN CP RELOCATION INDICATION message to the AMF.

The NG-RAN node shall allocate a unique RAN UE NGAP ID to be used for the UE and the NG-RAN node shall include this identity in the RAN CP RELOCATION INDICATION message.

When the NG-RAN node receives the *RRCConnectionReestablishmentRequest* message, it triggers the RAN CP Relocation Indication procedure including NAS-level security information received from the UE. If the AMF authenticates the request, it initiates the Connection Establishment Indication procedure including NAS-level security information to be sent to the UE in the *RRCConnectionReestablishment* message.

In case the AMF cannot authenticate the UE's request, the CONNECTION ESTABLISHMENT INDICATION message does not contain security information, and the NG-RAN node shall fail the RRC Re-establishment.

In case of authentication failure, the NG-RAN node and the AMF should locally release the allocated NG resources, if any.

**Interactions with the AMF CP Relocation and UE Context Release procedures:**

In case of successful UE authentication, the AMF initiates the UE Context Release procedure to release the UE's NG-connection in the old NG-RAN node. The AMF may initiate the AMF CP Relocation procedure before the release procedure in order to trigger the old NG-RAN node to return non-delivered NAS PDUs to the AMF.

#### 8.3.z.3 Abnormal Conditions

Void.

***----Start of the Next Change----***

#### 9.2.2.x RETRIEVE UE INFORMATION

The message is sent by the NG-RAN node to request UE information over the NG interface.

Direction: NG-RAN node → AMF

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.3.1.1 |  | YES | reject |
| 5G-S-TMSI | M |  | 9.3.3.20 |  | YES | reject |

#### 9.2.2.y UE INFORMATION TRANSFER

The message is sent by the AMF to transfer UE information over the NG interface.

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 |
| 5G-S-TMSI | M |  | 9.3.3.20 |  | YES | reject |
| NB-IoT UE Priority | O |  | 9.3.1.a |  | YES | ignore |
| UE Radio Capability | O |  | 9.3.1.74 |  | YES | ignore |
| S-NSSAI | O |  | 9.3.1.24 |  | YES | ignore |
| Allowed NSSAI | O |  | 9.3.1.31 | Indicates the S-NSSAIs permitted by the network | YES | ignore |

#### 9.2.2.z RAN CP RELOCATION INDICATION

This message is sent by the NG-RAN node to initiate the establishment of a UE-associated logical NG-connection, following the reception of re-establishment request.

Direction: NG-RAN node → AMF.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.2.1.1 |  | YES | reject |
| RAN UE NGAP ID | M |  | 9.2.3.4 |  | YES | reject |
| 5G-S-TMSI | M |  | 9.3.3.20 |  | YES | reject |
| E-UTRA CGI | M |  | 9.3.1.9 |  | YES | ignore |
| TAI | M |  | 9.3.3.11 |  | YES | ignore |
| UL CP Security Information | M |  | 9.3.3.b |  | YES | reject |

***//Editor’s note: the yellow part will be introduced in CP NGAP CR#0173 with two WI Codes.***

#### 9.2.2.A CONNECTION ESTABLISHMENT INDICATION

This message is sent by the AMF to complete the establishment of the UE-associated logical NG-connection.

Direction: AMF → NG-RAN node

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.3.1.1 |  | YES | reject |
| AMF UE NGAP ID | M |  | 9.3.3.1 |  | YES | ignore |
| RAN UE NGAP ID | M |  | 9.3.3.2 |  | YES | ignore |
| UE Radio Capability | O |  | 9.3.1.74 |  | YES | ignore |
| End Indication | O |  | 9.3.1.aaa |  | YES | ignore |
| S-NSSAI | O |  | 9.3.1.24 |  | YES | ignore |
| Allowed NSSAI | O |  | 9.3.1.31 | Indicates the S-NSSAIs permitted by the network | YES | ignore |
| DL CP Security Information | O |  | 9.3.3.c |  | YES | ignore |
| NB-IoT UE Priority | O |  | 9.3.1.a |  | YES | ignore |

***----Start of the Next Change----***

#### 9.2.6.13 ERROR INDICATION

This message is sent by both the NG-RAN node and the AMF to indicate that some error has been detected in the node.

Direction: NG-RAN node → AMF and 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 | O |  | 9.3.3.1 |  | YES | ignore |
| RAN UE NGAP ID | O |  | 9.3.3.2 |  | YES | ignore |
| Cause | O |  | 9.3.1.2 |  | YES | ignore |
| Criticality Diagnostics | O |  | 9.3.1.3 |  | YES | ignore |
| 5G-S-TMSI | O |  | 9.3.3.20 |  | YES | ignore |

***----Start of the Next Change----***

#### 9.3.1.a NB-IoT UE Priority

This IE provides the NB-IoT UE Priority and to be used by the NG-RAN to prioritise between UEs accessing via NB-IoT.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| NB-IoT UE Priority | M |  | INTEGER (0..255, …) | Lower value indicates higher priority. |

#### 9.3.3.b UL CP Security Information

This IE contains NAS level security information to enable UE authentication by the AMF as described in TS 33.401 [27].

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| UL NAS MAC | M |  | BIT STRING (SIZE(16)) | Defined in TS 33.401 [27]. |
| UL NAS Count | M |  | BIT STRING (SIZE(5)) | Defined in TS 33.401 [27]. |

#### 9.3.3.c DL CP Security Information

This IE contains NAS level security information to be forwarded to the UE as described in TS 33.401 [27].

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| DL NAS MAC | M |  | BIT STRING (SIZE(16)) | Defined in TS 33.401 [27]. |

***----Start of the Next Change----***

### 

### 9.4.3 Elementary Procedure Definitions

-- ASN1START

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

--

-- Elementary Procedure definitions

--

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

NGAP-PDU-Descriptions {

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

ngran-Access (22) modules (3) ngap (1) version1 (1) ngap-PDU-Descriptions (0)}

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

--

-- IE parameter types from other modules.

