**3GPP TSG-RAN WG3 Meeting #127-bis R3-252389**

**Wuhan, China, 7-11 April, 2025**

**Agenda item: 11.4**

**Source: Samsung, ZTE Corporation**

**Title: (TP to BL CR for 37.483) Data Collection procedures for UE performance**

**Document for: Text Proposal**

# 1. Introduction

This TP implements the agreement achieved in RAN3#127bis about introducing new E1 procedures for data collection of UE performance from CU-UP to CU-CP:

Introducing Data Collection Reporting Initiation and Data Collection Reporting procedures over E1 interface to transfer UL/DL UE throughput and UL/DL packet delay from CU-UP to CU-CP upon request.

# 2. Text Proposals to BLCR of 37.483

## 8.1 List of E1AP Elementary Procedures

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

Table 1: Class 1 procedures

| Elementary Procedure | | Initiating Message | | Successful Outcome | | Unsuccessful Outcome | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Response message | | Response message | |
| Reset | | RESET | | RESET ACKNOWLEDGE | |  | |
| gNB-CU-UP E1 Setup | | GNB-CU-UP E1 SETUP REQUEST | | GNB-CU-UP E1 SETUP RESPONSE | | GNB-CU-UP E1 SETUP FAILURE | |
| gNB-CU-CP E1 Setup | | GNB-CU-CP E1 SETUP REQUEST | | GNB-CU-CP E1 SETUP RESPONSE | | GNB-CU-CP E1 SETUP FAILURE | |
| gNB-CU-UP Configuration Update | | GNB-CU-UP CONFIGURATION UPDATE | | GNB-CU-UP CONFIGURATION UPDATE ACKNOWLEDGE | | GNB-CU-UP CONFIGURATION UPDATE FAILURE | |
| gNB-CU-CP Configuration Update | | GNB-CU-CP CONFIGURATION UPDATE | | GNB-CU-CP CONFIGURATION UPDATE ACKNOWLEDGE | | GNB-CU-CP CONFIGURATION UPDATE FAILURE | |
| E1 Release | | E1 RELEASE REQUEST | | E1 RELEASE RESPONSE | |  | |
| Bearer Context Setup | | BEARER CONTEXT SETUP REQUEST | | BEARER CONTEXT SETUP RESPONSE | | BEARER CONTEXT SETUP FAILURE | |
| Bearer Context Modification (gNB-CU-CP initiated) | | BEARER CONTEXT MODIFICATION REQUEST | | BEARER CONTEXT MODIFICATION RESPONSE | | BEARER CONTEXT MODIFICATION FAILURE | |
| Bearer Context Modification Required (gNB-CU-UP initiated) | | BEARER CONTEXT MODIFICATION REQUIRED | | BEARER CONTEXT MODIFICATION CONFIRM | |  | |
| Bearer Context Release (gNB-CU-CP initiated) | | BEARER CONTEXT RELEASE COMMAND | | BEARER CONTEXT RELEASE COMPLETE | |  | |
| Resource Status Reporting Initiation | | RESOURCE STATUS REQUEST | | RESOURCE STATUS RESPONSE | | RESOURCE STATUS FAILURE | |
| IAB UP TNL Address Update | | IAB UP TNL ADDRESS UPDATE | | IAB UP TNL ADDRESS UPDATE ACKNOWLEDGE | | IAB UP TNL ADDRESS UPDATE FAILURE | |
| BC Bearer Context Setup | | BC BEARER CONTEXT SETUP REQUEST | | BC BEARER CONTEXT SETUP RESPONSE | | BC BEARER CONTEXT SETUP FAILURE | |
| BC Bearer Context Modification (gNB-CU-CP initiated) | | BC BEARER CONTEXT MODIFICATION REQUEST | | BC BEARER CONTEXT MODIFICATION RESPONSE | | BC BEARER CONTEXT MODIFICATION FAILURE | |
| BC Bearer Context Modification Required (gNB-CU-UP initiated) | | BC BEARER CONTEXT MODIFICATION REQUIRED | | BC BEARER CONTEXT MODIFICATION CONFIRM | |  | |
| BC Bearer Context Release (gNB-CU-CP initiated) | | BC BEARER CONTEXT RELEASE COMMAND | | BC BEARER CONTEXT RELEASE COMPLETE | |  | |
| MC Bearer Context Setup | | MC BEARER CONTEXT SETUP REQUEST | | MC BEARER CONTEXT SETUP RESPONSE | | MC BEARER CONTEXT SETUP FAILURE | |
| MC Bearer Context Modification (gNB-CU-CP initiated) | | MC BEARER CONTEXT MODIFICATION REQUEST | | MC BEARER CONTEXT MODIFICATION RESPONSE | | MC BEARER CONTEXT MODIFICATION FAILURE | |
| MC Bearer Context Modification Required (gNB-CU-UP initiated) | | MC BEARER CONTEXT MODIFICATION REQUIRED | | MC BEARER CONTEXT MODIFICATION CONFIRM | |  | |
| MC Bearer Context Release (gNB-CU-CP initiated) | | MC BEARER CONTEXT RELEASE COMMAND | | MC BEARER CONTEXT RELEASE COMPLETE | |  | |
| Data Collection Reporting Initiation | | DATA COLLECTION REQUEST | | DATA COLLECTION RESPONSE | | DATA COLLECTION FAILURE | |

