**3GPP TSG-RAN WG3 Meeting #113-e R3-213203**

**E-meeting, 16 – 26 August 2021**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.463** | **CR** | **0610** | **rev** | **<Rev#>** | **Current version:** | **16.6.0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **X** | Core Network |  |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Support of dynamic ACL during handover and dual connectivity | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, Deutsche Telekom, China Telecom | | | | | | | | | |
| ***Source to TSG:*** | R3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI16 | | | | |  | ***Date:*** | | | 2020-08-16 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-15 (Release 15)* *Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The current ACL function may cause forwarding data discarding at the receiving node in case of handover and/or dual connectivity if the source IP address in the IP packet header of forwarding packets is unknown to the receivinig node. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Adding the source node’s Xn TNL IP addresses in bearer context setup message to piggyback to the receiving node before data forwarding starts. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Forwarding data will be discarded by the receiving node. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 8.3.1, 9.2.2.1,9.3.2.x, ASN.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **Y** |  | Other core specifications | | | | TS38.423CR0635  TS36.423CR1611  TS38.413CR0619  TS36.413CR1822  TS38.473CR0778  TS37.473CR0009 | | |
| ***affected:*** | |  |  | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  |  | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

<<<<<<<<<<<<<<<<<<<< Changes Begin>>>>>>>>>>>>>>>>>>>>

### 8.3.1 Bearer Context Setup

#### 8.3.1.1 General

The purpose of the Bearer Context Setup procedure is to allow the gNB-CU-CP to establish a bearer context in the gNB-CU-UP. The procedure uses UE-associated signalling.

#### 8.3.1.2 Successful Operation



Figure 8.3.1.2-1: Bearer Context Setup procedure: Successful Operation.

The gNB-CU-CP initiates the procedure by sending the BEARER CONTEXT SETUP REQUEST message to the gNB-CU-UP. If the gNB-CU-UP succeeds to establish the requested resources, it replies to the gNB-CU-CP with the BEARER CONTEXT SETUP RESPONSE message.

The gNB-CU-UP shall report to the gNB-CU-CP, in the BEARER CONTEXT SETUP RESPONSE message, the result for all the requested resources in the following way:

For E-UTRAN:

- A list of DRBs which are successfully established shall be included in the *DRB Setup List* IE;

- A list of DRBs which failed to be established shall be included in the *DRB Failed List* IE;

For NG-RAN:

- A list of PDU Session Resources which are successfully established shall be included in the *PDU Session Resource Setup List* IE;

- A list of PDU Session Resources which failed to be established shall be included in the *PDU Session Resource Failed List* IE;

- For each established PDU Session Resource, a list of DRBs which are successfully established shall be included in the *DRB Setup List* IE;

- For each established PDU Session Resource, a list of DRBs which failed to be established shall be included in the *DRB Failed List* IE;

- For each established DRB, a list of QoS Flows which are successfully established shall be included in the *Flow Setup List* IE;

- For each established DRB, a list of QoS Flows which failed to be established shall be included in the *Flow Failed List* IE;

When the gNB-CU-UP reports the unsuccessful establishment of a PDU Session Resource, DRB or QoS Flow the cause value should be precise enough to enable the gNB-CU-CP to know the reason for the unsuccessful establishment.

If the *Existing Allocated NG DL UP Transport Layer Information* IE is contained in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP may re-use the indicated resources already allocated for this bearer context. If the gNB-CU-UP decides to re-use the indicated resources, it shall include the *NG DL UP Unchanged* IE in the BEARER CONTEXT SETUP RESPONSE message.

If the *PDU Session Resource DL Aggregate Maximum Bit Rate* IE is contained in the *PDU Session Resource To Setup List* IE in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall store and use the information for the down link traffic policing for the Non-GBR QoS flows for the concerned UE as specified in TS 23.501 [20].

If the *Data Forwarding Information Request* IE, *PDU Session Data Forwarding Information Request* IE or the *DRB Data Forwarding Information Request* IE are included in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall include the requested forwarding information in the *Data Forwarding Information Response* IE, *PDU Session Data Forwarding Information Response* IE or the *DRB Data Forwarding Information Response* IE in the BEARER CONTEXT SETUP RESPONSE message.

If the *DL UP Parameters* IE is contained in the *DRB To Setup List* IE in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall configure the corresponding information.

For each PDU session for which the *Security Indication* IE is included in the *PDU Session Resource To Setup List* IE of the BEARER CONTEXT SETUP REQUEST message, and the *Integrity Protection Indication* IE or *Confidentiality Protection Indication* IE is set to "preferred", then the gNB-CU-UP should, if supported, perform user plane integrity protection or ciphering, respectively, for the concerned PDU session and shall notify whether it performed the user plane integrity protection or ciphering by including the *Integrity Protection Result* IE or *Confidentiality Protection Result* IE, respectively, in the *PDU Session Resource Setup List* IE of the BEARER CONTEXT SETUP RESPONSE message.

For each PDU session for which the *Security Indication* IE is included in the *PDU Session Resource To Setup List* IE of the BEARER CONTEXT SETUP REQUEST message, and the *Integrity Protection Indication* IE or *Confidentiality Protection Indication* IE is set to "required", then the gNB-CU-UP shall perform user plane integrity protection or ciphering, respectively, for the concerned PDU Session. If the gNB-CU-UP cannot perform the user plane integrity protection or ciphering, it shall reject the setup of the PDU Session Resources with an appropriate cause value.

For each PDU session for which the *Security Indication* IE is included in the *PDU Session Resource To Setup List* IE of the BEARER CONTEXT SETUP REQUEST message:

- if the *Integrity Protection Indication* IE is set to "not needed", then the gNB-CU-UP shall not perform user plane integrity protection for the concerned PDU session;

-if the *Confidentiality Protection Indication* IE is set to "not needed", then the gNB-CU-UP shall not perform user plane ciphering for the concerned PDU session.

For each PDU session, if the *Data Forwarding to E-UTRAN Information List* IE is included in the *PDU Session Resource To Modify List* IE in the BEARER CONTEXT MODIFICATION REQUEST message, the gNB-CU-UP shall, if supported, use it for inter-system data forwarding from 5GS to EPS as specified in TS38.300 [8].

If the *UE DL Maximum Integrity Protected Data Rate* IE is contained in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall use this value when enforcing the maximum integrity protected data rate for the UE.

If the *Bearer Context Status Change* IE is contained in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall consider the UE RRC state and act as specified in TS 38.401 [2].

For each requested DRB, if the *PDCP Duplication* IE is included in the *PDCP Configuration* IE contained in the BEARER CONTEXT SETUP REQUEST message, then the gNB-CU-UP shall include two *UP Transport Layer Information* IEs in the BEARER CONTEXT SETUP RESPONSE message to support packet duplication. If only one cell group is included in the *Cell Group Information* IE for the concerned DRB, then the gNB-CU-UP shall consider that the first *UP Transport Layer Information* IE of the two *UP Transport Layer Information* IEs is for the primary path.

For each requested DRB, if the *Additional PDCP duplication Information* IE is included in the *PDCP Configuration* IE contained in the BEARER CONTEXT SETUP REQUEST message, then the gNB-CU-UP shall, if supported, include the same number of *UP Transport Layer Information* IEs indicated by the *Additional PDCP duplication Information* IE in the BEARER CONTEXT SETUP RESPONSE message to support packet duplication. If only one cell group is included in the *Cell Group Information* IE for the concerned DRB, then the gNB-CU-UP shall consider that the first *UP Transport Layer Information* IE of these *UP Transport Layer Information* IEs is for the primary path. If more than one cell group is included in the *Cell Group Information* IE, then the gNB-CU-UP shall consider that the number of duplication tunnels for each cell group is indicated by the *Number of tunnels* IE, and that the first *UP Transport Layer Information* IE for each cell group is for the primary path or the split secondary path.

If the *PDCP SN Status Information* IE is contained within the *DRB To Setup List* IE in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall take it into account and act as specified in TS 38.401 [2].

If the *QoS Flow Mapping Indication* IE is contained in the *QoS Flows Information To Be Setup* IE within the *DRB To Setup List* IE in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP may take it into account that only the uplink or downlink QoS flow is mapped to the DRB.

For each PDU Session Resource, if the *Network Instance* IE is included in the *PDU Session Resource To Setup List* IE in the BEARER CONTEXT SETUP REQUEST message and the *Common Network Instance* IE is not included, the gNB-CU-UP shall, if supported, use it when selecting transport network resource as specified in TS 23.501 [20].

For each PDU session, if the *Common Network Instance* IE is included in the *PDU Session Resource To Setup List* IE in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall, if supported, use it when selecting transport network resource as specified in TS 23.501 [20].

For each PDU session, if the *Redundant NG UL UP Transport Layer Information* IE is included in the *PDU Session Resource To Setup List* IE in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall, if supported, use it as the uplink termination point of the redundant tunnel for the user plane data of those QoS flows in this PDU session which need redundant transmission as described in TS 23.501 [20], and it shall include the *Redundant NG DL UP Transport Layer Information* IE in the *PDU Session Resource Setup List IE* in the BEARER CONTEXT SETUP RESPONSE message.

For each PDU Session Resource, if the *Redundant Common Network Instance* IE is included in the *PDU Session Resource To Setup List* IE in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall, if supported, use it when selecting transport network resource for the redundant transmission as specified in TS 23.501 [20].

For each PDU session, if the *Redundant QoS Flow Indicator* IE is included in the *QoS Flow QoS Parameters List* IE in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall, if supported, consider it for the redundant transmission.

For each PDU session, if the *Redundant PDU Session Information* IE is included in the *PDU Session Resource To Setup List* IE contained in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall, if supported, set up the redundant user plane resources, as specified in TS 23.501 [20] and include, if supported, the *Used Redundant PDU Session Information* IE in the *PDU Session Resource Setup List* IE in the BEARER CONTEXT SETUP RESPONSE message.

If *UE Inactivity Timer* IE or *PDU session Inactivity Timer* IE or *DRB Inactivity Timer* IE is contained in BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall take it into account when perform inactivity monitoring.

If the *DRB QoS* IE is contained within the *DRB To Setup List* IE in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall, if supported, take it into account as specified in TS 28.552 [22].

If the *gNB-DU-ID* IE is contained in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall store the information received.

If the *RAN UE ID* IE is contained in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall store the information received.

For each successfully established DRB, the gNB-CU-UP shall provide, in the respective *UL UP Parameters* IE of the BEARER CONTEXT SETUP RESPONSE, one UL UP Transport Layer Information Item per cell group entry contained in the respective *Cell Group Information* IE of the BEARER CONTEXT SETUP REQUEST message.

If the *Trace Activation* IE is included in the BEARER CONTEXT SETUP REQUEST message the gNB-CU-UP shall, if supported, initiate the requested trace function as described in TS 32.422 [24]. In particular, the gNB-CU-UP shall, if supported:

- if the *MDT Activation* IE is set to "Immediate MDT Only", initiate the requested MDT session as described in TS 32.422 [24] and the gNB-CU-UP shall ignore *Interfaces To Trace* IE, and *Trace Depth* IE;

- if the *MDT Activation* IE is set to "Immediate MDT and Trace", initiate the requested trace session and MDT session as described in TS 32.422 [24];

If the *Management Based MDT PLMN List* IE is contained in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall, if supported, store the received information, and use this information to allow subsequent selection of the UE for management based MDT defined in TS 32.422 [24].

For EN-DC, if the *Subscriber Profile ID for RAT/Frequency priority* IE is included in the BEARER CONTEXT SETUP REQUEST, the gNB-CU-UP may use it to apply specific RRM policies as specified in TS 36.300 [25]. If the *Additional RRM Policy Index* IE is included in the BEARER CONTEXT SETUP REQUEST, the gNB-CU-UP may use it to apply specific RRM policies as specified in TS 36.300 [25].

If the *TSC Traffic Characteristics* IE is included in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall, if supported, take into account the corresponding information received in the *TSC Traffic Characteristics* IE.

For each QoS flow whose DRB has been successfully established and the *QoS Monitoring Request* IE was included in the *QoS Flow Level QoS Parameters* IE contained in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall store this information, and, if supported, perform delay measurement and QoS monitoring, as specified in TS 23.501 [20]. If the *QoS Monitoring Reporting Frequency* IE was included in the *QoS Flow Level QoS Parameters* IE contained in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall store this information, and, if supported, use it for RAN part delay reporting.

For each requested DRB, if the *QoS Mapping Information* IE is contained in the *DL UP Parameters* IE in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall use it to set DSCP and/or flow label fields in the downlink IP packets which are transmitted through the GTP tunnels indicated by the *UP Transport Layer Information* IE. The Diffserv code point (DSCP) marking is performed as specified in TS 38.474 [28].

If the BEARER CONTEXT SETUP REQUEST message contains the *NPN Context Information* IE the gNB-CU-UP shall, if supported, take it into account when allocating UP resources for the bearer context.

For each requested DRB, if the *EHC Parameters* IE is included in the *PDCP Configuration* IE, the gNB-CU-CP shall, if supported, also include *ROHC Parameters* IE in the *PDCP Configuration* IE in the BEARER CONTEXT SETUP REQUEST message, to enable the gNB-CU-UP to perform appropriate header compression.

If the *EHC parameters* IE is included in the *PDCP Configuration* IE contained in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP may take these parameters into account to perform appropriate header compression for the concerned DRB.

If the *DAPS Request Information* IE is included for a DRB to be setup in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall consider that the request concerns a DAPS handover for that DRB and, if admitted, act as specified in TS 38.300 [4].

If the *CHO Initiation* IE is contained in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall consider that the request concerns conditional handover or conditional PSCell change and act as specified in TS 38.401 [2].

If the *MCG Offered GBR QoS Flow Information* IE is contained in the *QoS Flows Information To Be Setup* IE within the *DRB To Setup List* IE in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP may take it into account when two cell groups are served by the gNB-CU-UP.

If the *Additional Handover Information* IE is included in the BEARER CONTEXT SETUP REQUEST message and set to “Discard PDCP SN”, the gNB-CU-UP shall, if supported, remove the forwarded PDCP SNs if received in the forwarded GTP-U packets, and deliver the forwarded PDCP SDUs to the UE, as specified in TS 38.300 [8].

If the *Source Node TNL Address Info* IE is included in the BEARER CONTEXT SETUP REQUEST message the gNB-CU-UP shall, if supported, store this information in the UE context and use it as part of its ACL functionality configuration actions, if such ACL functionality is deployed.

<<<<<<<<<<<<<<<<<<<< Next Change>>>>>>>>>>>>>>>>>>>>

#### 9.2.2.1 BEARER CONTEXT SETUP REQUEST

This message is sent by the gNB-CU-CP to request the gNB-CU-UP to setup a bearer context.

Direction: gNB-CU-CP → gNB-CU-UP

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** | **Criticality** | **Assigned Criticality** |
| Message Type | M |  | 9.3.1.1 |  | YES | reject |
| gNB-CU-CP UE E1AP ID | M |  | 9.3.1.4 |  | YES | reject |
| Security Information | M |  | 9.3.1.10 |  | YES | reject |
| UE DL Aggregate Maximum Bit Rate | M |  | Bit Rate 9.3.1.20 |  | YES | reject |
| UE DL Maximum Integrity Protected Data Rate | O |  | Bit Rate 9.3.1.20 | The Bit Rate is a portion of the UE’s Maximum Integrity Protected Data Rate, and is enforced by the gNB-CU-UP node. | YES | reject |
| Serving PLMN | M |  | PLMN Identity  9.3.1.7 |  | YES | ignore |
| Activity Notification Level | M |  | 9.3.1.67 |  | YES | reject |
| UE Inactivity Timer | O |  | Inactivity Timer  9.3.1.54 | Included if the Activity Notification Level is set to UE. | - | - |
| Bearer Context Status Change | O |  | ENUMERATED (Suspend, Resume, …) | Indicates the status of the Bearer Context | YES | reject |
| CHOICE *System* | M |  |  |  | YES | reject |
| *>E-UTRAN* |  |  |  |  |  |  |
| >>DRB To Setup List | M |  | DRB To Setup List E-UTRAN  9.3.3.1 |  | YES | reject |
| >>Subscriber Profile ID for RAT/Frequency priority | O |  | 9.3.1.69 |  | YES | ignore |
| >>Additional RRM Policy Index | O |  | 9.3.1.70 |  | YES | Ignore |
| *>NG-RAN* |  |  |  |  |  |  |
| >>PDU Session Resource To Setup List | M |  | 9.3.3.2 |  | YES | reject |
| RAN UE ID | O |  | OCTET STRING (SIZE(8)) |  | YES | ignore |
| gNB-DU ID | O |  | 9.3.1.65 | Included whenever it is known by the gNB-CU-CP | YES | ignore |
| Trace Activation | O |  | 9.3.1.68 |  | YES | ignore |
| NPN Context Information | O |  | 9.3.1.84 |  | YES | reject |
| Management Based MDT PLMN List | O |  | MDT PLMN List  9.3.1.89 |  | YES | ignore |
| CHO Initiation | O |  | ENUMERATED (True, …) |  | YES | reject |
| Additional Handover Information | O |  | ENUMERATED(Discard PDCP SN, …) | If set to “Discard PDCP SN”, indicates that the forwarded PDCP SNs have to be removed | YES | ignore |
| Source Node TNL Address Info | O |  | 9.3.2.x | The user plane TNL addresses of source node | YES | ignore |

<<<<<<<<<<<<<<<<<<<< Next Change>>>>>>>>>>>>>>>>>>>>

#### 9.3.2.x Source Node TNL Address Info

This IE is used for signalling TNL address information of source node.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| **GTP Transport Layer Address List** |  | *1* |  |  |
| **>GTP Transport Layer Address Item** |  | *1..<maxnoofGTPTLAs>* |  |  |
| >>GTP Transport Layer Address | M |  | Transport Layer Address  9.3.2.4 | GTP Transport Layer Address of source node |

<<<<<<<<<<<<<<<<<<<< Next Change>>>>>>>>>>>>>>>>>>>>

9.4.3 Elementary Procedure Definitions

-- ASN1START

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

--

-- Elementary Procedure definitions

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

E1AP-PDU-Descriptions {

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

ngran-access (22) modules (3) e1ap (5) version1 (1) e1ap-PDU-Descriptions (0) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

--

-- IE parameter types from other modules

--

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

IMPORTS

Criticality,

ProcedureCode

FROM E1AP-CommonDataTypes

Reset,

ResetAcknowledge,

ErrorIndication,

GNB-CU-UP-E1SetupRequest,

GNB-CU-UP-E1SetupResponse,

GNB-CU-UP-E1SetupFailure,

GNB-CU-CP-E1SetupRequest,

GNB-CU-CP-E1SetupResponse,

GNB-CU-CP-E1SetupFailure,

GNB-CU-UP-ConfigurationUpdate,

GNB-CU-UP-ConfigurationUpdateAcknowledge,

GNB-CU-UP-ConfigurationUpdateFailure,

GNB-CU-CP-ConfigurationUpdate,

GNB-CU-CP-ConfigurationUpdateAcknowledge,

GNB-CU-CP-ConfigurationUpdateFailure,

BearerContextSetupRequest,

BearerContextSetupResponse,

BearerContextSetupFailure,

BearerContextModificationRequest,

BearerContextModificationResponse,

BearerContextModificationFailure,

BearerContextModificationRequired,

BearerContextModificationConfirm,

BearerContextReleaseCommand,

BearerContextReleaseComplete,

BearerContextReleaseRequest,

BearerContextInactivityNotification,

DLDataNotification,

ULDataNotification,

DataUsageReport,

E1ReleaseRequest,

E1ReleaseResponse,

GNB-CU-UP-CounterCheckRequest,

GNB-CU-UP-StatusIndication,

MRDC-DataUsageReport,

DeactivateTrace,

TraceStart,

PrivateMessage,

ResourceStatusRequest,

ResourceStatusResponse,

ResourceStatusFailure,

ResourceStatusUpdate,

IAB-UPTNLAddressUpdate,

IAB-UPTNLAddressUpdateAcknowledge,

IAB-UPTNLAddressUpdateFailure,

CellTrafficTrace,

EarlyForwardingSNTransfer,

GNB-CU-CPMeasurementResultsInformation

FROM E1AP-PDU-Contents

id-reset,

id-errorIndication,

id-gNB-CU-UP-E1Setup,

id-gNB-CU-CP-E1Setup,

id-gNB-CU-UP-ConfigurationUpdate,

id-gNB-CU-CP-ConfigurationUpdate,

id-e1Release,

id-bearerContextSetup,

id-bearerContextModification,

id-bearerContextModificationRequired,

id-bearerContextRelease,

id-bearerContextReleaseRequest,

id-bearerContextInactivityNotification,

id-dLDataNotification,

id-uLDataNotification,

id-dataUsageReport,

id-gNB-CU-UP-CounterCheck,

id-gNB-CU-UP-StatusIndication,

id-mRDC-DataUsageReport,

id-DeactivateTrace,

id-TraceStart,

id-privateMessage,

id-resourceStatusReportingInitiation,

id-resourceStatusReporting,

id-iAB-UPTNLAddressUpdate,

id-CellTrafficTrace,

id-earlyForwardingSNTransfer,

id-gNB-CU-CPMeasurementResultsInformation

FROM E1AP-Constants;

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

--

-- Interface Elementary Procedure Class

--

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

E1AP-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

--

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

E1AP-PDU ::= CHOICE {

initiatingMessage InitiatingMessage,

successfulOutcome SuccessfulOutcome,

unsuccessfulOutcome UnsuccessfulOutcome,

...

}

InitiatingMessage ::= SEQUENCE {

procedureCode E1AP-ELEMENTARY-PROCEDURE.&procedureCode ({E1AP-ELEMENTARY-PROCEDURES}),

criticality E1AP-ELEMENTARY-PROCEDURE.&criticality ({E1AP-ELEMENTARY-PROCEDURES}{@procedureCode}),

value E1AP-ELEMENTARY-PROCEDURE.&InitiatingMessage ({E1AP-ELEMENTARY-PROCEDURES}{@procedureCode})

}

SuccessfulOutcome ::= SEQUENCE {

procedureCode E1AP-ELEMENTARY-PROCEDURE.&procedureCode ({E1AP-ELEMENTARY-PROCEDURES}),

criticality E1AP-ELEMENTARY-PROCEDURE.&criticality ({E1AP-ELEMENTARY-PROCEDURES}{@procedureCode}),

value E1AP-ELEMENTARY-PROCEDURE.&SuccessfulOutcome ({E1AP-ELEMENTARY-PROCEDURES}{@procedureCode})

}

UnsuccessfulOutcome ::= SEQUENCE {

procedureCode E1AP-ELEMENTARY-PROCEDURE.&procedureCode ({E1AP-ELEMENTARY-PROCEDURES}),

criticality E1AP-ELEMENTARY-PROCEDURE.&criticality ({E1AP-ELEMENTARY-PROCEDURES}{@procedureCode}),

value E1AP-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome ({E1AP-ELEMENTARY-PROCEDURES}{@procedureCode})

}

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

--

-- Interface Elementary Procedure List

--

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

E1AP-ELEMENTARY-PROCEDURES E1AP-ELEMENTARY-PROCEDURE ::= {

E1AP-ELEMENTARY-PROCEDURES-CLASS-1 |

E1AP-ELEMENTARY-PROCEDURES-CLASS-2 ,

...