--

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

IMPORTS

Criticality,

ProcedureCode

FROM NGAP-CommonDataTypes

AMFConfigurationUpdate,

AMFConfigurationUpdateAcknowledge,

AMFConfigurationUpdateFailure,

AMFStatusIndication,

CellTrafficTrace,

DeactivateTrace,

DownlinkNASTransport,

DownlinkNonUEAssociatedNRPPaTransport,

DownlinkRANConfigurationTransfer,

DownlinkRANStatusTransfer,

DownlinkUEAssociatedNRPPaTransport,

ErrorIndication,

HandoverCancel,

HandoverCancelAcknowledge,

HandoverCommand,

HandoverFailure,

HandoverNotify,

HandoverPreparationFailure,

HandoverRequest,

HandoverRequestAcknowledge,

HandoverRequired,

InitialContextSetupFailure,

InitialContextSetupRequest,

InitialContextSetupResponse,

InitialUEMessage,

LocationReport,

LocationReportingControl,

LocationReportingFailureIndication,

NASNonDeliveryIndication,

NGReset,

NGResetAcknowledge,

NGSetupFailure,

NGSetupRequest,

NGSetupResponse,

OverloadStart,

OverloadStop,

Paging,

PathSwitchRequest,

PathSwitchRequestAcknowledge,

PathSwitchRequestFailure,

PDUSessionResourceModifyConfirm,

PDUSessionResourceModifyIndication,

PDUSessionResourceModifyRequest,

PDUSessionResourceModifyResponse,

PDUSessionResourceNotify,

PDUSessionResourceReleaseCommand,

PDUSessionResourceReleaseResponse,

PDUSessionResourceSetupRequest,

PDUSessionResourceSetupResponse,

PrivateMessage,

PWSCancelRequest,

PWSCancelResponse,

PWSFailureIndication,

PWSRestartIndication,

RANConfigurationUpdate,

RANConfigurationUpdateAcknowledge,

RANConfigurationUpdateFailure,

RANCPRelocationIndication,

RerouteNASRequest,

RetrieveUEInformation,

RRCInactiveTransitionReport,

SecondaryRATDataUsageReport,

TraceFailureIndication,

TraceStart,

UEContextModificationFailure,

UEContextModificationRequest,

UEContextModificationResponse,

UEContextReleaseCommand,

UEContextReleaseComplete,

UEContextReleaseRequest,

UEInformationTransfer,

UERadioCapabilityCheckRequest,

UERadioCapabilityCheckResponse,

UERadioCapabilityInfoIndication,

UETNLABindingReleaseRequest,

UplinkNASTransport,

UplinkNonUEAssociatedNRPPaTransport,

UplinkRANConfigurationTransfer,

UplinkRANStatusTransfer,

UplinkUEAssociatedNRPPaTransport,

WriteReplaceWarningRequest,

WriteReplaceWarningResponse,

UplinkRIMInformationTransfer,

DownlinkRIMInformationTransfer

FROM NGAP-PDU-Contents

id-AMFConfigurationUpdate,

id-AMFStatusIndication,

id-CellTrafficTrace,

id-DeactivateTrace,

id-DownlinkNASTransport,

id-DownlinkNonUEAssociatedNRPPaTransport,

id-DownlinkRANConfigurationTransfer,

id-DownlinkRANStatusTransfer,

id-DownlinkUEAssociatedNRPPaTransport,

id-ErrorIndication,

id-HandoverCancel,

id-HandoverNotification,

id-HandoverPreparation,

id-HandoverResourceAllocation,

id-InitialContextSetup,

id-InitialUEMessage,

id-LocationReport,

id-LocationReportingControl,

id-LocationReportingFailureIndication,

id-NASNonDeliveryIndication,

id-NGReset,

id-NGSetup,

id-OverloadStart,

id-OverloadStop,

id-Paging,

id-PathSwitchRequest,

id-PDUSessionResourceModify,

id-PDUSessionResourceModifyIndication,

id-PDUSessionResourceNotify,

id-PDUSessionResourceRelease,

id-PDUSessionResourceSetup,

id-PrivateMessage,

id-PWSCancel,

id-PWSFailureIndication,

id-PWSRestartIndication,

id-RANConfigurationUpdate,

id-RANCPRelocationIndication,

id-RerouteNASRequest,

id-RetrieveUEInformation,

id-RRCInactiveTransitionReport,

id-SecondaryRATDataUsageReport,

id-TraceFailureIndication,

id-TraceStart,

id-UEContextModification,

id-UEContextRelease,

id-UEContextReleaseRequest,

id-UEInformationTransfer,

id-UERadioCapabilityCheck,

id-UERadioCapabilityInfoIndication,

id-UETNLABindingRelease,

id-UplinkNASTransport,

id-UplinkNonUEAssociatedNRPPaTransport,

id-UplinkRANConfigurationTransfer,

id-UplinkRANStatusTransfer,

id-UplinkUEAssociatedNRPPaTransport,

id-WriteReplaceWarning,

id-UplinkRIMInformationTransfer,

id-DownlinkRIMInformationTransfer

FROM NGAP-Constants;

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

--

-- Interface Elementary Procedure Class

--

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

NGAP-ELEMENTARY-PROCEDURE ::= CLASS {

&InitiatingMessage ,

&SuccessfulOutcome OPTIONAL,

&UnsuccessfulOutcome OPTIONAL,

&procedureCode ProcedureCode UNIQUE,

&criticality Criticality DEFAULT ignore

}

WITH SYNTAX {

INITIATING MESSAGE &InitiatingMessage

[SUCCESSFUL OUTCOME &SuccessfulOutcome]

[UNSUCCESSFUL OUTCOME &UnsuccessfulOutcome]

PROCEDURE CODE &procedureCode

[CRITICALITY &criticality]

}

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

--

-- Interface PDU Definition

--

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

NGAP-PDU ::= CHOICE {

initiatingMessage InitiatingMessage,

successfulOutcome SuccessfulOutcome,

unsuccessfulOutcome UnsuccessfulOutcome,

...

}

InitiatingMessage ::= SEQUENCE {

procedureCode NGAP-ELEMENTARY-PROCEDURE.&procedureCode ({NGAP-ELEMENTARY-PROCEDURES}),

criticality NGAP-ELEMENTARY-PROCEDURE.&criticality ({NGAP-ELEMENTARY-PROCEDURES}{@procedureCode}),

value NGAP-ELEMENTARY-PROCEDURE.&InitiatingMessage ({NGAP-ELEMENTARY-PROCEDURES}{@procedureCode})

}

SuccessfulOutcome ::= SEQUENCE {

procedureCode NGAP-ELEMENTARY-PROCEDURE.&procedureCode ({NGAP-ELEMENTARY-PROCEDURES}),

criticality NGAP-ELEMENTARY-PROCEDURE.&criticality ({NGAP-ELEMENTARY-PROCEDURES}{@procedureCode}),

value NGAP-ELEMENTARY-PROCEDURE.&SuccessfulOutcome ({NGAP-ELEMENTARY-PROCEDURES}{@procedureCode})

}

UnsuccessfulOutcome ::= SEQUENCE {

procedureCode NGAP-ELEMENTARY-PROCEDURE.&procedureCode ({NGAP-ELEMENTARY-PROCEDURES}),

criticality NGAP-ELEMENTARY-PROCEDURE.&criticality ({NGAP-ELEMENTARY-PROCEDURES}{@procedureCode}),

value NGAP-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome ({NGAP-ELEMENTARY-PROCEDURES}{@procedureCode})

}

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

--

-- Interface Elementary Procedure List

--

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

NGAP-ELEMENTARY-PROCEDURES NGAP-ELEMENTARY-PROCEDURE ::= {

NGAP-ELEMENTARY-PROCEDURES-CLASS-1 |

NGAP-ELEMENTARY-PROCEDURES-CLASS-2,

...