Table 2: Class 2 procedures

| Elementary Procedure | Message |
| --- | --- |
| Error Indication | ERROR INDICATION |
| Bearer Context Release Request (gNB-CU-UP initiated) | BEARER CONTEXT RELEASE REQUEST |
| Bearer Context Inactivity Notification | BEARER CONTEXT INACTIVITY NOTIFICATION |
| DL Data Notification | DL DATA NOTIFICATION |
| UL Data Notification | UL DATA NOTIFICATION |
| Data Usage Report | DATA USAGE REPORT |
| gNB-CU-UP Counter Check | GNB-CU-UP COUNTER CHECK REQUEST |
| gNB-CU-UP Status Indication | GNB-CU-UP STATUS INDICATION |
| MR-DC Data Usage Report | MR-DC DATA USAGE REPORT |
| Trace Start | TRACE START |
| Deactivate Trace | DEACTIVATE TRACE |
| Cell Traffic Trace | CELL TRAFFIC TRACE |
| Resource Status Reporting | RESOURCE STATUS UPDATE |
| Early Forwarding SN Transfer | EARLY FORWARDING SN TRANSFER |
| GNB-CU-CP Measurement Results Information | GNB-CU-CP MEASUREMENT RESULTS INFORMATION |
| IAB PSK Notification | IAB PSK NOTIFICATION |
| BC Bearer Context Release (gNB-CU-UP initiated) | BC BEARER CONTEXT RELEASE REQUEST |
| MC Bearer Context Release (gNB-CU-UP initiated) | MC BEARER CONTEXT RELEASE REQUEST |
| MC Bearer Notification | MC BEARER NOTIFICATION |
| Data Collection Reporting | DATA COLLECTION UPDATE |

### 8.2.AA Data Collection Reporting Initiation

#### 8.2.AA.1 General

Editor’s Note: FFS other information that can be requested using this procedure.

This procedure is used by a gNB-CU-CP to request from a gNB-CU-UP the reporting of information to support, e.g., AI/ML in NG-RAN.

The procedure uses non UE-associated signalling.

#### 8.2.AA.2 Successful Operation



Figure 8.4.AA.2-1: Data Collection Reporting Initiation, successful operation

The gNB-CU-CP initiates the procedure by sending the DATA COLLECTION REQUEST message to gNB-CU-UP to start information reporting and stop information reporting. Upon receipt, the gNB-CU-UP:

- shall initiate the requested information reporting according to the parameters given in the request in case the *Registration Request for Data Collection* IE is set to “start”; or

- shall stop all information reporting and terminate the reporting in case the *Registration Request for Data Collection* IE is set to “stop”.

If the gNB-CU-UP is capable to provide all of the requested information, it shall initiate the information reporting as requested by the gNB-CU-CP and respond with the DATA COLLECTION RESPONSE message.

If the *Reporting Periodicity for Data Collection* IE in the DATA COLLECTION REQUEST is present, this indicates the periodicity for the reporting of periodic information. The gNB-CU-UP shall report only once, unless otherwise requested within the *Reporting Periodicity for Data Collection* IE.

**Interaction with other procedures**

When starting a measurement, the *Report Characteristics for Data Collection* IE in the DATA COLLECTION REQUEST indicates the type of objects gNB-CU-UP shall perform measurements on. The gNB-CU-UP shall include in the DATA COLLECTION UPDATE message:

- the *Average UE Throughput DL* IE, if the first bit, “Average UE Throughput DL” of the *Report Characteristics for Data Collection* IE included in the DATA COLLECTION REQUEST message is set to “1”.

- the *Average UE Throughput UL* IE, if the second bit, “Average UE Throughput UL” of the *Report Characteristics for Data Collection* IE included in the DATA COLLECTION REQUEST message is set to “1”.

- the *Average Packet Delay* IE, if the third bit, “Average Packet Delay” of the *Report Characteristics for Data Collection* IE included in the DATA COLLECTION REQUEST message is set to “1”.

- FFS

Editor’s Note: The procedure text can be further refined.

#### 8.2.AA.3 Unsuccessful Operation



Figure 8.4.AA.3-1: Data Collection Reporting Initiation, unsuccessful operation

If none of the requested information reporting cannot be initiated, gNB-CU-UP shall send the DATA COLLECTION FAILURE message with an appropriate cause value.