}

E1AP-ELEMENTARY-PROCEDURES-CLASS-1 E1AP-ELEMENTARY-PROCEDURE ::= {

reset |

gNB-CU-UP-E1Setup |

gNB-CU-CP-E1Setup |

gNB-CU-UP-ConfigurationUpdate |

gNB-CU-CP-ConfigurationUpdate |

e1Release |

bearerContextSetup |

bearerContextModification |

bearerContextModificationRequired |

bearerContextRelease |

resourceStatusReportingInitiation |

iAB-UPTNLAddressUpdate ,

...

}

E1AP-ELEMENTARY-PROCEDURES-CLASS-2 E1AP-ELEMENTARY-PROCEDURE ::= {

errorIndication |

bearerContextReleaseRequest |

bearerContextInactivityNotification |

dLDataNotification |

uLDataNotification |

dataUsageReport |

gNB-CU-UP-CounterCheck |

gNB-CU-UP-StatusIndication |

mRDC-DataUsageReport |

deactivateTrace |

traceStart |

privateMessage |

cellTrafficTrace |

resourceStatusReporting |

earlyForwardingSNTransfer |

gNB-CU-CPMeasurementResultsInformation,

...

}

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

--

-- Interface Elementary Procedures

--

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

reset E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE Reset

SUCCESSFUL OUTCOME ResetAcknowledge

PROCEDURE CODE id-reset

CRITICALITY reject

}

errorIndication E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE ErrorIndication

PROCEDURE CODE id-errorIndication

CRITICALITY ignore

}

gNB-CU-UP-E1Setup E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE GNB-CU-UP-E1SetupRequest

SUCCESSFUL OUTCOME GNB-CU-UP-E1SetupResponse

UNSUCCESSFUL OUTCOME GNB-CU-UP-E1SetupFailure

PROCEDURE CODE id-gNB-CU-UP-E1Setup

CRITICALITY reject

}

gNB-CU-CP-E1Setup E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE GNB-CU-CP-E1SetupRequest

SUCCESSFUL OUTCOME GNB-CU-CP-E1SetupResponse

UNSUCCESSFUL OUTCOME GNB-CU-CP-E1SetupFailure

PROCEDURE CODE id-gNB-CU-CP-E1Setup

CRITICALITY reject

}

gNB-CU-UP-ConfigurationUpdate E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE GNB-CU-UP-ConfigurationUpdate

SUCCESSFUL OUTCOME GNB-CU-UP-ConfigurationUpdateAcknowledge

UNSUCCESSFUL OUTCOME GNB-CU-UP-ConfigurationUpdateFailure

PROCEDURE CODE id-gNB-CU-UP-ConfigurationUpdate

CRITICALITY reject

}

gNB-CU-CP-ConfigurationUpdate E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE GNB-CU-CP-ConfigurationUpdate

SUCCESSFUL OUTCOME GNB-CU-CP-ConfigurationUpdateAcknowledge

UNSUCCESSFUL OUTCOME GNB-CU-CP-ConfigurationUpdateFailure

PROCEDURE CODE id-gNB-CU-CP-ConfigurationUpdate

CRITICALITY reject

}

e1Release E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE E1ReleaseRequest

SUCCESSFUL OUTCOME E1ReleaseResponse

PROCEDURE CODE id-e1Release

CRITICALITY reject

}

bearerContextSetup E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE BearerContextSetupRequest

SUCCESSFUL OUTCOME BearerContextSetupResponse

UNSUCCESSFUL OUTCOME BearerContextSetupFailure

PROCEDURE CODE id-bearerContextSetup

CRITICALITY reject

}

bearerContextModification E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE BearerContextModificationRequest

SUCCESSFUL OUTCOME BearerContextModificationResponse

UNSUCCESSFUL OUTCOME BearerContextModificationFailure

PROCEDURE CODE id-bearerContextModification

CRITICALITY reject

}

bearerContextModificationRequired E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE BearerContextModificationRequired

SUCCESSFUL OUTCOME BearerContextModificationConfirm

PROCEDURE CODE id-bearerContextModificationRequired

CRITICALITY reject

}

bearerContextRelease E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE BearerContextReleaseCommand

SUCCESSFUL OUTCOME BearerContextReleaseComplete

PROCEDURE CODE id-bearerContextRelease

CRITICALITY reject

}

bearerContextReleaseRequest E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE BearerContextReleaseRequest

PROCEDURE CODE id-bearerContextReleaseRequest

CRITICALITY ignore

}

bearerContextInactivityNotification E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE BearerContextInactivityNotification

PROCEDURE CODE id-bearerContextInactivityNotification

CRITICALITY ignore

}

dLDataNotification E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE DLDataNotification

PROCEDURE CODE id-dLDataNotification

CRITICALITY ignore

}

uLDataNotification E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE ULDataNotification

PROCEDURE CODE id-uLDataNotification

CRITICALITY ignore

}

dataUsageReport E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE DataUsageReport

PROCEDURE CODE id-dataUsageReport

CRITICALITY ignore

}

gNB-CU-UP-CounterCheck E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE GNB-CU-UP-CounterCheckRequest

PROCEDURE CODE id-gNB-CU-UP-CounterCheck

CRITICALITY ignore

}

gNB-CU-UP-StatusIndication E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE GNB-CU-UP-StatusIndication

PROCEDURE CODE id-gNB-CU-UP-StatusIndication

CRITICALITY ignore

}

privateMessage E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE PrivateMessage

PROCEDURE CODE id-privateMessage

CRITICALITY ignore

}

gNB-CU-CPMeasurementResultsInformation E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE GNB-CU-CPMeasurementResultsInformation

PROCEDURE CODE id-gNB-CU-CPMeasurementResultsInformation

CRITICALITY ignore

}

mRDC-DataUsageReport E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE MRDC-DataUsageReport

PROCEDURE CODE id-mRDC-DataUsageReport

CRITICALITY ignore

}

deactivateTrace E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE DeactivateTrace

PROCEDURE CODE id-DeactivateTrace

CRITICALITY ignore

}

traceStart E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE TraceStart

PROCEDURE CODE id-TraceStart

CRITICALITY ignore

}

resourceStatusReportingInitiation E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE ResourceStatusRequest

SUCCESSFUL OUTCOME ResourceStatusResponse

UNSUCCESSFUL OUTCOME ResourceStatusFailure

PROCEDURE CODE id-resourceStatusReportingInitiation

CRITICALITY reject

}

resourceStatusReporting E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE ResourceStatusUpdate

PROCEDURE CODE id-resourceStatusReporting

CRITICALITY ignore

}

iAB-UPTNLAddressUpdate E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE IAB-UPTNLAddressUpdate

SUCCESSFUL OUTCOME IAB-UPTNLAddressUpdateAcknowledge

UNSUCCESSFUL OUTCOME IAB-UPTNLAddressUpdateFailure

PROCEDURE CODE id-iAB-UPTNLAddressUpdate

CRITICALITY reject

}

cellTrafficTrace E1AP-ELEMENTARY-PROCEDURE ::={

INITIATING MESSAGE CellTrafficTrace

PROCEDURE CODE id-CellTrafficTrace

CRITICALITY ignore

}

earlyForwardingSNTransfer E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE EarlyForwardingSNTransfer

PROCEDURE CODE id-earlyForwardingSNTransfer

CRITICALITY ignore

}

END

-- ASN1STOP

9.4.4 PDU Definitions

-- ASN1START

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

--

-- PDU definitions for E1AP

--

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

E1AP-PDU-Contents {

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

ngran-access (22) modules (3) e1ap (5) version1 (1) e1ap-PDU-Contents (1) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

--

-- IE parameter types from other modules

--

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

IMPORTS

Cause,

CriticalityDiagnostics,

GNB-CU-CP-UE-E1AP-ID,

GNB-CU-UP-UE-E1AP-ID,

UE-associatedLogicalE1-ConnectionItem,

GNB-CU-UP-ID,

GNB-CU-UP-Name,

Extended-GNB-CU-UP-Name,

GNB-CU-CP-Name,

Extended-GNB-CU-CP-Name,

CNSupport,

PLMN-Identity,

Slice-Support-List,

NR-CGI-Support-List,

QoS-Parameters-Support-List,

SecurityInformation,

BitRate,

BearerContextStatusChange,

DRB-To-Setup-List-EUTRAN,

DRB-Setup-List-EUTRAN,

DRB-Failed-List-EUTRAN,

DRB-To-Modify-List-EUTRAN,

DRB-Measurement-Results-Information-List,

DRB-Modified-List-EUTRAN,

DRB-Failed-To-Modify-List-EUTRAN,

DRB-To-Remove-List-EUTRAN,

DRB-Required-To-Remove-List-EUTRAN,

DRB-Required-To-Modify-List-EUTRAN,

DRB-Confirm-Modified-List-EUTRAN,

DRB-To-Setup-Mod-List-EUTRAN,

DRB-Setup-Mod-List-EUTRAN,

DRB-Failed-Mod-List-EUTRAN,

ExtendedSliceSupportList,

PDU-Session-Resource-To-Setup-List,

PDU-Session-Resource-Setup-List,

PDU-Session-Resource-Failed-List,

PDU-Session-Resource-To-Modify-List,

PDU-Session-Resource-Modified-List,

PDU-Session-Resource-Failed-To-Modify-List,

PDU-Session-Resource-To-Remove-List,

PDU-Session-Resource-Required-To-Modify-List,

PDU-Session-Resource-Confirm-Modified-List,

PDU-Session-Resource-To-Setup-Mod-List,

PDU-Session-Resource-Setup-Mod-List,

PDU-Session-Resource-Failed-Mod-List,

PDU-Session-To-Notify-List,

DRB-Status-Item,

DRB-Activity-Item,

Data-Usage-Report-List,

TimeToWait,

ActivityNotificationLevel,

ActivityInformation,

New-UL-TNL-Information-Required,

GNB-CU-CP-TNLA-Setup-Item,

GNB-CU-CP-TNLA-Failed-To-Setup-Item,

GNB-CU-CP-TNLA-To-Add-Item,

GNB-CU-CP-TNLA-To-Remove-Item,

GNB-CU-CP-TNLA-To-Update-Item,

GNB-CU-UP-TNLA-To-Remove-Item,

TransactionID,

Inactivity-Timer,

DRBs-Subject-To-Counter-Check-List-EUTRAN,

DRBs-Subject-To-Counter-Check-List-NG-RAN,

PPI,

GNB-CU-UP-Capacity,

GNB-CU-UP-OverloadInformation,

DataDiscardRequired,

PDU-Session-Resource-Data-Usage-List,

RANUEID,

GNB-DU-ID,

TraceID,

TraceActivation,

SubscriberProfileIDforRFP,

AdditionalRRMPriorityIndex,

RetainabilityMeasurementsInfo,

Transport-Layer-Address-Info,

HW-CapacityIndicator,

RegistrationRequest,

ReportCharacteristics,

ReportingPeriodicity,

TNL-AvailableCapacityIndicator,

DLUPTNLAddressToUpdateItem,

ULUPTNLAddressToUpdateItem,

NPNContextInfo,

NPNSupportInfo,

MDTPLMNList,

PrivacyIndicator,

URIaddress,

DRBs-Subject-To-Early-Forwarding-List,

CHOInitiation,

ExtendedSliceSupportList,

TransportLayerAddress,

AdditionalHandoverInfo,

Extended-NR-CGI-Support-List，

SourceNodeTNLAddressInfo

FROM E1AP-IEs

PrivateIE-Container{},

ProtocolExtensionContainer{},

ProtocolIE-Container{},

ProtocolIE-ContainerList{},

ProtocolIE-SingleContainer{},

E1AP-PRIVATE-IES,

E1AP-PROTOCOL-EXTENSION,

E1AP-PROTOCOL-IES

FROM E1AP-Containers

id-Cause,

id-CriticalityDiagnostics,

id-gNB-CU-CP-UE-E1AP-ID,

id-gNB-CU-UP-UE-E1AP-ID,

id-ResetType,

id-UE-associatedLogicalE1-ConnectionItem,

id-UE-associatedLogicalE1-ConnectionListResAck,

id-gNB-CU-UP-ID,

id-gNB-CU-UP-Name,

id-Extended-GNB-CU-UP-Name,

id-gNB-CU-CP-Name,

id-Extended-GNB-CU-CP-Name,

id-CNSupport,

id-SupportedPLMNs,

id-NPNSupportInfo,

id-NPNContextInfo,

id-SecurityInformation,

id-UEDLAggregateMaximumBitRate,

id-BearerContextStatusChange,

id-System-BearerContextSetupRequest,

id-System-BearerContextSetupResponse,

id-System-BearerContextModificationRequest,

id-System-BearerContextModificationResponse,

id-System-BearerContextModificationConfirm,

id-System-BearerContextModificationRequired,

id-DRB-Status-List,

id-Data-Usage-Report-List,

id-TimeToWait,

id-ActivityNotificationLevel,

id-ActivityInformation,

id-New-UL-TNL-Information-Required,

id-GNB-CU-CP-TNLA-Setup-List,

id-GNB-CU-CP-TNLA-Failed-To-Setup-List,

id-GNB-CU-CP-TNLA-To-Add-List,

id-GNB-CU-CP-TNLA-To-Remove-List,

id-GNB-CU-CP-TNLA-To-Update-List,

id-GNB-CU-UP-TNLA-To-Remove-List,

id-DRB-To-Setup-List-EUTRAN,

id-DRB-To-Modify-List-EUTRAN,

id-DRB-To-Remove-List-EUTRAN,

id-DRB-Required-To-Modify-List-EUTRAN,

id-DRB-Required-To-Remove-List-EUTRAN,

id-DRB-Setup-List-EUTRAN,

id-DRB-Failed-List-EUTRAN,

id-DRB-Measurement-Results-Information-List,

id-DRB-Modified-List-EUTRAN,

id-DRB-Failed-To-Modify-List-EUTRAN,

id-DRB-Confirm-Modified-List-EUTRAN,

id-DRB-To-Setup-Mod-List-EUTRAN,

id-DRB-Setup-Mod-List-EUTRAN,

id-DRB-Failed-Mod-List-EUTRAN,

id-PDU-Session-Resource-To-Setup-List,

id-PDU-Session-Resource-To-Modify-List,

id-PDU-Session-Resource-To-Remove-List,

id-PDU-Session-Resource-Required-To-Modify-List,

id-PDU-Session-Resource-Setup-List,

id-PDU-Session-Resource-Failed-List,

id-PDU-Session-Resource-Modified-List,

id-PDU-Session-Resource-Failed-To-Modify-List,

id-PDU-Session-Resource-Confirm-Modified-List,

id-PDU-Session-Resource-Setup-Mod-List,

id-PDU-Session-Resource-Failed-Mod-List,

id-PDU-Session-Resource-To-Setup-Mod-List,

id-PDU-Session-To-Notify-List,

id-TransactionID,

id-Serving-PLMN,

id-UE-Inactivity-Timer,

id-System-GNB-CU-UP-CounterCheckRequest,

id-DRBs-Subject-To-Counter-Check-List-EUTRAN,

id-DRBs-Subject-To-Counter-Check-List-NG-RAN,

id-PPI,

id-gNB-CU-UP-Capacity,

id-GNB-CU-UP-OverloadInformation,

id-UEDLMaximumIntegrityProtectedDataRate,

id-DataDiscardRequired,

id-PDU-Session-Resource-Data-Usage-List,

id-RANUEID,

id-GNB-DU-ID,

id-TraceID,

id-TraceActivation,

id-SubscriberProfileIDforRFP,

id-AdditionalRRMPriorityIndex,

id-RetainabilityMeasurementsInfo,

id-Transport-Layer-Address-Info,

id-gNB-CU-CP-Measurement-ID,

id-gNB-CU-UP-Measurement-ID,

id-RegistrationRequest,

id-ReportCharacteristics,

id-ReportingPeriodicity,

id-TNL-AvailableCapacityIndicator,

id-HW-CapacityIndicator,

id-DLUPTNLAddressToUpdateList,

id-ULUPTNLAddressToUpdateList,

id-ManagementBasedMDTPLMNList,

id-TraceCollectionEntityIPAddress,

id-PrivacyIndicator,

id-URIaddress,

id-DRBs-Subject-To-Early-Forwarding-List,

id-CHOInitiation,

id-ExtendedSliceSupportList,

id-AdditionalHandoverInfo,

id-Extended-NR-CGI-Support-List,

id-SourceNodeTNLAddressInfo，

maxnoofErrors,

maxnoofSPLMNs,

maxnoofDRBs,

maxnoofTNLAssociations,

maxnoofIndividualE1ConnectionsToReset,

maxnoofTNLAddresses

FROM E1AP-Constants;

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

--

-- RESET

--

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

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

--

-- Reset

--

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

Reset ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {ResetIEs} },

...

}

ResetIEs E1AP-PROTOCOL-IES ::= {

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

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

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

...

}

ResetType ::= CHOICE {

e1-Interface ResetAll,

partOfE1-Interface UE-associatedLogicalE1-ConnectionListRes,

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

}

ResetType-ExtIEs E1AP-PROTOCOL-IES ::= {

...

}

ResetAll ::= ENUMERATED {

reset-all,

...

}

UE-associatedLogicalE1-ConnectionListRes ::= SEQUENCE (SIZE(1.. maxnoofIndividualE1ConnectionsToReset)) OF ProtocolIE-SingleContainer { { UE-associatedLogicalE1-ConnectionItemRes } }

UE-associatedLogicalE1-ConnectionItemRes E1AP-PROTOCOL-IES ::= {

{ ID id-UE-associatedLogicalE1-ConnectionItem CRITICALITY reject TYPE UE-associatedLogicalE1-ConnectionItem PRESENCE mandatory},

...

}

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

--

-- Reset Acknowledge

--

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

ResetAcknowledge ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {ResetAcknowledgeIEs} },

...

}

ResetAcknowledgeIEs E1AP-PROTOCOL-IES ::= {

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

{ ID id-UE-associatedLogicalE1-ConnectionListResAck CRITICALITY ignore TYPE UE-associatedLogicalE1-ConnectionListResAck PRESENCE optional }|

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

...

}

UE-associatedLogicalE1-ConnectionListResAck ::= SEQUENCE (SIZE(1.. maxnoofIndividualE1ConnectionsToReset)) OF ProtocolIE-SingleContainer { { UE-associatedLogicalE1-ConnectionItemResAck } }

UE-associatedLogicalE1-ConnectionItemResAck E1AP-PROTOCOL-IES ::= {

{ ID id-UE-associatedLogicalE1-ConnectionItem CRITICALITY ignore TYPE UE-associatedLogicalE1-ConnectionItem PRESENCE mandatory },

...

}

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

--

-- ERROR INDICATION

--

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

ErrorIndication ::= SEQUENCE {

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

...

}

ErrorIndication-IEs E1AP-PROTOCOL-IES ::= {

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

{ ID id-gNB-CU-CP-UE-E1AP-ID CRITICALITY ignore TYPE GNB-CU-CP-UE-E1AP-ID PRESENCE optional}|

{ ID id-gNB-CU-UP-UE-E1AP-ID CRITICALITY ignore TYPE GNB-CU-UP-UE-E1AP-ID PRESENCE optional}|

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

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

...

}

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

--

-- GNB-CU-UP E1 SETUP

--

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

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

--

-- GNB-CU-UP E1 Setup Request

--

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

GNB-CU-UP-E1SetupRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {GNB-CU-UP-E1SetupRequestIEs} },

...

}

GNB-CU-UP-E1SetupRequestIEs E1AP-PROTOCOL-IES ::= {

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

{ ID id-gNB-CU-UP-ID CRITICALITY reject TYPE GNB-CU-UP-ID PRESENCE mandatory }|

{ ID id-gNB-CU-UP-Name CRITICALITY ignore TYPE GNB-CU-UP-Name PRESENCE optional }|

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

{ ID id-SupportedPLMNs CRITICALITY reject TYPE SupportedPLMNs-List PRESENCE mandatory }|

{ ID id-gNB-CU-UP-Capacity CRITICALITY ignore TYPE GNB-CU-UP-Capacity PRESENCE optional }|

{ ID id-Transport-Layer-Address-Info CRITICALITY ignore TYPE Transport-Layer-Address-Info PRESENCE optional }|

{ ID id-Extended-GNB-CU-UP-Name CRITICALITY ignore TYPE Extended-GNB-CU-UP-Name PRESENCE optional },

...

}

SupportedPLMNs-List ::= SEQUENCE (SIZE (1..maxnoofSPLMNs)) OF SupportedPLMNs-Item

SupportedPLMNs-Item ::= SEQUENCE {

pLMN-Identity PLMN-Identity,

slice-Support-List Slice-Support-List OPTIONAL,

nR-CGI-Support-List NR-CGI-Support-List OPTIONAL,

qoS-Parameters-Support-List QoS-Parameters-Support-List OPTIONAL,

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

...

}

SupportedPLMNs-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

{ ID id-NPNSupportInfo CRITICALITY reject EXTENSION NPNSupportInfo PRESENCE optional}|

{ ID id-ExtendedSliceSupportList CRITICALITY reject EXTENSION ExtendedSliceSupportList PRESENCE optional}|

{ ID id-Extended-NR-CGI-Support-List CRITICALITY ignore EXTENSION Extended-NR-CGI-Support-List PRESENCE optional},

...

}

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

--

-- GNB-CU-UP E1 Setup Response

--

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

GNB-CU-UP-E1SetupResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {GNB-CU-UP-E1SetupResponseIEs} },

...

}

GNB-CU-UP-E1SetupResponseIEs E1AP-PROTOCOL-IES ::= {

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

{ ID id-gNB-CU-CP-Name CRITICALITY ignore TYPE GNB-CU-CP-Name PRESENCE optional }|

{ ID id-Transport-Layer-Address-Info CRITICALITY ignore TYPE Transport-Layer-Address-Info PRESENCE optional }|

{ ID id-Extended-GNB-CU-CP-Name CRITICALITY ignore TYPE Extended-GNB-CU-CP-Name PRESENCE optional },

...

}

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

--

-- GNB-CU-UP E1 Setup Failure

--

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

GNB-CU-UP-E1SetupFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {GNB-CU-UP-E1SetupFailureIEs} },

...

}

GNB-CU-UP-E1SetupFailureIEs E1AP-PROTOCOL-IES ::= {

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

{ 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 },

...

}

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

--

-- GNB-CU-CP E1 SETUP

--

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

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

--

-- GNB-CU-CP E1 Setup Request

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

GNB-CU-CP-E1SetupRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {GNB-CU-CP-E1SetupRequestIEs} },

...

}

GNB-CU-CP-E1SetupRequestIEs E1AP-PROTOCOL-IES ::= {

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

{ ID id-gNB-CU-CP-Name CRITICALITY ignore TYPE GNB-CU-CP-Name PRESENCE optional }|

{ ID id-Transport-Layer-Address-Info CRITICALITY ignore TYPE Transport-Layer-Address-Info PRESENCE optional }|

{ ID id-Extended-GNB-CU-CP-Name CRITICALITY ignore TYPE Extended-GNB-CU-CP-Name PRESENCE optional },

...

}

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

--

-- GNB-CU-CP E1 Setup Response

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

GNB-CU-CP-E1SetupResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {GNB-CU-CP-E1SetupResponseIEs} },

...