}

NGAP-ELEMENTARY-PROCEDURES-CLASS-1 NGAP-ELEMENTARY-PROCEDURE ::= {

aMFConfigurationUpdate |

handoverCancel |

handoverPreparation |

handoverResourceAllocation |

initialContextSetup |

nGReset |

nGSetup |

pathSwitchRequest |

pDUSessionResourceModify |

pDUSessionResourceModifyIndication |

pDUSessionResourceRelease |

pDUSessionResourceSetup |

pWSCancel |

rANConfigurationUpdate |

uEContextModification |

uEContextRelease |

uERadioCapabilityCheck |

writeReplaceWarning

}

NGAP-ELEMENTARY-PROCEDURES-CLASS-2 NGAP-ELEMENTARY-PROCEDURE ::= {

aMFStatusIndication |

cellTrafficTrace |

deactivateTrace |

downlinkNASTransport |

downlinkNonUEAssociatedNRPPaTransport |

downlinkRANConfigurationTransfer |

downlinkRANStatusTransfer |

downlinkUEAssociatedNRPPaTransport |

errorIndication |

handoverNotification |

initialUEMessage |

locationReport |

locationReportingControl |

locationReportingFailureIndication |

nASNonDeliveryIndication |

overloadStart |

overloadStop |

paging |

pDUSessionResourceNotify |

privateMessage |

pWSFailureIndication |

pWSRestartIndication |

rerouteNASRequest |

rRCInactiveTransitionReport |

secondaryRATDataUsageReport |

traceFailureIndication |

traceStart |

uEContextReleaseRequest |

uERadioCapabilityInfoIndication |

uETNLABindingRelease |

uplinkNASTransport |

uplinkNonUEAssociatedNRPPaTransport |

uplinkRANConfigurationTransfer |

uplinkRANStatusTransfer |

uplinkUEAssociatedNRPPaTransport |

uplinkRIMInformationTransfer |

downlinkRIMInformationTransfer |

retrieveUEInformation |

uEInformationTransfer |

rANCPRelocationIndication

}

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

--

-- Interface Elementary Procedures

--

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

aMFConfigurationUpdate NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE AMFConfigurationUpdate

SUCCESSFUL OUTCOME AMFConfigurationUpdateAcknowledge

UNSUCCESSFUL OUTCOME AMFConfigurationUpdateFailure

PROCEDURE CODE id-AMFConfigurationUpdate

CRITICALITY reject

}

aMFStatusIndication NGAP-ELEMENTARY-PROCEDURE ::={

INITIATING MESSAGE AMFStatusIndication

PROCEDURE CODE id-AMFStatusIndication

CRITICALITY ignore

}

cellTrafficTrace NGAP-ELEMENTARY-PROCEDURE ::={

INITIATING MESSAGE CellTrafficTrace

PROCEDURE CODE id-CellTrafficTrace

CRITICALITY ignore

}

deactivateTrace NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE DeactivateTrace

PROCEDURE CODE id-DeactivateTrace

CRITICALITY ignore

}

downlinkNASTransport NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE DownlinkNASTransport

PROCEDURE CODE id-DownlinkNASTransport

CRITICALITY ignore

}

downlinkNonUEAssociatedNRPPaTransport NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE DownlinkNonUEAssociatedNRPPaTransport

PROCEDURE CODE id-DownlinkNonUEAssociatedNRPPaTransport

CRITICALITY ignore

}

downlinkRANConfigurationTransfer NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE DownlinkRANConfigurationTransfer

PROCEDURE CODE id-DownlinkRANConfigurationTransfer

CRITICALITY ignore

}

downlinkRANStatusTransfer NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE DownlinkRANStatusTransfer

PROCEDURE CODE id-DownlinkRANStatusTransfer

CRITICALITY ignore

}

downlinkUEAssociatedNRPPaTransport NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE DownlinkUEAssociatedNRPPaTransport

PROCEDURE CODE id-DownlinkUEAssociatedNRPPaTransport

CRITICALITY ignore

}

errorIndication NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE ErrorIndication

PROCEDURE CODE id-ErrorIndication

CRITICALITY ignore

}

handoverCancel NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE HandoverCancel

SUCCESSFUL OUTCOME HandoverCancelAcknowledge

PROCEDURE CODE id-HandoverCancel

CRITICALITY reject

}

handoverNotification NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE HandoverNotify

PROCEDURE CODE id-HandoverNotification

CRITICALITY ignore

}

handoverPreparation NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE HandoverRequired

SUCCESSFUL OUTCOME HandoverCommand

UNSUCCESSFUL OUTCOME HandoverPreparationFailure

PROCEDURE CODE id-HandoverPreparation

CRITICALITY reject

}

handoverResourceAllocation NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE HandoverRequest

SUCCESSFUL OUTCOME HandoverRequestAcknowledge

UNSUCCESSFUL OUTCOME HandoverFailure

PROCEDURE CODE id-HandoverResourceAllocation

CRITICALITY reject

}

initialContextSetup NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE InitialContextSetupRequest

SUCCESSFUL OUTCOME InitialContextSetupResponse

UNSUCCESSFUL OUTCOME InitialContextSetupFailure

PROCEDURE CODE id-InitialContextSetup

CRITICALITY reject

}

initialUEMessage NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE InitialUEMessage

PROCEDURE CODE id-InitialUEMessage

CRITICALITY ignore

}

locationReport NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE LocationReport

PROCEDURE CODE id-LocationReport

CRITICALITY ignore

}

locationReportingControl NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE LocationReportingControl

PROCEDURE CODE id-LocationReportingControl

CRITICALITY ignore

}

locationReportingFailureIndication NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE LocationReportingFailureIndication

PROCEDURE CODE id-LocationReportingFailureIndication

CRITICALITY ignore

}

nASNonDeliveryIndication NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE NASNonDeliveryIndication