#### 8.2.AA.4 Abnormal Conditions

For the same Measurement ID, if the initiating gNB-CU-CP does not receive either the DATA COLLECTION RESPONSE message or the DATA COLLECTION FAILURE message, the gNB-CU-CP may reinitiate the Data Collection Reporting Initiation procedure towards the same NG-RAN node, provided that the content of the new DATA COLLECTION REQUEST message is identical to the content of the previously unacknowledged DATA COLLECTION REQUEST message.

If the gNB-CU-UP receives an DATA COLLECTION REQUEST message which includes the *Registration Request* IE set to “stop” and if the gNB-CU-UP Measurement ID value received in the DATA COLLECTION REQUEST message is not used, the gNB-CU-UP shall initiate DATA COLLECTION FAILURE message with an appropriate cause value.

If the *Report Characteristics for Data Collection* IE bitmap is set to “0” (all bits are set to “0”) in the DATA COLLECTION REQUEST message then gNB-CU-UP shall initiate an DATA COLLECTION FAILURE message with an appropriate cause value.

If the gNB-CU-UP receives a DATA COLLECTION REQUEST message which includes the *Registration Request* IE set to “start” and the *gNB-CU-CP Measurement ID* IE corresponding to an existing on-going Data Collection reporting, then gNB-CU-UP shall initiate a DATA COLLECTION FAILURE message with an appropriate cause value.

### 8.2.BB Data Collection Reporting

#### 8.2.BB.1 General

This procedure is initiated by an gNB-CU-UP to report information accepted by the gNB-CU-CP following a successful Data Collection Reporting Initiation procedure.

The procedure uses non UE-associated signalling.

#### 8.2.BB.2 Successful Operation



Figure 8.4.11.2-1: Data Collection Reporting, successful operation

The gNB-CU-UP shall report the accepted information in DATA COLLECTION UPDATE message. The accepted information is the information that was successfully initiated during the preceding Data Collection Reporting Initiation procedure.

#### 8.2.BB.3 Unsuccessful Operation

Not applicable.

#### 8.2.BB.4 Abnormal Conditions

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

#### 9.2.1.CC DATA COLLECTION REQUEST

This message is sent by gNB-CU-CP to gNB-CU-UP to initiate the requested information reporting according to the parameters given in the message.

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 |
| Transaction ID | M |  | 9.3.1.53 |  | YES | reject |
| gNB-CU-CP Measurement ID | M |  | INTEGER (1..4095,...) | Allocated by gNB-CU-CP | YES | reject |
| gNB-CU-UP Measurement ID | C-ifRegistrationRequestStop |  | INTEGER (1..4095,...) | Allocated by gNB-CU-UP | YES | ignore |
| Registration Request for Data Collection | M |  | ENUMERATED(start, stop, …) | Type of request for which the AI/ML related information is required. | YES | reject |
| Report Characteristics for Data Collection | C-ifRegistrationRequestStart |  | BITSTRING  (SIZE(32)) | Each position in the bitmap indicates the object the gNB-CU-UP is requested to report.  First Bit = Average UE Throughput UL,  Second bit = Average UE Throughput DL,  Third Bit = Average Packet Delay,  Other bits are ignored by the gNB-CU-UP.  FFS on the coding | YES | reject |
| Reporting Periodicity for Data Collection | O |  | ENUMERATED (500ms, 1000ms, 2000ms, 5000ms, 10000ms, …) | Periodicity that can be used for reporting of requested objects. Also used as the averaging window length for all objects if supported. | YES | ignore |

|  |  |
| --- | --- |
| Condition | Explanation |
| ifRegistrationRequestStop | This IE shall be present if the *Registration Request* IE is set to the value "stop". |
| ifRegistrationRequestStart | This IE shall be present if the Registration Request IE is set to the value "start". |

#### 9.2.1.DD DATA COLLECTION RESPONSE

This message is sent by gNB-CU-UP to gNB-CU-CP to indicate that the requested information, for all or part of the measurement objects included in the reporting is successfully initiated.

Direction: gNB-CU-UP → gNB-CU-CP

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.3.1.1 |  | YES | reject |
| Transaction ID | M |  | 9.3.1.53 |  | YES | reject |
| gNB-CU-CP Measurement ID | M |  | INTEGER (1..4095,...) | Allocated by gNB-CU-CP | YES | reject |
| gNB-CU-UP Measurement ID | M |  | INTEGER (1..4095,...) | Allocated by gNB-CU-UP | YES | ignore |
| Cause | M |  | 9.3.1.2 | Failure cause for measurement objects for which the measurement cannot be initiated. | – |  |
| Criticality Diagnostics | O |  | 9.3.1.3 |  | YES | ignore |

#### 9.2.1.EE DATA COLLECTION FAILURE

This message is sent by the gNB CU-UP to gNB-CU-CP to indicate that for all of the requested objects the reporting cannot be initiated.

