**3GPP TSG-RAN3 Meeting #108-e *R3-204481***

**E-meeting, 1-11 June, 2020**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.413** | **CR** | **0237** | **rev** | **10** | **Current version:** | **16.1.0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **x** | Core Network | **x** |

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| ***Title:*** | Addition of SON features | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, CMCC, ZTE, Nokia, Nokia Shanghai Bell，CATT, Samsung, Ericsson, Qualcomm Incorporated, LG Electronics, NTT DOCOMO | | | | | | | | | |
| ***Source to TSG:*** | RAN3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_SON\_MDT | | | | |  | ***Date:*** | | | 2020-06-18 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) Rel-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Addition of SON features | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Addition of a new Inter-system SON Configuration Transfer IE in the DL and UL configuration transfer for inter-system exchange  Addition of a SON Information Report for intra system exchange | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | SON features not supported | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 2, 8.4.2.2, 8.8.1.2, 8.8.2.2, 9.2.7.1, 9.2.7.2, 9.3.1.29, 9.3.1.x, 9.3.1.y, 9.3.3.7, 9.3.3.x1, 9.3.3.x2, 9.3.3.Y1, 9.3.3.Y2, 9.3.3.Y3, 9.3.3.Y3a, 9.3.3.Y4, 9.3.3.Y5, 9.3.3.z1, 9.4.4, 9.4.5, 9.4.7 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **x** |  | Other core specifications | | | | TS 36.300 CR  TS 36.413 CR 1710  TS 36.423 CR 1373  TS 38.300 CR  TS 38.401 CR 0116  TS 38.420 CR 0019  TS 38.423 CR 0221  TS 38.460 CR 0031  TS 38.463 CR 0142  TS 38.470 CR 0064  TS 38.473 CR 0441 | | |
| ***affected:*** | |  | **x** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **x** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | Rev1: Editorial update and added an FFS on scenario of an RLF report generated by NG-RAN RRC being sent from E-UTRAN to NG-RAN.  Rev2: resubmitted to RAN3#105b  Rev3: includes the agreed TP in R3-196155  Rev4: Resubmitted to RAN3#106  Rev5: Resubmitted to RAN3#107e  Rev6: includes the agreed TP in R3-200370, R3-201323, R3-201331  Rev7: Updated towards latest spec version  Rev8: includes the agreed TP in R3-201740, R3-202838  Rev9: Resubmitted to RAN3#108e: Editorial: removal of editor’s note (RLF report) and added FFS for value of maxnoofCandidateCells  Rev10: includes the agreed TP in R3-204254, editorial | | | | | | | | |

*Start of the first change*

# 2 References

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[r1] 3GPP TS 36.401: "E-UTRAN Architecture Description".

[r2] 3GPP TS 38.104: "NR; Base Station (BS) radio transmission and reception".

[r3] 3GPP TS 36.423: "Evolved Universal Terrestrial Radio Access Network (E-UTRAN); X2 Application Protocol (X2AP) ".

*Start of the next change*

### 8.4.2 Handover Resource Allocation

#### 8.4.2.1 General

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

#### 8.4.2.2 Successful Operation



Figure 8.4.2.2-1: Handover resource allocation: successful operation

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

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

Upon receipt of the HANDOVER REQUEST message the target NG-RAN node shall

- attempt to execute the requested PDU session configuration and associated security;

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

- store the received Mobility Restriction List in the UE context;

- store the received UE Security Capabilities in the UE context;

- store the received Security Context in the UE context and take it into use as defined in TS 33.501 [13].

Upon reception of the *UE History Information* IE, which is included within the *Source to Target Transparent Container* IE of the HANDOVER REQUEST message, the target NG-RAN node shall collect the information defined as mandatory in the *UE History Information* IE and shall, if supported, collect the information defined as optional in the *UE History Information* IE, for as long as the UE stays in one of its cells, and store the collected information to be used for future handover preparations.

Upon receiving the *PDU Session Resource Setup List* IE contained in the HANDOVER REQUEST message, the target NG-RAN node shall behave the same as defined in the PDU Session Resource Setup procedure. The target NG-RAN node shall report to the AMF in the HANDOVER REQUEST ACKNOWLEDGE message the result for each PDU session resource requested to be setup. In particular, for each PDU session resource successfully setup, it shall include the *Handover Request Acknowledge Transfer* IE containing the following information:

- The list of QoS flows which have been successfully established in the *QoS Flow Setup Response List* IE.

- The *Data Forwarding Accepted* IE if the data forwarding for the QoS flow is accepted.

- The list of QoS flows which have failed to be established, if any, in the *QoS Flow Failed to Setup List* IE.

- The UP transport layer information to be used for the PDU session.

- The security result associated to the PDU session.

For each PDU session resource which failed to be setup, the *Handover Resource Allocation Unsuccessful Transfer* IE shall be included in the HANDOVER REQUEST ACKNOWLEDGE message containing a cause value that should be precise enough to enable the SMF to know the reason for the unsuccessful establishment.

Upon reception of the HANDOVER REQUEST ACKNOWLEDGE message the AMF shall, for each PDU session indicated in the *PDU Session ID* IE, transfer transparently the *Handover Request Acknowledge Transfer* IE or *Handover Resource Allocation Unsuccessful Transfer* IE to the SMF associated with the concerned PDU session.

If the HANDOVER REQUEST message contains the *Data Forwarding Not Possible* IE associated with a given PDU session within the *Handover Request Transfer* IE set to "data forwarding not possible", the target NG-RAN node may not include the *DL Forwarding UP TNL Information* IE and for intra-system handover the *Data Forwarding Response DRB List* IE within the *Handover Request Acknowledge Transfer* IE in the HANDOVER REQUEST ACKNOWLEDGE message for that PDU session.

In case of intra-system handover, if the target NG-RAN node accepts the downlink data forwarding for at least one QoS flow for which the *DL Forwarding* IE is set to "DL forwarding proposed", it may include the *DL Forwarding UP TNL Information* IE in the *Handover Request Acknowledge Transfer* IE as forwarding tunnel for the QoS flows listed in the *QoS Flow Setup Response List* IE of the HANDOVER REQUEST ACKNOWLEDGE message.

In case of intra-system handover, if the target NG-RAN node accepts the uplink data forwarding for at least one QoS flow for which the *UL Forwarding* IE is set to "UL forwarding proposed", it may include the *UL Forwarding UP TNL Information* IE in the *Handover Request Acknowledge Transfer* IE for the PDU session within the *PDU Session Resource Admitted List* IE of the HANDOVER REQUEST ACKNOWLEDGE message.

In case of intra-system handover, for each PDU session for which the *Additional DL UP TNL Information for HO List* IE is included in the *Handover Request Acknowledge Transfer* IE of the HANDOVER REQUEST ACKNOWLEDGE message, the SMF shall consider the included *Additional DL NG-U UP TNL Information* IE as the downlink termination point for the associated flows indicated in the *Additional QoS Flow Setup Response List* IE for this PDU session split in different tunnels and shall consider the *Additional DL Forwarding UP TNL Information* IE, if included, as the forwarding tunnel associated to these QoS flows.

In case of intra-system handover, for each PDU session for which the *Additional UL Forwarding UP TNL Information* IE is included in the *Handover Request Acknowledge Transfer* IE of the HANDOVER REQUEST ACKNOWLEDGE message, the SMF shall consider it as the termination points for the uplink forwarding tunnels for this PDU session split in different tunnels.

In case of intra-system handover, if the target NG-RAN node accepts the data forwarding for a successfully configured DRB, the target NG-RAN node may include the *DL Forwarding UP TNL Information* IE for the DRB within the *Data Forwarding Response DRB List* IE within *Handover Request Acknowledge Transfer* IE of the HANDOVER REQUEST ACKNOWLEDGE message.

If the HANDOVER REQUEST ACKNOWLEDGE message contains the *UL Forwarding UP TNL Information* IE for a given DRB in the *Data Forwarding Response DRB List* IE within the *Handover Request Acknowledge Transfer* IE, it indicates the target NG-RAN node has requested the forwarding of uplink data for the DRB.

In case of inter-system handover from E-UTRAN, if the *PDU Session Resource Setup Request Transfer* IE contains the *Direct Forwarding Path Availability* IE set to "direct path available", the target NG-RAN node shall, if supported, and if it accepts downlink data forwarding for the QoS flows mapped to an E-RAB of an admitted PDU session, include the *DL Forwarding UP TNL Information* IE in the *Data Forwarding Response E-RAB List* IE in the *Handover Request Acknowledge Transfer* IE in the HANDOVER REQUEST ACKNOWLEDGE message for that mapped E-RAB.

In case of inter-system handover from E-UTRAN, the target NG-RAN node includes the *Data Forwarding Accepted* IE for each QoS flow that the *DL Forwarding* IE is set to "DL forwarding proposed" for the corresponding E-RAB in the *Source NG-RAN Node to Target NG-RAN Node Transparent Container* IE and that the target NG-RAN node has admitted the proposed forwarding of downlink data for the QoS flow. If indirect data forwarding is applied for inter-system handover, if the target NG-RAN node accepts the downlink data forwarding for at least one QoS flow of an admitted PDU session it shall include the *DL Forwarding UP TNL Information* IE in the *PDU Session Resource Setup Response Transfer* IE for that PDU session within the *PDU Session Resources Admitted List* IE of the HANDOVER REQUEST ACKNOWLEDGE message.

In case of inter-system handover from E-UTRAN with direct forwarding, if the target NG-RAN node receives the *SgNB UE X2AP ID* IE in the *Source NG-RAN Node to Target NG-RAN Node Transparent Container* IE, it may use it for internal forwarding as described in TS 37.340 [32].

The target NG-RAN node shall use the information in the *Mobility Restriction List* IE if present in the HANDOVER REQUEST message to

- determine a target for subsequent mobility action for which the target NG-RAN node provides information about the target of the mobility action towards the UE;

- select a proper SCG during dual connectivity operation;

- assign proper RNA(s) for the UE when moving the UE to RRC\_INACTIVE state.

If the *Mobility Restriction List* IE is not contained in the HANDOVER REQUEST message, the target NG-RAN node shall consider that no roaming and no access restriction apply to the UE. The target NG-RAN node shall also consider that no roaming and no access restriction apply to the UE when:

- one of the QoS flows includes a particular ARP value (TS 23.501 [9]).

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

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

If the *Core Network Assistance Information for RRC INACTIVE* IE is included in the HANDOVER REQUEST message, the target NG-RAN node shall, if supported, store this information in the UE context and use it for e.g. the RRC\_INACTIVE state decision and RNA configuration for the UE and RAN paging if any for a UE in RRC\_INACTIVE state, as specified in TS 38.300 [8].

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

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

If the *NASC* IE is included in the HANDOVER REQUEST message, the target NG-RAN node shall use it towards the UE as specified in TS 33.501 [13].

If the *RRC Inactive Transition Report Request* IE is included in the HANDOVER REQUEST message, the NG-RAN node shall, if supported, store this information in the UE context.