PROCEDURE CODE id-NASNonDeliveryIndication

CRITICALITY ignore

}

nGReset NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE NGReset

SUCCESSFUL OUTCOME NGResetAcknowledge

PROCEDURE CODE id-NGReset

CRITICALITY reject

}

nGSetup NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE NGSetupRequest

SUCCESSFUL OUTCOME NGSetupResponse

UNSUCCESSFUL OUTCOME NGSetupFailure

PROCEDURE CODE id-NGSetup

CRITICALITY reject

}

overloadStart NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE OverloadStart

PROCEDURE CODE id-OverloadStart

CRITICALITY ignore

}

overloadStop NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE OverloadStop

PROCEDURE CODE id-OverloadStop

CRITICALITY reject

}

paging NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE Paging

PROCEDURE CODE id-Paging

CRITICALITY ignore

}

pathSwitchRequest NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE PathSwitchRequest

SUCCESSFUL OUTCOME PathSwitchRequestAcknowledge

UNSUCCESSFUL OUTCOME PathSwitchRequestFailure

PROCEDURE CODE id-PathSwitchRequest

CRITICALITY reject

}

pDUSessionResourceModify NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE PDUSessionResourceModifyRequest

SUCCESSFUL OUTCOME PDUSessionResourceModifyResponse

PROCEDURE CODE id-PDUSessionResourceModify

CRITICALITY reject

}

pDUSessionResourceModifyIndication NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE PDUSessionResourceModifyIndication

SUCCESSFUL OUTCOME PDUSessionResourceModifyConfirm

PROCEDURE CODE id-PDUSessionResourceModifyIndication

CRITICALITY reject

}

pDUSessionResourceNotify NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE PDUSessionResourceNotify

PROCEDURE CODE id-PDUSessionResourceNotify

CRITICALITY ignore

}

pDUSessionResourceRelease NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE PDUSessionResourceReleaseCommand

SUCCESSFUL OUTCOME PDUSessionResourceReleaseResponse

PROCEDURE CODE id-PDUSessionResourceRelease

CRITICALITY reject

}

pDUSessionResourceSetup NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE PDUSessionResourceSetupRequest

SUCCESSFUL OUTCOME PDUSessionResourceSetupResponse

PROCEDURE CODE id-PDUSessionResourceSetup

CRITICALITY reject

}

privateMessage NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE PrivateMessage

PROCEDURE CODE id-PrivateMessage

CRITICALITY ignore

}

pWSCancel NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE PWSCancelRequest

SUCCESSFUL OUTCOME PWSCancelResponse

PROCEDURE CODE id-PWSCancel

CRITICALITY reject

}

pWSFailureIndication NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE PWSFailureIndication

PROCEDURE CODE id-PWSFailureIndication

CRITICALITY ignore

}

pWSRestartIndication NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE PWSRestartIndication

PROCEDURE CODE id-PWSRestartIndication

CRITICALITY ignore

}

rANConfigurationUpdate NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE RANConfigurationUpdate

SUCCESSFUL OUTCOME RANConfigurationUpdateAcknowledge

UNSUCCESSFUL OUTCOME RANConfigurationUpdateFailure

PROCEDURE CODE id-RANConfigurationUpdate

CRITICALITY reject

}

rerouteNASRequest NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE RerouteNASRequest

PROCEDURE CODE id-RerouteNASRequest

CRITICALITY reject

}

rRCInactiveTransitionReport NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE RRCInactiveTransitionReport

PROCEDURE CODE id-RRCInactiveTransitionReport

CRITICALITY ignore

}

secondaryRATDataUsageReport NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE SecondaryRATDataUsageReport

PROCEDURE CODE id-SecondaryRATDataUsageReport

CRITICALITY ignore

}

traceFailureIndication NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE TraceFailureIndication

PROCEDURE CODE id-TraceFailureIndication

CRITICALITY ignore

}

traceStart NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE TraceStart

PROCEDURE CODE id-TraceStart

CRITICALITY ignore

}

uEContextModification NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UEContextModificationRequest

SUCCESSFUL OUTCOME UEContextModificationResponse

UNSUCCESSFUL OUTCOME UEContextModificationFailure

PROCEDURE CODE id-UEContextModification

CRITICALITY reject

}

uEContextRelease NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UEContextReleaseCommand

SUCCESSFUL OUTCOME UEContextReleaseComplete

PROCEDURE CODE id-UEContextRelease

CRITICALITY reject

}

uEContextReleaseRequest NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UEContextReleaseRequest

PROCEDURE CODE id-UEContextReleaseRequest

CRITICALITY ignore

}

uERadioCapabilityCheck NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UERadioCapabilityCheckRequest

SUCCESSFUL OUTCOME UERadioCapabilityCheckResponse

PROCEDURE CODE id-UERadioCapabilityCheck

CRITICALITY reject

}

uERadioCapabilityInfoIndication NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UERadioCapabilityInfoIndication

PROCEDURE CODE id-UERadioCapabilityInfoIndication

CRITICALITY ignore

}

uETNLABindingRelease NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UETNLABindingReleaseRequest

PROCEDURE CODE id-UETNLABindingRelease

CRITICALITY ignore

}

uplinkNASTransport NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UplinkNASTransport

PROCEDURE CODE id-UplinkNASTransport

CRITICALITY ignore

}

uplinkNonUEAssociatedNRPPaTransport NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UplinkNonUEAssociatedNRPPaTransport

PROCEDURE CODE id-UplinkNonUEAssociatedNRPPaTransport

CRITICALITY ignore

}

uplinkRANConfigurationTransfer NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UplinkRANConfigurationTransfer

PROCEDURE CODE id-UplinkRANConfigurationTransfer

CRITICALITY ignore

}

uplinkRANStatusTransfer NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UplinkRANStatusTransfer

PROCEDURE CODE id-UplinkRANStatusTransfer

CRITICALITY ignore

}

uplinkUEAssociatedNRPPaTransport NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UplinkUEAssociatedNRPPaTransport

PROCEDURE CODE id-UplinkUEAssociatedNRPPaTransport

CRITICALITY ignore

}

writeReplaceWarning NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE WriteReplaceWarningRequest

SUCCESSFUL OUTCOME WriteReplaceWarningResponse

PROCEDURE CODE id-WriteReplaceWarning

CRITICALITY reject

}

uplinkRIMInformationTransfer NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UplinkRIMInformationTransfer

PROCEDURE CODE id-UplinkRIMInformationTransfer

CRITICALITY ignore

}

downlinkRIMInformationTransfer NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE DownlinkRIMInformationTransfer

PROCEDURE CODE id-DownlinkRIMInformationTransfer

CRITICALITY ignore

}

retrieveUEInformation NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE RetrieveUEInformation

PROCEDURE CODE id-RetrieveUEInformation

CRITICALITY reject

}

uEInformationTransfer NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UEInformationTransfer