Direction: gNB-CU-UP → gNB-CU-CP.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.3.1.1 |  | YES | reject |
| Transaction ID | M |  | 9.3.1.53 |  | YES | reject |
| gNB-CU-CP Measurement ID | M |  | INTEGER (1..4095,...) | Allocated by gNB-CU-CP | YES | reject |
| gNB-CU-UP Measurement ID | M |  | INTEGER (1..4095,...) | Allocated by gNB-CU-UP | YES | ignore |
| Cause | M |  | 9.3.1.2 |  | YES | ignore |
| Criticality Diagnostics | O |  | 9.3.1.3 |  | YES | ignore |

#### 9.2.1.FF DATA COLLECTION UPDATE

This message is sent by gNB-CU-UP to gNB-CU-CP to report the requested information.

Direction: gNB-CU-UP → gNB-CU-CP.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.3.1.1 |  | YES | reject |
| Transaction ID | M |  | 9.3.1.53 |  | YES | reject |
| gNB-CU-CP Measurement ID | M |  | INTEGER (1..4095,...) | Allocated by gNB-CU-CP | YES | reject |
| gNB-CU-UP Measurement ID | M |  | INTEGER (1..4095,...) | Allocated by gNB-CU-UP | YES | ignore |
| FFS other information |  |  |  |  |  |  |

<<<<<<<<<<<<<<<<<<<< Next Changes >>>>>>>>>>>>>>>>>>>>

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,

BCBearerContextSetupRequest,

BCBearerContextSetupResponse,

BCBearerContextSetupFailure,

BCBearerContextModificationRequest,

BCBearerContextModificationResponse,

BCBearerContextModificationFailure,

BCBearerContextModificationRequired,

BCBearerContextModificationConfirm,

BCBearerContextReleaseCommand,

BCBearerContextReleaseComplete,

BCBearerContextReleaseRequest,

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,

MCBearerContextSetupRequest,

MCBearerContextSetupResponse,

MCBearerContextSetupFailure,

MCBearerContextModificationRequest,

MCBearerContextModificationResponse,

MCBearerContextModificationFailure,

MCBearerContextModificationRequired,

MCBearerContextModificationConfirm,

MCBearerNotification,

MCBearerContextReleaseCommand,

MCBearerContextReleaseComplete,

MCBearerContextReleaseRequest,

MRDC-DataUsageReport,

DeactivateTrace,

TraceStart,

PrivateMessage,

ResourceStatusRequest,

ResourceStatusResponse,

ResourceStatusFailure,

ResourceStatusUpdate,

IAB-UPTNLAddressUpdate,

IAB-UPTNLAddressUpdateAcknowledge,

IAB-UPTNLAddressUpdateFailure,

CellTrafficTrace,

EarlyForwardingSNTransfer,

GNB-CU-CPMeasurementResultsInformation,

IABPSKNotification,

DataCollectionRequest,

DataCollectionResponse,

DataCollectionFailure,

DataCollectionUpdate

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,

id-iABPSKNotification,

id-BCBearerContextSetup,

id-BCBearerContextModification,

id-BCBearerContextModificationRequired,

id-BCBearerContextRelease,

id-BCBearerContextReleaseRequest,

id-MCBearerContextSetup,

id-MCBearerContextModification,

id-MCBearerContextModificationRequired,

id-MCBearerNotification,

id-MCBearerContextRelease,

id-MCBearerContextReleaseRequest,

id-dataCollectionReportingInitiation,

id-dataCollectionReporting

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

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

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 |

bCBearerContextSetup |

bCBearerContextModification |

bCBearerContextModificationRequired |

bCBearerContextRelease |

mCBearerContextSetup |

mCBearerContextModification |

mCBearerContextModificationRequired |

mCBearerContextRelease |

dataCollectionReportingInitiation,

...

}

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 |

iABPSKNotification |

bCBearerContextReleaseRequest |

mCBearerContextReleaseRequest |

mCBearerNotification |

dataCollectionReporting,

...

}

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

--

-- Interface Elementary Procedures

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

reset E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE Reset

SUCCESSFUL OUTCOME ResetAcknowledge

PROCEDURE CODE id-reset

CRITICALITY reject

}

<uncahnged text omitted>

mCBearerNotification E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE MCBearerNotification

PROCEDURE CODE id-MCBearerNotification

CRITICALITY reject

}

mCBearerContextRelease E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE MCBearerContextReleaseCommand

SUCCESSFUL OUTCOME MCBearerContextReleaseComplete

PROCEDURE CODE id-MCBearerContextRelease

CRITICALITY reject

}

mCBearerContextReleaseRequest E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE MCBearerContextReleaseRequest

PROCEDURE CODE id-MCBearerContextReleaseRequest

CRITICALITY reject

}

dataCollectionReportingInitiation E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE DataCollectionRequest

SUCCESSFUL OUTCOME DataCollectionResponse

UNSUCCESSFUL OUTCOME DataCollectionFailure

PROCEDURE CODE id-dataCollectionReportingInitiation

CRITICALITY reject

}

dataCollectionReporting E1AP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE DataCollectionUpdate