If the *Redirection for Voice EPS Fallback* IE is included in the HANDOVER REQUEST message, the NG-RAN node shall, if supported, store it and use it in a subsequent decision of EPS fallback for voice as specified in TS 23.502 [10].

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

Upon reception of the *UE History Information from the UE* IE, which is included within the *Source to Target Transparent Container* IE of the HANDOVER REQUEST message, the target NG-RAN node shall, if supported, store the collected information and use it for future handover preparations.

After all necessary resources for the admitted PDU session resources have been allocated, the target NG-RAN node shall generate the HANDOVER REQUEST ACKNOWLEDGE message.

**Interactions with RRC Inactive Transition Report procedure:**

If the *RRC Inactive Transition Report Request* IE is included in the HANDOVER REQUEST message and set to "subsequent state transition report", the NG-RAN node shall, if supported, send the RRC INACTIVE TRANSITION REPORT message to the AMF to report the RRC state of the UE when the UE enters or leaves RRC\_INACTIVE state.

#### 8.4.2.3 Unsuccessful Operation



Figure 8.4.2.3-1: Handover resource allocation: unsuccessful operation

If the target NG-RAN node does not admit any of the PDU session resources, or a failure occurs during the Handover Preparation, it shall send the HANDOVER FAILURE message to the AMF with an appropriate cause value.

#### 8.4.2.4 Abnormal Conditions

If the supported algorithms for encryption defined in the *Encryption Algorithms* IE in the *UE Security Capabilities* IE, plus the mandated support of EEA0 and NEA0 in all UEs (TS 33.501 [13]), do not match any allowed algorithms defined in the configured list of allowed encryption algorithms in the NG-RAN node (TS 33.501 [13]), the target NG-RAN node shall reject the procedure using the HANDOVER FAILURE message.

If the supported algorithms for integrity defined in the *Integrity Protection Algorithms* IE in the *UE Security Capabilities* IE, plus the mandated support of the EIA0 and NIA0 algorithm in all UEs (TS 33.501 [13]), do not match any allowed algorithms defined in the configured list of allowed integrity protection algorithms in the NG-RAN node (TS 33.501 [13]), the target NG-RAN node shall reject the procedure using the HANDOVER FAILURE message.

If the target NG-RAN node receives a HANDOVER REQUEST message which does not contain the *Mobility Restriction List* IE, and the serving PLMN cannot be determined otherwise by the NG-RAN node, the target NG-RAN node shall reject the procedure using the HANDOVER FAILURE message.

If the target NG-RAN node receives a HANDOVER REQUEST message containing the *Mobility Restriction List* IE, and the serving PLMN indicated is not supported by the target cell, the target NG-RAN node shall reject the procedure using the HANDOVER FAILURE message.

*Start of the next change*

## 8.8 Configuration Transfer Procedures

### 8.8.1 Uplink RAN Configuration Transfer

#### 8.8.1.1 General

The purpose of the Uplink RAN Configuration Transfer procedure is to transfer RAN configuration information from the NG-RAN node to the AMF. The AMF does not interpret the transferred RAN configuration information. This procedure uses non-UE associated signalling.

#### 8.8.1.2 Successful Operation



Figure 8.8.1.2-1: Uplink RAN configuration transfer

The NG-RAN node initiates the procedure by sending the UPLINK RAN CONFIGURATION TRANSFER message to the AMF.

If the AMF receives the *SON Configuration Transfer* IE, it shall transparently transfer the *SON Configuration Transfer* IE towards the NG-RAN node indicated in the *Target RAN Node ID* IE which is included in the *SON Configuration Transfer* IE.

If the AMF receives the *EN-DC SON Configuration Transfer* IE, it shall transparently transfer the *EN-DC SON Configuration Transfer* IE towards an MME serving the eNB indicated in the *Target eNB-ID* IE which is included in the *EN-DC SON Configuration Transfer* IE.

If the AMF receives the *Inter-system SON Configuration Transfer* IE, it shall transparently transfer the *Inter-system SON Configuration Transfer* IE towards an MME serving the eNB indicated in the *Target eNB-ID* IE which is included in the *Inter-system SON Configuration Transfer* IE.

#### 8.8.1.3 Abnormal Conditions

Void.

### 8.8.2 Downlink RAN Configuration Transfer

#### 8.8.2.1 General

The purpose of the Downlink RAN Configuration Transfer procedure is to transfer RAN configuration information from the AMF to the NG-RAN node. This procedure uses non-UE associated signalling.

#### 8.8.2.2 Successful Operation



Figure 8.8.2.2-1: Downlink RAN configuration transfer

The procedure is initiated with an DOWNLINK RAN CONFIGURATION TRANSFER message sent from the AMF to the NG-RAN node.

If the NG-RAN node receives, in the *SON Configuration Transfer* IE or in the *EN-DC SON Configuration Transfer* IE, the *SON Information* IE containing the *SON Information Request* IE, it may transfer back the requested information either towards the NG-RAN node indicated in the *Source RAN Node ID* IE of the *SON Configuration Transfer* IE or towards an eNB indicated in the *Source eNB-ID* IE of the *EN-DC SON Configuration Transfer* IE by initiating the Uplink RAN Configuration Transfer procedure.

If the NG-RAN node receives, in the *SON Configuration Transfer* IE, the *Xn TNL Configuration Info* IE containing the *Xn Extended Transport Layer Addresses* IE, it may use it as part of its ACL functionality configuration actions, if such ACL functionality is deployed.

If the NG-RAN node receives, in the *SON Configuration Transfer* IE, the *SON Information* IE containing the *SON Information Reply* IE including the *Xn TNL Configuration Info* IE as an answer to a former request, it may use it to initiate the Xn TNL establishment.

In case the *IP-Sec Transport Layer Address* IE is present and the *GTP Transport Layer Addresses* IE within the *Xn Extended Transport Layer Addresses* IE is not empty, GTP traffic is conveyed within an IP-Sec tunnel terminated at the IP-Sec tunnel endpoint given in the *IP-Sec Transport Layer Address* IE.

In case the *IP-Sec Transport Layer Address* IE is not present, GTP traffic is terminated at the endpoints given by the list of addresses in the *Xn* *GTP Transport Layer Addresses* IE within the *Xn Extended Transport Layer Addresses* IE.

In case the *Xn* *GTP Transport Layer Addresses* IE is empty and the *IP-Sec Transport Layer Address* IE is present, SCTP traffic is conveyed within an IP-Sec tunnel terminated at the IP-Sec tunnel endpoint given in the *IP-Sec Transport Layer Address* IE, within the *Xn Extended Transport Layer Addresses* IE.

In case the *Xn SCTP Transport Layer Addresses* IE is present and the *IP-Sec Transport Layer Address* IE is also present, the concerned SCTP traffic is conveyed within an IP-Sec tunnel terminated at the IP-Sec tunnel endpoint given in this *IP-Sec Transport Layer Address* IE, within the *Xn Extended Transport Layer Addresses* IE.

If the NG-RAN node is configured to use one IPsec tunnel for all NG and Xn traffic (IPsec star topology) then the traffic to the peer NG-RAN node shall be routed through this IPsec tunnel and the *IP-Sec Transport Layer Address* IE shall be ignored.

If the NG-RAN node receives the *SON Information* IE containing the *SON Information Report* IE it may use it as specified in TS 38.300 [8].

If the NG-RAN node receives the *Inter-system* *SON Information* IE containing the *Inter-System SON Information Report* IE it may use it as specified in TS 38.300 [8].

If the NG-RAN node is configured to use one IPsec tunnel for all NG and Xn traffic (IPsec star topology) then the traffic to the peer NG-RAN node shall be routed through this IPsec tunnel and the IP-Sec Transport Layer Address IE shall be ignored.

#### 8.8.2.3 Abnormal Conditions

Void.

*Start of the first change*

#### 9.2.7.1 UPLINK RAN CONFIGURATION TRANSFER

This message is sent by the NG-RAN node in order to transfer RAN configuration information.

Direction: NG-RAN node → AMF

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.3.1.1 |  | YES | ignore |
| SON Configuration Transfer | O |  | 9.3.3.6 |  | YES | ignore |
| EN-DC SON Configuration Transfer | O |  | OCTET STRING | Contains the *EN-DC SON Configuration Transfer* IE as defined in TS 36.413 [16]. | YES | ignore |
| Inter-system SON Configuration Transfer | O |  | 9.3.3.X1 |  | YES | ignore |

#### 9.2.7.2 DOWNLINK RAN CONFIGURATION TRANSFER

This message is sent by the AMF in order to transfer RAN configuration information.

Direction: AMF → NG-RAN node

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.3.1.1 |  | YES | ignore |
| SON Configuration Transfer | O |  | 9.3.3.6 |  | YES | ignore |
| EN-DC SON Configuration Transfer | O |  | OCTET STRING | Contains the *EN-DC SON Configuration Transfer* IE as defined in TS 36.413 [16]. | YES | ignore |
| Inter-system SON Configuration Transfer | O |  | 9.3.3.X1 |  | YES | ignore |

*Start of the next change*

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

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

This IE is transparent to the 5GC.

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

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

*Start of the next change*

#### 9.3.1.x Global eNB ID

This IE is used to globally identify an eNB (see TS 36.401 [r1]).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| PLMN Identity | M |  | 9.2.3.8 |  |
| CHOICE *eNB ID* | M |  |  |  |
| *>Macro eNB ID* |  |  |  |  |
| >>Macro eNB ID | M |  | BIT STRING (SIZE(20)) | Equal to the 20 leftmost bits of the *Cell Identity* IE contained in the *E-UTRAN CGI* IE (see TS 36.423 [r3] subclause 9.3.1.9) of each cell served by the eNB. |
| *>Home eNB ID* |  |  |  |  |
| >>Home eNB ID | M |  | BIT STRING (SIZE(28)) | Equal to the *Cell Identity* IE contained in the *E-UTRAN CGI* IE (see TS 36. 423 [r3] subclause 9.3.1.9) of the cell served by the eNB. |
| *>Short Macro eNB ID* |  |  |  |  |
| >> Short Macro eNB ID | M |  | BIT STRING (SIZE(18)) | Equal to the 18 leftmost bits of the *Cell Identity* IE (see TS 36. 423 [r3] subclause 9.3.1.9) of each cell served by the eNB. |
| *>Long Macro eNB ID* |  |  |  |  |
| >> Long Macro eNB ID | M |  | BIT STRING (SIZE(21)) | Equal to the 21 leftmost bits of the *Cell Identity* IE (see TS 36. 423 [r3] subclause 9.3.1.9) of each cell served by the eNB. |

9.3.1.y UE History Information from the UE

This IE contains information about mobility history report for a UE.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** |
| CHOICE *UE History Information from the UE* | M |  |  |  |
| >*NR* |  |  |  |  |
| >>NR Mobility History Report | M |  | OCTET STRING | VisitedCellInfoList contained in the UEInformationResponse message (TS 38.331 [18]). |