PROCEDURE CODE id-UEInformationTransfer

CRITICALITY reject

}

rANCPRelocationIndication NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE RANCPRelocationIndication

PROCEDURE CODE id-RANCPRelocationIndication

CRITICALITY reject

}

END

-- ASN1STOP

### 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,

BroadcastCancelledAreaList,

BroadcastCompletedAreaList,

CancelAllWarningMessages,

Cause,

CellIDListForRestart,

CNAssistedRANTuning,

ConcurrentWarningMessageInd,

CoreNetworkAssistanceInformationForInactive,

CPTransportLayerInformation,

CriticalityDiagnostics,

DataCodingScheme,

DL-CP-SecurityInformation,

DirectForwardingPathAvailability,

EmergencyAreaIDListForRestart,

EmergencyFallbackIndicator,

EN-DCSONConfigurationTransfer,

EUTRA-CGI,

FiveG-S-TMSI,

GlobalRANNodeID,

GUAMI,

HandoverFlag,

HandoverType,

IMSVoiceSupportIndicator,

IndexToRFSP,

InfoOnRecommendedCellsAndRANNodesForPaging,

LAI,

LocationReportingRequestType,

MaskedIMEISV,

MessageIdentifier,

MobilityRestrictionList,

NAS-PDU,

NASSecurityParametersFromNGRAN,

NB-IoT-UEPriority,

NewSecurityContextInd,

NGRAN-CGI,

NGRAN-TNLAssociationToRemoveList,

NGRANTraceID,

NR-CGI,

NRPPa-PDU,

NumberOfBroadcastsRequested,

OverloadResponse,

OverloadStartNSSAIList,

PagingDRX,

PagingOrigin,

PagingPriority,

PDUSessionAggregateMaximumBitRate,

PDUSessionResourceAdmittedList,

PDUSessionResourceFailedToModifyListModCfm,

PDUSessionResourceFailedToModifyListModRes,

PDUSessionResourceFailedToSetupListCxtFail,

PDUSessionResourceFailedToSetupListCxtRes,

PDUSessionResourceFailedToSetupListHOAck,

PDUSessionResourceFailedToSetupListPSReq,

PDUSessionResourceFailedToSetupListSURes,

PDUSessionResourceHandoverList,

PDUSessionResourceListCxtRelCpl,

PDUSessionResourceListCxtRelReq,

PDUSessionResourceListHORqd,

PDUSessionResourceModifyListModCfm,

PDUSessionResourceModifyListModInd,

PDUSessionResourceModifyListModReq,

PDUSessionResourceModifyListModRes,

PDUSessionResourceNotifyList,

PDUSessionResourceReleasedListNot,

PDUSessionResourceReleasedListPSAck,

PDUSessionResourceReleasedListPSFail,

PDUSessionResourceReleasedListRelRes,

PDUSessionResourceSecondaryRATUsageList,

PDUSessionResourceSetupListCxtReq,

PDUSessionResourceSetupListCxtRes,

PDUSessionResourceSetupListHOReq,

PDUSessionResourceSetupListSUReq,

PDUSessionResourceSetupListSURes,

PDUSessionResourceSwitchedList,

PDUSessionResourceToBeSwitchedDLList,

PDUSessionResourceToReleaseListHOCmd,

PDUSessionResourceToReleaseListRelCmd,

PLMNSupportList,

PWSFailedCellIDList,

RANNodeName,

RANPagingPriority,

RANStatusTransfer-TransparentContainer,

RAN-UE-NGAP-ID,

RedirectionVoiceFallback,

RelativeAMFCapacity,

RepetitionPeriod,

ResetType,

RoutingID,

RRCEstablishmentCause,

RRCInactiveTransitionReportRequest,

RRCState,

SecurityContext,

SecurityKey,

SerialNumber,

ServedGUAMIList,

SliceSupportList,

S-NSSAI,

SONConfigurationTransfer,

SourceToTarget-TransparentContainer,

SourceToTarget-AMFInformationReroute,

SRVCCOperationPossible,

SupportedTAList,

TAI, TAIListForPaging,

TAIListForRestart,

TargetID,

TargetToSource-TransparentContainer,

TimeToWait,

TNLAssociationList,

TraceActivation,

TrafficLoadReductionIndication,

TransportLayerAddress,

UEAggregateMaximumBitRate,

UE-associatedLogicalNG-connectionList,

UEContextRequest,

UE-NGAP-IDs,

UEPagingIdentity,

UEPresenceInAreaOfInterestList,

UERadioCapability,

UERadioCapabilityForPaging,

UERetentionInformation,

UESecurityCapabilities,

UL-CP-SecurityInformation,

UnavailableGUAMIList,

UserLocationInformation,

WarningAreaCoordinates,

WarningAreaList,

WarningMessageContents,

WarningSecurityInfo,

WarningType,

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-BroadcastCancelledAreaList,

id-BroadcastCompletedAreaList,

id-CancelAllWarningMessages,

id-Cause,

id-CellIDListForRestart,

id-CNAssistedRANTuning,

id-ConcurrentWarningMessageInd,

id-CoreNetworkAssistanceInformationForInactive,

id-CriticalityDiagnostics,

id-DataCodingScheme,

id-DefaultPagingDRX,

id-DirectForwardingPathAvailability,

id-DL-CP-SecurityInformation,

id-EmergencyAreaIDListForRestart,

id-EmergencyFallbackIndicator,

id-ENDC-SONConfigurationTransferDL,

id-ENDC-SONConfigurationTransferUL,

id-EUTRA-CGI,

id-FiveG-S-TMSI,

id-GlobalRANNodeID,

id-GUAMI,

id-HandoverFlag,

id-HandoverType,

id-IMSVoiceSupportIndicator,

id-IndexToRFSP,

id-InfoOnRecommendedCellsAndRANNodesForPaging,

id-LocationReportingRequestType,

id-MaskedIMEISV,

id-MessageIdentifier,

id-MobilityRestrictionList,

id-NAS-PDU,

id-NASC,

id-NASSecurityParametersFromNGRAN,

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-NR-CGI,

id-NRPPa-PDU,

id-NumberOfBroadcastsRequested,

id-OldAMF,

id-OverloadStartNSSAIList,

id-PagingDRX,

id-PagingOrigin,

id-PagingPriority,

id-PDUSessionResourceAdmittedList,

id-PDUSessionResourceFailedToModifyListModCfm,

id-PDUSessionResourceFailedToModifyListModRes,

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-PDUSessionResourceSecondaryRATUsageList,