}

GNB-CU-CP-E1SetupResponseIEs E1AP-PROTOCOL-IES ::= {

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

{ ID id-gNB-CU-UP-ID CRITICALITY reject TYPE GNB-CU-UP-ID PRESENCE mandatory }|

{ ID id-gNB-CU-UP-Name CRITICALITY ignore TYPE GNB-CU-UP-Name PRESENCE optional }|

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

{ ID id-SupportedPLMNs CRITICALITY reject TYPE SupportedPLMNs-List PRESENCE mandatory }|

{ ID id-gNB-CU-UP-Capacity CRITICALITY ignore TYPE GNB-CU-UP-Capacity PRESENCE optional }|

{ ID id-Transport-Layer-Address-Info CRITICALITY ignore TYPE Transport-Layer-Address-Info PRESENCE optional }|

{ ID id-Extended-GNB-CU-UP-Name CRITICALITY ignore TYPE Extended-GNB-CU-UP-Name PRESENCE optional },

...

}

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

--

-- GNB-CU-CP E1 Setup Failure

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

GNB-CU-CP-E1SetupFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {GNB-CU-CP-E1SetupFailureIEs} },

...

}

GNB-CU-CP-E1SetupFailureIEs E1AP-PROTOCOL-IES ::= {

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

{ 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 },

...

}

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

--

-- GNB-CU-UP CONFIGURATION UPDATE

--

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

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

--

-- GNB-CU-UP Configuration Update

--

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

GNB-CU-UP-ConfigurationUpdate ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {GNB-CU-UP-ConfigurationUpdateIEs} },

...

}

GNB-CU-UP-ConfigurationUpdateIEs E1AP-PROTOCOL-IES ::= {

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

{ ID id-gNB-CU-UP-ID CRITICALITY reject TYPE GNB-CU-UP-ID PRESENCE mandatory }|

{ ID id-gNB-CU-UP-Name CRITICALITY ignore TYPE GNB-CU-UP-Name PRESENCE optional }|

{ ID id-SupportedPLMNs CRITICALITY reject TYPE SupportedPLMNs-List PRESENCE optional }|

{ ID id-gNB-CU-UP-Capacity CRITICALITY ignore TYPE GNB-CU-UP-Capacity PRESENCE optional }|

{ ID id-GNB-CU-UP-TNLA-To-Remove-List CRITICALITY reject TYPE GNB-CU-UP-TNLA-To-Remove-List PRESENCE optional }|

{ ID id-Transport-Layer-Address-Info CRITICALITY ignore TYPE Transport-Layer-Address-Info PRESENCE optional }|

{ ID id-Extended-GNB-CU-UP-Name CRITICALITY ignore TYPE Extended-GNB-CU-UP-Name PRESENCE optional },

...

}

GNB-CU-UP-TNLA-To-Remove-List ::= SEQUENCE (SIZE(1.. maxnoofTNLAssociations)) OF GNB-CU-UP-TNLA-To-Remove-Item

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

--

-- GNB-CU-UP Configuration Update Acknowledge

--

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

GNB-CU-UP-ConfigurationUpdateAcknowledge ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {GNB-CU-UP-ConfigurationUpdateAcknowledgeIEs} },

...

}

GNB-CU-UP-ConfigurationUpdateAcknowledgeIEs E1AP-PROTOCOL-IES ::= {

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

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

{ ID id-Transport-Layer-Address-Info CRITICALITY ignore TYPE Transport-Layer-Address-Info PRESENCE optional },

...

}

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

--

-- GNB-CU-UP Configuration Update Failure

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

GNB-CU-UP-ConfigurationUpdateFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {GNB-CU-UP-ConfigurationUpdateFailureIEs} },

...

}

GNB-CU-UP-ConfigurationUpdateFailureIEs E1AP-PROTOCOL-IES ::= {

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

{ 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 },

...

}

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

--

-- GNB-CU-CP CONFIGURATION UPDATE

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

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

--

-- GNB-CU-CP Configuration Update

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

GNB-CU-CP-ConfigurationUpdate ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {GNB-CU-CP-ConfigurationUpdateIEs} },

...

}

GNB-CU-CP-ConfigurationUpdateIEs E1AP-PROTOCOL-IES ::= {

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

{ ID id-gNB-CU-CP-Name CRITICALITY ignore TYPE GNB-CU-CP-Name PRESENCE optional }|

{ ID id-GNB-CU-CP-TNLA-To-Add-List CRITICALITY ignore TYPE GNB-CU-CP-TNLA-To-Add-List PRESENCE optional }|

{ ID id-GNB-CU-CP-TNLA-To-Remove-List CRITICALITY ignore TYPE GNB-CU-CP-TNLA-To-Remove-List PRESENCE optional }|

{ ID id-GNB-CU-CP-TNLA-To-Update-List CRITICALITY ignore TYPE GNB-CU-CP-TNLA-To-Update-List PRESENCE optional }|

{ ID id-Transport-Layer-Address-Info CRITICALITY ignore TYPE Transport-Layer-Address-Info PRESENCE optional }|

{ ID id-Extended-GNB-CU-CP-Name CRITICALITY ignore TYPE Extended-GNB-CU-CP-Name PRESENCE optional },

...

}

GNB-CU-CP-TNLA-To-Add-List ::= SEQUENCE (SIZE(1.. maxnoofTNLAssociations)) OF GNB-CU-CP-TNLA-To-Add-Item

GNB-CU-CP-TNLA-To-Remove-List ::= SEQUENCE (SIZE(1.. maxnoofTNLAssociations)) OF GNB-CU-CP-TNLA-To-Remove-Item

GNB-CU-CP-TNLA-To-Update-List ::= SEQUENCE (SIZE(1.. maxnoofTNLAssociations)) OF GNB-CU-CP-TNLA-To-Update-Item

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

--

-- GNB-CU-CP Configuration Update Acknowledge

--

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

GNB-CU-CP-ConfigurationUpdateAcknowledge ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {GNB-CU-CP-ConfigurationUpdateAcknowledgeIEs} },

...

}

GNB-CU-CP-ConfigurationUpdateAcknowledgeIEs E1AP-PROTOCOL-IES ::= {

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

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

{ ID id-GNB-CU-CP-TNLA-Setup-List CRITICALITY ignore TYPE GNB-CU-CP-TNLA-Setup-List PRESENCE optional }|

{ ID id-GNB-CU-CP-TNLA-Failed-To-Setup-List CRITICALITY ignore TYPE GNB-CU-CP-TNLA-Failed-To-Setup-List PRESENCE optional }|

{ ID id-Transport-Layer-Address-Info CRITICALITY ignore TYPE Transport-Layer-Address-Info PRESENCE optional },

...

}

GNB-CU-CP-TNLA-Setup-List ::= SEQUENCE (SIZE(1.. maxnoofTNLAssociations)) OF GNB-CU-CP-TNLA-Setup-Item

GNB-CU-CP-TNLA-Failed-To-Setup-List ::= SEQUENCE (SIZE(1.. maxnoofTNLAssociations)) OF GNB-CU-CP-TNLA-Failed-To-Setup-Item

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

--

-- GNB-CU-CP Configuration Update Failure

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

GNB-CU-CP-ConfigurationUpdateFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {GNB-CU-CP-ConfigurationUpdateFailureIEs} },

...

}

GNB-CU-CP-ConfigurationUpdateFailureIEs E1AP-PROTOCOL-IES ::= {

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

{ 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 },

...

}

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

--

-- E1 RELEASE

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

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

--

-- E1 Release Request

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

E1ReleaseRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {E1ReleaseRequestIEs} },

...

}

E1ReleaseRequestIEs E1AP-PROTOCOL-IES ::= {

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

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

...

}

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

--

-- E1 Release Response

--

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

E1ReleaseResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {E1ReleaseResponseIEs} },

...

}

E1ReleaseResponseIEs E1AP-PROTOCOL-IES ::= {

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

...

}

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

--

-- BEARER CONTEXT SETUP

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

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

--

-- Bearer Context Setup Request

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

BearerContextSetupRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { BearerContextSetupRequestIEs} },

...

}

BearerContextSetupRequestIEs E1AP-PROTOCOL-IES ::= {

{ ID id-gNB-CU-CP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-CP-UE-E1AP-ID PRESENCE mandatory }|

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

{ ID id-UEDLAggregateMaximumBitRate CRITICALITY reject TYPE BitRate PRESENCE mandatory }|

{ ID id-UEDLMaximumIntegrityProtectedDataRate CRITICALITY reject TYPE BitRate PRESENCE optional }|

{ ID id-Serving-PLMN CRITICALITY ignore TYPE PLMN-Identity PRESENCE mandatory }|

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

{ ID id-UE-Inactivity-Timer CRITICALITY reject TYPE Inactivity-Timer PRESENCE optional }|

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

{ ID id-System-BearerContextSetupRequest CRITICALITY reject TYPE System-BearerContextSetupRequest PRESENCE mandatory }|

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

{ ID id-GNB-DU-ID CRITICALITY ignore TYPE GNB-DU-ID PRESENCE optional }|

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

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

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

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

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

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

...

}

System-BearerContextSetupRequest ::= CHOICE {

e-UTRAN-BearerContextSetupRequest ProtocolIE-Container {{EUTRAN-BearerContextSetupRequest}},

nG-RAN-BearerContextSetupRequest ProtocolIE-Container {{NG-RAN-BearerContextSetupRequest}},

choice-extension ProtocolIE-SingleContainer {{System-BearerContextSetupRequest-ExtIEs}}

}

System-BearerContextSetupRequest-ExtIEs E1AP-PROTOCOL-IES::= {

...

}

EUTRAN-BearerContextSetupRequest E1AP-PROTOCOL-IES ::= {

{ ID id-DRB-To-Setup-List-EUTRAN CRITICALITY reject TYPE DRB-To-Setup-List-EUTRAN PRESENCE mandatory }|

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

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

...

}

NG-RAN-BearerContextSetupRequest E1AP-PROTOCOL-IES ::= {

{ ID id-PDU-Session-Resource-To-Setup-List CRITICALITY reject TYPE PDU-Session-Resource-To-Setup-List PRESENCE mandatory },

...

}

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

--

-- Bearer Context Setup Response

--

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

BearerContextSetupResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { BearerContextSetupResponseIEs} },

...

}

BearerContextSetupResponseIEs E1AP-PROTOCOL-IES ::= {

{ ID id-gNB-CU-CP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-CP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-gNB-CU-UP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-UP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-System-BearerContextSetupResponse CRITICALITY ignore TYPE System-BearerContextSetupResponse PRESENCE mandatory },

...

}

System-BearerContextSetupResponse::= CHOICE {

e-UTRAN-BearerContextSetupResponse ProtocolIE-Container {{EUTRAN-BearerContextSetupResponse}},

nG-RAN-BearerContextSetupResponse ProtocolIE-Container {{NG-RAN-BearerContextSetupResponse}},

choice-extension ProtocolIE-SingleContainer {{System-BearerContextSetupResponse-ExtIEs}}

}

System-BearerContextSetupResponse-ExtIEs E1AP-PROTOCOL-IES ::= {

...

}

EUTRAN-BearerContextSetupResponse E1AP-PROTOCOL-IES ::= {

{ ID id-DRB-Setup-List-EUTRAN CRITICALITY ignore TYPE DRB-Setup-List-EUTRAN PRESENCE mandatory }|

{ ID id-DRB-Failed-List-EUTRAN CRITICALITY ignore TYPE DRB-Failed-List-EUTRAN PRESENCE optional },

...

}

NG-RAN-BearerContextSetupResponse E1AP-PROTOCOL-IES ::= {

{ ID id-PDU-Session-Resource-Setup-List CRITICALITY ignore TYPE PDU-Session-Resource-Setup-List PRESENCE mandatory }|

{ ID id-PDU-Session-Resource-Failed-List CRITICALITY ignore TYPE PDU-Session-Resource-Failed-List PRESENCE optional },

...

}

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

--

-- Bearer Context Setup Failure

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

BearerContextSetupFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { BearerContextSetupFailureIEs} },

...

}

BearerContextSetupFailureIEs E1AP-PROTOCOL-IES ::= {

{ ID id-gNB-CU-CP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-CP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-gNB-CU-UP-UE-E1AP-ID CRITICALITY ignore TYPE GNB-CU-UP-UE-E1AP-ID PRESENCE optional }|

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

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

...

}

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

--

-- BEARER CONTEXT MODIFICATION

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

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

--

-- Bearer Context Modification Request

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

BearerContextModificationRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { BearerContextModificationRequestIEs} },

...

}

BearerContextModificationRequestIEs E1AP-PROTOCOL-IES ::= {

{ ID id-gNB-CU-CP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-CP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-gNB-CU-UP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-UP-UE-E1AP-ID PRESENCE mandatory }|

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

{ ID id-UEDLAggregateMaximumBitRate CRITICALITY reject TYPE BitRate PRESENCE optional }|

{ ID id-UEDLMaximumIntegrityProtectedDataRate CRITICALITY reject TYPE BitRate PRESENCE optional }|

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

{ ID id-New-UL-TNL-Information-Required CRITICALITY reject TYPE New-UL-TNL-Information-Required PRESENCE optional }|

{ ID id-UE-Inactivity-Timer CRITICALITY reject TYPE Inactivity-Timer PRESENCE optional }|

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

{ ID id-System-BearerContextModificationRequest CRITICALITY reject TYPE System-BearerContextModificationRequest PRESENCE optional }|

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

{ ID id-GNB-DU-ID CRITICALITY ignore TYPE GNB-DU-ID PRESENCE optional }|

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

...

}

System-BearerContextModificationRequest ::= CHOICE {

e-UTRAN-BearerContextModificationRequest ProtocolIE-Container {{EUTRAN-BearerContextModificationRequest}},

nG-RAN-BearerContextModificationRequest ProtocolIE-Container {{NG-RAN-BearerContextModificationRequest}},

choice-extension ProtocolIE-SingleContainer {{System-BearerContextModificationRequest-ExtIEs}}

}

System-BearerContextModificationRequest-ExtIEs E1AP-PROTOCOL-IES ::= {

...

}

EUTRAN-BearerContextModificationRequest E1AP-PROTOCOL-IES ::= {

{ ID id-DRB-To-Setup-Mod-List-EUTRAN CRITICALITY reject TYPE DRB-To-Setup-Mod-List-EUTRAN PRESENCE optional }|

{ ID id-DRB-To-Modify-List-EUTRAN CRITICALITY reject TYPE DRB-To-Modify-List-EUTRAN PRESENCE optional }|

{ ID id-DRB-To-Remove-List-EUTRAN CRITICALITY reject TYPE DRB-To-Remove-List-EUTRAN PRESENCE optional }|

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

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

...

}

NG-RAN-BearerContextModificationRequest E1AP-PROTOCOL-IES ::= {

{ ID id-PDU-Session-Resource-To-Setup-Mod-List CRITICALITY reject TYPE PDU-Session-Resource-To-Setup-Mod-List PRESENCE optional }|

{ ID id-PDU-Session-Resource-To-Modify-List CRITICALITY reject TYPE PDU-Session-Resource-To-Modify-List PRESENCE optional }|

{ ID id-PDU-Session-Resource-To-Remove-List CRITICALITY reject TYPE PDU-Session-Resource-To-Remove-List PRESENCE optional },

...

}

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

--

-- Bearer Context Modification Response

--

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

BearerContextModificationResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { BearerContextModificationResponseIEs} },

...

}

BearerContextModificationResponseIEs E1AP-PROTOCOL-IES ::= {

{ ID id-gNB-CU-CP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-CP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-gNB-CU-UP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-UP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-System-BearerContextModificationResponse CRITICALITY ignore TYPE System-BearerContextModificationResponse PRESENCE optional },

...

}

System-BearerContextModificationResponse ::= CHOICE {

e-UTRAN-BearerContextModificationResponse ProtocolIE-Container {{EUTRAN-BearerContextModificationResponse}},

nG-RAN-BearerContextModificationResponse ProtocolIE-Container {{NG-RAN-BearerContextModificationResponse}},

choice-extension ProtocolIE-SingleContainer {{System-BearerContextModificationResponse-ExtIEs}}

}

System-BearerContextModificationResponse-ExtIEs E1AP-PROTOCOL-IES ::= {

...

}

EUTRAN-BearerContextModificationResponse E1AP-PROTOCOL-IES ::= {

{ ID id-DRB-Setup-Mod-List-EUTRAN CRITICALITY ignore TYPE DRB-Setup-Mod-List-EUTRAN PRESENCE optional }|

{ ID id-DRB-Failed-Mod-List-EUTRAN CRITICALITY ignore TYPE DRB-Failed-Mod-List-EUTRAN PRESENCE optional }|

{ ID id-DRB-Modified-List-EUTRAN CRITICALITY ignore TYPE DRB-Modified-List-EUTRAN PRESENCE optional }|

{ ID id-DRB-Failed-To-Modify-List-EUTRAN CRITICALITY ignore TYPE DRB-Failed-To-Modify-List-EUTRAN PRESENCE optional }|

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

...

}

NG-RAN-BearerContextModificationResponse E1AP-PROTOCOL-IES ::= {

{ ID id-PDU-Session-Resource-Setup-Mod-List CRITICALITY reject TYPE PDU-Session-Resource-Setup-Mod-List PRESENCE optional }|

{ ID id-PDU-Session-Resource-Failed-Mod-List CRITICALITY reject TYPE PDU-Session-Resource-Failed-Mod-List PRESENCE optional }|

{ ID id-PDU-Session-Resource-Modified-List CRITICALITY reject TYPE PDU-Session-Resource-Modified-List PRESENCE optional }|

{ ID id-PDU-Session-Resource-Failed-To-Modify-List CRITICALITY reject TYPE PDU-Session-Resource-Failed-To-Modify-List PRESENCE optional }|

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

...

}

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

--

-- Bearer Context Modification Failure

--

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

BearerContextModificationFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { BearerContextModificationFailureIEs} },

...

}

BearerContextModificationFailureIEs E1AP-PROTOCOL-IES ::= {

{ ID id-gNB-CU-CP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-CP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-gNB-CU-UP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-UP-UE-E1AP-ID PRESENCE mandatory }|

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

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

...

}

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

--

-- BEARER CONTEXT MODIFICATION REQUIRED

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

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

--

-- Bearer Context Modification Required

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

BearerContextModificationRequired ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { BearerContextModificationRequiredIEs} },

...

}

BearerContextModificationRequiredIEs E1AP-PROTOCOL-IES ::= {

{ ID id-gNB-CU-CP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-CP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-gNB-CU-UP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-UP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-System-BearerContextModificationRequired CRITICALITY reject TYPE System-BearerContextModificationRequired PRESENCE mandatory },

...

}

System-BearerContextModificationRequired ::= CHOICE {

e-UTRAN-BearerContextModificationRequired ProtocolIE-Container {{EUTRAN-BearerContextModificationRequired}},

nG-RAN-BearerContextModificationRequired ProtocolIE-Container {{NG-RAN-BearerContextModificationRequired}},

choice-extension ProtocolIE-SingleContainer {{System-BearerContextModificationRequired-ExtIEs}}

}

System-BearerContextModificationRequired-ExtIEs E1AP-PROTOCOL-IES ::= {

...

}

EUTRAN-BearerContextModificationRequired E1AP-PROTOCOL-IES ::= {

{ ID id-DRB-Required-To-Modify-List-EUTRAN CRITICALITY reject TYPE DRB-Required-To-Modify-List-EUTRAN PRESENCE optional }|

{ ID id-DRB-Required-To-Remove-List-EUTRAN CRITICALITY reject TYPE DRB-Required-To-Remove-List-EUTRAN PRESENCE optional },

...

}

NG-RAN-BearerContextModificationRequired E1AP-PROTOCOL-IES ::= {

{ ID id-PDU-Session-Resource-Required-To-Modify-List CRITICALITY reject TYPE PDU-Session-Resource-Required-To-Modify-List PRESENCE optional }|

{ ID id-PDU-Session-Resource-To-Remove-List CRITICALITY reject TYPE PDU-Session-Resource-To-Remove-List PRESENCE optional },

...

}

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

--

-- Bearer Context Modification Confirm

--

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

BearerContextModificationConfirm ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { BearerContextModificationConfirmIEs} },

...

}

BearerContextModificationConfirmIEs E1AP-PROTOCOL-IES ::= {

{ ID id-gNB-CU-CP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-CP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-gNB-CU-UP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-UP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-System-BearerContextModificationConfirm CRITICALITY ignore TYPE System-BearerContextModificationConfirm PRESENCE optional },

...

}

System-BearerContextModificationConfirm ::= CHOICE {

e-UTRAN-BearerContextModificationConfirm ProtocolIE-Container {{EUTRAN-BearerContextModificationConfirm}},

nG-RAN-BearerContextModificationConfirm ProtocolIE-Container {{NG-RAN-BearerContextModificationConfirm}},

choice-extension ProtocolIE-SingleContainer {{System-BearerContextModificationConfirm-ExtIEs}}

}

System-BearerContextModificationConfirm-ExtIEs E1AP-PROTOCOL-IES ::= {

...

}

EUTRAN-BearerContextModificationConfirm E1AP-PROTOCOL-IES ::= {

{ ID id-DRB-Confirm-Modified-List-EUTRAN CRITICALITY ignore TYPE DRB-Confirm-Modified-List-EUTRAN PRESENCE optional },

...

}

NG-RAN-BearerContextModificationConfirm E1AP-PROTOCOL-IES ::= {

{ ID id-PDU-Session-Resource-Confirm-Modified-List CRITICALITY ignore TYPE PDU-Session-Resource-Confirm-Modified-List PRESENCE optional },

...

}

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

--

-- BEARER CONTEXT RELEASE

--

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

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

--

-- Bearer Context Release Command

--

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

BearerContextReleaseCommand ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { BearerContextReleaseCommandIEs} },

...

}

BearerContextReleaseCommandIEs E1AP-PROTOCOL-IES ::= {

{ ID id-gNB-CU-CP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-CP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-gNB-CU-UP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-UP-UE-E1AP-ID PRESENCE mandatory }|

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

...

}

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

--

-- Bearer Context Release Complete

--

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

BearerContextReleaseComplete ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { BearerContextReleaseCompleteIEs} },

...

}

BearerContextReleaseCompleteIEs E1AP-PROTOCOL-IES ::= {

{ ID id-gNB-CU-CP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-CP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-gNB-CU-UP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-UP-UE-E1AP-ID PRESENCE mandatory }|

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

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

...

}

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

--

-- BEARER CONTEXT RELEASE REQUEST

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

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

--

-- Bearer Context Release Request

--

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

BearerContextReleaseRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { BearerContextReleaseRequestIEs} },

...

}

BearerContextReleaseRequestIEs E1AP-PROTOCOL-IES ::= {

{ ID id-gNB-CU-CP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-CP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-gNB-CU-UP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-UP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-DRB-Status-List CRITICALITY ignore TYPE DRB-Status-List PRESENCE optional }|

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

...

}

DRB-Status-List ::= SEQUENCE (SIZE(1..maxnoofDRBs)) OF DRB-Status-Item

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

--

-- BEARER CONTEXT INACTIVITY NOTIFICATION

--

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

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

--

-- Bearer Context Inactivity Notification

--

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

BearerContextInactivityNotification ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { BearerContextInactivityNotificationIEs } },

...

}

BearerContextInactivityNotificationIEs E1AP-PROTOCOL-IES ::= {

{ ID id-gNB-CU-CP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-CP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-gNB-CU-UP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-UP-UE-E1AP-ID PRESENCE mandatory }|

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

...