*Start of the next change*

9.3.3.7 SON Information

This IE identifies the nature of the configuration information transferred, i.e., a request, a reply or a report.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** | **Criticality** | **Assigned Criticality** |
| CHOICE *SON Information* | M |  |  |  | - |  |
| >*SON Information Request* |  |  |  |  | - |  |
| >>SON Information Request | M |  | ENUMERATED  (Xn TNL Configuration Info, …) |  | - |  |
| >*SON Information Reply* |  |  |  |  | - |  |
| >>SON Information Reply | M |  | 9.3.3.8 |  | - |  |
| >SON Information Report |  |  |  |  | YES | ignore |
| >>SON Information Report | M |  | 9.3.3.Y1 |  |  |  |

*Start of the next change*

#### 9.3.3.X1 Inter-system SON Configuration Transfer

This IE contains the configuration information, used by e.g., SON functionality, transmitted between an NG-RAN node and an eNB and additionally includes the node identifier of the destination of this configuration information and the node identifier of the source of this information.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| CHOICE *Transfer Type* | M |  |  |  |
| >*from E-UTRAN to NG-RAN* |  |  |  |  |
| **>>Source eNB-ID** |  | *1* |  |  |
| >>>Global eNB ID | M |  | 9.3.1.x |  |
| >>>Selected EPS TAI | M |  | EPS TAI  9.3.3.17 |  |
| **>>Target NG-RAN node ID** |  | *1* |  |  |
| >>>Global RAN Node ID | M |  | 9.3.1.5 |  |
| >>>Selected TAI | M |  | TAI  9.3.3.11 |  |
| >*from NG-RAN to E-UTRAN* |  |  |  |  |
| **>>Source NG-RAN Node ID** |  | *1* |  |  |
| >>>Global RAN Node ID | M |  | 9.3.1.5 |  |
| >>>Selected TAI | M |  | TAI  9.3.3.11 |  |
| **>>Target eNB-ID** |  | *1* |  |  |
| >>>Global eNB ID | M |  | 9.3.1.x |  |
| >>>Selected EPS TAI | M |  | EPS TAI  9.3.3.17 |  |
| Inter-system SON Information | M |  | 9.3.3.X2 |  |

*Start of the next change*

#### 9.3.3.X2 Inter-system SON Information

This IE identifies the nature of the configuration information transferred.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| CHOICE *Inter-system SON Information* | M |  |  |  |
| >*Inter-system SON Information Report* |  |  |  |  |
| >>Inter-system SON Information Report | M |  | 9.3.3.Y2 |  |

#### 9.3.3.Y1 SON Information Report

This IE contains the configuration information to be transferred.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| CHOICE *SON Information Report* | M |  |  |  |
| > *Failure Indication Information* |  |  |  |  |
| >> Failure Indication | M |  | 9.3.3.Y3 |  |
| >HO *Report Information* |  |  |  |  |
| >>HO Report | M |  | 9.3.3.Y4 |  |

#### 9.3.3.Y2 Inter-system SON Information Report

This IE contains the configuration information to be transferred.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| CHOICE *SON Information Report* | M |  |  |  |
| *>HO Report Information* |  |  |  |  |
| >> Inter-system HO Report | M |  | 9.3.3.Y5 |  |
| >Failure Indication Information |  |  |  |  |
| >>Inter-system Failure Indication | M |  | 9.3.3.Y3a |  |

#### 9.3.3.Y3 Failure Indication

This IE contains the failure indication to be transferred.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| UE RLF Report Container | O |  | 9.3.3.Z1 |  |

9.3.3.Y3a Inter-system Failure Indication

This IE contains the failure indication to be transferred.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** |
| UE RLF Report Container | O |  | 9.3.3.Z1 | Only contains the LTE RLF report in this version of the specification. |

#### 9.3.3.Y4 HO Report

This IE contains the HO report to be transferred.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** |
| Handover Report Type | M |  | ENUMERATED (HO too early, HO to wrong cell, Inter-system ping-pong, …) |  |
| Handover Cause | M |  | Cause  9.2.3.1 | Indicates handover cause employed for handover from source cell |
| Source cell CGI | M |  | NG-RAN CGI  9.3.1.73 | NG-RAN CGI of the source cell for handover procedure |
| Target cell CGI | M |  | NG-RAN CGI 9.3.1.73 | NG-RAN CGI of the target cell for handover procedure.  If the Handover Report Type is set to “Inter-system ping-pong”, it contains the target cell of the inter system handover from the other system to NG-RAN nodecell |
| Re-establishment Cell CGI | C-  ifHandoverReportType HoToWrongCell |  | NG-RAN CGI 9.3.1.73 | NG-RAN CGI of the cell where UE attempted re-establishment or where the UE successfully re-connected after the failure |
| Source Cell C-RNTI | O |  | BIT STRING (SIZE (16)) | C-RNTI allocated at the source NG-RAN node |
| Target Cell in E-UTRAN | C-  ifHandoverReportType Intersystempingpong |  | E-UTRA CGI  9.3.1.9 | E-UTRA CGI of the E-UTRAN target cell for handover procedure |
| Mobility Information | O |  | BIT STRING (SIZE (32)) | Information provided in the HANDOVER REQUEST message from the source NG-RAN node |
| UE RLF Report Container | O |  | 9.3.3.Z1 | The UE RLF Report Container IE received in the FAILURE INDICATION message. |

|  |  |
| --- | --- |
| **Condition** | **Explanation** |
| ifHandoverReportTypeHoToWrongCell | This IE shall be present if the *Handover Report Type* IE is set to the value "HO to wrong cell" |
| ifHandoverReportTypeIntersystempingpong | This IE shall be present if the *Handover Report Type* IE is set to the value "Inter-system ping-pong" |

#### 9.3.3.Y5 Inter-system HO Report

This IE contains the inter-system HO report to be transferred.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** |
| CHOICE *Handover Report Type* | M |  |  |  |
| *>Too early Inter-system HO* |  |  |  |  |
| >>Source cell ID | M |  | E-UTRA CGI  9.3.1.9 | CGI of the source cell for the HO. |
| >>Failure cell ID | M |  | NG-RAN CGI 9.3.1.73 | CGI of the target cell for the HO. |
| >>UE RLF Report Container | O |  | 9.3.3.Z1 |  |
| >*Inter-system Unnecessary HO* |  |  |  |  |
| >>Source cell CGI | M |  | NG-RAN CGI 9.3.1.73 | Source NR cell in NG-RAN |
| >>Target cell CGI | M |  | E-UTRA CGI  9.3.1.9 | Target cell in E-UTRAN |
| >>Early IRAT HO | M |  | ENUMERATED (true, false, ...) | Is set to “true” if the measurement period expired due to an inter-RAT handover towards NR executed within the configured measurement duration and otherwise set to “false” |
| **>>Candidate Cell List** |  | *1* |  |  |
| >>> Candidate Cell List Item |  | *1 .. <maxnoofCandidateCells>* |  |  |
| >>>>CHOICE Candidate Cell Type | M |  |  |  |
| >>>>> Candidate CGI |  |  |  |  |
| >>>>>>Candidate Cell ID | M |  | NR CGI 9.3.1.7 | This IE contains an NR CGI. |
| >>>>>Candidate PCI |  |  |  |  |
| >>>>>>Candidate PCI | M |  | INTEGER (0..1007, …) | This IE includes the NR Physical Cell Identifier of detected cells not included in the Candidate Cell List IE and for which an NR CGI could not be derived. |
| >>>>>>Candidate NR ARFCN | M |  | INTEGER (0.. maxNARFCN) | RF Reference Frequency as defined in TS 38.104 [r2], section 5.4.2.1. The frequency provided in this IE identifies the absolute frequency position of the reference resource block (Common RB 0) of the carrier. Its lowest subcarrier is also known as Point A. |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxnoofCandidateCells | Maximum no. of candidate cells. Value is 32 |
| maxNARFCN | Maximum value of NR carrier frequency, defined in TS 38.331 [18] |

9.3.3.Z1 UE RLF Report Container

This IE contains the RLF Report to be transferred.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** |
| CHOICE *RLF type* | M |  |  |  |
| >*NR* |  |  |  |  |
| >>NR UE RLF Report Container | M |  | OCTET STRING | *nr-RLF-Report-r16* IE contained in the *UEInformationResponse* message defined in TS 38.331 [18]. |
| >*LTE* |  |  |  |  |
| >>LTE UE RLF Report Container | M |  | OCTET STRING | *RLF-Report-r9* IE contained in the UEInformationResponse message defined in TS 36.331 [21] |

*Start of the next change*

9.4 Message and Information Element Abstract Syntax (with ASN.1)

9.4.1 General

NGAP ASN.1 definition conforms to ITU-T Rec. X.691 [4], ITU-T Rec. X.680 [5] and ITU-T Rec. X.681 [6].

The ASN.1 definition specifies the structure and content of NGAP messages. NGAP messages can contain any IEs specified in the object set definitions for that message without the order or number of occurrence being restricted by ASN.1. However, for this version of the standard, a sending entity shall construct an NGAP message according to the PDU definitions module and with the following additional rules:

- IEs shall be ordered (in an IE container) in the order they appear in object set definitions.

- Object set definitions specify how many times IEs may appear. An IE shall appear exactly once if the presence field in an object has value "mandatory". An IE may appear at most once if the presence field in an object has value "optional" or "conditional". If in a tabular format there is multiplicity specified for an IE (i.e., an IE list) then in the corresponding ASN.1 definition the list definition is separated into two parts. The first part defines an IE container list where the list elements reside. The second part defines list elements. The IE container list appears as an IE of its own. For this version of the standard an IE container list may contain only one kind of list elements.

NOTE: In the above "IE" means an IE in the object set with an explicit ID. If one IE needs to appear more than once in one object set, then the different occurrences will have different IE IDs.

If an NGAP message that is not constructed as defined above is received, this shall be considered as Abstract Syntax Error, and the message shall be handled as defined for Abstract Syntax Error in subclause 10.3.6.

9.4.2 Usage of private message mechanism for non-standard use

The private message mechanism for non-standard use may be used:

- for special operator- (and/or vendor) specific features considered not to be part of the basic functionality, i.e., the functionality required for a complete and high-quality specification in order to guarantee multivendor interoperability;

- by vendors for research purposes, e.g., to implement and evaluate new algorithms/features before such features are proposed for standardisation.

The private message mechanism shall not be used for basic functionality. Such functionality shall be standardised.

9.4.3 Elementary Procedure Definitions

-- ASN1START

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

--

-- Elementary Procedure definitions

--

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

NGAP-PDU-Descriptions {

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

--

-- IE parameter types from other modules.