PROCEDURE CODE id-dataCollectionReporting

CRITICALITY ignore

}

END

-- ASN1STOP

<<<<<<<<<<<<<<<<<<<< Next Changes >>>>>>>>>>>>>>>>>>>>

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

AssociatedSessionID,

Cause,

CriticalityDiagnostics,

GNB-CU-CP-MBS-E1AP-ID,

GNB-CU-UP-MBS-E1AP-ID,

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,

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,

DirectForwardingPathAvailability,

IAB-Donor-CU-UPPSKInfo-Item,

ECGI-Support-List,

MDTPollutedMeasurementIndicator,

UESliceMaximumBitRateList,

SCGActivationStatus,

GlobalMBSSessionID,

BCBearerContextToSetup,

BCBearerContextToSetupResponse,

BCBearerContextToModify,

BCBearerContextToModifyResponse,

BCBearerContextToModifyRequired,

BCBearerContextToModifyConfirm,

MCBearerContextToSetup,

MCBearerContextToSetupResponse,

MCBearerContextToModify,

MCBearerContextToModifyResponse,

MCBearerContextToModifyRequired,

MCBearerContextToModifyConfirm,

MBSMulticastF1UContextDescriptor,

MBS-ServiceArea,

GNB-CU-UP-MBS-Support-Info,

SDTContinueROHC,

MDTPLMNModificationList,

InactivityInformationRequest,

UEInactivityInformation,

MBSSessionResourceNotification,

MT-SDT-Information,

MT-SDT-Information-Request,

SDT-data-size-threshold,

SDT-data-size-threshold-Crossed,

RegistrationRequestForDataCollection,

ReportCharacteristicsForDataCollection,

ReportingPeriodicityForDataCollection

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-AssociatedSessionID,

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-DirectForwardingPathAvailability, id-IAB-Donor-CU-UPPSKInfo,

id-ECGI-Support-List,

id-MDTPollutedMeasurementIndicator,

id-UESliceMaximumBitRateList,

id-SCGActivationStatus,

id-GNB-CU-CP-MBS-E1AP-ID,

id-GNB-CU-UP-MBS-E1AP-ID,

id-GlobalMBSSessionID,

id-BCBearerContextToSetup,

id-BCBearerContextToSetupResponse,

id-BCBearerContextToModify,

id-BCBearerContextToModifyResponse,

id-BCBearerContextToModifyRequired,

id-BCBearerContextToModifyConfirm,

id-MCBearerContextToSetup,

id-MCBearerContextToSetupResponse,

id-MCBearerContextToModify,

id-MCBearerContextToModifyResponse,

id-MCBearerContextToModifyRequired,

id-MCBearerContextToModifyConfirm,

id-MBSMulticastF1UContextDescriptor,

id-gNB-CU-UP-MBS-Support-Info,

id-SDTContinueROHC,

id-ManagementBasedMDTPLMNModificationList,

id-MBS-ServiceArea,

id-InactivityInformationRequest,

id-UEInactivityInformation,

id-MBSSessionResourceNotification,

id-MT-SDT-Information,

id-MT-SDT-Information-Request,

id-SDT-data-size-threshold,

id-SDT-data-size-threshold-Crossed,

id-RegistrationRequestForDataCollection,

id-ReportCharacteristicsForDataCollection,

id-ReportingPeriodicityForDataCollection

maxnoofErrors,

maxnoofSPLMNs,

maxnoofDRBs,

maxnoofTNLAssociations,

maxnoofIndividualE1ConnectionsToReset,

maxnoofTNLAddresses,

maxnoofPSKs

FROM E1AP-Constants;

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

--

<unchanged text omitted>

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

--

-- DATA COLLECTION REQUEST

--

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

DataCollectionRequest ::= SEQUENCE {

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

...

}

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

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

{ ID id-gNB-CU-CP-Measurement-ID CRITICALITY reject TYPE Measurement-ID PRESENCE mandatory}|

{ ID id-gNB-CU-UP-Measurement-ID CRITICALITY ignore TYPE Measurement-ID PRESENCE conditional}|

-- This IE shall be present if the *Registration Request for Data Collection* IE is set to the value "stop".

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

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

-- This IE shall be present if the *Registration Request for Data Collection* IE is set to the value "start".

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

...

}

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

--

-- DATA COLLECTION RESPONSE

--

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

DataCollectionResponse ::= SEQUENCE {

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

...

}

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

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

{ ID id-gNB-CU-CP-Measurement-ID CRITICALITY reject TYPE Measurement-ID PRESENCE mandatory}|

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

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

...

}

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

--

-- DATA COLLECTION FAILURE

--

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

DataCollectionFailure ::= SEQUENCE {

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

...

}

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

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

{ ID id-gNB-CU-CP-Measurement-ID CRITICALITY reject TYPE Measurement-ID PRESENCE mandatory}|

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

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

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

...

}

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

--

-- DATA COLLECTION UPDATE

--

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

DataCollectionUpdate ::= SEQUENCE {

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

...