}

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

--

-- DL DATA NOTIFICATION

--

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

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

--

-- DL Data Notification

--

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

DLDataNotification ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { DLDataNotificationIEs } },

...

}

DLDataNotificationIEs E1AP-PROTOCOL-IES ::= {

{ ID id-gNB-CU-CP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-CP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-gNB-CU-UP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-UP-UE-E1AP-ID PRESENCE mandatory }|

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

...

}

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

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

--

-- UL Data Notification

--

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

ULDataNotification ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { ULDataNotificationIEs } },

...

}

ULDataNotificationIEs E1AP-PROTOCOL-IES ::= {

{ ID id-gNB-CU-CP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-CP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-gNB-CU-UP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-UP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-PDU-Session-To-Notify-List CRITICALITY reject TYPE PDU-Session-To-Notify-List PRESENCE mandatory },

...

}

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

--

-- DATA USAGE REPORT

--

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

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

--

-- Data Usage Report

--

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

DataUsageReport ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { DataUsageReportIEs } },

...

}

DataUsageReportIEs E1AP-PROTOCOL-IES ::= {

{ ID id-gNB-CU-CP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-CP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-gNB-CU-UP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-UP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-Data-Usage-Report-List CRITICALITY ignore TYPE Data-Usage-Report-List PRESENCE mandatory },

...

}

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

--

-- GNB-CU-UP COUNTER CHECK

--

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

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

--

-- gNB-CU-UP Counter Check Request

--

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

GNB-CU-UP-CounterCheckRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { GNB-CU-UP-CounterCheckRequestIEs } },

...

}

GNB-CU-UP-CounterCheckRequestIEs E1AP-PROTOCOL-IES ::= {

{ ID id-gNB-CU-CP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-CP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-gNB-CU-UP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-UP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-System-GNB-CU-UP-CounterCheckRequest CRITICALITY reject TYPE System-GNB-CU-UP-CounterCheckRequest PRESENCE mandatory },

...

}

System-GNB-CU-UP-CounterCheckRequest ::= CHOICE {

e-UTRAN-GNB-CU-UP-CounterCheckRequest ProtocolIE-Container {{EUTRAN-GNB-CU-UP-CounterCheckRequest}},

nG-RAN-GNB-CU-UP-CounterCheckRequest ProtocolIE-Container {{NG-RAN-GNB-CU-UP-CounterCheckRequest}},

choice-extension ProtocolIE-SingleContainer {{System-GNB-CU-UP-CounterCheckRequest-ExtIEs}}

}

System-GNB-CU-UP-CounterCheckRequest-ExtIEs E1AP-PROTOCOL-IES::= {

...

}

EUTRAN-GNB-CU-UP-CounterCheckRequest E1AP-PROTOCOL-IES ::= {

{ ID id-DRBs-Subject-To-Counter-Check-List-EUTRAN CRITICALITY ignore TYPE DRBs-Subject-To-Counter-Check-List-EUTRAN PRESENCE mandatory },

...

}

NG-RAN-GNB-CU-UP-CounterCheckRequest E1AP-PROTOCOL-IES ::= {

{ ID id-DRBs-Subject-To-Counter-Check-List-NG-RAN CRITICALITY ignore TYPE DRBs-Subject-To-Counter-Check-List-NG-RAN PRESENCE mandatory },

...

}

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

--

-- gNB-CU-UP STATUS INDICATION ELEMENTARY PROCEDURE

--

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

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

--

-- gNB-CU-UP Status Indication

--

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

GNB-CU-UP-StatusIndication ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { GNB-CU-UP-StatusIndicationIEs} },

...

}

GNB-CU-UP-StatusIndicationIEs E1AP-PROTOCOL-IES ::= {

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

{ ID id-GNB-CU-UP-OverloadInformation CRITICALITY reject TYPE GNB-CU-UP-OverloadInformation PRESENCE mandatory },

...

}

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

--

-- gNB-CU-CP MEASUREMENT RESULTS INFORMATION

--

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

GNB-CU-CPMeasurementResultsInformation ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { GNB-CU-CPMeasurementResultsInformationIEs } },

...

}

GNB-CU-CPMeasurementResultsInformationIEs E1AP-PROTOCOL-IES ::= {

{ ID id-gNB-CU-CP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-CP-UE-E1AP-ID PRESENCE mandatory}|

{ ID id-gNB-CU-UP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-UP-UE-E1AP-ID PRESENCE mandatory}|

{ ID id-DRB-Measurement-Results-Information-List CRITICALITY ignore TYPE DRB-Measurement-Results-Information-List PRESENCE mandatory},

...

}

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

--

-- MR-DC DATA USAGE REPORT

--

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

MRDC-DataUsageReport ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { MRDC-DataUsageReportIEs } },

...

}

MRDC-DataUsageReportIEs E1AP-PROTOCOL-IES ::= {

{ ID id-gNB-CU-CP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-CP-UE-E1AP-ID PRESENCE mandatory}|

{ ID id-gNB-CU-UP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-UP-UE-E1AP-ID PRESENCE mandatory}|

{ ID id-PDU-Session-Resource-Data-Usage-List CRITICALITY ignore TYPE PDU-Session-Resource-Data-Usage-List PRESENCE mandatory},

...

}

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

--

-- TRACE ELEMENTARY PROCEDURES

--

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

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

--

-- TRACE START

--

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

TraceStart ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {TraceStartIEs} },

...

}

TraceStartIEs E1AP-PROTOCOL-IES ::= {

{ ID id-gNB-CU-CP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-CP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-gNB-CU-UP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-UP-UE-E1AP-ID PRESENCE mandatory }|

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

...

}

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

--

-- DEACTIVATE TRACE

--

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

DeactivateTrace ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {DeactivateTraceIEs} },

...

}

DeactivateTraceIEs E1AP-PROTOCOL-IES ::= {

{ ID id-gNB-CU-CP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-CP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-gNB-CU-UP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-UP-UE-E1AP-ID PRESENCE mandatory }|

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

...

}

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

--

-- CELL TRAFFIC TRACE

--

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

CellTrafficTrace ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { CellTrafficTraceIEs } },

...

}

CellTrafficTraceIEs E1AP-PROTOCOL-IES ::= {

{ID id-gNB-CU-CP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-CP-UE-E1AP-ID PRESENCE mandatory }|

{ID id-gNB-CU-UP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-UP-UE-E1AP-ID PRESENCE mandatory }|

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

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

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

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

...

}

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

--

-- PRIVATE MESSAGE

--

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

PrivateMessage ::= SEQUENCE {

privateIEs PrivateIE-Container {{PrivateMessage-IEs}},

...

}

PrivateMessage-IEs E1AP-PRIVATE-IES ::= {

...

}

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

--

-- RESOURCE STATUS REQUEST

--

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

ResourceStatusRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { ResourceStatusRequestIEs } },

...

}

ResourceStatusRequestIEs E1AP-PROTOCOL-IES ::= {

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

{ ID id-gNB-CU-CP-Measurement-ID CRITICALITY reject TYPE INTEGER (1..4095, ...) PRESENCE mandatory}|

{ ID id-gNB-CU-UP-Measurement-ID CRITICALITY ignore TYPE INTEGER (1..4095, ...) PRESENCE optional}|

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

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

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

...

}

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

--

-- RESOURCE STATUS RESPONSE

--

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

ResourceStatusResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { ResourceStatusResponseIEs } },

...

}

ResourceStatusResponseIEs E1AP-PROTOCOL-IES ::= {

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

{ ID id-gNB-CU-CP-Measurement-ID CRITICALITY reject TYPE INTEGER (1..4095, ...) PRESENCE mandatory}|

{ ID id-gNB-CU-UP-Measurement-ID CRITICALITY ignore TYPE INTEGER (1..4095, ...) PRESENCE mandatory}|

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

...

}

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

--

-- RESOURCE STATUS FAILURE

--

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

ResourceStatusFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { ResourceStatusFailureIEs } },

...

}

ResourceStatusFailureIEs E1AP-PROTOCOL-IES ::= {

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

{ ID id-gNB-CU-CP-Measurement-ID CRITICALITY reject TYPE INTEGER (1..4095, ...) PRESENCE mandatory}|

{ ID id-gNB-CU-UP-Measurement-ID CRITICALITY ignore TYPE INTEGER (1..4095, ...) PRESENCE optional}|

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

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

...

}

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

--

-- RESOURCE STATUS UPDATE

--

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

ResourceStatusUpdate ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { ResourceStatusUpdateIEs } },

...

}

ResourceStatusUpdateIEs E1AP-PROTOCOL-IES ::= {

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

{ ID id-gNB-CU-CP-Measurement-ID CRITICALITY reject TYPE INTEGER (1..4095, ...) PRESENCE mandatory}|

{ ID id-gNB-CU-UP-Measurement-ID CRITICALITY ignore TYPE INTEGER (1..4095, ...) PRESENCE optional}|

{ ID id-TNL-AvailableCapacityIndicator CRITICALITY ignore TYPE TNL-AvailableCapacityIndicator PRESENCE optional}|

{ ID id-HW-CapacityIndicator CRITICALITY ignore TYPE HW-CapacityIndicator PRESENCE mandatory},

...

}

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

--

-- IAB UP TNL ADDRESS UPDATE

--

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

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

--

-- IAB UP TNL Address Update

--

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

IAB-UPTNLAddressUpdate ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { IAB-UPTNLAddressUpdateIEs} },

...

}

IAB-UPTNLAddressUpdateIEs E1AP-PROTOCOL-IES ::= {

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

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

...

}

DLUPTNLAddressToUpdateList ::= SEQUENCE (SIZE(1.. maxnoofTNLAddresses)) OF DLUPTNLAddressToUpdateItem

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

--

-- IAB UP TNL Address Update Acknowledge

--

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

IAB-UPTNLAddressUpdateAcknowledge ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { IAB-UPTNLAddressUpdateAcknowledgeIEs} },

...

}

IAB-UPTNLAddressUpdateAcknowledgeIEs E1AP-PROTOCOL-IES ::= {

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

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

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

...

}

ULUPTNLAddressToUpdateList ::= SEQUENCE (SIZE(1.. maxnoofTNLAddresses)) OF ULUPTNLAddressToUpdateItem

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

--

-- IAB UP TNL Address Update Failure

--

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

IAB-UPTNLAddressUpdateFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {IAB-UPTNLAddressUpdateFailureIEs} },

...

}

IAB-UPTNLAddressUpdateFailureIEs E1AP-PROTOCOL-IES ::= {

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

{ 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 },

...

}

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

--

-- EARLY FORWARDING SN TRANSFER

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

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

--

-- Early Forwarding SN Transfer

--

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

EarlyForwardingSNTransfer ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { EarlyForwardingSNTransferIEs } },

...

}

EarlyForwardingSNTransferIEs E1AP-PROTOCOL-IES ::= {

{ ID id-gNB-CU-CP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-CP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-gNB-CU-UP-UE-E1AP-ID CRITICALITY reject TYPE GNB-CU-UP-UE-E1AP-ID PRESENCE mandatory }|

{ ID id-DRBs-Subject-To-Early-Forwarding-List CRITICALITY reject TYPE DRBs-Subject-To-Early-Forwarding-List PRESENCE mandatory },

...

}

END

-- ASN1STOP

9.4.5 Information Element Definitions

-- ASN1START

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

--

-- Information Element Definitions

--

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

E1AP-IEs {

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

ngran-access (22) modules (3) e1ap (5) version1 (1) e1ap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS

id-CommonNetworkInstance,

id-SNSSAI,

id-OldQoSFlowMap-ULendmarkerexpected,

id-DRB-QoS,

id-endpoint-IP-Address-and-Port,

id-NetworkInstance,

id-QoSFlowMappingIndication,

id-TNLAssociationTransportLayerAddressgNBCUUP,

id-Cause,

id-QoSMonitoringRequest,

id-QosMonitoringReportingFrequency,

id-QoSMonitoringDisabled,

id-PDCP-StatusReportIndication,

id-RedundantCommonNetworkInstance,

id-redundant-nG-UL-UP-TNL-Information,

id-redundant-nG-DL-UP-TNL-Information,

id-RedundantQosFlowIndicator,

id-TSCTrafficCharacteristics,

id-ExtendedPacketDelayBudget,

id-CNPacketDelayBudgetDownlink,

id-CNPacketDelayBudgetUplink,

id-AdditionalPDCPduplicationInformation,

id-RedundantPDUSessionInformation,

id-RedundantPDUSessionInformation-used,

id-QoS-Mapping-Information,

id-MDTConfiguration,

id-TraceCollectionEntityURI,

id-EHC-Parameters,

id-DAPSRequestInfo,

id-EarlyForwardingCOUNTReq,

id-EarlyForwardingCOUNTInfo,

id-AlternativeQoSParaSetList,

id-MCG-OfferedGBRQoSFlowInfo,

id-Number-of-tunnels,

id-DataForwardingtoE-UTRANInformationList,

maxnoofQoSParaSets,

maxnoofErrors,

maxnoofSliceItems,

maxnoofEUTRANQOSParameters,

maxnoofNGRANQOSParameters,

maxnoofDRBs,

maxnoofPDUSessionResource,

maxnoofQoSFlows,

maxnoofUPParameters,

maxnoofCellGroups,

maxnooftimeperiods,

maxnoofNRCGI,

maxnoofTLAs,

maxnoofGTPTLAs,

maxnoofSPLMNs,

maxnoofMDTPLMNs,

maxnoofExtSliceItems,

maxnoofDataForwardingTunneltoE-UTRAN,

maxnoofExtNRCGI

FROM E1AP-Constants

Criticality,

ProcedureCode,

ProtocolIE-ID,

TriggeringMessage

FROM E1AP-CommonDataTypes

ProtocolExtensionContainer{},

ProtocolIE-SingleContainer{},

E1AP-PROTOCOL-EXTENSION,

E1AP-PROTOCOL-IES

FROM E1AP-Containers;

-- A

ActivityInformation ::= CHOICE {

dRB-Activity-List DRB-Activity-List,

pDU-Session-Resource-Activity-List PDU-Session-Resource-Activity-List,

uE-Activity UE-Activity,

choice-extension ProtocolIE-SingleContainer {{ActivityInformation-ExtIEs}}

}

ActivityInformation-ExtIEs E1AP-PROTOCOL-IES ::= {

...

}

ActivityNotificationLevel ::= ENUMERATED {

drb,

pdu-session,

ue,

...

}

AdditionalHandoverInfo ::= ENUMERATED {

discard-pdpc-SN,

...

}

AdditionalPDCPduplicationInformation ::= ENUMERATED {

three,

four,

...

}

AdditionalRRMPriorityIndex ::= BIT STRING (SIZE(32))

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

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

AlternativeQoSParaSetItem ::= SEQUENCE {

alternativeQoSParameterIndex INTEGER(1..8,...),

guaranteedFlowBitRateDL BitRate OPTIONAL,

guaranteedFlowBitRateUL BitRate OPTIONAL,

packetDelayBudget PacketDelayBudget OPTIONAL,

packetErrorRate PacketErrorRate OPTIONAL,

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

...

}

AlternativeQoSParaSetItem-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

-- B

BearerContextStatusChange ::= ENUMERATED {

suspend,

resume,

...

}

BitRate ::= INTEGER (0..4000000000000,...)

-- C

Cause ::= CHOICE {

radioNetwork CauseRadioNetwork,

transport CauseTransport,

protocol CauseProtocol,

misc CauseMisc,

choice-extension ProtocolIE-SingleContainer {{Cause-ExtIEs}}

}

Cause-ExtIEs E1AP-PROTOCOL-IES ::= {

...

}

CauseMisc ::= ENUMERATED {

control-processing-overload,

not-enough-user-plane-processing-resources,

hardware-failure,

om-intervention,

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,

unknown-or-already-allocated-gnb-cu-cp-ue-e1ap-id,

unknown-or-already-allocated-gnb-cu-up-ue-e1ap-id,

unknown-or-inconsistent-pair-of-ue-e1ap-id,

interaction-with-other-procedure,

pPDCP-Count-wrap-around,

not-supported-QCI-value,

not-supported-5QI-value,

encryption-algorithms-not-supported,

integrity-protection-algorithms-not-supported,

uP-integrity-protection-not-possible,

uP-confidentiality-protection-not-possible,

multiple-PDU-Session-ID-Instances,

unknown-PDU-Session-ID,

multiple-QoS-Flow-ID-Instances,

unknown-QoS-Flow-ID,

multiple-DRB-ID-Instances,

unknown-DRB-ID,

invalid-QoS-combination,

procedure-cancelled,

normal-release,

no-radio-resources-available,

action-desirable-for-radio-reasons,

resources-not-available-for-the-slice,

pDCP-configuration-not-supported,

...,

ue-dl-max-IP-data-rate-reason,

uP-integrity-protection-failure,

release-due-to-pre-emption,

rsn-not-available-for-the-up,

nPN-not-supported,

report-characteristic-empty,

existing-measurement-ID,

measurement-temporarily-not-available,

measurement-not-supported-for-the-object

}

CauseTransport ::= ENUMERATED {

unspecified,

transport-resource-unavailable,

...,

unknown-TNL-address-for-IAB

}

Cell-Group-Information ::= SEQUENCE (SIZE(1.. maxnoofCellGroups)) OF Cell-Group-Information-Item

Cell-Group-Information-Item ::= SEQUENCE {

cell-Group-ID Cell-Group-ID,

uL-Configuration UL-Configuration OPTIONAL,

dL-TX-Stop DL-TX-Stop OPTIONAL,

rAT-Type RAT-Type OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { Cell-Group-Information-Item-ExtIEs } } OPTIONAL,

...

}

Cell-Group-Information-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

{ ID id-Number-of-tunnels CRITICALITY ignore EXTENSION Number-of-tunnels PRESENCE optional},

...

}

Cell-Group-ID ::= INTEGER (0..3, ...)

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

Number-of-tunnels ::= INTEGER (1..4, ...)

CipheringAlgorithm ::= ENUMERATED {

nEA0,

c-128-NEA1,

c-128-NEA2,

c-128-NEA3,

...

}

CNSupport ::= ENUMERATED {

c-epc,

c-5gc,

both,

...

}

CommonNetworkInstance ::= OCTET STRING

ConfidentialityProtectionIndication ::= ENUMERATED {

required,

preferred,

not-needed,

...

}

ConfidentialityProtectionResult ::= ENUMERATED {

performed,

not-performed,

...

}

CP-TNL-Information ::= CHOICE {

endpoint-IP-Address TransportLayerAddress,

choice-extension ProtocolIE-SingleContainer {{CP-TNL-Information-ExtIEs}}

}

CP-TNL-Information-ExtIEs E1AP-PROTOCOL-IES ::= {

{ ID id-endpoint-IP-Address-and-Port CRITICALITY reject TYPE Endpoint-IP-address-and-port PRESENCE mandatory},

...

}

CriticalityDiagnostics ::= SEQUENCE {

procedureCode ProcedureCode OPTIONAL,

triggeringMessage TriggeringMessage OPTIONAL,

procedureCriticality Criticality OPTIONAL,

transactionID TransactionID OPTIONAL,

iEsCriticalityDiagnostics CriticalityDiagnostics-IE-List OPTIONAL,

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

...

}

CriticalityDiagnostics-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxnoofErrors)) OF

SEQUENCE {

iECriticality Criticality,

iE-ID ProtocolIE-ID,

typeOfError TypeOfError,

iE-Extensions ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-ExtIEs} } OPTIONAL,

...

}

CriticalityDiagnostics-IE-List-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

-- D

DAPSRequestInfo ::= SEQUENCE {

dapsIndicator ENUMERATED {daps-HO-required, ...},

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

...

}

DAPSRequestInfo-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

Data-Forwarding-Information-Request ::= SEQUENCE {

data-Forwarding-Request Data-Forwarding-Request,

qoS-Flows-Forwarded-On-Fwd-Tunnels QoS-Flow-Mapping-List OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { Data-Forwarding-Information-Request-ExtIEs } } OPTIONAL,

...

}

Data-Forwarding-Information-Request-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

Data-Forwarding-Information ::= SEQUENCE {

uL-Data-Forwarding UP-TNL-Information OPTIONAL,

dL-Data-Forwarding UP-TNL-Information OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { Data-Forwarding-Information-ExtIEs } } OPTIONAL,

...

}

Data-Forwarding-Information-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

Data-Forwarding-Request ::= ENUMERATED {

uL,

dL,

both,

...

}

DataForwardingtoE-UTRANInformationList ::= SEQUENCE (SIZE(1.. maxnoofDataForwardingTunneltoE-UTRAN)) OF DataForwardingtoE-UTRANInformationListItem

DataForwardingtoE-UTRANInformationListItem ::= SEQUENCE {

data-forwarding-tunnel-information  UP-TNL-Information,

qoS-Flows-to-be-forwarded-List QoS-Flows-to-be-forwarded-List,

iE-Extensions ProtocolExtensionContainer { { DataForwardingtoE-UTRANInformationListItem-ExtIEs} } OPTIONAL,

...

}

DataForwardingtoE-UTRANInformationListItem-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

Data-Usage-per-PDU-Session-Report ::= SEQUENCE {

secondaryRATType ENUMERATED {nR, e-UTRA, ...},

pDU-session-Timed-Report-List SEQUENCE (SIZE(1..maxnooftimeperiods)) OF MRDC-Data-Usage-Report-Item,

iE-Extensions ProtocolExtensionContainer { { Data-Usage-per-PDU-Session-Report-ExtIEs} } OPTIONAL,

...

}

Data-Usage-per-PDU-Session-Report-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

Data-Usage-per-QoS-Flow-List ::= SEQUENCE (SIZE(1..maxnoofQoSFlows)) OF Data-Usage-per-QoS-Flow-Item

Data-Usage-per-QoS-Flow-Item ::= SEQUENCE {

qoS-Flow-Identifier QoS-Flow-Identifier,

secondaryRATType ENUMERATED {nR, e-UTRA, ...},

qoS-Flow-Timed-Report-List SEQUENCE (SIZE(1..maxnooftimeperiods)) OF MRDC-Data-Usage-Report-Item,

iE-Extensions ProtocolExtensionContainer { { Data-Usage-per-QoS-Flow-Item-ExtIEs} } OPTIONAL,

...

}

Data-Usage-per-QoS-Flow-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

Data-Usage-Report-List ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF Data-Usage-Report-Item

Data-Usage-Report-Item ::= SEQUENCE {

dRB-ID DRB-ID,

rAT-Type RAT-Type,

dRB-Usage-Report-List DRB-Usage-Report-List,

iE-Extensions ProtocolExtensionContainer { { Data-Usage-Report-ItemExtIEs } } OPTIONAL,

...

}

Data-Usage-Report-ItemExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DefaultDRB ::= ENUMERATED {

true,

false,

...

}

DiscardTimer ::= ENUMERATED {ms10, ms20, ms30, ms40, ms50, ms60, ms75, ms100, ms150, ms200, ms250, ms300, ms500, ms750, ms1500, infinity}

DLDiscarding ::= SEQUENCE {

dLDiscardingCountVal PDCP-Count,

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

}

DLDiscarding-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DLUPTNLAddressToUpdateItem ::= SEQUENCE {

oldTNLAdress TransportLayerAddress,

newTNLAdress TransportLayerAddress,

iE-Extensions ProtocolExtensionContainer { { DLUPTNLAddressToUpdateItemExtIEs } } OPTIONAL,

...