--

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

IMPORTS

Criticality,

ProcedureCode

FROM NGAP-CommonDataTypes

AMFConfigurationUpdate,

AMFConfigurationUpdateAcknowledge,

AMFConfigurationUpdateFailure,

AMFStatusIndication,

CellTrafficTrace,

DeactivateTrace,

DownlinkNASTransport,

DownlinkNonUEAssociatedNRPPaTransport,

DownlinkRANConfigurationTransfer,

DownlinkRANStatusTransfer,

DownlinkUEAssociatedNRPPaTransport,

ErrorIndication,

HandoverCancel,

HandoverCancelAcknowledge,

HandoverCommand,

HandoverFailure,

HandoverNotify,

HandoverPreparationFailure,

HandoverRequest,

HandoverRequestAcknowledge,

HandoverRequired,

InitialContextSetupFailure,

InitialContextSetupRequest,

InitialContextSetupResponse,

InitialUEMessage,

LocationReport,

LocationReportingControl,

LocationReportingFailureIndication,

NASNonDeliveryIndication,

NGReset,

NGResetAcknowledge,

NGSetupFailure,

NGSetupRequest,

NGSetupResponse,

OverloadStart,

OverloadStop,

Paging,

PathSwitchRequest,

PathSwitchRequestAcknowledge,

PathSwitchRequestFailure,

PDUSessionResourceModifyConfirm,

PDUSessionResourceModifyIndication,

PDUSessionResourceModifyRequest,

PDUSessionResourceModifyResponse,

PDUSessionResourceNotify,

PDUSessionResourceReleaseCommand,

PDUSessionResourceReleaseResponse,

PDUSessionResourceSetupRequest,

PDUSessionResourceSetupResponse,

PrivateMessage,

PWSCancelRequest,

PWSCancelResponse,

PWSFailureIndication,

PWSRestartIndication,

RANConfigurationUpdate,

RANConfigurationUpdateAcknowledge,

RANConfigurationUpdateFailure,

RerouteNASRequest,

RRCInactiveTransitionReport,

SecondaryRATDataUsageReport,

TraceFailureIndication,

TraceStart,

UEContextModificationFailure,

UEContextModificationRequest,

UEContextModificationResponse,

UEContextReleaseCommand,

UEContextReleaseComplete,

UEContextReleaseRequest,

UERadioCapabilityCheckRequest,

UERadioCapabilityCheckResponse,

UERadioCapabilityInfoIndication,

UETNLABindingReleaseRequest,

UplinkNASTransport,

UplinkNonUEAssociatedNRPPaTransport,

UplinkRANConfigurationTransfer,

UplinkRANStatusTransfer,

UplinkUEAssociatedNRPPaTransport,

WriteReplaceWarningRequest,

WriteReplaceWarningResponse,

UplinkRIMInformationTransfer,

DownlinkRIMInformationTransfer

FROM NGAP-PDU-Contents

id-AMFConfigurationUpdate,

id-AMFStatusIndication,

id-CellTrafficTrace,

id-DeactivateTrace,

id-DownlinkNASTransport,

id-DownlinkNonUEAssociatedNRPPaTransport,

id-DownlinkRANConfigurationTransfer,

id-DownlinkRANStatusTransfer,

id-DownlinkUEAssociatedNRPPaTransport,

id-ErrorIndication,

id-HandoverCancel,

id-HandoverNotification,

id-HandoverPreparation,

id-HandoverResourceAllocation,

id-InitialContextSetup,

id-InitialUEMessage,

id-LocationReport,

id-LocationReportingControl,

id-LocationReportingFailureIndication,

id-NASNonDeliveryIndication,

id-NGReset,

id-NGSetup,

id-OverloadStart,

id-OverloadStop,

id-Paging,

id-PathSwitchRequest,

id-PDUSessionResourceModify,

id-PDUSessionResourceModifyIndication,

id-PDUSessionResourceNotify,

id-PDUSessionResourceRelease,

id-PDUSessionResourceSetup,

id-PrivateMessage,

id-PWSCancel,

id-PWSFailureIndication,

id-PWSRestartIndication,

id-RANConfigurationUpdate,

id-RerouteNASRequest,

id-RRCInactiveTransitionReport,

id-SecondaryRATDataUsageReport,

id-TraceFailureIndication,

id-TraceStart,

id-UEContextModification,

id-UEContextRelease,

id-UEContextReleaseRequest,

id-UERadioCapabilityCheck,

id-UERadioCapabilityInfoIndication,

id-UETNLABindingRelease,

id-UplinkNASTransport,

id-UplinkNonUEAssociatedNRPPaTransport,

id-UplinkRANConfigurationTransfer,

id-UplinkRANStatusTransfer,

id-UplinkUEAssociatedNRPPaTransport,

id-WriteReplaceWarning,

id-UplinkRIMInformationTransfer,

id-DownlinkRIMInformationTransfer

FROM NGAP-Constants;

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

--

-- Interface Elementary Procedure Class

--

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

NGAP-ELEMENTARY-PROCEDURE ::= CLASS {

&InitiatingMessage ,

&SuccessfulOutcome OPTIONAL,

&UnsuccessfulOutcome OPTIONAL,

&procedureCode ProcedureCode UNIQUE,

&criticality Criticality DEFAULT ignore

}

WITH SYNTAX {

INITIATING MESSAGE &InitiatingMessage

[SUCCESSFUL OUTCOME &SuccessfulOutcome]

[UNSUCCESSFUL OUTCOME &UnsuccessfulOutcome]

PROCEDURE CODE &procedureCode

[CRITICALITY &criticality]

}

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

--

-- Interface PDU Definition

--

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

NGAP-PDU ::= CHOICE {

initiatingMessage InitiatingMessage,

successfulOutcome SuccessfulOutcome,

unsuccessfulOutcome UnsuccessfulOutcome,

...

}

InitiatingMessage ::= SEQUENCE {

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

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

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

}

SuccessfulOutcome ::= SEQUENCE {

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

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

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

}

UnsuccessfulOutcome ::= SEQUENCE {

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

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

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

}

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

--

-- Interface Elementary Procedure List

--

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

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

NGAP-ELEMENTARY-PROCEDURES-CLASS-1 |

NGAP-ELEMENTARY-PROCEDURES-CLASS-2,

...

}

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

aMFConfigurationUpdate |

handoverCancel |

handoverPreparation |

handoverResourceAllocation |

initialContextSetup |

nGReset |

nGSetup |

pathSwitchRequest |

pDUSessionResourceModify |

pDUSessionResourceModifyIndication |

pDUSessionResourceRelease |

pDUSessionResourceSetup |

pWSCancel |

rANConfigurationUpdate |

uEContextModification |

uEContextRelease |

uERadioCapabilityCheck |

writeReplaceWarning

}

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

aMFStatusIndication |

cellTrafficTrace |

deactivateTrace |

downlinkNASTransport |

downlinkNonUEAssociatedNRPPaTransport |

downlinkRANConfigurationTransfer |

downlinkRANStatusTransfer |

downlinkUEAssociatedNRPPaTransport |

errorIndication |

handoverNotification |

initialUEMessage |

locationReport |

locationReportingControl |

locationReportingFailureIndication |

nASNonDeliveryIndication |

overloadStart |

overloadStop |

paging |

pDUSessionResourceNotify |

privateMessage |

pWSFailureIndication |

pWSRestartIndication |

rerouteNASRequest |

rRCInactiveTransitionReport |

secondaryRATDataUsageReport |

traceFailureIndication |

traceStart |

uEContextReleaseRequest |

uERadioCapabilityInfoIndication |

uETNLABindingRelease |

uplinkNASTransport |

uplinkNonUEAssociatedNRPPaTransport |

uplinkRANConfigurationTransfer |

uplinkRANStatusTransfer |

uplinkUEAssociatedNRPPaTransport |

uplinkRIMInformationTransfer |

downlinkRIMInformationTransfer

}

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

--

-- Interface Elementary Procedures

--

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

aMFConfigurationUpdate NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE AMFConfigurationUpdate

SUCCESSFUL OUTCOME AMFConfigurationUpdateAcknowledge

UNSUCCESSFUL OUTCOME AMFConfigurationUpdateFailure

PROCEDURE CODE id-AMFConfigurationUpdate

CRITICALITY reject

}

aMFStatusIndication NGAP-ELEMENTARY-PROCEDURE ::={

INITIATING MESSAGE AMFStatusIndication

PROCEDURE CODE id-AMFStatusIndication

CRITICALITY ignore

}

cellTrafficTrace NGAP-ELEMENTARY-PROCEDURE ::={

INITIATING MESSAGE CellTrafficTrace

PROCEDURE CODE id-CellTrafficTrace

CRITICALITY ignore

}

deactivateTrace NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE DeactivateTrace

PROCEDURE CODE id-DeactivateTrace

CRITICALITY ignore

}

downlinkNASTransport NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE DownlinkNASTransport

PROCEDURE CODE id-DownlinkNASTransport

CRITICALITY ignore

}

downlinkNonUEAssociatedNRPPaTransport NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE DownlinkNonUEAssociatedNRPPaTransport

PROCEDURE CODE id-DownlinkNonUEAssociatedNRPPaTransport

CRITICALITY ignore

}

downlinkRANConfigurationTransfer NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE DownlinkRANConfigurationTransfer

PROCEDURE CODE id-DownlinkRANConfigurationTransfer

CRITICALITY ignore

}

downlinkRANStatusTransfer NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE DownlinkRANStatusTransfer

PROCEDURE CODE id-DownlinkRANStatusTransfer

CRITICALITY ignore

}

downlinkUEAssociatedNRPPaTransport NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE DownlinkUEAssociatedNRPPaTransport

PROCEDURE CODE id-DownlinkUEAssociatedNRPPaTransport

CRITICALITY ignore

}

errorIndication NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE ErrorIndication

PROCEDURE CODE id-ErrorIndication

CRITICALITY ignore

}

handoverCancel NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE HandoverCancel

SUCCESSFUL OUTCOME HandoverCancelAcknowledge

PROCEDURE CODE id-HandoverCancel

CRITICALITY reject

}

handoverNotification NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE HandoverNotify

PROCEDURE CODE id-HandoverNotification

CRITICALITY ignore

}

handoverPreparation NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE HandoverRequired

SUCCESSFUL OUTCOME HandoverCommand

UNSUCCESSFUL OUTCOME HandoverPreparationFailure

PROCEDURE CODE id-HandoverPreparation

CRITICALITY reject

}

handoverResourceAllocation NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE HandoverRequest

SUCCESSFUL OUTCOME HandoverRequestAcknowledge

UNSUCCESSFUL OUTCOME HandoverFailure

PROCEDURE CODE id-HandoverResourceAllocation

CRITICALITY reject

}

initialContextSetup NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE InitialContextSetupRequest

SUCCESSFUL OUTCOME InitialContextSetupResponse

UNSUCCESSFUL OUTCOME InitialContextSetupFailure

PROCEDURE CODE id-InitialContextSetup

CRITICALITY reject

}

initialUEMessage NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE InitialUEMessage

PROCEDURE CODE id-InitialUEMessage

CRITICALITY ignore

}

locationReport NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE LocationReport

PROCEDURE CODE id-LocationReport

CRITICALITY ignore

}

locationReportingControl NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE LocationReportingControl