}

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

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

{ ID id-gNB-CU-CP-Measurement-ID CRITICALITY reject TYPE Measurement-ID PRESENCE mandatory}|

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

...

}

END

-- ASN1STOP

<<<<<<<<<<<<<<<<<<<< Next Changes >>>>>>>>>>>>>>>>>>>>

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-BCBearerContextNGU-TNLInfoatNGRAN-Request,

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,

id-DataForwardingtoNG-RANQoSFlowInformationList,

id-MaxCIDEHCDL,

id-ignoreMappingRuleIndication,

id-EarlyDataForwardingIndicator,

id-QoSFlowsDRBRemapping,

id-SecurityIndicationModify,

id-DataForwardingSourceIPAddress,

id-M4ReportAmount,

id-M6ReportAmount,

id-M7ReportAmount,

id-PDUSession-PairID,

id-SurvivalTime,

id-UDC-Parameters,

id-SecurityIndication,

id-SecurityResult,

id-SDTindicatorSetup,

id-SDTindicatorMod,

id-DiscardTimerExtended,

id-MCForwardingResourceRequest,

id-MCForwardingResourceIndication,

id-MCForwardingResourceResponse,

id-MCForwardingResourceRelease,

id-MCForwardingResourceReleaseIndication,

id-PDCP-COUNT-Reset,

id-MBSSessionAssociatedInfoNonSupportToSupport,

id-VersionID,

id-MBSAreaSessionID,

id-Secondary-PDU-Session-Data-Forwarding-Information,

id-MBSSessionResourceNotification,

id-MCBearerContextInactivityTimer,

id-MCBearerContextStatusChange,

id-SpecialTriggeringPurpose,

id-F1UTunnelNotEstablished,

id-PDUSetQoSParameters,

id-N6JitterInformation,

id-ECNMarkingorCongestionInformationReportingRequest,

id-ECNMarkingorCongestionInformationReportingStatus,

id-PDUSetbasedHandlingIndicator,

id-IndirectPathIndication,

id-F1U-TNL-InfoToAdd-List,

id-F1U-TNL-InfoAdded-List,

id-F1U-TNL-InfoToAddOrModify-List,

id-F1U-TNL-InfoAddedOrModified-List,

id-F1U-TNL-InfoToRelease-List,

id-BroadcastF1U-ContextReferenceE1,

id-PSIbasedDiscardTimer,

id-UserPlaneErrorIndicator,

id-MaximumDataBurstVolume,

id-PDCPSNGapReport,

id-UserPlaneFailureIndication,

maxnoofMBSAreaSessionIDs,

maxnoofSharedNG-UTerminations,

maxnoofMRBs,

maxnoofMBSSessionIDs,

maxnoofQoSParaSets,

maxnoofErrors,

maxnoofSliceItems,

maxnoofEUTRANQOSParameters,

maxnoofNGRANQOSParameters,

maxnoofDRBs,

maxnoofPDUSessionResource,

maxnoofQoSFlows,

maxnoofUPParameters,

maxnoofCellGroups,

maxnooftimeperiods,

maxnoofNRCGI,

maxnoofTLAs,

maxnoofGTPTLAs,

maxnoofSPLMNs,

maxnoofMDTPLMNs,

maxnoofExtSliceItems,

maxnoofDataForwardingTunneltoE-UTRAN,

maxnoofExtNRCGI,

maxnoofECGI,

maxnoofSMBRValues,

maxnoofCellsforMBS,

maxnoofTAIforMBS,

maxnoofMBSServiceAreaInformation,

maxnoofDUs

FROM E1AP-Constants

Criticality,

ProcedureCode,

ProtocolIE-ID,

TriggeringMessage

FROM E1AP-CommonDataTypes

ProtocolExtensionContainer{},

ProtocolIE-SingleContainer{},

E1AP-PROTOCOL-EXTENSION,

E1AP-PROTOCOL-IES

FROM E1AP-Containers;

<<<<<<<<<<<<<<<<<<<< Next Changes >>>>>>>>>>>>>>>>>>>>

-- 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 ::= {

{ID id-PDUSession-PairID CRITICALITY ignore EXTENSION PDUSession-PairID PRESENCE optional },

...

}

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

RetainabilityMeasurementsInfo ::= SEQUENCE (SIZE(1.. maxnoofDRBs)) OF DRB-Removed-Item

RegistrationRequest ::= ENUMERATED {

start,

stop,

...

}

RegistrationRequestForDataCollection ::= ENUMERATED {start, stop, ... }

ReportCharacteristics ::= BIT STRING (SIZE(36))

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

ReportingPeriodicity ::= ENUMERATED {

ms500, ms1000, ms2000, ms5000, ms10000, ms20000, ms30000, ms40000, ms50000, ms60000, ms70000, ms80000, ms90000, ms100000, ms110000, ms120000,

...

}

ReportingPeriodicityForDataCollection ::= ENUMERATED {

half-thousand-ms,

one-thousand-ms,

two-thousand-ms,

five-thousand-ms,

ten-thousand-ms,

...