}

DLUPTNLAddressToUpdateItemExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DL-TX-Stop ::= ENUMERATED {

stop,

resume,

...

}

DRB-Activity ::= ENUMERATED {

active,

not-active,

...

}

DRB-Activity-List ::= SEQUENCE (SIZE(1..maxnoofDRBs)) OF DRB-Activity-Item

DRB-Activity-Item ::= SEQUENCE {

dRB-ID DRB-ID,

dRB-Activity DRB-Activity,

iE-Extensions ProtocolExtensionContainer { { DRB-Activity-ItemExtIEs } } OPTIONAL,

...

}

DRB-Activity-ItemExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-Confirm-Modified-List-EUTRAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-Confirm-Modified-Item-EUTRAN

DRB-Confirm-Modified-Item-EUTRAN ::= SEQUENCE {

dRB-ID DRB-ID,

cell-Group-Information Cell-Group-Information OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { DRB-Confirm-Modified-Item-EUTRAN-ExtIEs } } OPTIONAL,

...

}

DRB-Confirm-Modified-Item-EUTRAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-Confirm-Modified-List-NG-RAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-Confirm-Modified-Item-NG-RAN

DRB-Confirm-Modified-Item-NG-RAN ::= SEQUENCE {

dRB-ID DRB-ID,

cell-Group-Information Cell-Group-Information OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { DRB-Confirm-Modified-Item-NG-RAN-ExtIEs } } OPTIONAL,

...

}

DRB-Confirm-Modified-Item-NG-RAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-Failed-List-EUTRAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-Failed-Item-EUTRAN

DRB-Failed-Item-EUTRAN ::= SEQUENCE {

dRB-ID DRB-ID,

cause Cause,

iE-Extensions ProtocolExtensionContainer { { DRB-Failed-Item-EUTRAN-ExtIEs } } OPTIONAL,

...

}

DRB-Failed-Item-EUTRAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-Failed-Mod-List-EUTRAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-Failed-Mod-Item-EUTRAN

DRB-Failed-Mod-Item-EUTRAN ::= SEQUENCE {

dRB-ID DRB-ID,

cause Cause,

iE-Extensions ProtocolExtensionContainer { { DRB-Failed-Mod-Item-EUTRAN-ExtIEs } } OPTIONAL,

...

}

DRB-Failed-Mod-Item-EUTRAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-Failed-List-NG-RAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-Failed-Item-NG-RAN

DRB-Failed-Item-NG-RAN ::= SEQUENCE {

dRB-ID DRB-ID,

cause Cause,

iE-Extensions ProtocolExtensionContainer { { DRB-Failed-Item-NG-RAN-ExtIEs } } OPTIONAL,

...

}

DRB-Failed-Item-NG-RAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-Failed-Mod-List-NG-RAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-Failed-Mod-Item-NG-RAN

DRB-Failed-Mod-Item-NG-RAN ::= SEQUENCE {

dRB-ID DRB-ID,

cause Cause,

iE-Extensions ProtocolExtensionContainer { { DRB-Failed-Mod-Item-NG-RAN-ExtIEs } } OPTIONAL,

...

}

DRB-Failed-Mod-Item-NG-RAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-Failed-To-Modify-List-EUTRAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-Failed-To-Modify-Item-EUTRAN

DRB-Failed-To-Modify-Item-EUTRAN ::= SEQUENCE {

dRB-ID DRB-ID,

cause Cause,

iE-Extensions ProtocolExtensionContainer { { DRB-Failed-To-Modify-Item-EUTRAN-ExtIEs } } OPTIONAL,

...

}

DRB-Failed-To-Modify-Item-EUTRAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-Failed-To-Modify-List-NG-RAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-Failed-To-Modify-Item-NG-RAN

DRB-Failed-To-Modify-Item-NG-RAN ::= SEQUENCE {

dRB-ID DRB-ID,

cause Cause,

iE-Extensions ProtocolExtensionContainer { { DRB-Failed-To-Modify-Item-NG-RAN-ExtIEs } } OPTIONAL,

...

}

DRB-Failed-To-Modify-Item-NG-RAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-ID ::= INTEGER (1..32, ...)

DRB-Measurement-Results-Information-List ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-Measurement-Results-Information-Item

DRB-Measurement-Results-Information-Item ::= SEQUENCE {

dRB-ID DRB-ID,

uL-D1-Result INTEGER (0..10000, ...) OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { DRB-Measurement-Results-Information-Item-ExtIEs } } OPTIONAL,

...

}

DRB-Measurement-Results-Information-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-Modified-List-EUTRAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-Modified-Item-EUTRAN

DRB-Modified-Item-EUTRAN ::= SEQUENCE {

dRB-ID DRB-ID,

s1-DL-UP-TNL-Information UP-TNL-Information OPTIONAL,

pDCP-SN-Status-Information PDCP-SN-Status-Information OPTIONAL,

uL-UP-Transport-Parameters UP-Parameters OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { DRB-Modified-Item-EUTRAN-ExtIEs } } OPTIONAL,

...

}

DRB-Modified-Item-EUTRAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-Modified-List-NG-RAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-Modified-Item-NG-RAN

DRB-Modified-Item-NG-RAN ::= SEQUENCE {

dRB-ID DRB-ID,

uL-UP-Transport-Parameters UP-Parameters OPTIONAL,

pDCP-SN-Status-Information PDCP-SN-Status-Information OPTIONAL,

flow-Setup-List QoS-Flow-List OPTIONAL,

flow-Failed-List QoS-Flow-Failed-List OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { DRB-Modified-Item-NG-RAN-ExtIEs } } OPTIONAL,

...

}

DRB-Modified-Item-NG-RAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

{ID id-EarlyForwardingCOUNTInfo CRITICALITY reject EXTENSION EarlyForwardingCOUNTInfo PRESENCE optional}|

{ID id-OldQoSFlowMap-ULendmarkerexpected CRITICALITY ignore EXTENSION QoS-Flow-List PRESENCE optional},

...

}

DRB-Removed-Item ::= SEQUENCE {

dRB-ID DRB-ID,

dRB-Released-In-Session ENUMERATED {released-in-session, not-released-in-session, ...} OPTIONAL,

dRB-Accumulated-Session-Time OCTET STRING (SIZE(5)) OPTIONAL,

qoS-Flow-Removed-List SEQUENCE (SIZE(1.. maxnoofQoSFlows)) OF QoS-Flow-Removed-Item OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { DRB-Removed-Item-ExtIEs } } OPTIONAL,

...

}

DRB-Removed-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-Required-To-Modify-List-EUTRAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-Required-To-Modify-Item-EUTRAN

DRB-Required-To-Modify-Item-EUTRAN ::= SEQUENCE {

dRB-ID DRB-ID,

s1-DL-UP-TNL-Information UP-TNL-Information OPTIONAL,

gNB-CU-UP-CellGroupRelatedConfiguration GNB-CU-UP-CellGroupRelatedConfiguration OPTIONAL,

cause Cause OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { DRB-Required-To-Modify-Item-EUTRAN-ExtIEs } } OPTIONAL,

...

}

DRB-Required-To-Modify-Item-EUTRAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-Required-To-Modify-List-NG-RAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-Required-To-Modify-Item-NG-RAN

DRB-Required-To-Modify-Item-NG-RAN ::= SEQUENCE {

dRB-ID DRB-ID,

gNB-CU-UP-CellGroupRelatedConfiguration GNB-CU-UP-CellGroupRelatedConfiguration OPTIONAL,

flow-To-Remove QoS-Flow-List OPTIONAL,

cause Cause OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { DRB-Required-To-Modify-Item-NG-RAN-ExtIEs } } OPTIONAL,

...

}

DRB-Required-To-Modify-Item-NG-RAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-Setup-List-EUTRAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-Setup-Item-EUTRAN

DRB-Setup-Item-EUTRAN ::= SEQUENCE {

dRB-ID DRB-ID,

s1-DL-UP-TNL-Information UP-TNL-Information,

data-Forwarding-Information-Response Data-Forwarding-Information OPTIONAL,

uL-UP-Transport-Parameters UP-Parameters,

s1-DL-UP-Unchanged ENUMERATED {true, ...} OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { DRB-Setup-Item-EUTRAN-ExtIEs } } OPTIONAL,

...

}

DRB-Setup-Item-EUTRAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-Setup-Mod-List-EUTRAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-Setup-Mod-Item-EUTRAN

DRB-Setup-Mod-Item-EUTRAN ::= SEQUENCE {

dRB-ID DRB-ID,

s1-DL-UP-TNL-Information UP-TNL-Information,

data-Forwarding-Information-Response Data-Forwarding-Information OPTIONAL,

uL-UP-Transport-Parameters UP-Parameters,

iE-Extensions ProtocolExtensionContainer { { DRB-Setup-Mod-Item-EUTRAN-ExtIEs } } OPTIONAL,

...

}

DRB-Setup-Mod-Item-EUTRAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-Setup-List-NG-RAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-Setup-Item-NG-RAN

DRB-Setup-Item-NG-RAN ::= SEQUENCE {

dRB-ID DRB-ID,

dRB-data-Forwarding-Information-Response Data-Forwarding-Information OPTIONAL,

uL-UP-Transport-Parameters UP-Parameters,

flow-Setup-List QoS-Flow-List,

flow-Failed-List QoS-Flow-Failed-List OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { DRB-Setup-Item-NG-RAN-ExtIEs } } OPTIONAL,

...

}

DRB-Setup-Item-NG-RAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-Setup-Mod-List-NG-RAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-Setup-Mod-Item-NG-RAN

DRB-Setup-Mod-Item-NG-RAN ::= SEQUENCE {

dRB-ID DRB-ID,

dRB-data-Forwarding-Information-Response Data-Forwarding-Information OPTIONAL,

uL-UP-Transport-Parameters UP-Parameters,

flow-Setup-List QoS-Flow-List,

flow-Failed-List QoS-Flow-Failed-List OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { DRB-Setup-Mod-Item-NG-RAN-ExtIEs } } OPTIONAL,

...

}

DRB-Setup-Mod-Item-NG-RAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-Status-Item ::= SEQUENCE {

dRB-ID DRB-ID,

pDCP-DL-Count PDCP-Count OPTIONAL,

pDCP-UL-Count PDCP-Count OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { DRB-Status-ItemExtIEs } } OPTIONAL,

...

}

DRB-Status-ItemExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRBs-Subject-To-Counter-Check-List-EUTRAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRBs-Subject-To-Counter-Check-Item-EUTRAN

DRBs-Subject-To-Counter-Check-Item-EUTRAN ::= SEQUENCE {

dRB-ID DRB-ID,

pDCP-UL-Count PDCP-Count,

pDCP-DL-Count PDCP-Count,

iE-Extensions ProtocolExtensionContainer { { DRBs-Subject-To-Counter-Check-Item-EUTRAN-ExtIEs } } OPTIONAL,

...

}

DRBs-Subject-To-Counter-Check-Item-EUTRAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRBs-Subject-To-Counter-Check-List-NG-RAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRBs-Subject-To-Counter-Check-Item-NG-RAN

DRBs-Subject-To-Counter-Check-Item-NG-RAN ::= SEQUENCE {

pDU-Session-ID PDU-Session-ID,

dRB-ID DRB-ID,

pDCP-UL-Count PDCP-Count,

pDCP-DL-Count PDCP-Count,

iE-Extensions ProtocolExtensionContainer { { DRBs-Subject-To-Counter-Check-Item-NG-RAN-ExtIEs } } OPTIONAL,

...

}

DRBs-Subject-To-Counter-Check-Item-NG-RAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRBs-Subject-To-Early-Forwarding-List ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRBs-Subject-To-Early-Forwarding-Item

DRBs-Subject-To-Early-Forwarding-Item ::= SEQUENCE {

dRB-ID DRB-ID,

dLCountValue PDCP-Count,

iE-Extensions ProtocolExtensionContainer { { DRBs-Subject-To-Early-Forwarding-Item-ExtIEs } } OPTIONAL,

...

}

DRBs-Subject-To-Early-Forwarding-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-To-Modify-List-EUTRAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-To-Modify-Item-EUTRAN

DRB-To-Modify-Item-EUTRAN ::= SEQUENCE {

dRB-ID DRB-ID,

pDCP-Configuration PDCP-Configuration OPTIONAL,

eUTRAN-QoS EUTRAN-QoS OPTIONAL,

s1-UL-UP-TNL-Information UP-TNL-Information OPTIONAL,

data-Forwarding-Information Data-Forwarding-Information OPTIONAL,

pDCP-SN-Status-Request PDCP-SN-Status-Request OPTIONAL,

pDCP-SN-Status-Information PDCP-SN-Status-Information OPTIONAL,

dL-UP-Parameters UP-Parameters OPTIONAL,

cell-Group-To-Add Cell-Group-Information OPTIONAL,

cell-Group-To-Modify Cell-Group-Information OPTIONAL,

cell-Group-To-Remove Cell-Group-Information OPTIONAL,

dRB-Inactivity-Timer Inactivity-Timer OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { DRB-To-Modify-Item-EUTRAN-ExtIEs } } OPTIONAL,

...

}

DRB-To-Modify-Item-EUTRAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-To-Modify-List-NG-RAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-To-Modify-Item-NG-RAN

DRB-To-Modify-Item-NG-RAN ::= SEQUENCE {

dRB-ID DRB-ID,

sDAP-Configuration SDAP-Configuration OPTIONAL,

pDCP-Configuration PDCP-Configuration OPTIONAL,

dRB-Data-Forwarding-Information Data-Forwarding-Information OPTIONAL,

pDCP-SN-Status-Request PDCP-SN-Status-Request OPTIONAL,

pdcp-SN-Status-Information PDCP-SN-Status-Information OPTIONAL,

dL-UP-Parameters UP-Parameters OPTIONAL,

cell-Group-To-Add Cell-Group-Information OPTIONAL,

cell-Group-To-Modify Cell-Group-Information OPTIONAL,

cell-Group-To-Remove Cell-Group-Information OPTIONAL,

flow-Mapping-Information QoS-Flow-QoS-Parameter-List OPTIONAL,

dRB-Inactivity-Timer Inactivity-Timer OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { DRB-To-Modify-Item-NG-RAN-ExtIEs } } OPTIONAL,

...

}

DRB-To-Modify-Item-NG-RAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

{ID id-OldQoSFlowMap-ULendmarkerexpected CRITICALITY reject EXTENSION QoS-Flow-List PRESENCE optional}|

{ID id-DRB-QoS CRITICALITY ignore EXTENSION QoSFlowLevelQoSParameters PRESENCE optional}|

{ID id-EarlyForwardingCOUNTReq CRITICALITY reject EXTENSION EarlyForwardingCOUNTReq PRESENCE optional}|

{ID id-EarlyForwardingCOUNTInfo CRITICALITY reject EXTENSION EarlyForwardingCOUNTInfo PRESENCE optional},

...

}

DRB-To-Remove-List-EUTRAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-To-Remove-Item-EUTRAN

DRB-To-Remove-Item-EUTRAN ::= SEQUENCE {

dRB-ID DRB-ID,

iE-Extensions ProtocolExtensionContainer { { DRB-To-Remove-Item-EUTRAN-ExtIEs } } OPTIONAL,

...

}

DRB-To-Remove-Item-EUTRAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-Required-To-Remove-List-EUTRAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-Required-To-Remove-Item-EUTRAN

DRB-Required-To-Remove-Item-EUTRAN ::= SEQUENCE {

dRB-ID DRB-ID,

cause Cause,

iE-Extensions ProtocolExtensionContainer { { DRB-Required-To-Remove-Item-EUTRAN-ExtIEs } } OPTIONAL,

...

}

DRB-Required-To-Remove-Item-EUTRAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-To-Remove-List-NG-RAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-To-Remove-Item-NG-RAN

DRB-To-Remove-Item-NG-RAN ::= SEQUENCE {

dRB-ID DRB-ID,

iE-Extensions ProtocolExtensionContainer { { DRB-To-Remove-Item-NG-RAN-ExtIEs } } OPTIONAL,

...

}

DRB-To-Remove-Item-NG-RAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-Required-To-Remove-List-NG-RAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-Required-To-Remove-Item-NG-RAN

DRB-Required-To-Remove-Item-NG-RAN ::= SEQUENCE {

dRB-ID DRB-ID,

cause Cause,

iE-Extensions ProtocolExtensionContainer { { DRB-Required-To-Remove-Item-NG-RAN-ExtIEs } } OPTIONAL,

...

}

DRB-Required-To-Remove-Item-NG-RAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-To-Setup-List-EUTRAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-To-Setup-Item-EUTRAN

DRB-To-Setup-Item-EUTRAN ::= SEQUENCE {

dRB-ID DRB-ID,

pDCP-Configuration PDCP-Configuration,

eUTRAN-QoS EUTRAN-QoS,

s1-UL-UP-TNL-Information UP-TNL-Information,

data-Forwarding-Information-Request Data-Forwarding-Information-Request OPTIONAL,

cell-Group-Information Cell-Group-Information,

dL-UP-Parameters UP-Parameters OPTIONAL,

dRB-Inactivity-Timer Inactivity-Timer OPTIONAL,

existing-Allocated-S1-DL-UP-TNL-Info UP-TNL-Information OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { DRB-To-Setup-Item-EUTRAN-ExtIEs } } OPTIONAL,

...

}

DRB-To-Setup-Item-EUTRAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-To-Setup-Mod-List-EUTRAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-To-Setup-Mod-Item-EUTRAN

DRB-To-Setup-Mod-Item-EUTRAN ::= SEQUENCE {

dRB-ID DRB-ID,

pDCP-Configuration PDCP-Configuration,

eUTRAN-QoS EUTRAN-QoS,

s1-UL-UP-TNL-Information UP-TNL-Information,

data-Forwarding-Information-Request Data-Forwarding-Information-Request OPTIONAL,

cell-Group-Information Cell-Group-Information,

dL-UP-Parameters UP-Parameters OPTIONAL,

dRB-Inactivity-Timer Inactivity-Timer OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { DRB-To-Setup-Mod-Item-EUTRAN-ExtIEs } } OPTIONAL,

...

}

DRB-To-Setup-Mod-Item-EUTRAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRB-To-Setup-List-NG-RAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-To-Setup-Item-NG-RAN

DRB-To-Setup-Item-NG-RAN ::= SEQUENCE {

dRB-ID DRB-ID,

sDAP-Configuration SDAP-Configuration,

pDCP-Configuration PDCP-Configuration,

cell-Group-Information Cell-Group-Information,

qos-flow-Information-To-Be-Setup QoS-Flow-QoS-Parameter-List,

dRB-Data-Forwarding-Information-Request Data-Forwarding-Information-Request OPTIONAL,

dRB-Inactivity-Timer Inactivity-Timer OPTIONAL,

pDCP-SN-Status-Information PDCP-SN-Status-Information OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { DRB-To-Setup-Item-NG-RAN-ExtIEs } } OPTIONAL,

...

}

DRB-To-Setup-Item-NG-RAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

{ID id-DRB-QoS CRITICALITY ignore EXTENSION QoSFlowLevelQoSParameters PRESENCE optional}|

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

...

}

DRB-To-Setup-Mod-List-NG-RAN ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-To-Setup-Mod-Item-NG-RAN

DRB-To-Setup-Mod-Item-NG-RAN ::= SEQUENCE {

dRB-ID DRB-ID,

sDAP-Configuration SDAP-Configuration,

pDCP-Configuration PDCP-Configuration,

cell-Group-Information Cell-Group-Information,

flow-Mapping-Information QoS-Flow-QoS-Parameter-List,

dRB-Data-Forwarding-Information-Request Data-Forwarding-Information-Request OPTIONAL,

dRB-Inactivity-Timer Inactivity-Timer OPTIONAL,

pDCP-SN-Status-Information PDCP-SN-Status-Information OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { DRB-To-Setup-Mod-Item-NG-RAN-ExtIEs } } OPTIONAL,

...

}

DRB-To-Setup-Mod-Item-NG-RAN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

{ID id-DRB-QoS CRITICALITY ignore EXTENSION QoSFlowLevelQoSParameters PRESENCE optional},

...

}

DRB-Usage-Report-List ::= SEQUENCE (SIZE(1..maxnooftimeperiods)) OF DRB-Usage-Report-Item

DRB-Usage-Report-Item ::= SEQUENCE {

startTimeStamp OCTET STRING (SIZE(4)),

endTimeStamp OCTET STRING (SIZE(4)),

usageCountUL INTEGER (0..18446744073709551615),

usageCountDL INTEGER (0..18446744073709551615),

iE-Extensions ProtocolExtensionContainer { { DRB-Usage-Report-Item-ExtIEs} } OPTIONAL,

...

}

DRB-Usage-Report-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

Duplication-Activation ::= ENUMERATED {

active,

inactive,

...

}

Dynamic5QIDescriptor ::= SEQUENCE {

qoSPriorityLevel QoSPriorityLevel,

packetDelayBudget PacketDelayBudget,

packetErrorRate PacketErrorRate,

fiveQI INTEGER (0..255, ...) OPTIONAL,

delayCritical ENUMERATED {delay-critical, non-delay-critical} OPTIONAL,

averagingWindow AveragingWindow OPTIONAL,

maxDataBurstVolume MaxDataBurstVolume OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { Dynamic5QIDescriptor-ExtIEs } } OPTIONAL

}

Dynamic5QIDescriptor-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

{ ID id-ExtendedPacketDelayBudget CRITICALITY ignore EXTENSION ExtendedPacketDelayBudget PRESENCE optional }|

{ ID id-CNPacketDelayBudgetDownlink CRITICALITY ignore EXTENSION ExtendedPacketDelayBudget PRESENCE optional }|

{ ID id-CNPacketDelayBudgetUplink CRITICALITY ignore EXTENSION ExtendedPacketDelayBudget PRESENCE optional },

...

}

DataDiscardRequired ::= ENUMERATED {

required,

...

}

-- E

EarlyForwardingCOUNTInfo ::= CHOICE {

firstDLCount FirstDLCount,

dLDiscardingCount DLDiscarding,

choice-Extension ProtocolIE-SingleContainer { { EarlyForwardingCOUNTInfo-ExtIEs} }

}

EarlyForwardingCOUNTInfo-ExtIEs E1AP-PROTOCOL-IES ::= {

...

}

EarlyForwardingCOUNTReq ::= ENUMERATED { first-dl-count, dl-discarding, ...}

EHC-Common-Parameters ::= SEQUENCE {

ehc-CID-Length ENUMERATED { bits7, bits15, ...},

iE-Extensions ProtocolExtensionContainer { { EHC-Common-Parameters-ExtIEs } } OPTIONAL

}

EHC-Common-Parameters-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

EHC-Downlink-Parameters ::= SEQUENCE {

drb-ContinueEHC-DL ENUMERATED { true, ...},

iE-Extensions ProtocolExtensionContainer { { EHC-Downlink-Parameters-ExtIEs } } OPTIONAL

}

EHC-Downlink-Parameters-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

EHC-Uplink-Parameters ::= SEQUENCE {

drb-ContinueEHC-UL ENUMERATED { true, ...},

iE-Extensions ProtocolExtensionContainer { { EHC-Uplink-Parameters-ExtIEs } } OPTIONAL

}

EHC-Uplink-Parameters-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

EHC-Parameters ::= SEQUENCE {

ehc-Common EHC-Common-Parameters,

ehc-Downlink EHC-Downlink-Parameters OPTIONAL,

ehc-Uplink EHC-Uplink-Parameters OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { EHC-Parameters-ExtIEs } } OPTIONAL

}

EHC-Parameters-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

EncryptionKey ::= OCTET STRING

Endpoint-IP-address-and-port::= SEQUENCE {

endpoint-IP-Address TransportLayerAddress,

portNumber PortNumber,

iE-Extensions ProtocolExtensionContainer { { Endpoint-IP-address-and-port-ExtIEs} } OPTIONAL

}

Endpoint-IP-address-and-port-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

EUTRANAllocationAndRetentionPriority ::= SEQUENCE {

priorityLevel PriorityLevel,

pre-emptionCapability Pre-emptionCapability,

pre-emptionVulnerability Pre-emptionVulnerability,

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

...