PROCEDURE CODE id-LocationReportingControl

CRITICALITY ignore

}

locationReportingFailureIndication NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE LocationReportingFailureIndication

PROCEDURE CODE id-LocationReportingFailureIndication

CRITICALITY ignore

}

nASNonDeliveryIndication NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE NASNonDeliveryIndication

PROCEDURE CODE id-NASNonDeliveryIndication

CRITICALITY ignore

}

nGReset NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE NGReset

SUCCESSFUL OUTCOME NGResetAcknowledge

PROCEDURE CODE id-NGReset

CRITICALITY reject

}

nGSetup NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE NGSetupRequest

SUCCESSFUL OUTCOME NGSetupResponse

UNSUCCESSFUL OUTCOME NGSetupFailure

PROCEDURE CODE id-NGSetup

CRITICALITY reject

}

overloadStart NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE OverloadStart

PROCEDURE CODE id-OverloadStart

CRITICALITY ignore

}

overloadStop NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE OverloadStop

PROCEDURE CODE id-OverloadStop

CRITICALITY reject

}

paging NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE Paging

PROCEDURE CODE id-Paging

CRITICALITY ignore

}

pathSwitchRequest NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE PathSwitchRequest

SUCCESSFUL OUTCOME PathSwitchRequestAcknowledge

UNSUCCESSFUL OUTCOME PathSwitchRequestFailure

PROCEDURE CODE id-PathSwitchRequest

CRITICALITY reject

}

pDUSessionResourceModify NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE PDUSessionResourceModifyRequest

SUCCESSFUL OUTCOME PDUSessionResourceModifyResponse

PROCEDURE CODE id-PDUSessionResourceModify

CRITICALITY reject

}

pDUSessionResourceModifyIndication NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE PDUSessionResourceModifyIndication

SUCCESSFUL OUTCOME PDUSessionResourceModifyConfirm

PROCEDURE CODE id-PDUSessionResourceModifyIndication

CRITICALITY reject

}

pDUSessionResourceNotify NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE PDUSessionResourceNotify

PROCEDURE CODE id-PDUSessionResourceNotify

CRITICALITY ignore

}

pDUSessionResourceRelease NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE PDUSessionResourceReleaseCommand

SUCCESSFUL OUTCOME PDUSessionResourceReleaseResponse

PROCEDURE CODE id-PDUSessionResourceRelease

CRITICALITY reject

}

pDUSessionResourceSetup NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE PDUSessionResourceSetupRequest

SUCCESSFUL OUTCOME PDUSessionResourceSetupResponse

PROCEDURE CODE id-PDUSessionResourceSetup

CRITICALITY reject

}

privateMessage NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE PrivateMessage

PROCEDURE CODE id-PrivateMessage

CRITICALITY ignore

}

pWSCancel NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE PWSCancelRequest

SUCCESSFUL OUTCOME PWSCancelResponse

PROCEDURE CODE id-PWSCancel

CRITICALITY reject

}

pWSFailureIndication NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE PWSFailureIndication

PROCEDURE CODE id-PWSFailureIndication

CRITICALITY ignore

}

pWSRestartIndication NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE PWSRestartIndication

PROCEDURE CODE id-PWSRestartIndication

CRITICALITY ignore

}

rANConfigurationUpdate NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE RANConfigurationUpdate

SUCCESSFUL OUTCOME RANConfigurationUpdateAcknowledge

UNSUCCESSFUL OUTCOME RANConfigurationUpdateFailure

PROCEDURE CODE id-RANConfigurationUpdate

CRITICALITY reject

}

rerouteNASRequest NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE RerouteNASRequest

PROCEDURE CODE id-RerouteNASRequest

CRITICALITY reject

}

rRCInactiveTransitionReport NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE RRCInactiveTransitionReport

PROCEDURE CODE id-RRCInactiveTransitionReport

CRITICALITY ignore

}

secondaryRATDataUsageReport NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE SecondaryRATDataUsageReport

PROCEDURE CODE id-SecondaryRATDataUsageReport

CRITICALITY ignore

}

traceFailureIndication NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE TraceFailureIndication

PROCEDURE CODE id-TraceFailureIndication

CRITICALITY ignore

}

traceStart NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE TraceStart

PROCEDURE CODE id-TraceStart

CRITICALITY ignore

}

uEContextModification NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UEContextModificationRequest

SUCCESSFUL OUTCOME UEContextModificationResponse

UNSUCCESSFUL OUTCOME UEContextModificationFailure

PROCEDURE CODE id-UEContextModification

CRITICALITY reject

}

uEContextRelease NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UEContextReleaseCommand

SUCCESSFUL OUTCOME UEContextReleaseComplete

PROCEDURE CODE id-UEContextRelease

CRITICALITY reject

}

uEContextReleaseRequest NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UEContextReleaseRequest

PROCEDURE CODE id-UEContextReleaseRequest

CRITICALITY ignore

}

uERadioCapabilityCheck NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UERadioCapabilityCheckRequest

SUCCESSFUL OUTCOME UERadioCapabilityCheckResponse

PROCEDURE CODE id-UERadioCapabilityCheck

CRITICALITY reject

}

uERadioCapabilityInfoIndication NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UERadioCapabilityInfoIndication

PROCEDURE CODE id-UERadioCapabilityInfoIndication

CRITICALITY ignore

}

uETNLABindingRelease NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UETNLABindingReleaseRequest

PROCEDURE CODE id-UETNLABindingRelease

CRITICALITY ignore

}

uplinkNASTransport NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UplinkNASTransport

PROCEDURE CODE id-UplinkNASTransport

CRITICALITY ignore

}

uplinkNonUEAssociatedNRPPaTransport NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UplinkNonUEAssociatedNRPPaTransport

PROCEDURE CODE id-UplinkNonUEAssociatedNRPPaTransport

CRITICALITY ignore

}

uplinkRANConfigurationTransfer NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UplinkRANConfigurationTransfer

PROCEDURE CODE id-UplinkRANConfigurationTransfer

CRITICALITY ignore

}

uplinkRANStatusTransfer NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UplinkRANStatusTransfer

PROCEDURE CODE id-UplinkRANStatusTransfer

CRITICALITY ignore

}

uplinkUEAssociatedNRPPaTransport NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UplinkUEAssociatedNRPPaTransport

PROCEDURE CODE id-UplinkUEAssociatedNRPPaTransport

CRITICALITY ignore

}

writeReplaceWarning NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE WriteReplaceWarningRequest

SUCCESSFUL OUTCOME WriteReplaceWarningResponse

PROCEDURE CODE id-WriteReplaceWarning

CRITICALITY reject

}

uplinkRIMInformationTransfer NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE UplinkRIMInformationTransfer

PROCEDURE CODE id-UplinkRIMInformationTransfer

CRITICALITY ignore

}

downlinkRIMInformationTransfer NGAP-ELEMENTARY-PROCEDURE ::= {

INITIATING MESSAGE DownlinkRIMInformationTransfer

PROCEDURE CODE id-DownlinkRIMInformationTransfer

CRITICALITY ignore

}

END

-- ASN1STOP

9.4.4 PDU Definitions

-- ASN1START

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

--

-- PDU definitions for NGAP.

--

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

NGAP-PDU-Contents {

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

--

-- IE parameter types from other modules.