}

RequestedAction4AvailNGUTermination ::= ENUMERATED {

apply-available-configuration,

apply-requested-configuration,

...,

apply-available-configuration-if-same-as-requested

}

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 ::= {

...

}

<<<<<<<<<<<<<<<<<<<< Next Changes >>>>>>>>>>>>>>>>>>>>

-- U

UDC-Parameters ::= SEQUENCE {

bufferSize BufferSize,

dictionary Dictionary OPTIONAL,

continueUDC ENUMERATED {true, ...} OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { UDC-Parameters-ExtIEs } } OPTIONAL

}

UDC-Parameters-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

{ ID id-VersionID CRITICALITY ignore EXTENSION INTEGER (0..15) PRESENCE optional},

...

}

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 ::= {

...

}

UESliceMaximumBitRateList ::= SEQUENCE (SIZE(1.. maxnoofSMBRValues)) OF UESliceMaximumBitRateItem

UESliceMaximumBitRateItem ::= SEQUENCE {

sNSSAI SNSSAI,

uESliceMaximumBitRateDL BitRate,

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

...

}

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

...

}

<<<<<<<<<<<<<<<<<<<< Next Changes >>>>>>>>>>>>>>>>>>>>

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

id-iABPSKNotification ProcedureCode ::= 28

id-BCBearerContextSetup ProcedureCode ::= 29

id-BCBearerContextModification ProcedureCode ::= 30

id-BCBearerContextModificationRequired ProcedureCode ::= 31

id-BCBearerContextRelease ProcedureCode ::= 32

id-BCBearerContextReleaseRequest ProcedureCode ::= 33

id-MCBearerContextSetup ProcedureCode ::= 34

id-MCBearerContextModification ProcedureCode ::= 35

id-MCBearerContextModificationRequired ProcedureCode ::= 36

id-MCBearerContextRelease ProcedureCode ::= 37

id-MCBearerContextReleaseRequest ProcedureCode ::= 38

id-MCBearerNotification ProcedureCode ::= 39

id-dataCollectionReportingInitiation ProcedureCode ::= X1

id-dataCollectionReporting ProcedureCode ::= X2

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

--

-- 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

maxnoofPSKs INTEGER ::= 256

maxnoofECGI INTEGER ::= 512

maxnoofSMBRValues INTEGER ::= 8

maxnoofMBSAreaSessionIDs INTEGER ::= 256

maxnoofSharedNG-UTerminations INTEGER ::= 8

maxnoofMRBs INTEGER ::= 32

maxnoofMBSSessionIDs INTEGER ::= 512

maxnoofCellsforMBS INTEGER ::= 512

maxnoofTAIforMBS INTEGER ::= 512

maxnoofMBSServiceAreaInformation INTEGER ::= 256

maxnoofDUs INTEGER ::= 512

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

--

-- IEs

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

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-DataForwardingtoNG-RANQoSFlowInformationList ProtocolIE-ID ::= 136