}

ExtendedPacketDelayBudget ::= INTEGER (1..65535, ...)

EUTRANAllocationAndRetentionPriority-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

EUTRAN-QoS-Support-List ::= SEQUENCE (SIZE(1.. maxnoofEUTRANQOSParameters)) OF EUTRAN-QoS-Support-Item

EUTRAN-QoS-Support-Item ::= SEQUENCE {

eUTRAN-QoS EUTRAN-QoS,

iE-Extensions ProtocolExtensionContainer { { EUTRAN-QoS-Support-Item-ExtIEs } } OPTIONAL

}

EUTRAN-QoS-Support-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

EUTRAN-QoS ::= SEQUENCE {

qCI QCI,

eUTRANallocationAndRetentionPriority EUTRANAllocationAndRetentionPriority,

gbrQosInformation GBR-QosInformation OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { EUTRAN-QoS-ExtIEs } } OPTIONAL,

...

}

EUTRAN-QoS-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

ExtendedSliceSupportList ::= SEQUENCE (SIZE(1.. maxnoofExtSliceItems)) OF Slice-Support-Item

-- F

FirstDLCount ::= SEQUENCE {

firstDLCountVal PDCP-Count,

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

}

FirstDLCount-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

-- G

GNB-CU-CP-Name ::= PrintableString(SIZE(1..150,...))

Extended-GNB-CU-CP-Name ::= SEQUENCE {

gNB-CU-CP-NameVisibleString GNB-CU-CP-NameVisibleString OPTIONAL,

gNB-CU-CP-NameUTF8String GNB-CU-CP-NameUTF8String OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { Extended-GNB-CU-CP-Name-ExtIEs } } OPTIONAL,

...

}

Extended-GNB-CU-CP-Name-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

GNB-CU-CP-NameVisibleString ::= VisibleString(SIZE(1..150,...))

GNB-CU-CP-NameUTF8String ::= UTF8String(SIZE(1..150,...))

GNB-CU-CP-UE-E1AP-ID ::= INTEGER (0..4294967295)

GNB-CU-UP-Capacity ::= INTEGER (0..255)

GNB-CU-UP-CellGroupRelatedConfiguration ::= SEQUENCE (SIZE(1.. maxnoofUPParameters)) OF GNB-CU-UP-CellGroupRelatedConfiguration-Item

GNB-CU-UP-CellGroupRelatedConfiguration-Item ::= SEQUENCE {

cell-Group-ID Cell-Group-ID,

uP-TNL-Information UP-TNL-Information,

uL-Configuration UL-Configuration OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {GNB-CU-UP-CellGroupRelatedConfiguration-Item-ExtIEs } } OPTIONAL

}

GNB-CU-UP-CellGroupRelatedConfiguration-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

GNB-CU-UP-ID ::= INTEGER (0..68719476735)

GNB-CU-UP-Name ::= PrintableString(SIZE(1..150,...))

Extended-GNB-CU-UP-Name ::= SEQUENCE {

gNB-CU-UP-NameVisibleString GNB-CU-UP-NameVisibleString OPTIONAL,

gNB-CU-UP-NameUTF8String GNB-CU-UP-NameUTF8String OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { Extended-GNB-CU-UP-Name-ExtIEs } } OPTIONAL,

...

}

Extended-GNB-CU-UP-Name-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

GNB-CU-UP-NameVisibleString ::= VisibleString(SIZE(1..150,...))

GNB-CU-UP-NameUTF8String ::= UTF8String(SIZE(1..150,...))

GNB-CU-UP-UE-E1AP-ID ::= INTEGER (0..4294967295)

GNB-CU-CP-TNLA-Setup-Item::= SEQUENCE {

tNLAssociationTransportLayerAddress CP-TNL-Information,

iE-Extensions ProtocolExtensionContainer { { GNB-CU-CP-TNLA-Setup-Item-ExtIEs} } OPTIONAL,

...

}

GNB-CU-CP-TNLA-Setup-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

GNB-CU-CP-TNLA-Failed-To-Setup-Item ::= SEQUENCE {

tNLAssociationTransportLayerAddress CP-TNL-Information,

cause Cause,

iE-Extensions ProtocolExtensionContainer { { GNB-CU-CP-TNLA-Failed-To-Setup-Item-ExtIEs} } OPTIONAL

}

GNB-CU-CP-TNLA-Failed-To-Setup-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

GNB-CU-CP-TNLA-To-Add-Item ::= SEQUENCE {

tNLAssociationTransportLayerAddress CP-TNL-Information,

tNLAssociationUsage TNLAssociationUsage,

iE-Extensions ProtocolExtensionContainer { { GNB-CU-CP-TNLA-To-Add-Item-ExtIEs} } OPTIONAL

}

GNB-CU-CP-TNLA-To-Add-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

GNB-CU-CP-TNLA-To-Remove-Item::= SEQUENCE {

tNLAssociationTransportLayerAddress CP-TNL-Information,

iE-Extensions ProtocolExtensionContainer { { GNB-CU-CP-TNLA-To-Remove-Item-ExtIEs} } OPTIONAL

}

GNB-CU-CP-TNLA-To-Remove-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

{ID id-TNLAssociationTransportLayerAddressgNBCUUP CRITICALITY reject EXTENSION CP-TNL-Information PRESENCE optional},

...

}

GNB-CU-CP-TNLA-To-Update-Item::= SEQUENCE {

tNLAssociationTransportLayerAddress CP-TNL-Information,

tNLAssociationUsage TNLAssociationUsage OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { GNB-CU-CP-TNLA-To-Update-Item-ExtIEs} } OPTIONAL

}

GNB-CU-CP-TNLA-To-Update-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

GNB-CU-UP-TNLA-To-Remove-Item::= SEQUENCE {

tNLAssociationTransportLayerAddress CP-TNL-Information,

tNLAssociationTransportLayerAddressgNBCUCP CP-TNL-Information OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { GNB-CU-UP-TNLA-To-Remove-Item-ExtIEs} } OPTIONAL

}

GNB-CU-UP-TNLA-To-Remove-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

GBR-QosInformation ::= SEQUENCE {

e-RAB-MaximumBitrateDL BitRate,

e-RAB-MaximumBitrateUL BitRate,

e-RAB-GuaranteedBitrateDL BitRate,

e-RAB-GuaranteedBitrateUL BitRate,

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

...

}

GBR-QosInformation-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

GBR-QoSFlowInformation::= SEQUENCE {

maxFlowBitRateDownlink BitRate,

maxFlowBitRateUplink BitRate,

guaranteedFlowBitRateDownlink BitRate,

guaranteedFlowBitRateUplink BitRate,

maxPacketLossRateDownlink MaxPacketLossRate OPTIONAL,

maxPacketLossRateUplink MaxPacketLossRate OPTIONAL,

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

...

}

GBR-QosFlowInformation-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

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

...

}

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

GTPTLAs ::= SEQUENCE (SIZE(1.. maxnoofGTPTLAs)) OF GTPTLA-Item

GTPTLA-Item ::= SEQUENCE {

gTPTransportLayerAddresses TransportLayerAddress,

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

...

}

GTPTLA-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

GTPTunnel ::= SEQUENCE {

transportLayerAddress TransportLayerAddress,

gTP-TEID GTP-TEID,

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

...

}

GTPTunnel-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

GNB-CU-UP-OverloadInformation ::= ENUMERATED {overloaded, not-overloaded}

GNB-DU-ID ::= INTEGER (0..68719476735)

-- H

HFN ::= INTEGER (0..4294967295)

HW-CapacityIndicator ::= SEQUENCE {

offeredThroughput INTEGER (1..16777216, ...),

availableThroughput INTEGER (0..100, ...),

iE-Extensions ProtocolExtensionContainer { { HW-CapacityIndicator-ExtIEs } },

...

}

HW-CapacityIndicator-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

-- I

IntegrityProtectionIndication ::= ENUMERATED {

required,

preferred,

not-needed,

...

}

IntegrityProtectionAlgorithm ::= ENUMERATED {

nIA0,

i-128-NIA1,

i-128-NIA2,

i-128-NIA3,

...

}

IntegrityProtectionKey ::= OCTET STRING

IntegrityProtectionResult ::= ENUMERATED {

performed,

not-performed,

...

}

Inactivity-Timer ::= INTEGER (1..7200, ...)

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

ImmediateMDT ::= SEQUENCE {

measurementsToActivate MeasurementsToActivate,

measurementFour M4Configuration OPTIONAL,

measurementSix M6Configuration OPTIONAL,

measurementSeven M7Configuration OPTIONAL,

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

...

}

ImmediateMDT-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

-- J

-- K

-- L

Links-to-log ::= ENUMERATED {

uplink,

downlink,

both-uplink-and-downlink,

...

}

-- M

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

MaximumIPdatarate ::= SEQUENCE {

maxIPrate MaxIPrate,

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

...

}

MaximumIPdatarate-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

MaxIPrate ::= ENUMERATED {

bitrate64kbs,

max-UErate,

...

}

MaxPacketLossRate ::= INTEGER (0..1000, ...)

MRDC-Data-Usage-Report-Item ::= SEQUENCE {

startTimeStamp OCTET STRING (SIZE(4)),

endTimeStamp OCTET STRING (SIZE(4)),

usageCountUL INTEGER (0..18446744073709551615),

usageCountDL INTEGER (0..18446744073709551615),

iE-Extensions ProtocolExtensionContainer { { MRDC-Data-Usage-Report-Item-ExtIEs} } OPTIONAL,

...

}

MRDC-Data-Usage-Report-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

MRDC-Usage-Information ::= SEQUENCE {

data-Usage-per-PDU-Session-Report Data-Usage-per-PDU-Session-Report OPTIONAL,

data-Usage-per-QoS-Flow-List Data-Usage-per-QoS-Flow-List OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { MRDC-Usage-Information-ExtIEs} } OPTIONAL,

...

}

MRDC-Usage-Information-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

M4Configuration ::= SEQUENCE {

m4period M4period,

m4-links-to-log Links-to-log,

iE-Extensions ProtocolExtensionContainer { { M4Configuration-ExtIEs} } OPTIONAL,

...

}

M4Configuration-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

M4period ::= ENUMERATED {ms1024, ms2048, ms5120, ms10240, min1, ... }

M6Configuration ::= SEQUENCE {

m6report-Interval M6report-Interval,

m6-links-to-log Links-to-log,

iE-Extensions ProtocolExtensionContainer { { M6Configuration-ExtIEs} } OPTIONAL,

...

}

M6Configuration-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

M6report-Interval ::= ENUMERATED { ms120, ms240, ms480, ms640, ms1024, ms2048, ms5120, ms10240, ms20480 ,ms40960, min1, min6, min12, min30, ... }

M7Configuration ::= SEQUENCE {

m7period M7period,

m7-links-to-log Links-to-log,

iE-Extensions ProtocolExtensionContainer { { M7Configuration-ExtIEs} } OPTIONAL,

...

}

M7Configuration-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

M7period ::= INTEGER(1..60, ...)

MDT-Activation ::= ENUMERATED {

immediate-MDT-only,

immediate-MDT-and-Trace,

...

}

MDT-Configuration ::= SEQUENCE {

mdt-Activation MDT-Activation,

mDTMode MDTMode,

iE-Extensions ProtocolExtensionContainer { { MDT-Configuration-ExtIEs} } OPTIONAL,

...

}

MDT-Configuration-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

MDTMode ::= CHOICE {

immediateMDT ImmediateMDT,

choice-extension ProtocolIE-SingleContainer {{MDTMode-ExtIEs}}

}

MDTMode-ExtIEs E1AP-PROTOCOL-IES ::= {

...

}

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

MDTPLMNList ::= SEQUENCE (SIZE(1..maxnoofMDTPLMNs)) OF PLMN-Identity

-- N

NetworkInstance ::= INTEGER (1..256, ...)

New-UL-TNL-Information-Required::= ENUMERATED {

required,

...

}

NGRANAllocationAndRetentionPriority ::= SEQUENCE {

priorityLevel PriorityLevel,

pre-emptionCapability Pre-emptionCapability,

pre-emptionVulnerability Pre-emptionVulnerability,

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

}

NGRANAllocationAndRetentionPriority-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

NG-RAN-QoS-Support-List ::= SEQUENCE (SIZE(1.. maxnoofNGRANQOSParameters)) OF NG-RAN-QoS-Support-Item

NG-RAN-QoS-Support-Item ::= SEQUENCE {

non-Dynamic5QIDescriptor Non-Dynamic5QIDescriptor,

iE-Extensions ProtocolExtensionContainer { { NG-RAN-QoS-Support-Item-ExtIEs } } OPTIONAL

}

NG-RAN-QoS-Support-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

NID ::= BIT STRING (SIZE (44))

Non-Dynamic5QIDescriptor ::= SEQUENCE {

fiveQI INTEGER (0..255, ...),

qoSPriorityLevel QoSPriorityLevel OPTIONAL,

averagingWindow AveragingWindow OPTIONAL,

maxDataBurstVolume MaxDataBurstVolume OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { Non-Dynamic5QIDescriptor-ExtIEs } } OPTIONAL

}

Non-Dynamic5QIDescriptor-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

{ ID id-CNPacketDelayBudgetDownlink CRITICALITY ignore EXTENSION ExtendedPacketDelayBudget PRESENCE optional }|

{ ID id-CNPacketDelayBudgetUplink CRITICALITY ignore EXTENSION ExtendedPacketDelayBudget PRESENCE optional },

...

}

NPNSupportInfo ::= CHOICE {

sNPN NPNSupportInfo-SNPN,

choice-extension ProtocolIE-SingleContainer {{NPNSupportInfo-ExtIEs}}

}

NPNSupportInfo-ExtIEs E1AP-PROTOCOL-IES ::= {

...

}

NPNSupportInfo-SNPN ::= SEQUENCE {

nID NID,

iE-Extensions ProtocolExtensionContainer { { NPNSupportInfo-SNPN-ExtIEs } } OPTIONAL

}

NPNSupportInfo-SNPN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

NPNContextInfo ::= CHOICE {

sNPN NPNContextInfo-SNPN,

choice-extension ProtocolIE-SingleContainer {{NPNContextInfo-ExtIEs}}

}

NPNContextInfo-ExtIEs E1AP-PROTOCOL-IES ::= {

...

}

NPNContextInfo-SNPN ::= SEQUENCE {

nID NID,

iE-Extensions ProtocolExtensionContainer { {NPNContextInfo-SNPN-ExtIEs } } OPTIONAL

}

NPNContextInfo-SNPN-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

NR-Cell-Identity ::= BIT STRING (SIZE(36))

NR-CGI ::= SEQUENCE {

pLMN-Identity PLMN-Identity,

nR-Cell-Identity NR-Cell-Identity,

iE-Extensions ProtocolExtensionContainer { { NR-CGI-ExtIEs } } OPTIONAL

}

NR-CGI-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

NR-CGI-Support-List ::= SEQUENCE (SIZE(1.. maxnoofNRCGI)) OF NR-CGI-Support-Item

NR-CGI-Support-Item ::= SEQUENCE {

nR-CGI NR-CGI,

iE-Extensions ProtocolExtensionContainer { { NR-CGI-Support-Item-ExtIEs } } OPTIONAL

}

NR-CGI-Support-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

Extended-NR-CGI-Support-List ::= SEQUENCE (SIZE(1.. maxnoofExtNRCGI)) OF Extended-NR-CGI-Support-Item

Extended-NR-CGI-Support-Item ::= SEQUENCE {

nR-CGI NR-CGI,

iE-Extensions ProtocolExtensionContainer { { Extended-NR-CGI-Support-Item-ExtIEs } } OPTIONAL

}

Extended-NR-CGI-Support-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

-- O

OutOfOrderDelivery ::= ENUMERATED {

true,

...

}

-- P

PacketDelayBudget ::= INTEGER (0..1023, ...)

PacketErrorRate ::= SEQUENCE {

pER-Scalar PER-Scalar,

pER-Exponent PER-Exponent,

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

...

}

PacketErrorRate-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

PER-Scalar ::= INTEGER (0..9, ...)

PER-Exponent ::= INTEGER (0..9, ...)

PDCP-Configuration ::= SEQUENCE {

pDCP-SN-Size-UL PDCP-SN-Size,

pDCP-SN-Size-DL PDCP-SN-Size,

rLC-Mode RLC-Mode,

rOHC-Parameters ROHC-Parameters OPTIONAL,

t-ReorderingTimer T-ReorderingTimer OPTIONAL,

discardTimer DiscardTimer OPTIONAL,

uLDataSplitThreshold ULDataSplitThreshold OPTIONAL,

pDCP-Duplication PDCP-Duplication OPTIONAL,

pDCP-Reestablishment PDCP-Reestablishment OPTIONAL,

pDCP-DataRecovery PDCP-DataRecovery OPTIONAL,

duplication-Activation Duplication-Activation OPTIONAL,

outOfOrderDelivery OutOfOrderDelivery OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { PDCP-Configuration-ExtIEs } } OPTIONAL,

...

}

PDCP-Configuration-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

{ID id-PDCP-StatusReportIndication CRITICALITY ignore EXTENSION PDCP-StatusReportIndication PRESENCE optional}|

{ ID id-AdditionalPDCPduplicationInformation CRITICALITY ignore EXTENSION AdditionalPDCPduplicationInformation PRESENCE optional }|

{ ID id-EHC-Parameters CRITICALITY ignore EXTENSION EHC-Parameters PRESENCE optional},

...

}

PDCP-Count ::= SEQUENCE {

pDCP-SN PDCP-SN,

hFN HFN,

iE-Extensions ProtocolExtensionContainer { { PDCP-Count-ExtIEs } } OPTIONAL,

...

}

PDCP-Count-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

PDCP-SN-Status-Request ::= ENUMERATED {

requested,

...

}

PDCP-DataRecovery ::= ENUMERATED {

true,

...

}

PDCP-Duplication ::= ENUMERATED {

true,

...

}

PDCP-Reestablishment ::= ENUMERATED {

true,

...

}

PDU-Session-Resource-Data-Usage-List ::= SEQUENCE (SIZE(1.. maxnoofPDUSessionResource)) OF PDU-Session-Resource-Data-Usage-Item

PDU-Session-Resource-Data-Usage-Item ::= SEQUENCE {

pDU-Session-ID PDU-Session-ID,

mRDC-Usage-Information MRDC-Usage-Information,

iE-Extensions ProtocolExtensionContainer { { PDU-Session-Resource-Data-Usage-Item-ExtIEs } } OPTIONAL,

...

}

PDU-Session-Resource-Data-Usage-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

PDCP-SN ::= INTEGER (0..262143)

PDCP-SN-Size ::= ENUMERATED {

s-12,

s-18,

...

}

PDCP-SN-Status-Information ::= SEQUENCE {

pdcpStatusTransfer-UL DRBBStatusTransfer,

pdcpStatusTransfer-DL PDCP-Count,

iE-Extension ProtocolExtensionContainer { { PDCP-SN-Status-Information-ExtIEs} } OPTIONAL,

...

}

PDCP-StatusReportIndication ::= ENUMERATED {

downlink,

uplink,

both,

...

}

PDCP-SN-Status-Information-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

DRBBStatusTransfer ::= SEQUENCE {

receiveStatusofPDCPSDU BIT STRING (SIZE(1..131072)) OPTIONAL,

countValue PDCP-Count,

iE-Extension ProtocolExtensionContainer { {DRBBStatusTransfer-ExtIEs} } OPTIONAL,

...

}

DRBBStatusTransfer-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

PDU-Session-ID ::= INTEGER (0..255)

PDU-Session-Resource-Activity ::= ENUMERATED {

active,

not-active,

...

}

PDU-Session-Resource-Activity-List ::= SEQUENCE (SIZE(1.. maxnoofPDUSessionResource)) OF PDU-Session-Resource-Activity-Item

PDU-Session-Resource-Activity-Item ::= SEQUENCE {

pDU-Session-ID PDU-Session-ID,

pDU-Session-Resource-Activity PDU-Session-Resource-Activity,

iE-Extensions ProtocolExtensionContainer { { PDU-Session-Resource-Activity-ItemExtIEs } } OPTIONAL,

...

}

PDU-Session-Resource-Activity-ItemExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

PDU-Session-Resource-Confirm-Modified-List ::= SEQUENCE (SIZE(1.. maxnoofPDUSessionResource)) OF PDU-Session-Resource-Confirm-Modified-Item

PDU-Session-Resource-Confirm-Modified-Item ::= SEQUENCE {

pDU-Session-ID PDU-Session-ID,

dRB-Confirm-Modified-List-NG-RAN DRB-Confirm-Modified-List-NG-RAN OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { PDU-Session-Resource-Confirm-Modified-Item-ExtIEs } } OPTIONAL,

...

}

PDU-Session-Resource-Confirm-Modified-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

PDU-Session-Resource-Failed-List ::= SEQUENCE (SIZE(1.. maxnoofPDUSessionResource)) OF PDU-Session-Resource-Failed-Item

PDU-Session-Resource-Failed-Item ::= SEQUENCE {

pDU-Session-ID PDU-Session-ID,

cause Cause,

iE-Extensions ProtocolExtensionContainer { { PDU-Session-Resource-Failed-Item-ExtIEs } } OPTIONAL,

...

}

PDU-Session-Resource-Failed-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

PDU-Session-Resource-Failed-Mod-List ::= SEQUENCE (SIZE(1.. maxnoofPDUSessionResource)) OF PDU-Session-Resource-Failed-Mod-Item

PDU-Session-Resource-Failed-Mod-Item ::= SEQUENCE {

pDU-Session-ID PDU-Session-ID,

cause Cause,

iE-Extensions ProtocolExtensionContainer { { PDU-Session-Resource-Failed-Mod-Item-ExtIEs } } OPTIONAL,

...

}

PDU-Session-Resource-Failed-Mod-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

PDU-Session-Resource-Failed-To-Modify-List ::= SEQUENCE (SIZE(1.. maxnoofPDUSessionResource)) OF PDU-Session-Resource-Failed-To-Modify-Item

PDU-Session-Resource-Failed-To-Modify-Item ::= SEQUENCE {

pDU-Session-ID PDU-Session-ID,

cause Cause,

iE-Extensions ProtocolExtensionContainer { { PDU-Session-Resource-Failed-To-Modify-Item-ExtIEs } } OPTIONAL,

...