--

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

IMPORTS

AllowedNSSAI,

AMFName,

AMFSetID,

AMF-TNLAssociationSetupList,

AMF-TNLAssociationToAddList,

AMF-TNLAssociationToRemoveList,

AMF-TNLAssociationToUpdateList,

AMF-UE-NGAP-ID,

AssistanceDataForPaging,

BroadcastCancelledAreaList,

BroadcastCompletedAreaList,

CancelAllWarningMessages,

Cause,

CellIDListForRestart,

CNAssistedRANTuning,

ConcurrentWarningMessageInd,

CoreNetworkAssistanceInformationForInactive,

CPTransportLayerInformation,

CriticalityDiagnostics,

DataCodingScheme,

DirectForwardingPathAvailability,

EmergencyAreaIDListForRestart,

EmergencyFallbackIndicator,

EN-DCSONConfigurationTransfer,

EUTRA-CGI,

FiveG-S-TMSI,

GlobalRANNodeID,

GUAMI,

HandoverFlag,

HandoverType,

IMSVoiceSupportIndicator,

IndexToRFSP,

InfoOnRecommendedCellsAndRANNodesForPaging,

IntersystemSONConfigurationTransfer,

LAI,

LocationReportingRequestType,

MaskedIMEISV,

MessageIdentifier,

MobilityRestrictionList,

NAS-PDU,

NASSecurityParametersFromNGRAN,

NewSecurityContextInd,

NGRAN-CGI,

NGRAN-TNLAssociationToRemoveList,

NGRANTraceID,

NR-CGI,

NRPPa-PDU,

NumberOfBroadcastsRequested,

OverloadResponse,

OverloadStartNSSAIList,

PagingDRX,

PagingOrigin,

PagingPriority,

PDUSessionAggregateMaximumBitRate,

PDUSessionResourceAdmittedList,

PDUSessionResourceFailedToModifyListModCfm,

PDUSessionResourceFailedToModifyListModRes,

PDUSessionResourceFailedToSetupListCxtFail,

PDUSessionResourceFailedToSetupListCxtRes,

PDUSessionResourceFailedToSetupListHOAck,

PDUSessionResourceFailedToSetupListPSReq,

PDUSessionResourceFailedToSetupListSURes,

PDUSessionResourceHandoverList,

PDUSessionResourceListCxtRelCpl,

PDUSessionResourceListCxtRelReq,

PDUSessionResourceListHORqd,

PDUSessionResourceModifyListModCfm,

PDUSessionResourceModifyListModInd,

PDUSessionResourceModifyListModReq,

PDUSessionResourceModifyListModRes,

PDUSessionResourceNotifyList,

PDUSessionResourceReleasedListNot,

PDUSessionResourceReleasedListPSAck,

PDUSessionResourceReleasedListPSFail,

PDUSessionResourceReleasedListRelRes,

PDUSessionResourceSecondaryRATUsageList,

PDUSessionResourceSetupListCxtReq,

PDUSessionResourceSetupListCxtRes,

PDUSessionResourceSetupListHOReq,

PDUSessionResourceSetupListSUReq,

PDUSessionResourceSetupListSURes,

PDUSessionResourceSwitchedList,

PDUSessionResourceToBeSwitchedDLList,

PDUSessionResourceToReleaseListHOCmd,

PDUSessionResourceToReleaseListRelCmd,

PLMNSupportList,

PWSFailedCellIDList,

RANNodeName,

RANPagingPriority,

RANStatusTransfer-TransparentContainer,

RAN-UE-NGAP-ID,

RedirectionVoiceFallback,

RelativeAMFCapacity,

RepetitionPeriod,

ResetType,

RoutingID,

RRCEstablishmentCause,

RRCInactiveTransitionReportRequest,

RRCState,

SecurityContext,

SecurityKey,

SerialNumber,

ServedGUAMIList,

SliceSupportList,

S-NSSAI,

SONConfigurationTransfer,

SourceToTarget-TransparentContainer,

SourceToTarget-AMFInformationReroute,

SRVCCOperationPossible,

SupportedTAList,

TAIListForPaging,

TAIListForRestart,

TargetID,

TargetToSource-TransparentContainer,

TimeToWait,

TNLAssociationList,

TraceActivation,

TrafficLoadReductionIndication,

TransportLayerAddress,

UEAggregateMaximumBitRate,

UE-associatedLogicalNG-connectionList,

UEContextRequest,

UE-NGAP-IDs,

UEPagingIdentity,

UEPresenceInAreaOfInterestList,

UERadioCapability,

UERadioCapabilityForPaging,

UERetentionInformation,

UESecurityCapabilities,

UnavailableGUAMIList,

UserLocationInformation,

WarningAreaCoordinates,

WarningAreaList,

WarningMessageContents,

WarningSecurityInfo,

WarningType,

RIMInformationTransfer

FROM NGAP-IEs

PrivateIE-Container{},

ProtocolExtensionContainer{},

ProtocolIE-Container{},

ProtocolIE-ContainerList{},

ProtocolIE-ContainerPair{},

ProtocolIE-SingleContainer{},

NGAP-PRIVATE-IES,

NGAP-PROTOCOL-EXTENSION,

NGAP-PROTOCOL-IES,

NGAP-PROTOCOL-IES-PAIR

FROM NGAP-Containers

id-AllowedNSSAI,

id-AMFName,

id-AMFOverloadResponse,

id-AMFSetID,

id-AMF-TNLAssociationFailedToSetupList,

id-AMF-TNLAssociationSetupList,

id-AMF-TNLAssociationToAddList,

id-AMF-TNLAssociationToRemoveList,

id-AMF-TNLAssociationToUpdateList,

id-AMFTrafficLoadReductionIndication,

id-AMF-UE-NGAP-ID,

id-AssistanceDataForPaging,

id-BroadcastCancelledAreaList,

id-BroadcastCompletedAreaList,

id-CancelAllWarningMessages,

id-Cause,

id-CellIDListForRestart,

id-CNAssistedRANTuning,

id-ConcurrentWarningMessageInd,

id-CoreNetworkAssistanceInformationForInactive,

id-CriticalityDiagnostics,

id-DataCodingScheme,

id-DefaultPagingDRX,

id-DirectForwardingPathAvailability,

id-EmergencyAreaIDListForRestart,

id-EmergencyFallbackIndicator,

id-ENDC-SONConfigurationTransferDL,

id-ENDC-SONConfigurationTransferUL,

id-EUTRA-CGI,

id-FiveG-S-TMSI,

id-GlobalRANNodeID,

id-GUAMI,

id-HandoverFlag,

id-HandoverType,

id-IMSVoiceSupportIndicator,

id-IndexToRFSP,

id-InfoOnRecommendedCellsAndRANNodesForPaging,

id-IntersystemSONConfigurationTransferDL,

id-IntersystemSONConfigurationTransferUL,

id-LocationReportingRequestType,

id-MaskedIMEISV,

id-MessageIdentifier,

id-MobilityRestrictionList,

id-NAS-PDU,

id-NASC,

id-NASSecurityParametersFromNGRAN,

id-NewAMF-UE-NGAP-ID,

id-NewGUAMI,

id-NewSecurityContextInd,

id-NGAP-Message,

id-NGRAN-CGI,

id-NGRAN-TNLAssociationToRemoveList,

id-NGRANTraceID,

id-NR-CGI,

id-NRPPa-PDU,

id-NumberOfBroadcastsRequested,

id-OldAMF,

id-OverloadStartNSSAIList,

id-PagingDRX,

id-PagingOrigin,

id-PagingPriority,

id-PDUSessionResourceAdmittedList,

id-PDUSessionResourceFailedToModifyListModCfm,

id-PDUSessionResourceFailedToModifyListModRes,

id-PDUSessionResourceFailedToSetupListCxtFail,

id-PDUSessionResourceFailedToSetupListCxtRes,

id-PDUSessionResourceFailedToSetupListHOAck,

id-PDUSessionResourceFailedToSetupListPSReq,

id-PDUSessionResourceFailedToSetupListSURes,

id-PDUSessionResourceHandoverList,

id-PDUSessionResourceListCxtRelCpl,

id-PDUSessionResourceListCxtRelReq,

id-PDUSessionResourceListHORqd,

id-PDUSessionResourceModifyListModCfm,

id-PDUSessionResourceModifyListModInd,

id-PDUSessionResourceModifyListModReq,

id-PDUSessionResourceModifyListModRes,

id-PDUSessionResourceNotifyList,

id-PDUSessionResourceReleasedListNot,

id-PDUSessionResourceReleasedListPSAck,

id-PDUSessionResourceReleasedListPSFail,

id-PDUSessionResourceReleasedListRelRes,

id-PDUSessionResourceSecondaryRATUsageList,

id-PDUSessionResourceSetupListCxtReq,

id-PDUSessionResourceSetupListCxtRes,

id-PDUSessionResourceSetupListHOReq,

id-PDUSessionResourceSetupListSUReq,

id-PDUSessionResourceSetupListSURes,

id-PDUSessionResourceSwitchedList,

id-PDUSessionResourceToBeSwitchedDLList,

id-PDUSessionResourceToReleaseListHOCmd,

id-PDUSessionResourceToReleaseListRelCmd,

id-PLMNSupportList,

id-PWSFailedCellIDList,

id-RANNodeName,

id-RANPagingPriority,

id-RANStatusTransfer-TransparentContainer,

id-RAN-UE-NGAP-ID,

id-RedirectionVoiceFallback,

id-RelativeAMFCapacity,

id-RepetitionPeriod,

id-ResetType,

id-RoutingID,

id-RRCEstablishmentCause,

id-RRCInactiveTransitionReportRequest,

id-RRCState,

id-SecurityContext,

id-SecurityKey,

id-SerialNumber,

id-ServedGUAMIList,

id-SliceSupportList,

id-SONConfigurationTransferDL,

id-SONConfigurationTransferUL,

id-SourceAMF-UE-NGAP-ID,

id-SourceToTarget-TransparentContainer,

id-SourceToTarget-AMFInformationReroute,

id-SRVCCOperationPossible,

id-SupportedTAList,

id-TAIListForPaging,

id-TAIListForRestart,

id-TargetID,

id-TargetToSource-TransparentContainer,

id-TimeToWait,

id-TraceActivation,

id-TraceCollectionEntityIPAddress,

id-UEAggregateMaximumBitRate,

id-UE-associatedLogicalNG-connectionList,

id-UEContextRequest,

id-UE-NGAP-IDs,

id-UEPagingIdentity,

id-UEPresenceInAreaOfInterestList,

id-UERadioCapability,

id-UERadioCapabilityForPaging,

id-UERetentionInformation,

id-UESecurityCapabilities,

id-UnavailableGUAMIList,

id-UserLocationInformation,

id-WarningAreaCoordinates,

id-WarningAreaList,

id-WarningMessageContents,

id-WarningSecurityInfo,

id-WarningType,

id-RIMInformationTransfer

FROM NGAP-Constants;

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

--

-- PDU SESSION MANAGEMENT ELEMENTARY PROCEDURES

--

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

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

--

-- PDU Session Resource Setup Elementary Procedure

--

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

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

--

-- PDU SESSION RESOURCE SETUP REQUEST

--

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

PDUSessionResourceSetupRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PDUSessionResourceSetupRequestIEs} },

...

}

PDUSessionResourceSetupRequestIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

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

...

}

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

--

-- PDU SESSION RESOURCE SETUP RESPONSE

--

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

PDUSessionResourceSetupResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PDUSessionResourceSetupResponseIEs} },

...

}

PDUSessionResourceSetupResponseIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

...

}

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

--

-- PDU Session Resource Release Elementary Procedure

--

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

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

--

-- PDU SESSION RESOURCE RELEASE COMMAND

--

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

PDUSessionResourceReleaseCommand ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PDUSessionResourceReleaseCommandIEs} },

...

}

PDUSessionResourceReleaseCommandIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

...

}

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

--

-- PDU SESSION RESOURCE RELEASE RESPONSE

--

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

PDUSessionResourceReleaseResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PDUSessionResourceReleaseResponseIEs} },

...

}

PDUSessionResourceReleaseResponseIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

...

}

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

--

-- PDU Session Resource Modify Elementary Procedure

--

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

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

--

-- PDU SESSION RESOURCE MODIFY REQUEST

--

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

PDUSessionResourceModifyRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PDUSessionResourceModifyRequestIEs} },

...

}

PDUSessionResourceModifyRequestIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

...

}

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

--

-- PDU SESSION RESOURCE MODIFY RESPONSE

--

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

PDUSessionResourceModifyResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PDUSessionResourceModifyResponseIEs} },

...

}

PDUSessionResourceModifyResponseIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

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

...

}

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

--

-- PDU Session Resource Notify Elementary Procedure

--

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

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

--

-- PDU SESSION RESOURCE NOTIFY

--

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

PDUSessionResourceNotify ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PDUSessionResourceNotifyIEs} },

...

}

PDUSessionResourceNotifyIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

...

}

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

--

-- PDU Session Resource Modify Indication Elementary Procedure

--

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

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

--

-- PDU SESSION RESOURCE MODIFY INDICATION

--

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

PDUSessionResourceModifyIndication ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PDUSessionResourceModifyIndicationIEs} },

...

}

PDUSessionResourceModifyIndicationIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

...

}

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

--

-- PDU SESSION RESOURCE MODIFY CONFIRM

--

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

PDUSessionResourceModifyConfirm ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PDUSessionResourceModifyConfirmIEs} },

...

}

PDUSessionResourceModifyConfirmIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

...

}

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

--

-- UE CONTEXT MANAGEMENT ELEMENTARY PROCEDURES

--

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

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

--

-- Initial Context Setup Elementary Procedure

--

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

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

--

-- INITIAL CONTEXT SETUP REQUEST

--

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

InitialContextSetupRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {InitialContextSetupRequestIEs} },

...

}

InitialContextSetupRequestIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

...

}

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

--

-- INITIAL CONTEXT SETUP RESPONSE

--

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

InitialContextSetupResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {InitialContextSetupResponseIEs} },

...

}

InitialContextSetupResponseIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

...

}

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

--

-- INITIAL CONTEXT SETUP FAILURE

--

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

InitialContextSetupFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {InitialContextSetupFailureIEs} },

...

}

InitialContextSetupFailureIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

...

}

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

--

-- UE Context Release Request Elementary Procedure

--

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

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

--

-- UE CONTEXT RELEASE REQUEST

--

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

UEContextReleaseRequest ::= SEQUENCE {

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

...

}

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

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

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

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

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

...

}

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

--

-- UE Context Release Elementary Procedure

--

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

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

--

-- UE CONTEXT RELEASE COMMAND

--

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

UEContextReleaseCommand ::= SEQUENCE {

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

...