id-PDUSessionResourceSetupListCxtReq,

id-PDUSessionResourceSetupListCxtRes,

id-PDUSessionResourceSetupListHOReq,

id-PDUSessionResourceSetupListSUReq,

id-PDUSessionResourceSetupListSURes,

id-PDUSessionResourceSwitchedList,

id-PDUSessionResourceToBeSwitchedDLList,

id-PDUSessionResourceToReleaseListHOCmd,

id-PDUSessionResourceToReleaseListRelCmd,

id-PLMNSupportList,

id-PWSFailedCellIDList,

id-RANNodeName,

id-RANPagingPriority,

id-RANStatusTransfer-TransparentContainer,

id-RAN-UE-NGAP-ID,

id-RedirectionVoiceFallback,

id-RelativeAMFCapacity,

id-RepetitionPeriod,

id-ResetType,

id-RoutingID,

id-RRCEstablishmentCause,

id-RRCInactiveTransitionReportRequest,

id-RRCState,

id-S-NSSAI,

id-SecurityContext,

id-SecurityKey,

id-SerialNumber,

id-ServedGUAMIList,

id-SliceSupportList,

id-SONConfigurationTransferDL,

id-SONConfigurationTransferUL,

id-SourceAMF-UE-NGAP-ID,

id-SourceToTarget-TransparentContainer,

id-SourceToTarget-AMFInformationReroute,

id-SRVCCOperationPossible,

id-SupportedTAList,

id-TAI,

id-TAIListForPaging,

id-TAIListForRestart,

id-TargetID,

id-TargetToSource-TransparentContainer,

id-TimeToWait,

id-TraceActivation,

id-TraceCollectionEntityIPAddress,

id-UEAggregateMaximumBitRate,

id-UE-associatedLogicalNG-connectionList,

id-UEContextRequest,

id-UE-NGAP-IDs,

id-UEPagingIdentity,

id-UEPresenceInAreaOfInterestList,

id-UERadioCapability,

id-UERadioCapabilityForPaging,

id-UERetentionInformation,

id-UESecurityCapabilities,

id-UL-CP-SecurityInformation,

id-UnavailableGUAMIList,

id-UserLocationInformation,

id-WarningAreaCoordinates,

id-WarningAreaList,

id-WarningMessageContents,

id-WarningSecurityInfo,

id-WarningType,

id-RIMInformationTransfer

FROM NGAP-Constants;

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

--

-- PDU SESSION MANAGEMENT ELEMENTARY PROCEDURES

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

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--

-- PDU Session Resource Setup Elementary Procedure

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

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--

-- 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

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

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

--

-- 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

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

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

--

-- 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

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

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--

-- PDU SESSION RESOURCE MODIFY INDICATION

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

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

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

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 mandatory }|

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

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

...

}

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

--

-- UE CONTEXT MANAGEMENT ELEMENTARY PROCEDURES

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

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--

-- Initial Context Setup Elementary Procedure

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--

-- INITIAL CONTEXT SETUP REQUEST

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

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 },

...

}

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

--

-- 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

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

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-- UE CONTEXT RELEASE REQUEST

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

UEContextReleaseRequest ::= SEQUENCE {

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

...

}

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

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

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

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

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

...

}

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

--

-- UE Context Release Elementary Procedure

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

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--

-- UE CONTEXT RELEASE COMMAND

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

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

--

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

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 },

...

}

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

--

-- UE Context Modification Elementary Procedure

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

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--

-- UE CONTEXT MODIFICATION REQUEST

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

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 },

...

}

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

--

-- 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

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

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},

...

}

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

--

-- 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 },

...

}

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

--

-- 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},

...

}

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

--

-- HANDOVER REQUEST ACKNOWLEDGE

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

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 },

...

}

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

--

-- 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 },

...

}

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

--

-- Handover Notification Elementary Procedure

--

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

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

--

-- 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 },

...

}

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

--

-- Path Switch Request Elementary Procedure

--

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

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

--

-- 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 },

...

}

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

--

-- 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},

...

}

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

--

-- 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 },

...

}

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

--

-- 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

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

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

--

-- 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 },

...

}

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

--

-- NAS TRANSPORT ELEMENTARY PROCEDURES

--

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

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

--

-- 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 },

...

}

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

--

-- 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 },

...

}

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

--

-- 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 },

...

}

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

--

-- 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 },

...

}

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

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-- INTERFACE MANAGEMENT ELEMENTARY PROCEDURES

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

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

--

-- 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 },

...

}

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

--

-- 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 },

...

}

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

--

-- 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

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

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

--

-- 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 },

...

}

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

--

-- 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

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

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

--

-- AMF CONFIGURATION UPDATE

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

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 },

...

}

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

--

-- 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

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

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

--

-- AMF STATUS INDICATION

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

AMFStatusIndication ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {AMFStatusIndicationIEs} },

...

}

AMFStatusIndicationIEs NGAP-PROTOCOL-IES ::= {

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

...

}

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

--

-- NG Reset Elementary Procedure

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

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

--

-- 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 },

...

}

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

--

-- OVERLOAD START

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

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

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

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--

-- UPLINK RAN CONFIGURATION TRANSFER

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

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 },

...

}

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

--

-- 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 },

...

}

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

--

-- WARNING MESSAGE TRANSMISSION ELEMENTARY PROCEDURES

--

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

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

--

-- Write-Replace Warning Elementary Procedure

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

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

--

-- 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

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

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

--

-- 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

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

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

--

-- 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

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

--

-- 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 },

...

}

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

--

-- 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 },

...

}

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

--

-- 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 },

...

}

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

--

-- 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 },

...

}

***//Editor’s note: the yellow part will be introduced in CP NGAP CR#0173 with two WI Codes.***

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

--

-- Connection Establishment Indication

--

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

ConnectionEstablishmentIndication::= SEQUENCE {

protocolIEs ProtocolIE-Container { {ConnectionEstablishmentIndicationIEs} },

...