}

PDU-Session-Resource-Failed-To-Modify-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

PDU-Session-Resource-Modified-List ::= SEQUENCE (SIZE(1.. maxnoofPDUSessionResource)) OF PDU-Session-Resource-Modified-Item

PDU-Session-Resource-Modified-Item ::= SEQUENCE {

pDU-Session-ID PDU-Session-ID,

nG-DL-UP-TNL-Information UP-TNL-Information OPTIONAL,

securityResult SecurityResult OPTIONAL,

pDU-Session-Data-Forwarding-Information-Response Data-Forwarding-Information OPTIONAL,

dRB-Setup-List-NG-RAN DRB-Setup-List-NG-RAN OPTIONAL,

dRB-Failed-List-NG-RAN DRB-Failed-List-NG-RAN OPTIONAL,

dRB-Modified-List-NG-RAN DRB-Modified-List-NG-RAN OPTIONAL,

dRB-Failed-To-Modify-List-NG-RAN DRB-Failed-To-Modify-List-NG-RAN OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { PDU-Session-Resource-Modified-Item-ExtIEs } } OPTIONAL,

...

}

PDU-Session-Resource-Modified-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

{ ID id-redundant-nG-DL-UP-TNL-Information CRITICALITY ignore EXTENSION UP-TNL-Information PRESENCE optional },

...

}

PDU-Session-Resource-Required-To-Modify-List ::= SEQUENCE (SIZE(1.. maxnoofPDUSessionResource)) OF PDU-Session-Resource-Required-To-Modify-Item

PDU-Session-Resource-Required-To-Modify-Item ::= SEQUENCE {

pDU-Session-ID PDU-Session-ID,

nG-DL-UP-TNL-Information UP-TNL-Information OPTIONAL,

dRB-Required-To-Modify-List-NG-RAN DRB-Required-To-Modify-List-NG-RAN OPTIONAL,

dRB-Required-To-Remove-List-NG-RAN DRB-Required-To-Remove-List-NG-RAN OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { PDU-Session-Resource-Required-To-Modify-Item-ExtIEs } } OPTIONAL,

...

}

PDU-Session-Resource-Required-To-Modify-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

{ ID id-redundant-nG-DL-UP-TNL-Information CRITICALITY ignore EXTENSION UP-TNL-Information PRESENCE optional },

...

}

PDU-Session-Resource-Setup-List ::= SEQUENCE (SIZE(1.. maxnoofPDUSessionResource)) OF PDU-Session-Resource-Setup-Item

PDU-Session-Resource-Setup-Item ::= SEQUENCE {

pDU-Session-ID PDU-Session-ID,

securityResult SecurityResult OPTIONAL,

nG-DL-UP-TNL-Information UP-TNL-Information,

pDU-Session-Data-Forwarding-Information-Response Data-Forwarding-Information OPTIONAL,

nG-DL-UP-Unchanged ENUMERATED {true, ...} OPTIONAL,

dRB-Setup-List-NG-RAN DRB-Setup-List-NG-RAN,

dRB-Failed-List-NG-RAN DRB-Failed-List-NG-RAN OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { PDU-Session-Resource-Setup-Item-ExtIEs } } OPTIONAL,

...

}

PDU-Session-Resource-Setup-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

{ ID id-redundant-nG-DL-UP-TNL-Information CRITICALITY ignore EXTENSION UP-TNL-Information PRESENCE optional }|

{ ID id-RedundantPDUSessionInformation-used CRITICALITY ignore EXTENSION RedundantPDUSessionInformation PRESENCE optional },

...

}

PDU-Session-Resource-Setup-Mod-List ::= SEQUENCE (SIZE(1.. maxnoofPDUSessionResource)) OF PDU-Session-Resource-Setup-Mod-Item

PDU-Session-Resource-Setup-Mod-Item ::= SEQUENCE {

pDU-Session-ID PDU-Session-ID,

securityResult SecurityResult OPTIONAL,

nG-DL-UP-TNL-Information UP-TNL-Information,

pDU-Session-Data-Forwarding-Information-Response Data-Forwarding-Information OPTIONAL,

dRB-Setup-Mod-List-NG-RAN DRB-Setup-Mod-List-NG-RAN,

dRB-Failed-Mod-List-NG-RAN DRB-Failed-Mod-List-NG-RAN OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { PDU-Session-Resource-Setup-Mod-Item-ExtIEs } } OPTIONAL,

...

}

PDU-Session-Resource-Setup-Mod-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

{ ID id-redundant-nG-DL-UP-TNL-Information CRITICALITY ignore EXTENSION UP-TNL-Information PRESENCE optional },

...

}

PDU-Session-Resource-To-Modify-List ::= SEQUENCE (SIZE(1.. maxnoofPDUSessionResource)) OF PDU-Session-Resource-To-Modify-Item

PDU-Session-Resource-To-Modify-Item ::= SEQUENCE {

pDU-Session-ID PDU-Session-ID,

securityIndication SecurityIndication OPTIONAL,

pDU-Session-Resource-DL-AMBR BitRate OPTIONAL,

nG-UL-UP-TNL-Information UP-TNL-Information OPTIONAL,

pDU-Session-Data-Forwarding-Information-Request Data-Forwarding-Information-Request OPTIONAL,

pDU-Session-Data-Forwarding-Information Data-Forwarding-Information OPTIONAL,

pDU-Session-Inactivity-Timer Inactivity-Timer OPTIONAL,

networkInstance NetworkInstance OPTIONAL,

dRB-To-Setup-List-NG-RAN DRB-To-Setup-List-NG-RAN OPTIONAL,

dRB-To-Modify-List-NG-RAN DRB-To-Modify-List-NG-RAN OPTIONAL,

dRB-To-Remove-List-NG-RAN DRB-To-Remove-List-NG-RAN OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { PDU-Session-Resource-To-Modify-Item-ExtIEs } } OPTIONAL,

...

}

PDU-Session-Resource-To-Modify-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

{ID id-SNSSAI CRITICALITY reject EXTENSION SNSSAI PRESENCE optional}|

{ ID id-CommonNetworkInstance CRITICALITY ignore EXTENSION CommonNetworkInstance PRESENCE optional }|

{ID id-redundant-nG-UL-UP-TNL-Information CRITICALITY ignore EXTENSION UP-TNL-Information PRESENCE optional }|

{ID id-RedundantCommonNetworkInstance CRITICALITY ignore EXTENSION CommonNetworkInstance PRESENCE optional }|

{ID id-DataForwardingtoE-UTRANInformationList CRITICALITY ignore EXTENSION DataForwardingtoE-UTRANInformationList PRESENCE optional },

...

}

PDU-Session-Resource-To-Remove-List ::= SEQUENCE (SIZE(1.. maxnoofPDUSessionResource)) OF PDU-Session-Resource-To-Remove-Item

PDU-Session-Resource-To-Remove-Item ::= SEQUENCE {

pDU-Session-ID PDU-Session-ID,

iE-Extensions ProtocolExtensionContainer { { PDU-Session-Resource-To-Remove-Item-ExtIEs } } OPTIONAL,

...

}

PDU-Session-Resource-To-Remove-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

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

...

}

PDU-Session-Resource-To-Setup-List ::= SEQUENCE (SIZE(1.. maxnoofPDUSessionResource)) OF PDU-Session-Resource-To-Setup-Item

PDU-Session-Resource-To-Setup-Item ::= SEQUENCE {

pDU-Session-ID PDU-Session-ID,

pDU-Session-Type PDU-Session-Type,

sNSSAI SNSSAI,

securityIndication SecurityIndication,

pDU-Session-Resource-DL-AMBR BitRate OPTIONAL,

nG-UL-UP-TNL-Information UP-TNL-Information,

pDU-Session-Data-Forwarding-Information-Request Data-Forwarding-Information-Request OPTIONAL,

pDU-Session-Inactivity-Timer Inactivity-Timer OPTIONAL,

existing-Allocated-NG-DL-UP-TNL-Info UP-TNL-Information OPTIONAL,

networkInstance NetworkInstance OPTIONAL,

dRB-To-Setup-List-NG-RAN DRB-To-Setup-List-NG-RAN,

iE-Extensions ProtocolExtensionContainer { { PDU-Session-Resource-To-Setup-Item-ExtIEs } } OPTIONAL,

...

}

PDU-Session-Resource-To-Setup-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

{ ID id-CommonNetworkInstance CRITICALITY ignore EXTENSION CommonNetworkInstance PRESENCE optional }|

{ ID id-redundant-nG-UL-UP-TNL-Information CRITICALITY ignore EXTENSION UP-TNL-Information PRESENCE optional }|

{ ID id-RedundantCommonNetworkInstance CRITICALITY ignore EXTENSION CommonNetworkInstance PRESENCE optional }|

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

...

}

PDU-Session-Resource-To-Setup-Mod-List ::= SEQUENCE (SIZE(1.. maxnoofPDUSessionResource)) OF PDU-Session-Resource-To-Setup-Mod-Item

PDU-Session-Resource-To-Setup-Mod-Item ::= SEQUENCE {

pDU-Session-ID PDU-Session-ID,

pDU-Session-Type PDU-Session-Type,

sNSSAI SNSSAI,

securityIndication SecurityIndication,

pDU-Session-Resource-AMBR BitRate OPTIONAL,

nG-UL-UP-TNL-Information UP-TNL-Information,

pDU-Session-Data-Forwarding-Information-Request Data-Forwarding-Information-Request OPTIONAL,

pDU-Session-Inactivity-Timer Inactivity-Timer OPTIONAL,

dRB-To-Setup-Mod-List-NG-RAN DRB-To-Setup-Mod-List-NG-RAN,

iE-Extensions ProtocolExtensionContainer { { PDU-Session-Resource-To-Setup-Mod-Item-ExtIEs } } OPTIONAL,

...

}

PDU-Session-Resource-To-Setup-Mod-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

{ID id-NetworkInstance CRITICALITY ignore EXTENSION NetworkInstance PRESENCE optional}|

{ID id-CommonNetworkInstance CRITICALITY ignore EXTENSION CommonNetworkInstance PRESENCE optional}|

{ID id-redundant-nG-UL-UP-TNL-Information CRITICALITY ignore EXTENSION UP-TNL-Information PRESENCE optional }|

{ID id-RedundantCommonNetworkInstance CRITICALITY ignore EXTENSION CommonNetworkInstance PRESENCE optional },

...

}

PDU-Session-To-Notify-List ::= SEQUENCE (SIZE(1.. maxnoofPDUSessionResource)) OF PDU-Session-To-Notify-Item

PDU-Session-To-Notify-Item ::= SEQUENCE {

pDU-Session-ID PDU-Session-ID,

qoS-Flow-List QoS-Flow-List,

iE-Extensions ProtocolExtensionContainer { { PDU-Session-To-Notify-Item-ExtIEs } } OPTIONAL,

...

}

PDU-Session-To-Notify-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

PDU-Session-Type ::= ENUMERATED {

ipv4,

ipv6,

ipv4v6,

ethernet,

unstructured,

...

}

PLMN-Identity ::= OCTET STRING (SIZE(3))

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

PPI ::= INTEGER (0..7, ...)

PriorityLevel ::= INTEGER { spare (0), highest (1), lowest (14), no-priority (15) } (0..15)

Pre-emptionCapability ::= ENUMERATED {

shall-not-trigger-pre-emption,

may-trigger-pre-emption

}

Pre-emptionVulnerability ::= ENUMERATED {

not-pre-emptable,

pre-emptable

}

PrivacyIndicator ::= ENUMERATED {

immediate-MDT,

logged-MDT,

...

}

-- Q

QCI ::= INTEGER (0..255)

QoS-Characteristics ::= CHOICE {

non-Dynamic-5QI Non-Dynamic5QIDescriptor,

dynamic-5QI Dynamic5QIDescriptor,

choice-extension ProtocolIE-SingleContainer {{QoS-Characteristics-ExtIEs}}

}

QoS-Characteristics-ExtIEs E1AP-PROTOCOL-IES ::= {

...

}

QoS-Flow-Identifier ::= INTEGER (0..63)

QoS-Flow-List ::= SEQUENCE (SIZE(1.. maxnoofQoSFlows)) OF QoS-Flow-Item

QoS-Flow-Item ::= SEQUENCE {

qoS-Flow-Identifier QoS-Flow-Identifier,

iE-Extensions ProtocolExtensionContainer { { QoS-Flow-Item-ExtIEs } } OPTIONAL,

...

}

QoS-Flow-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

{ID id-QoSFlowMappingIndication CRITICALITY ignore EXTENSION QoS-Flow-Mapping-Indication PRESENCE optional},

...

}

QoS-Flow-Failed-List ::= SEQUENCE (SIZE(1.. maxnoofQoSFlows)) OF QoS-Flow-Failed-Item

QoS-Flow-Failed-Item ::= SEQUENCE {

qoS-Flow-Identifier QoS-Flow-Identifier,

cause Cause,

iE-Extensions ProtocolExtensionContainer { { QoS-Flow-Failed-Item-ExtIEs } } OPTIONAL,

...

}

QoS-Flow-Failed-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

QoS-Flow-Mapping-List ::= SEQUENCE (SIZE(1.. maxnoofQoSFlows)) OF QoS-Flow-Mapping-Item

QoS-Flow-Mapping-Item ::= SEQUENCE {

qoS-Flow-Identifier QoS-Flow-Identifier,

qoSFlowMappingIndication QoS-Flow-Mapping-Indication OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { QoS-Flow-Mapping-Item-ExtIEs } } OPTIONAL,

...

}

QoS-Flow-Mapping-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

QoS-Flow-Mapping-Indication ::= ENUMERATED {ul, dl, ...}

QoS-Parameters-Support-List ::= SEQUENCE {

eUTRAN-QoS-Support-List EUTRAN-QoS-Support-List OPTIONAL,

nG-RAN-QoS-Support-List NG-RAN-QoS-Support-List OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { QoS-Parameters-Support-List-ItemExtIEs} } OPTIONAL,

...

}

QoS-Parameters-Support-List-ItemExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

QoSPriorityLevel ::= INTEGER (0..127, ...)

QoS-Flow-QoS-Parameter-List ::= SEQUENCE (SIZE(1.. maxnoofQoSFlows)) OF QoS-Flow-QoS-Parameter-Item

QoS-Flow-QoS-Parameter-Item ::= SEQUENCE {

qoS-Flow-Identifier QoS-Flow-Identifier,

qoSFlowLevelQoSParameters QoSFlowLevelQoSParameters,

qoSFlowMappingIndication QoS-Flow-Mapping-Indication OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { QoS-Flow-QoS-Parameter-Item-ExtIEs } } OPTIONAL,

...

}

QoS-Flow-QoS-Parameter-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

{ID id-RedundantQosFlowIndicator CRITICALITY ignore EXTENSION RedundantQoSFlowIndicator PRESENCE optional}|

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

...

}

QoSFlowLevelQoSParameters ::= SEQUENCE {

qoS-Characteristics QoS-Characteristics,

nGRANallocationRetentionPriority NGRANAllocationAndRetentionPriority,

gBR-QoS-Flow-Information GBR-QoSFlowInformation OPTIONAL,

reflective-QoS-Attribute ENUMERATED {subject-to, ...} OPTIONAL,

additional-QoS-Information ENUMERATED {more-likely, ...} OPTIONAL,

paging-Policy-Indicator INTEGER (1..8, ...) OPTIONAL,

reflective-QoS-Indicator ENUMERATED {enabled, ...} OPTIONAL,

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

}

QoSFlowLevelQoSParameters-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

{ID id-QoSMonitoringRequest CRITICALITY ignore EXTENSION QosMonitoringRequest PRESENCE optional}|

{ID id-MCG-OfferedGBRQoSFlowInfo CRITICALITY ignore EXTENSION GBR-QoSFlowInformation PRESENCE optional}|

{ID id-QosMonitoringReportingFrequency CRITICALITY ignore EXTENSION QosMonitoringReportingFrequency PRESENCE optional}|

{ID id-QoSMonitoringDisabled CRITICALITY ignore EXTENSION QosMonitoringDisabled PRESENCE optional},

...

}

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

QosMonitoringReportingFrequency ::= INTEGER (1..1800, ...)

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

QoS-Flow-Removed-Item ::= SEQUENCE {

qoS-Flow-Identifier QoS-Flow-Identifier,

qoS-Flow-Released-In-Session ENUMERATED {released-in-session, not-released-in-session, ...} OPTIONAL,

qoS-Flow-Accumulated-Session-Time OCTET STRING (SIZE(5)) OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { QoS-Flow-Removed-Item-ExtIEs } } OPTIONAL,

...

}

QoS-Flow-Removed-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

QoS-Flows-to-be-forwarded-List ::= SEQUENCE (SIZE(1.. maxnoofQoSFlows)) OF QoS-Flows-to-be-forwarded-Item

QoS-Flows-to-be-forwarded-Item ::= SEQUENCE {

qoS-Flow-Identifier QoS-Flow-Identifier,

iE-Extensions ProtocolExtensionContainer { { QoS-Flows-to-be-forwarded-Item-ExtIEs } } OPTIONAL,

...

}

QoS-Flows-to-be-forwarded-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

QoS-Mapping-Information ::= SEQUENCE {

dscp BIT STRING (SIZE(6)) OPTIONAL,

flow-label BIT STRING (SIZE(20)) OPTIONAL,

...

}

-- R

RANUEID ::= OCTET STRING (SIZE (8))

RAT-Type ::= ENUMERATED {

e-UTRA,

nR,

...

}

RedundantQoSFlowIndicator::= ENUMERATED {true,false}

RedundantPDUSessionInformation ::= SEQUENCE {

rSN RSN,

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

...

}

RedundantPDUSessionInformation-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

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

RetainabilityMeasurementsInfo ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-Removed-Item

RegistrationRequest ::= ENUMERATED {

start,

stop,

...

}

ReportCharacteristics ::= BIT STRING (SIZE(36))

ReportingPeriodicity ::= ENUMERATED {

ms500, ms1000, ms2000, ms5000, ms10000, ms20000, ms30000, ms40000, ms50000, ms60000, ms70000, ms80000, ms90000, ms100000, ms110000, ms120000,

...

}

RLC-Mode ::= ENUMERATED {

rlc-tm,

rlc-am,

rlc-um-bidirectional,

rlc-um-unidirectional-ul,

rlc-um-unidirectional-dl,

...

}

ROHC-Parameters ::= CHOICE {

rOHC ROHC,

uPlinkOnlyROHC UplinkOnlyROHC,

choice-Extension ProtocolIE-SingleContainer { { ROHC-Parameters-ExtIEs} }

}

ROHC-Parameters-ExtIEs E1AP-PROTOCOL-IES ::= {

...

}

ROHC ::= SEQUENCE {

maxCID INTEGER (0..16383, ...),

rOHC-Profiles INTEGER (0..511, ...),

continueROHC ENUMERATED {true, ...} OPTIONAL,

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

}

ROHC-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

-- S

SecurityAlgorithm ::= SEQUENCE {

cipheringAlgorithm CipheringAlgorithm,

integrityProtectionAlgorithm IntegrityProtectionAlgorithm OPTIONAL,

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

...

}

SecurityAlgorithm-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

SecurityIndication ::= SEQUENCE {

integrityProtectionIndication IntegrityProtectionIndication,

confidentialityProtectionIndication ConfidentialityProtectionIndication,

maximumIPdatarate MaximumIPdatarate OPTIONAL,

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

...

}

SecurityIndication-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

SecurityInformation ::= SEQUENCE {

securityAlgorithm SecurityAlgorithm,

uPSecuritykey UPSecuritykey,

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

...

}

SecurityInformation-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

SecurityResult ::= SEQUENCE {

integrityProtectionResult IntegrityProtectionResult,

confidentialityProtectionResult ConfidentialityProtectionResult,

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

...

}

SecurityResult-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

Slice-Support-List ::= SEQUENCE (SIZE(1.. maxnoofSliceItems)) OF Slice-Support-Item

Slice-Support-Item ::= SEQUENCE {

sNSSAI SNSSAI,

iE-Extensions ProtocolExtensionContainer { { Slice-Support-Item-ExtIEs } } OPTIONAL

}

Slice-Support-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

SNSSAI ::= SEQUENCE {

sST OCTET STRING (SIZE(1)),

sD OCTET STRING (SIZE(3)) OPTIONAL,

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

...

}

SNSSAI-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

SDAP-Configuration ::= SEQUENCE {

defaultDRB DefaultDRB,

sDAP-Header-UL SDAP-Header-UL,

sDAP-Header-DL SDAP-Header-DL,

iE-Extensions ProtocolExtensionContainer { { SDAP-Configuration-ExtIEs } } OPTIONAL,

...

}

SDAP-Configuration-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

SDAP-Header-DL ::= ENUMERATED {

present,

absent,

...

}

SDAP-Header-UL ::= ENUMERATED {

present,

absent,

...

}

SubscriberProfileIDforRFP ::= INTEGER (1..256, ...)

SourceNodeTNLAddressInfo ::= SEQUENCE {

gTPTNLAddressList GTPTLAs,

iPSecTNLA TransportLayerAddress OPTIONAL,

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

...

}

SourceNodeTNLAddressInfo-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

-- T

TimeToWait ::= ENUMERATED {v1s, v2s, v5s, v10s, v20s, v60s, ...}

TNLAssociationUsage ::= ENUMERATED {

ue,

non-ue,

both,

...

}

TNL-AvailableCapacityIndicator ::= SEQUENCE {

dL-TNL-OfferedCapacity INTEGER (0..16777216, ...),

dL-TNL-AvailableCapacity INTEGER (0..100, ...),

uL-TNL-OfferedCapacity INTEGER (0..16777216, ...),

uL-TNL-AvailableCapacity INTEGER (0..100, ...),

iE-Extensions ProtocolExtensionContainer { { TNL-AvailableCapacityIndicator-ExtIEs } },

...

}

TNL-AvailableCapacityIndicator-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

TSCTrafficCharacteristics ::= SEQUENCE {

tSCTrafficCharacteristicsUL TSCTrafficInformation OPTIONAL,

tSCTrafficCharacteristicsDL TSCTrafficInformation OPTIONAL,

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

}

TSCTrafficCharacteristics-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

TSCTrafficInformation ::= SEQUENCE {

periodicity Periodicity,

burstArrivalTime BurstArrivalTime OPTIONAL,

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

}

TSCTrafficInformation-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

Periodicity ::= INTEGER (1..640000, ...)

BurstArrivalTime ::= OCTET STRING

TraceActivation ::= SEQUENCE {

traceID TraceID,

interfacesToTrace InterfacesToTrace,

traceDepth TraceDepth,

traceCollectionEntityIPAddress TransportLayerAddress,

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

...

}

TraceActivation-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

{ ID id-MDTConfiguration CRITICALITY ignore EXTENSION MDT-Configuration PRESENCE optional }|

{ ID id-TraceCollectionEntityURI CRITICALITY ignore EXTENSION URIaddress PRESENCE optional},

...

}

TraceDepth ::= ENUMERATED {

minimum,

medium,

maximum,

minimumWithoutVendorSpecificExtension,

mediumWithoutVendorSpecificExtension,

maximumWithoutVendorSpecificExtension,

...

}

TraceID ::= OCTET STRING (SIZE(8))

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

TransactionID ::= INTEGER (0..255, ...)

T-Reordering ::= ENUMERATED {ms0, ms1, ms2, ms4, ms5, ms8, ms10, ms15, ms20, ms30, ms40, ms50, ms60, ms80, ms100, ms120, ms140, ms160, ms180, ms200, ms220, ms240, ms260, ms280, ms300, ms500, ms750, ms1000, ms1250, ms1500, ms1750, ms2000, ms2250, ms2500, ms2750, ms3000, ...}

T-ReorderingTimer ::= SEQUENCE {

t-Reordering T-Reordering,

iE-Extensions ProtocolExtensionContainer { { T-ReorderingTimer-ExtIEs } } OPTIONAL,

...