}

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

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

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

...

}

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

--

-- UE CONTEXT RELEASE COMPLETE

--

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

UEContextReleaseComplete ::= SEQUENCE {

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

...

}

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

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

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

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

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

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

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

...

}

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

--

-- UE Context Modification Elementary Procedure

--

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

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

--

-- UE CONTEXT MODIFICATION REQUEST

--

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

UEContextModificationRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UEContextModificationRequestIEs} },

...

}

UEContextModificationRequestIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

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

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

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

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

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

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

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

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

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

...

}

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

--

-- UE CONTEXT MODIFICATION RESPONSE

--

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

UEContextModificationResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UEContextModificationResponseIEs} },

...

}

UEContextModificationResponseIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

...

}

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

--

-- UE CONTEXT MODIFICATION FAILURE

--

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

UEContextModificationFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UEContextModificationFailureIEs} },

...

}

UEContextModificationFailureIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

...

}

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

--

-- RRC INACTIVE TRANSITION REPORT

--

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

RRCInactiveTransitionReport ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {RRCInactiveTransitionReportIEs} },

...

}

RRCInactiveTransitionReportIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

...

}

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

--

-- UE MOBILITY MANAGEMENT ELEMENTARY PROCEDURES

--

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

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

--

-- Handover Preparation Elementary Procedure

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

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

--

-- HANDOVER REQUIRED

--

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

HandoverRequired ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {HandoverRequiredIEs} },

...

}

HandoverRequiredIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

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

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

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

...

}

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

--

-- HANDOVER COMMAND

--

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

HandoverCommand ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {HandoverCommandIEs} },

...

}

HandoverCommandIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

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

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

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

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

...

}

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

--

-- HANDOVER PREPARATION FAILURE

--

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

HandoverPreparationFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {HandoverPreparationFailureIEs} },

...

}

HandoverPreparationFailureIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

...

}

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

--

-- Handover Resource Allocation Elementary Procedure

--

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

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

--

-- HANDOVER REQUEST

--

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

HandoverRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {HandoverRequestIEs} },

...

}

HandoverRequestIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

...

}

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

--

-- HANDOVER REQUEST ACKNOWLEDGE

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

HandoverRequestAcknowledge ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {HandoverRequestAcknowledgeIEs} },

...

}

HandoverRequestAcknowledgeIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

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

...

}

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

--

-- HANDOVER FAILURE

--

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

HandoverFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { HandoverFailureIEs} },

...

}

HandoverFailureIEs NGAP-PROTOCOL-IES ::= {

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

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

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

...

}

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

--

-- Handover Notification Elementary Procedure

--

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

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

--

-- HANDOVER NOTIFY

--

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

HandoverNotify ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { HandoverNotifyIEs} },

...

}

HandoverNotifyIEs NGAP-PROTOCOL-IES ::= {

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

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

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

...

}

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

--

-- Path Switch Request Elementary Procedure

--

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

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

--

-- PATH SWITCH REQUEST

--

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

PathSwitchRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { PathSwitchRequestIEs} },

...

}

PathSwitchRequestIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

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

...

}

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

--

-- PATH SWITCH REQUEST ACKNOWLEDGE

--

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

PathSwitchRequestAcknowledge ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { PathSwitchRequestAcknowledgeIEs} },

...

}

PathSwitchRequestAcknowledgeIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

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

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

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

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

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

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

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

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

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

...

}

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

--

-- PATH SWITCH REQUEST FAILURE

--

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

PathSwitchRequestFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { PathSwitchRequestFailureIEs} },

...

}

PathSwitchRequestFailureIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

...

}

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

--

-- Handover Cancellation Elementary Procedure

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

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

--

-- HANDOVER CANCEL

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

HandoverCancel ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { HandoverCancelIEs} },

...

}

HandoverCancelIEs NGAP-PROTOCOL-IES ::= {

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

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

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

...

}

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

--

-- HANDOVER CANCEL ACKNOWLEDGE

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

HandoverCancelAcknowledge ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { HandoverCancelAcknowledgeIEs} },

...

}

HandoverCancelAcknowledgeIEs NGAP-PROTOCOL-IES ::= {

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

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

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

...

}

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

--

-- Uplink RAN Status Transfer Elementary Procedure

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

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

--

-- UPLINK RAN STATUS TRANSFER

--

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

UplinkRANStatusTransfer ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UplinkRANStatusTransferIEs} },

...

}

UplinkRANStatusTransferIEs NGAP-PROTOCOL-IES ::= {

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

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

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

...

}

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

--

-- Downlink RAN Status Transfer Elementary Procedure

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

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

--

-- DOWNLINK RAN STATUS TRANSFER

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

DownlinkRANStatusTransfer ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {DownlinkRANStatusTransferIEs} },

...

}

DownlinkRANStatusTransferIEs NGAP-PROTOCOL-IES ::= {

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

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

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

...

}

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

--

-- PAGING ELEMENTARY PROCEDURE

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

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

--

-- PAGING

--

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

Paging ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PagingIEs} },

...

}

PagingIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

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

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

...

}

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

--

-- NAS TRANSPORT ELEMENTARY PROCEDURES

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

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

--

-- INITIAL UE MESSAGE

--

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

InitialUEMessage ::= SEQUENCE {

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

...

}

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

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

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

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

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

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

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

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

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

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

...

}

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

--

-- DOWNLINK NAS TRANSPORT

--

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

DownlinkNASTransport ::= SEQUENCE {

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

...

}

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

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

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

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

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

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

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

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

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

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

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

...

}

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

--

-- UPLINK NAS TRANSPORT

--

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

UplinkNASTransport ::= SEQUENCE {

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

...

}

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

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

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

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

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

...

}

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

--

-- NAS NON DELIVERY INDICATION

--

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

NASNonDeliveryIndication ::= SEQUENCE {

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

...

}

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

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

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

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

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

...

}

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

--

-- REROUTE NAS REQUEST

--

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

RerouteNASRequest ::= SEQUENCE {

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

...

}

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

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

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

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

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

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

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

...

}

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

--

-- INTERFACE MANAGEMENT ELEMENTARY PROCEDURES

--

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

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

--

-- NG Setup Elementary Procedure

--

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

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

--

-- NG SETUP REQUEST

--

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

NGSetupRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {NGSetupRequestIEs} },

...

}

NGSetupRequestIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

...

}

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

--

-- NG SETUP RESPONSE

--

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

NGSetupResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {NGSetupResponseIEs} },

...

}

NGSetupResponseIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

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

...

}

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

--

-- NG SETUP FAILURE

--

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

NGSetupFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {NGSetupFailureIEs} },

...

}

NGSetupFailureIEs NGAP-PROTOCOL-IES ::= {

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

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

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

...

}

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

--

-- RAN Configuration Update Elementary Procedure

--

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

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

--

-- RAN CONFIGURATION UPDATE

--

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

RANConfigurationUpdate ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {RANConfigurationUpdateIEs} },

...

}

RANConfigurationUpdateIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

...

}

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

--

-- RAN CONFIGURATION UPDATE ACKNOWLEDGE

--

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

RANConfigurationUpdateAcknowledge ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {RANConfigurationUpdateAcknowledgeIEs} },

...

}

RANConfigurationUpdateAcknowledgeIEs NGAP-PROTOCOL-IES ::= {

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

...

}

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

--

-- RAN CONFIGURATION UPDATE FAILURE

--

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

RANConfigurationUpdateFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {RANConfigurationUpdateFailureIEs} },

...

}

RANConfigurationUpdateFailureIEs NGAP-PROTOCOL-IES ::= {

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

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

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

...

}

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

--

-- AMF Configuration Update Elementary Procedure

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

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

--

-- AMF CONFIGURATION UPDATE

--

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

AMFConfigurationUpdate ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {AMFConfigurationUpdateIEs} },

...

}

AMFConfigurationUpdateIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

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

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

...

}

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

--

-- AMF CONFIGURATION UPDATE ACKNOWLEDGE

--

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

AMFConfigurationUpdateAcknowledge ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {AMFConfigurationUpdateAcknowledgeIEs} },

...

}

AMFConfigurationUpdateAcknowledgeIEs NGAP-PROTOCOL-IES ::= {

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

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

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

...

}

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

--

-- AMF CONFIGURATION UPDATE FAILURE

--

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

AMFConfigurationUpdateFailure ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {AMFConfigurationUpdateFailureIEs} },

...

}

AMFConfigurationUpdateFailureIEs NGAP-PROTOCOL-IES ::= {

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

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

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

...

}

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

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-- AMF Status Indication Elementary Procedure

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

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

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-- AMF STATUS INDICATION

--

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

AMFStatusIndication ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {AMFStatusIndicationIEs} },

...

}

AMFStatusIndicationIEs NGAP-PROTOCOL-IES ::= {

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

...

}

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

--

-- NG Reset Elementary Procedure

--

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

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

--

-- NG RESET

--

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

NGReset ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {NGResetIEs} },

...

}

NGResetIEs NGAP-PROTOCOL-IES ::= {

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

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

...

}

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

--

-- NG RESET ACKNOWLEDGE

--

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

NGResetAcknowledge ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {NGResetAcknowledgeIEs} },

...

}

NGResetAcknowledgeIEs NGAP-PROTOCOL-IES ::= {

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

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

...

}

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

--

-- Error Indication Elementary Procedure

--

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

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

--

-- ERROR INDICATION

--

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

ErrorIndication ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {ErrorIndicationIEs} },

...

}

ErrorIndicationIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

...

}

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

--

-- OVERLOAD START

--

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

OverloadStart ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {OverloadStartIEs} },

...

}

OverloadStartIEs NGAP-PROTOCOL-IES ::= {

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

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

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

...

}

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

--

-- OVERLOAD STOP

--

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

OverloadStop ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {OverloadStopIEs} },

...

}

OverloadStopIEs NGAP-PROTOCOL-IES ::= {

...

}

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

--

-- CONFIGURATION TRANSFER ELEMENTARY PROCEDURES

--

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

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

--

-- UPLINK RAN CONFIGURATION TRANSFER

--

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

UplinkRANConfigurationTransfer ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UplinkRANConfigurationTransferIEs} },

...

}

UplinkRANConfigurationTransferIEs NGAP-PROTOCOL-IES ::= {

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

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

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

...

}

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

--

-- DOWNLINK RAN CONFIGURATION TRANSFER

--

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

DownlinkRANConfigurationTransfer ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {DownlinkRANConfigurationTransferIEs} },

...

}

DownlinkRANConfigurationTransferIEs NGAP-PROTOCOL-IES ::= {

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

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

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

...

}

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

--

-- WARNING MESSAGE TRANSMISSION ELEMENTARY PROCEDURES

--

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

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

--

-- Write-Replace Warning Elementary Procedure

--

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

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

--

-- WRITE-REPLACE WARNING REQUEST

--

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

WriteReplaceWarningRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {WriteReplaceWarningRequestIEs} },

...