}

ConnectionEstablishmentIndicationIEs 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-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-DL-CP-SecurityInformation CRITICALITY ignore TYPE DL-CP-SecurityInformation PRESENCE optional}|

{ ID id-NB-IoT-UEPriority CRITICALITY ignore TYPE NB-IoT-UEPriority 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-AdditionalUL-NGU-UP-TNLInformation,

id-Cause,

id-CNTypeRestrictionsForEquivalent,

id-CNTypeRestrictionsForServing,

id-CommonNetworkInstance,

id-DataForwardingNotPossible,

id-DataForwardingResponseERABList,

id-DirectForwardingPathAvailability,

id-DL-NGU-UP-TNLInformation,

id-EndpointIPAddressAndPort,

id-ExtendedRATRestrictionInformation,

id-GUAMIType,

id-LastEUTRAN-PLMNIdentity,

id-LocationReportingAdditionalInfo,

id-MaximumIntegrityProtectedDataRate-DL,

id-NetworkInstance,

id-OldAssociatedQosFlowList-ULendmarkerexpected,

id-PDUSessionAggregateMaximumBitRate,

id-PDUSessionResourceFailedToSetupListCxtFail,

id-PDUSessionResourceReleaseResponseTransfer,

id-PDUSessionType,

id-PSCellInformation,

id-QosFlowAddOrModifyRequestList,

id-QosFlowSetupRequestList,

id-QosFlowToReleaseList,

id-QosMonitoringRequest,

id-RAT-Information,

id-SCTP-TLAs,

id-SecondaryRATUsageInformation,

id-SecurityIndication,

id-SecurityResult,

id-SgNB-UE-X2AP-ID,

id-S-NSSAI,

id-TNLAssociationTransportLayerAddressNGRAN,

id-TargetRNC-ID,

id-UL-NGU-UP-TNLInformation,

id-UL-NGU-UP-TNLModifyList,

id-ULForwarding,

id-ULForwardingUP-TNLInformation,

maxnoofAllowedAreas,

maxnoofAllowedS-NSSAIs,

maxnoofBPLMNs,

maxnoofCellIDforWarning,

maxnoofCellinAoI,

maxnoofCellinEAI,

maxnoofCellsingNB,

maxnoofCellsinngeNB,

maxnoofCellinTAI,

maxnoofCellsinUEHistoryInfo,

maxnoofCellsUEMovingTrajectory,

maxnoofDRBs,

maxnoofEmergencyAreaID,

maxnoofEAIforRestart,

maxnoofEPLMNs,

maxnoofEPLMNsPlusOne,

maxnoofE-RABs,

maxnoofErrors,

maxnoofForbTACs,

maxnoofMultiConnectivity,

maxnoofMultiConnectivityMinusOne,

maxnoofNGConnectionsToReset,

maxnoofPDUSessions,

maxnoofPLMNs,

maxnoofQosFlows,

maxnoofRANNodeinAoI,

maxnoofRecommendedCells,

maxnoofRecommendedRANNodes,

maxnoofAoI,

maxnoofServedGUAMIs,

maxnoofSliceItems,

maxnoofTACs,

maxnoofTAIforInactive,

maxnoofTAIforPaging,

maxnoofTAIforRestart,

maxnoofTAIforWarning,

maxnoofTAIinAoI,

maxnoofTimePeriods,

maxnoofTNLAssociations,

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 ::= {

...

}

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 ::= {

...

}

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 ::= {

...

}

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

AMFName ::= PrintableString (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 ::= {

...

}

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 ::= {

...

}

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

-- 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 ::= {

...

}

-- C

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 ::= {

...

}

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,

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

}

CauseTransport ::= ENUMERATED {

transport-resource-unavailable,

unspecified,

...

}

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 ::= {

...

}

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,

...

}

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 ::= {

...

}

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 ::= {

...

}

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 ::= {

...

}

-- 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 ::= {

...

}

DataForwardingResponseERABList ::= SEQUENCE (SIZE(1..maxnoofE-RABs)) OF DataForwardingResponseERABListItem

DataForwardingResponseERABListItem ::= SEQUENCE {

e-RAB-ID E-RAB-ID,

dLForwarding DLForwarding OPTIONAL,

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 reject 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 ::= {

...

}

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 ::= {

...

}

-- E

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,

...

}

EN-DCSONConfigurationTransfer ::= OCTET STRING

EndpointIPAddressAndPort ::=SEQUENCE {

endpointIPAddress TransportLayerAddress,

portNumber PortNumber,

iE-Extensions ProtocolExtensionContainer { { EndpointIPAddressAndPort-ExtIEs} } OPTIONAL

}

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 ::= {

...

}

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)

-- F

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

-- 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 ::= {

...}

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 ::= {

...

}

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 ::= {

...

}

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},

...

}

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},

...

}

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

}

-- I

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))

-- 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

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 },

...

}

-- M

MaskedIMEISV ::= BIT STRING (SIZE(64))

MaximumDataBurstVolume ::= INTEGER (0..4095, ..., 4096.. 2000000)

MessageIdentifier ::= BIT STRING (SIZE(16))

MaximumIntegrityProtectedDataRate ::= ENUMERATED {

bitrate64kbs,

maximum-UE-rate,

...

}

MICOModeIndication ::= ENUMERATED {

true,

...

}

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},

...

}

-- 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-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 ::= {

...

}

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))

NonDynamic5QIDescriptor ::= SEQUENCE {

fiveQI FiveQI,

priorityLevelQos PriorityLevelQos OPTIONAL,

averagingWindow AveragingWindow OPTIONAL,

maximumDataBurstVolume MaximumDataBurstVolume OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {NonDynamic5QIDescriptor-ExtIEs} } OPTIONAL,

...

}

NonDynamic5QIDescriptor-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

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

NotificationCause ::= ENUMERATED {

fulfilled,

not-fulfilled,

...

}

NotificationControl ::= ENUMERATED {

notification-requested,

...

}

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, ...))

NRPPa-PDU ::= OCTET STRING

NumberOfBroadcasts ::= INTEGER (0..65535)

NumberOfBroadcastsRequested ::= INTEGER (0..65535)

-- 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, ...)

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,

...

}

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 },

...

}

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 },

...

}

PathSwitchRequestUnsuccessfulTransfer ::= SEQUENCE {

cause Cause,

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

...

}

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

...

}

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 ::= {

...

}

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 ::= {

...

}

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 },

...

}

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 },

...

}

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 },

...

}

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 },

...

}

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 },

...

}

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 },

...

}

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 ::= {

...

}

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 ::= {

...

}

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 ::= {

...

}

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 },

...

}

PDUSessionResourceSetupResponseTransfer ::= SEQUENCE {

dLQosFlowPerTNLInformation QosFlowPerTNLInformation,

additionalDLQosFlowPerTNLInformation QosFlowPerTNLInformationList OPTIONAL,

securityResult SecurityResult OPTIONAL,

qosFlowFailedToSetupList QosFlowListWithCause OPTIONAL,

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

...

}

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

...

}

PDUSessionResourceSetupUnsuccessfulTransfer ::= SEQUENCE {

cause Cause,

criticalityDiagnostics CriticalityDiagnostics OPTIONAL,

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

...

}

PDUSessionResourceSetupUnsuccessfulTransfer-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 ::= {

...

}

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 ::= {

...