}

T-ReorderingTimer-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

TypeOfError ::= ENUMERATED {

not-understood,

missing,

...

}

Transport-Layer-Address-Info ::= SEQUENCE {

transport-UP-Layer-Addresses-Info-To-Add-List Transport-UP-Layer-Addresses-Info-To-Add-List OPTIONAL,

transport-UP-Layer-Addresses-Info-To-Remove-List Transport-UP-Layer-Addresses-Info-To-Remove-List OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { Transport-Layer-Address-Info-ExtIEs} } OPTIONAL,

...

}

Transport-Layer-Address-Info-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

Transport-UP-Layer-Addresses-Info-To-Add-List ::= SEQUENCE (SIZE(1.. maxnoofTLAs)) OF Transport-UP-Layer-Addresses-Info-To-Add-Item

Transport-UP-Layer-Addresses-Info-To-Add-Item ::= SEQUENCE {

iP-SecTransportLayerAddress TransportLayerAddress,

gTPTransportLayerAddressesToAdd GTPTLAs OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { Transport-UP-Layer-Addresses-Info-To-Add-ItemExtIEs } } OPTIONAL,

...

}

Transport-UP-Layer-Addresses-Info-To-Add-ItemExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

Transport-UP-Layer-Addresses-Info-To-Remove-List ::= SEQUENCE (SIZE(1.. maxnoofTLAs)) OF Transport-UP-Layer-Addresses-Info-To-Remove-Item

Transport-UP-Layer-Addresses-Info-To-Remove-Item ::= SEQUENCE {

iP-SecTransportLayerAddress TransportLayerAddress,

gTPTransportLayerAddressesToRemove GTPTLAs OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { Transport-UP-Layer-Addresses-Info-To-Remove-ItemExtIEs } } OPTIONAL,

...

}

Transport-UP-Layer-Addresses-Info-To-Remove-ItemExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

-- U

UE-Activity ::= ENUMERATED {

active,

not-active,

...

}

UE-associatedLogicalE1-ConnectionItem ::= SEQUENCE {

gNB-CU-CP-UE-E1AP-ID GNB-CU-CP-UE-E1AP-ID OPTIONAL,

gNB-CU-UP-UE-E1AP-ID GNB-CU-UP-UE-E1AP-ID OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { UE-associatedLogicalE1-ConnectionItemExtIEs} } OPTIONAL,

...

}

UE-associatedLogicalE1-ConnectionItemExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

UL-Configuration ::= ENUMERATED {

no-data,

shared,

only,

...

}

ULUPTNLAddressToUpdateItem ::= SEQUENCE {

oldTNLAdress TransportLayerAddress,

newTNLAdress TransportLayerAddress,

iE-Extensions ProtocolExtensionContainer { { ULUPTNLAddressToUpdateItemExtIEs } } OPTIONAL,

...

}

ULUPTNLAddressToUpdateItemExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

ULDataSplitThreshold ::= ENUMERATED {b0, b100, b200, b400, b800, b1600, b3200, b6400, b12800, b25600, b51200, b102400, b204800, b409600, b819200, b1228800, b1638400, b2457600, b3276800, b4096000, b4915200, b5734400, b6553600, infinity, ...}

UP-Parameters ::= SEQUENCE (SIZE(1.. maxnoofUPParameters)) OF UP-Parameters-Item

UP-Parameters-Item ::= SEQUENCE {

uP-TNL-Information UP-TNL-Information,

cell-Group-ID Cell-Group-ID,

iE-Extensions ProtocolExtensionContainer { { UP-Parameters-Item-ExtIEs } } OPTIONAL,

...

}

UP-Parameters-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

{ID id-QoS-Mapping-Information CRITICALITY reject EXTENSION QoS-Mapping-Information PRESENCE optional},

...

}

UPSecuritykey ::= SEQUENCE {

encryptionKey EncryptionKey,

integrityProtectionKey IntegrityProtectionKey OPTIONAL,

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

...

}

UPSecuritykey-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

UP-TNL-Information ::= CHOICE {

gTPTunnel GTPTunnel,

choice-extension ProtocolIE-SingleContainer {{UP-TNL-Information-ExtIEs}}

}

UP-TNL-Information-ExtIEs E1AP-PROTOCOL-IES ::= {

...

}

UplinkOnlyROHC ::= SEQUENCE {

maxCID INTEGER (0..16383, ...),

rOHC-Profiles INTEGER (0..511, ...),

continueROHC ENUMERATED {true, ...} OPTIONAL,

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

}

UplinkOnlyROHC-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

URIaddress ::= VisibleString

-- V

-- W

-- X

-- Y

-- Z

END

-- ASN1STOP

9.4.6 Common Definitions

-- ASN1START

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

--

-- Common definitions

--

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

E1AP-CommonDataTypes {

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

ngran-access (22) modules (3) e1ap (5) version1 (1) e1ap-CommonDataTypes (3)}

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

--

-- Extension constants

--

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

maxPrivateIEs INTEGER ::= 65535

maxProtocolExtensions INTEGER ::= 65535

maxProtocolIEs INTEGER ::= 65535

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

--

-- Common Data Types

--

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

Criticality ::= ENUMERATED { reject, ignore, notify }

Presence ::= ENUMERATED { optional, conditional, mandatory }

PrivateIE-ID ::= CHOICE {

local INTEGER (0.. maxPrivateIEs),

global OBJECT IDENTIFIER

}

ProcedureCode ::= INTEGER (0..255)

ProtocolExtensionID ::= INTEGER (0..maxProtocolExtensions)

ProtocolIE-ID ::= INTEGER (0..maxProtocolIEs)

TriggeringMessage ::= ENUMERATED { initiating-message, successful-outcome, unsuccessful-outcome}

END

-- ASN1STOP

9.4.7 Constant Definitions

-- ASN1START

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

--

-- Constant definitions

--

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

E1AP-Constants {

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

ngran-access (22) modules (3) e1ap (5) version1 (1) e1ap-Constants (4) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS

ProcedureCode,

ProtocolIE-ID

FROM E1AP-CommonDataTypes;

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

--

-- Elementary Procedures

--

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

id-reset ProcedureCode ::= 0

id-errorIndication ProcedureCode ::= 1

id-privateMessage ProcedureCode ::= 2

id-gNB-CU-UP-E1Setup ProcedureCode ::= 3

id-gNB-CU-CP-E1Setup ProcedureCode ::= 4

id-gNB-CU-UP-ConfigurationUpdate ProcedureCode ::= 5

id-gNB-CU-CP-ConfigurationUpdate ProcedureCode ::= 6

id-e1Release ProcedureCode ::= 7

id-bearerContextSetup ProcedureCode ::= 8

id-bearerContextModification ProcedureCode ::= 9

id-bearerContextModificationRequired ProcedureCode ::= 10

id-bearerContextRelease ProcedureCode ::= 11

id-bearerContextReleaseRequest ProcedureCode ::= 12

id-bearerContextInactivityNotification ProcedureCode ::= 13

id-dLDataNotification ProcedureCode ::= 14

id-dataUsageReport ProcedureCode ::= 15

id-gNB-CU-UP-CounterCheck ProcedureCode ::= 16

id-gNB-CU-UP-StatusIndication ProcedureCode ::= 17

id-uLDataNotification ProcedureCode ::= 18

id-mRDC-DataUsageReport ProcedureCode ::= 19

id-TraceStart ProcedureCode ::= 20

id-DeactivateTrace ProcedureCode ::= 21

id-resourceStatusReportingInitiation ProcedureCode ::= 22

id-resourceStatusReporting ProcedureCode ::= 23

id-iAB-UPTNLAddressUpdate ProcedureCode ::= 24

id-CellTrafficTrace ProcedureCode ::= 25

id-earlyForwardingSNTransfer ProcedureCode ::= 26

id-gNB-CU-CPMeasurementResultsInformation ProcedureCode ::= 27

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

--

-- Lists

--

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

maxnoofErrors INTEGER ::= 256

maxnoofSPLMNs INTEGER ::= 12

maxnoofSliceItems INTEGER ::= 1024

maxnoofIndividualE1ConnectionsToReset INTEGER ::= 65536

maxnoofEUTRANQOSParameters INTEGER ::= 256

maxnoofNGRANQOSParameters INTEGER ::= 256

maxnoofDRBs INTEGER ::= 32

maxnoofNRCGI INTEGER ::= 512

maxnoofPDUSessionResource INTEGER ::= 256

maxnoofQoSFlows INTEGER ::= 64

maxnoofUPParameters INTEGER ::= 8

maxnoofCellGroups INTEGER ::= 4

maxnooftimeperiods INTEGER ::= 2

maxnoofTNLAssociations INTEGER ::= 32

maxnoofTLAs INTEGER ::= 16

maxnoofGTPTLAs INTEGER ::= 16

maxnoofTNLAddresses INTEGER ::= 8

maxnoofMDTPLMNs INTEGER ::= 16

maxnoofQoSParaSets INTEGER ::= 8

maxnoofExtSliceItems INTEGER ::= 65535

maxnoofDataForwardingTunneltoE-UTRAN INTEGER ::= 256

maxnoofExtNRCGI INTEGER ::= 16384

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

--

-- IEs

--

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

id-Cause ProtocolIE-ID ::= 0

id-CriticalityDiagnostics ProtocolIE-ID ::= 1

id-gNB-CU-CP-UE-E1AP-ID ProtocolIE-ID ::= 2

id-gNB-CU-UP-UE-E1AP-ID ProtocolIE-ID ::= 3

id-ResetType ProtocolIE-ID ::= 4

id-UE-associatedLogicalE1-ConnectionItem ProtocolIE-ID ::= 5

id-UE-associatedLogicalE1-ConnectionListResAck ProtocolIE-ID ::= 6

id-gNB-CU-UP-ID ProtocolIE-ID ::= 7

id-gNB-CU-UP-Name ProtocolIE-ID ::= 8

id-gNB-CU-CP-Name ProtocolIE-ID ::= 9

id-CNSupport ProtocolIE-ID ::= 10

id-SupportedPLMNs ProtocolIE-ID ::= 11

id-TimeToWait ProtocolIE-ID ::= 12

id-SecurityInformation ProtocolIE-ID ::= 13

id-UEDLAggregateMaximumBitRate ProtocolIE-ID ::= 14

id-System-BearerContextSetupRequest ProtocolIE-ID ::= 15

id-System-BearerContextSetupResponse ProtocolIE-ID ::= 16

id-BearerContextStatusChange ProtocolIE-ID ::= 17

id-System-BearerContextModificationRequest ProtocolIE-ID ::= 18

id-System-BearerContextModificationResponse ProtocolIE-ID ::= 19

id-System-BearerContextModificationConfirm ProtocolIE-ID ::= 20

id-System-BearerContextModificationRequired ProtocolIE-ID ::= 21

id-DRB-Status-List ProtocolIE-ID ::= 22

id-ActivityNotificationLevel ProtocolIE-ID ::= 23

id-ActivityInformation ProtocolIE-ID ::= 24

id-Data-Usage-Report-List ProtocolIE-ID ::= 25

id-New-UL-TNL-Information-Required ProtocolIE-ID ::= 26

id-GNB-CU-CP-TNLA-To-Add-List ProtocolIE-ID ::= 27

id-GNB-CU-CP-TNLA-To-Remove-List ProtocolIE-ID ::= 28

id-GNB-CU-CP-TNLA-To-Update-List ProtocolIE-ID ::= 29

id-GNB-CU-CP-TNLA-Setup-List ProtocolIE-ID ::= 30

id-GNB-CU-CP-TNLA-Failed-To-Setup-List ProtocolIE-ID ::= 31

id-DRB-To-Setup-List-EUTRAN ProtocolIE-ID ::= 32

id-DRB-To-Modify-List-EUTRAN ProtocolIE-ID ::= 33

id-DRB-To-Remove-List-EUTRAN ProtocolIE-ID ::= 34

id-DRB-Required-To-Modify-List-EUTRAN ProtocolIE-ID ::= 35

id-DRB-Required-To-Remove-List-EUTRAN ProtocolIE-ID ::= 36

id-DRB-Setup-List-EUTRAN ProtocolIE-ID ::= 37

id-DRB-Failed-List-EUTRAN ProtocolIE-ID ::= 38

id-DRB-Modified-List-EUTRAN ProtocolIE-ID ::= 39

id-DRB-Failed-To-Modify-List-EUTRAN ProtocolIE-ID ::= 40

id-DRB-Confirm-Modified-List-EUTRAN ProtocolIE-ID ::= 41

id-PDU-Session-Resource-To-Setup-List ProtocolIE-ID ::= 42

id-PDU-Session-Resource-To-Modify-List ProtocolIE-ID ::= 43

id-PDU-Session-Resource-To-Remove-List ProtocolIE-ID ::= 44

id-PDU-Session-Resource-Required-To-Modify-List ProtocolIE-ID ::= 45

id-PDU-Session-Resource-Setup-List ProtocolIE-ID ::= 46

id-PDU-Session-Resource-Failed-List ProtocolIE-ID ::= 47

id-PDU-Session-Resource-Modified-List ProtocolIE-ID ::= 48

id-PDU-Session-Resource-Failed-To-Modify-List ProtocolIE-ID ::= 49

id-PDU-Session-Resource-Confirm-Modified-List ProtocolIE-ID ::= 50

id-DRB-To-Setup-Mod-List-EUTRAN ProtocolIE-ID ::= 51

id-DRB-Setup-Mod-List-EUTRAN ProtocolIE-ID ::= 52

id-DRB-Failed-Mod-List-EUTRAN ProtocolIE-ID ::= 53

id-PDU-Session-Resource-Setup-Mod-List ProtocolIE-ID ::= 54

id-PDU-Session-Resource-Failed-Mod-List ProtocolIE-ID ::= 55

id-PDU-Session-Resource-To-Setup-Mod-List ProtocolIE-ID ::= 56

id-TransactionID ProtocolIE-ID ::= 57

id-Serving-PLMN ProtocolIE-ID ::= 58

id-UE-Inactivity-Timer ProtocolIE-ID ::= 59

id-System-GNB-CU-UP-CounterCheckRequest ProtocolIE-ID ::= 60

id-DRBs-Subject-To-Counter-Check-List-EUTRAN ProtocolIE-ID ::= 61

id-DRBs-Subject-To-Counter-Check-List-NG-RAN ProtocolIE-ID ::= 62

id-PPI ProtocolIE-ID ::= 63

id-gNB-CU-UP-Capacity ProtocolIE-ID ::= 64

id-GNB-CU-UP-OverloadInformation ProtocolIE-ID ::= 65

id-UEDLMaximumIntegrityProtectedDataRate ProtocolIE-ID ::= 66

id-PDU-Session-To-Notify-List ProtocolIE-ID ::= 67

id-PDU-Session-Resource-Data-Usage-List ProtocolIE-ID ::= 68

id-SNSSAI ProtocolIE-ID ::= 69

id-DataDiscardRequired ProtocolIE-ID ::= 70

id-OldQoSFlowMap-ULendmarkerexpected ProtocolIE-ID ::= 71

id-DRB-QoS ProtocolIE-ID ::= 72

id-GNB-CU-UP-TNLA-To-Remove-List ProtocolIE-ID ::= 73

id-endpoint-IP-Address-and-Port ProtocolIE-ID ::= 74

id-TNLAssociationTransportLayerAddressgNBCUUP ProtocolIE-ID ::= 75

id-RANUEID ProtocolIE-ID ::= 76

id-GNB-DU-ID ProtocolIE-ID ::= 77

id-CommonNetworkInstance ProtocolIE-ID ::= 78

id-NetworkInstance ProtocolIE-ID ::= 79

id-QoSFlowMappingIndication ProtocolIE-ID ::= 80

id-TraceActivation ProtocolIE-ID ::= 81

id-TraceID ProtocolIE-ID ::= 82

id-SubscriberProfileIDforRFP ProtocolIE-ID ::= 83

id-AdditionalRRMPriorityIndex ProtocolIE-ID ::= 84

id-RetainabilityMeasurementsInfo ProtocolIE-ID ::= 85

id-Transport-Layer-Address-Info ProtocolIE-ID ::= 86

id-QoSMonitoringRequest ProtocolIE-ID ::= 87

id-PDCP-StatusReportIndication ProtocolIE-ID ::= 88

id-gNB-CU-CP-Measurement-ID ProtocolIE-ID ::= 89

id-gNB-CU-UP-Measurement-ID ProtocolIE-ID ::= 90

id-RegistrationRequest ProtocolIE-ID ::= 91

id-ReportCharacteristics ProtocolIE-ID ::= 92

id-ReportingPeriodicity ProtocolIE-ID ::= 93

id-TNL-AvailableCapacityIndicator ProtocolIE-ID ::= 94

id-HW-CapacityIndicator ProtocolIE-ID ::= 95

id-RedundantCommonNetworkInstance ProtocolIE-ID ::= 96

id-redundant-nG-UL-UP-TNL-Information ProtocolIE-ID ::= 97

id-redundant-nG-DL-UP-TNL-Information ProtocolIE-ID ::= 98

id-RedundantQosFlowIndicator ProtocolIE-ID ::= 99

id-TSCTrafficCharacteristics ProtocolIE-ID ::= 100

id-CNPacketDelayBudgetDownlink ProtocolIE-ID ::= 101

id-CNPacketDelayBudgetUplink ProtocolIE-ID ::= 102

id-ExtendedPacketDelayBudget ProtocolIE-ID ::= 103

id-AdditionalPDCPduplicationInformation ProtocolIE-ID ::= 104

id-RedundantPDUSessionInformation ProtocolIE-ID ::= 105

id-RedundantPDUSessionInformation-used ProtocolIE-ID ::= 106

id-QoS-Mapping-Information ProtocolIE-ID ::= 107

id-DLUPTNLAddressToUpdateList ProtocolIE-ID ::= 108

id-ULUPTNLAddressToUpdateList ProtocolIE-ID ::= 109

id-NPNSupportInfo ProtocolIE-ID ::= 110

id-NPNContextInfo ProtocolIE-ID ::= 111

id-MDTConfiguration ProtocolIE-ID ::= 112

id-ManagementBasedMDTPLMNList ProtocolIE-ID ::= 113

id-TraceCollectionEntityIPAddress ProtocolIE-ID ::= 114

id-PrivacyIndicator ProtocolIE-ID ::= 115

id-TraceCollectionEntityURI ProtocolIE-ID ::= 116

id-URIaddress ProtocolIE-ID ::= 117

id-EHC-Parameters ProtocolIE-ID ::= 118

id-DRBs-Subject-To-Early-Forwarding-List ProtocolIE-ID ::= 119

id-DAPSRequestInfo ProtocolIE-ID ::= 120

id-CHOInitiation ProtocolIE-ID ::= 121

id-EarlyForwardingCOUNTReq ProtocolIE-ID ::= 122

id-EarlyForwardingCOUNTInfo ProtocolIE-ID ::= 123

id-AlternativeQoSParaSetList ProtocolIE-ID ::= 124

id-ExtendedSliceSupportList ProtocolIE-ID ::= 125

id-MCG-OfferedGBRQoSFlowInfo ProtocolIE-ID ::= 126

id-Number-of-tunnels ProtocolIE-ID ::= 127

id-DRB-Measurement-Results-Information-List ProtocolIE-ID ::= 128

id-Extended-GNB-CU-CP-Name ProtocolIE-ID ::= 129

id-Extended-GNB-CU-UP-Name ProtocolIE-ID ::= 130

id-DataForwardingtoE-UTRANInformationList ProtocolIE-ID ::= 131

id-QosMonitoringReportingFrequency ProtocolIE-ID ::= 132

id-QoSMonitoringDisabled ProtocolIE-ID ::= 133

id-AdditionalHandoverInfo ProtocolIE-ID ::= 134

id-Extended-NR-CGI-Support-List ProtocolIE-ID ::= 135

id-SourceNodeTNLAddressInfo ProtocolIE-ID ::= xxx

END

-- ASN1STOP

9.4.8 Container Definitions

-- ASN1START

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

--

-- Container definitions

--

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

E1AP-Containers {

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

ngran-access (22) modules (3) e1ap (5) version1 (1) e1ap-Containers (5) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

--

-- IE parameter types from other modules.

--

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

IMPORTS

maxPrivateIEs,

maxProtocolExtensions,

maxProtocolIEs,

Criticality,

Presence,

PrivateIE-ID,

ProtocolIE-ID

FROM E1AP-CommonDataTypes;

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

--

-- Class Definition for Protocol IEs

--

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

E1AP-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 Extensions

--

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

E1AP-PROTOCOL-EXTENSION ::= CLASS {

&id ProtocolIE-ID UNIQUE,

&criticality Criticality,

&Extension,

&presence Presence

}

WITH SYNTAX {

ID &id

CRITICALITY &criticality

EXTENSION &Extension

PRESENCE &presence

}

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

--

-- Class Definition for Private IEs

--

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

E1AP-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 { E1AP-PROTOCOL-IES : IEsSetParam} ::=

SEQUENCE (SIZE (0..maxProtocolIEs)) OF

ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-SingleContainer { E1AP-PROTOCOL-IES : IEsSetParam} ::=

ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-Field { E1AP-PROTOCOL-IES : IEsSetParam} ::= SEQUENCE {

id E1AP-PROTOCOL-IES.&id ({IEsSetParam}),

criticality E1AP-PROTOCOL-IES.&criticality ({IEsSetParam}{@id}),

value E1AP-PROTOCOL-IES.&Value ({IEsSetParam}{@id})

}

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

--

-- Container Lists for Protocol IE Containers

--

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

ProtocolIE-ContainerList {INTEGER : lowerBound, INTEGER : upperBound, E1AP-PROTOCOL-IES : IEsSetParam} ::=

SEQUENCE (SIZE (lowerBound..upperBound)) OF

ProtocolIE-Container {{IEsSetParam}}

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

--

-- Container for Protocol Extensions

--

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

ProtocolExtensionContainer { E1AP-PROTOCOL-EXTENSION : ExtensionSetParam} ::=

SEQUENCE (SIZE (1..maxProtocolExtensions)) OF

ProtocolExtensionField {{ExtensionSetParam}}

ProtocolExtensionField { E1AP-PROTOCOL-EXTENSION : ExtensionSetParam} ::= SEQUENCE {

id E1AP-PROTOCOL-EXTENSION.&id ({ExtensionSetParam}),

criticality E1AP-PROTOCOL-EXTENSION.&criticality ({ExtensionSetParam}{@id}),

extensionValue E1AP-PROTOCOL-EXTENSION.&Extension ({ExtensionSetParam}{@id})

}

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

--

-- Container for Private IEs

--

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

PrivateIE-Container { E1AP-PRIVATE-IES : IEsSetParam} ::=

SEQUENCE (SIZE (1..maxPrivateIEs)) OF

PrivateIE-Field {{IEsSetParam}}

PrivateIE-Field { E1AP-PRIVATE-IES : IEsSetParam} ::= SEQUENCE {

id E1AP-PRIVATE-IES.&id ({IEsSetParam}),

criticality E1AP-PRIVATE-IES.&criticality ({IEsSetParam}{@id}),

value E1AP-PRIVATE-IES.&Value ({IEsSetParam}{@id})

}

END

-- ASN1STOP

<<<<<<<<<<<<<<<<<<<< Changes End >>>>>>>>>>>>>>>>>>>>