id-MaxCIDEHCDL ProtocolIE-ID ::= 137

id-ignoreMappingRuleIndication ProtocolIE-ID ::= 138

id-DirectForwardingPathAvailability ProtocolIE-ID ::= 139

id-EarlyDataForwardingIndicator ProtocolIE-ID ::= 140

id-QoSFlowsDRBRemapping ProtocolIE-ID ::= 141

id-DataForwardingSourceIPAddress ProtocolIE-ID ::= 142

id-SecurityIndicationModify ProtocolIE-ID ::= 143

id-IAB-Donor-CU-UPPSKInfo ProtocolIE-ID ::= 144

id-ECGI-Support-List ProtocolIE-ID ::= 145

id-MDTPollutedMeasurementIndicator ProtocolIE-ID ::= 146

id-M4ReportAmount ProtocolIE-ID ::= 147

id-M6ReportAmount ProtocolIE-ID ::= 148

id-M7ReportAmount ProtocolIE-ID ::= 149

id-UESliceMaximumBitRateList ProtocolIE-ID ::= 150

id-PDUSession-PairID ProtocolIE-ID ::= 151

id-SurvivalTime ProtocolIE-ID ::= 152

id-UDC-Parameters ProtocolIE-ID ::= 153

id-SCGActivationStatus ProtocolIE-ID ::= 154

id-GNB-CU-CP-MBS-E1AP-ID ProtocolIE-ID ::= 155

id-GNB-CU-UP-MBS-E1AP-ID ProtocolIE-ID ::= 156

id-GlobalMBSSessionID ProtocolIE-ID ::= 157

id-BCBearerContextToSetup ProtocolIE-ID ::= 158

id-BCBearerContextToSetupResponse ProtocolIE-ID ::= 159

id-BCBearerContextToModify ProtocolIE-ID ::= 160

id-BCBearerContextToModifyResponse ProtocolIE-ID ::= 161

id-BCBearerContextToModifyRequired ProtocolIE-ID ::= 162

id-BCBearerContextToModifyConfirm ProtocolIE-ID ::= 163

id-MCBearerContextToSetup ProtocolIE-ID ::= 164

id-MCBearerContextToSetupResponse ProtocolIE-ID ::= 165

id-MCBearerContextToModify ProtocolIE-ID ::= 166

id-MCBearerContextToModifyResponse ProtocolIE-ID ::= 167

id-MCBearerContextToModifyRequired ProtocolIE-ID ::= 168

id-MCBearerContextToModifyConfirm ProtocolIE-ID ::= 169

id-MBSMulticastF1UContextDescriptor ProtocolIE-ID ::= 170

id-gNB-CU-UP-MBS-Support-Info ProtocolIE-ID ::= 171

id-SecurityIndication ProtocolIE-ID ::= 172

id-SecurityResult ProtocolIE-ID ::= 173

id-SDTContinueROHC ProtocolIE-ID ::= 174

id-SDTindicatorSetup ProtocolIE-ID ::= 175

id-SDTindicatorMod ProtocolIE-ID ::= 176

id-DiscardTimerExtended ProtocolIE-ID ::= 177

id-ManagementBasedMDTPLMNModificationList ProtocolIE-ID ::= 178

id-MCForwardingResourceRequest ProtocolIE-ID ::= 179

id-MCForwardingResourceIndication ProtocolIE-ID ::= 180

id-MCForwardingResourceResponse ProtocolIE-ID ::= 181

id-MCForwardingResourceRelease ProtocolIE-ID ::= 182

id-MCForwardingResourceReleaseIndication ProtocolIE-ID ::= 183

id-PDCP-COUNT-Reset ProtocolIE-ID ::= 184

id-MBSSessionAssociatedInfoNonSupportToSupport ProtocolIE-ID ::= 185

id-VersionID ProtocolIE-ID ::= 186

id-InactivityInformationRequest ProtocolIE-ID ::= 187

id-UEInactivityInformation ProtocolIE-ID ::= 188

id-MBSAreaSessionID ProtocolIE-ID ::= 189

id-Secondary-PDU-Session-Data-Forwarding-Information ProtocolIE-ID ::= 190

id-MBSSessionResourceNotification ProtocolIE-ID ::= 191

id-MCBearerContextInactivityTimer ProtocolIE-ID ::= 192

id-MCBearerContextStatusChange ProtocolIE-ID ::= 193

id-MT-SDT-Information ProtocolIE-ID ::= 194

id-MT-SDT-Information-Request ProtocolIE-ID ::= 195

id-SDT-data-size-threshold ProtocolIE-ID ::= 196

id-SDT-data-size-threshold-Crossed ProtocolIE-ID ::= 197

id-SpecialTriggeringPurpose ProtocolIE-ID ::= 198

id-AssociatedSessionID ProtocolIE-ID ::= 199

id-MBS-ServiceArea ProtocolIE-ID ::= 200

id-PDUSetQoSParameters ProtocolIE-ID ::= 201

id-N6JitterInformation ProtocolIE-ID ::= 202

id-ECNMarkingorCongestionInformationReportingRequest ProtocolIE-ID ::= 203

id-ECNMarkingorCongestionInformationReportingStatus ProtocolIE-ID ::= 204

id-PDUSetbasedHandlingIndicator ProtocolIE-ID ::= 205

id-IndirectPathIndication ProtocolIE-ID ::= 206

id-F1UTunnelNotEstablished ProtocolIE-ID ::= 207

id-F1U-TNL-InfoToAdd-List ProtocolIE-ID ::= 208

id-F1U-TNL-InfoAdded-List ProtocolIE-ID ::= 209

id-F1U-TNL-InfoToAddOrModify-List ProtocolIE-ID ::= 210

id-F1U-TNL-InfoAddedOrModified-List ProtocolIE-ID ::= 211

id-F1U-TNL-InfoToRelease-List ProtocolIE-ID ::= 212

id-BroadcastF1U-ContextReferenceE1 ProtocolIE-ID ::= 213

id-PSIbasedDiscardTimer ProtocolIE-ID ::= 214

id-UserPlaneErrorIndicator ProtocolIE-ID ::= 215

id-MaximumDataBurstVolume ProtocolIE-ID ::= 216

id-BCBearerContextNGU-TNLInfoatNGRAN-Request ProtocolIE-ID ::= 217

id-PDCPSNGapReport ProtocolIE-ID ::= 218

id-UserPlaneFailureIndication ProtocolIE-ID ::= 219

id-RegistrationRequestForDataCollection ProtocolIE-ID ::= XX1

id-ReportCharacteristicsForDataCollection ProtocolIE-ID ::= XX2

id-ReportingPeriodicityForDataCollection ProtocolIE-ID ::= XX3

END

-- ASN1STOP

<<<<<<<<<<<<<<<<<<<< End of the Change >>>>>>>>>>>>>>>>>>>>