}

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

PLMNIdentity ::= OCTET STRING (SIZE(3))

PLMNSupportList ::= SEQUENCE (SIZE(1..maxnoofPLMNs)) OF PLMNSupportItem

PLMNSupportItem ::= SEQUENCE {

pLMNIdentity PLMNIdentity,

sliceSupportList SliceSupportList,

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

...

}

PLMNSupportItem-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

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 ::= {

...

}

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 ::= {

...

}

QosFlowAddOrModifyResponseList ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QosFlowAddOrModifyResponseItem

QosFlowAddOrModifyResponseItem ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

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

...

}

QosFlowAddOrModifyResponseItem-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 reject 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},

...

}

QosMonitoringRequest ::= ENUMERATED {ul, dl, both}

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 ::= {

...

}

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 ::= {

...

}

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 ::= {

...

}

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

RANNodeName ::= PrintableString (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,

...

}

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,

...

}

ReflectiveQosAttribute ::= ENUMERATED {

subject-to,

...

}

RelativeAMFCapacity ::= INTEGER (0..255)

ReportArea ::= ENUMERATED {

cell,

...

}

RepetitionPeriod ::= INTEGER (0..131071)

ResetAll ::= ENUMERATED {

reset-all,

...

}

ResetType ::= CHOICE {

nG-Interface ResetAll,

partOfNG-Interface UE-associatedLogicalNG-connectionList,

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

}

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

...

}

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

}

RRCInactiveTransitionReportRequest ::= ENUMERATED {

subsequent-state-transition-report,

single-rrc-connected-state-report,

cancel-report,

...

}

RRCState ::= ENUMERATED {

inactive,

connected,

...

}

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, ...},

...

}

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

-- S

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 ::= {

...

}

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 ::= {

...

}

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 ::= {

...

}

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 ::= {

...

}

SONInformationReply ::= SEQUENCE {

xnTNLConfigurationInfo XnTNLConfigurationInfo OPTIONAL,

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

...

}

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

...

}

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},

...

}

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))

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-RAT-Information CRITICALITY reject EXTENSION RAT-Information PRESENCE optional},

...

}

-- 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 ::= {

...

}

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.

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)

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,

...

}

TraceActivation ::= SEQUENCE {

nGRANTraceID NGRANTraceID,

interfacesToTrace InterfacesToTrace,

traceDepth TraceDepth,

traceCollectionEntityIPAddress TransportLayerAddress,

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

...

}

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

...

}

TraceDepth ::= ENUMERATED {

minimum,

medium,

maximum,

minimumWithoutVendorSpecificExtension,

mediumWithoutVendorSpecificExtension,

maximumWithoutVendorSpecificExtension,

...

}

TrafficLoadReductionIndication ::= INTEGER (1..99)

TransportLayerAddress ::= BIT STRING (SIZE(1..160, ...))

TypeOfError ::= ENUMERATED {

not-understood,

missing,

...

}

-- U

UEAggregateMaximumBitRate ::= SEQUENCE {

uEAggregateMaximumBitRateDL BitRate,

uEAggregateMaximumBitRateUL BitRate,

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

...

}

UEAggregateMaximumBitRate-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 ::= {

...}

UEContextRequest ::= ENUMERATED {requested, ...}

UEHistoryInformation ::= SEQUENCE (SIZE(1..maxnoofCellsinUEHistoryInfo)) OF LastVisitedCellItem

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 ::= {

...

}

UERadioCapabilityForPagingOfNR ::= OCTET STRING

UERadioCapabilityForPagingOfEUTRA ::= OCTET STRING

UERetentionInformation ::= ENUMERATED {

ues-retained,

...

}

UESecurityCapabilities ::= SEQUENCE {

nRencryptionAlgorithms NRencryptionAlgorithms,

nRintegrityProtectionAlgorithms NRintegrityProtectionAlgorithms,

eUTRAencryptionAlgorithms EUTRAencryptionAlgorithms,

eUTRAintegrityProtectionAlgorithms EUTRAintegrityProtectionAlgorithms,

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

...

}

UESecurityCapabilities-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 ::= {

...

}

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,

...

}

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 ::= {

...

}

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 ::= {

...

}

UserLocationInformation ::= CHOICE {

userLocationInformationEUTRA UserLocationInformationEUTRA,

userLocationInformationNR UserLocationInformationNR,

userLocationInformationN3IWF UserLocationInformationN3IWF,

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

}

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

...

}

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 ::= {

...

}

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},

...

}

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

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))

-- 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 ::= xx

id-UEInformationTransfer ProcedureCode ::= yy

id-RANCPRelocationIndication ProcedureCode ::= zz

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

--

-- Extension constants

--

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

maxPrivateIEs INTEGER ::= 65535

maxProtocolExtensions INTEGER ::= 65535

maxProtocolIEs INTEGER ::= 65535

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

--

-- Lists

--

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

maxnoofAllowedAreas INTEGER ::= 16

maxnoofAllowedS-NSSAIs INTEGER ::= 8

maxnoofBPLMNs INTEGER ::= 12

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

maxnoofForbTACs INTEGER ::= 4096

maxnoofMultiConnectivity INTEGER ::= 4

maxnoofMultiConnectivityMinusOne INTEGER ::= 3

maxnoofNGConnectionsToReset INTEGER ::= 65536

maxnoofPDUSessions INTEGER ::= 256

maxnoofPLMNs INTEGER ::= 12

maxnoofQosFlows INTEGER ::= 64

maxnoofRANNodeinAoI INTEGER ::= 64

maxnoofRecommendedCells INTEGER ::= 16

maxnoofRecommendedRANNodes INTEGER ::= 16

maxnoofAoI INTEGER ::= 64

maxnoofServedGUAMIs INTEGER ::= 256

maxnoofSliceItems INTEGER ::= 1024

maxnoofTACs INTEGER ::= 256

maxnoofTAIforInactive INTEGER ::= 16

maxnoofTAIforPaging INTEGER ::= 16

maxnoofTAIforRestart INTEGER ::= 2048

maxnoofTAIforWarning INTEGER ::= 65535

maxnoofTAIinAoI INTEGER ::= 16

maxnoofTimePeriods INTEGER ::= 2

maxnoofTNLAssociations INTEGER ::= 32

maxnoofXnExtTLAs INTEGER ::= 16

maxnoofXnGTP-TLAs INTEGER ::= 16

maxnoofXnTLAs INTEGER ::= 2

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

--

-- 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-DataForwardingResponseERABList 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-NB-IoT-UEPriority ProtocolIE-ID ::= aaa

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

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

id-TAI ProtocolIE-ID ::= ddd

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 of the Changes----***