}

WriteReplaceWarningRequestIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

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

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

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

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

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

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

...

}

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

--

-- WRITE-REPLACE WARNING RESPONSE

--

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

WriteReplaceWarningResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {WriteReplaceWarningResponseIEs} },

...

}

WriteReplaceWarningResponseIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

...

}

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

--

-- PWS Cancel Elementary Procedure

--

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

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

--

-- PWS CANCEL REQUEST

--

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

PWSCancelRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PWSCancelRequestIEs} },

...

}

PWSCancelRequestIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

...

}

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

--

-- PWS CANCEL RESPONSE

--

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

PWSCancelResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PWSCancelResponseIEs} },

...

}

PWSCancelResponseIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

...

}

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

--

-- PWS Restart Indication Elementary Procedure

--

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

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

--

-- PWS RESTART INDICATION

--

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

PWSRestartIndication ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PWSRestartIndicationIEs} },

...

}

PWSRestartIndicationIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

...

}

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

--

-- PWS Failure Indication Elementary Procedure

--

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

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

--

-- PWS FAILURE INDICATION

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

PWSFailureIndication ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PWSFailureIndicationIEs} },

...

}

PWSFailureIndicationIEs NGAP-PROTOCOL-IES ::= {

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

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

...

}

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

--

-- NRPPA TRANSPORT ELEMENTARY PROCEDURES

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

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

--

-- DOWNLINK UE ASSOCIATED NRPPA TRANSPORT

--

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

DownlinkUEAssociatedNRPPaTransport ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {DownlinkUEAssociatedNRPPaTransportIEs} },

...

}

DownlinkUEAssociatedNRPPaTransportIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

...

}

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

--

-- UPLINK UE ASSOCIATED NRPPA TRANSPORT

--

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

UplinkUEAssociatedNRPPaTransport ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UplinkUEAssociatedNRPPaTransportIEs} },

...

}

UplinkUEAssociatedNRPPaTransportIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

...

}

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

--

-- DOWNLINK NON UE ASSOCIATED NRPPA TRANSPORT

--

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

DownlinkNonUEAssociatedNRPPaTransport ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {DownlinkNonUEAssociatedNRPPaTransportIEs} },

...

}

DownlinkNonUEAssociatedNRPPaTransportIEs NGAP-PROTOCOL-IES ::= {

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

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

...

}

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

--

-- UPLINK NON UE ASSOCIATED NRPPA TRANSPORT

--

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

UplinkNonUEAssociatedNRPPaTransport ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UplinkNonUEAssociatedNRPPaTransportIEs} },

...

}

UplinkNonUEAssociatedNRPPaTransportIEs NGAP-PROTOCOL-IES ::= {

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

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

...

}

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

--

-- TRACE ELEMENTARY PROCEDURES

--

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

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

--

-- TRACE START

--

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

TraceStart ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {TraceStartIEs} },

...

}

TraceStartIEs NGAP-PROTOCOL-IES ::= {

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

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

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

...

}

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

--

-- TRACE FAILURE INDICATION

--

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

TraceFailureIndication ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {TraceFailureIndicationIEs} },

...

}

TraceFailureIndicationIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

...

}

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

--

-- DEACTIVATE TRACE

--

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

DeactivateTrace ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {DeactivateTraceIEs} },

...

}

DeactivateTraceIEs NGAP-PROTOCOL-IES ::= {

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

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

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

...

}

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

--

-- CELL TRAFFIC TRACE

--

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

CellTrafficTrace ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {CellTrafficTraceIEs} },

...

}

CellTrafficTraceIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

...

}

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

--

-- LOCATION REPORTING ELEMENTARY PROCEDURES

--

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

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

--

-- LOCATION REPORTING CONTROL

--

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

LocationReportingControl ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {LocationReportingControlIEs} },

...

}

LocationReportingControlIEs NGAP-PROTOCOL-IES ::= {

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

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

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

...

}

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

--

-- LOCATION REPORTING FAILURE INDICATION

--

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

LocationReportingFailureIndication ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {LocationReportingFailureIndicationIEs} },

...

}

LocationReportingFailureIndicationIEs NGAP-PROTOCOL-IES ::= {

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

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

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

...

}

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

--

-- LOCATION REPORT

--

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

LocationReport ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {LocationReportIEs} },

...

}

LocationReportIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

...

}

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

--

-- UE TNLA BINDING ELEMENTARY PROCEDURES

--

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

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

--

-- UE TNLA BINDING RELEASE REQUEST

--

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

UETNLABindingReleaseRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UETNLABindingReleaseRequestIEs} },

...

}

UETNLABindingReleaseRequestIEs NGAP-PROTOCOL-IES ::= {

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

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

...

}

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

--

-- UE RADIO CAPABILITY MANAGEMENT ELEMENTARY PROCEDURES

--

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

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

--

-- UE RADIO CAPABILITY INFO INDICATION

--

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

UERadioCapabilityInfoIndication ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UERadioCapabilityInfoIndicationIEs} },

...

}

UERadioCapabilityInfoIndicationIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

...

}

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

--

-- UE Radio Capability Check Elementary Procedure

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

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

--

-- UE RADIO CAPABILITY CHECK REQUEST

--

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

UERadioCapabilityCheckRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UERadioCapabilityCheckRequestIEs} },

...

}

UERadioCapabilityCheckRequestIEs NGAP-PROTOCOL-IES ::= {

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

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

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

...

}

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

--

-- UE RADIO CAPABILITY CHECK RESPONSE

--

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

UERadioCapabilityCheckResponse ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UERadioCapabilityCheckResponseIEs} },

...

}

UERadioCapabilityCheckResponseIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

...

}

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

--

-- PRIVATE MESSAGE ELEMENTARY PROCEDURE

--

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

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

--

-- PRIVATE MESSAGE

--

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

PrivateMessage ::= SEQUENCE {

privateIEs PrivateIE-Container { { PrivateMessageIEs } },

...

}

PrivateMessageIEs NGAP-PRIVATE-IES ::= {

...

}

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

--

-- DATA USAGE REPORTING ELEMENTARY PROCEDURES

--

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

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

--

-- SECONDARY RAT DATA USAGE REPORT

--

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

SecondaryRATDataUsageReport ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {SecondaryRATDataUsageReportIEs} },

...

}

SecondaryRATDataUsageReportIEs NGAP-PROTOCOL-IES ::= {

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

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

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

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

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

...

}

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

--

-- RIM INFORMATION TRANSFER ELEMENTARY PROCEDURES

--

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

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

--

-- UPLINK RIM INFORMATION TRANSFER

--

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

UplinkRIMInformationTransfer ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {UplinkRIMInformationTransferIEs} },

...

}

UplinkRIMInformationTransferIEs NGAP-PROTOCOL-IES ::= {

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

...

}

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

--

-- DOWNLINK RIM INFORMATION TRANSFER

--

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

DownlinkRIMInformationTransfer ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {DownlinkRIMInformationTransferIEs} },

...

}

DownlinkRIMInformationTransferIEs NGAP-PROTOCOL-IES ::= {

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

...

}

END

-- ASN1STOP

9.4.5 Information Element Definitions

-- ASN1START

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

--

-- Information Element Definitions

--

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

NGAP-IEs {

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS

id-AdditionalDLForwardingUPTNLInformation,

id-AdditionalULForwardingUPTNLInformation,

id-AdditionalDLQosFlowPerTNLInformation,

id-AdditionalDLUPTNLInformationForHOList,

id-AdditionalNGU-UP-TNLInformation,

id-AdditionalUL-NGU-UP-TNLInformation,

id-Cause,

id-CNTypeRestrictionsForEquivalent,

id-CNTypeRestrictionsForServing,

id-CommonNetworkInstance,

id-DataForwardingNotPossible,

id-DataForwardingResponseERABList,

id-DirectForwardingPathAvailability,

id-DL-NGU-UP-TNLInformation,

id-EndpointIPAddressAndPort,

id-ExtendedRATRestrictionInformation,

id-GUAMIType,

id-LastEUTRAN-PLMNIdentity,

id-LocationReportingAdditionalInfo,

id-MaximumIntegrityProtectedDataRate-DL,

id-NetworkInstance,

id-OldAssociatedQosFlowList-ULendmarkerexpected,

id-PDUSessionAggregateMaximumBitRate,

id-PDUSessionResourceFailedToSetupListCxtFail,

id-PDUSessionResourceReleaseResponseTransfer,

id-PDUSessionType,

id-PSCellInformation,

id-QosFlowAddOrModifyRequestList,

id-QosFlowSetupRequestList,

id-QosFlowToReleaseList,

id-QosMonitoringRequest,

id-RAT-Information,

id-SCTP-TLAs,

id-SecondaryRATUsageInformation,

id-SecurityIndication,

id-SecurityResult,

id-SgNB-UE-X2AP-ID,

id-S-NSSAI,

id-SONInformationReport,

id-TNLAssociationTransportLayerAddressNGRAN,

id-TargetRNC-ID,

id-UEHistoryInformationFromTheUE,

id-UL-NGU-UP-TNLInformation,

id-UL-NGU-UP-TNLModifyList,

id-ULForwarding,

id-ULForwardingUP-TNLInformation, maxnoofAllowedAreas,

maxnoofAllowedS-NSSAIs,

maxnoofBPLMNs,

maxnoofCandidateCells,

maxnoofCellIDforWarning,

maxnoofCellinAoI,

maxnoofCellinEAI,

maxnoofCellsingNB,

maxnoofCellsinngeNB,

maxnoofCellinTAI,

maxnoofCellsinUEHistoryInfo,

maxnoofCellsUEMovingTrajectory,

maxnoofDRBs,

maxnoofEmergencyAreaID,

maxnoofEAIforRestart,

maxnoofEPLMNs,

maxnoofEPLMNsPlusOne,

maxnoofE-RABs,

maxnoofErrors,

maxnoofForbTACs,

maxnoofMultiConnectivity,

maxnoofMultiConnectivityMinusOne,

maxnoofNGConnectionsToReset,

maxnoofPDUSessions,

maxnoofPLMNs,

maxnoofQosFlows,

maxnoofRANNodeinAoI,

maxnoofRecommendedCells,

maxnoofRecommendedRANNodes,

maxnoofAoI,

maxnoofServedGUAMIs,

maxnoofSliceItems,

maxnoofTACs,

maxnoofTAIforInactive,

maxnoofTAIforPaging,

maxnoofTAIforRestart,

maxnoofTAIforWarning,

maxnoofTAIinAoI,

maxnoofTimePeriods,

maxnoofTNLAssociations,

maxnoofXnExtTLAs,

maxnoofXnGTP-TLAs,

maxnoofXnTLAs

FROM NGAP-Constants

Criticality,

ProcedureCode,

ProtocolIE-ID,

TriggeringMessage

FROM NGAP-CommonDataTypes

ProtocolExtensionContainer{},

ProtocolIE-Container{},

NGAP-PROTOCOL-EXTENSION,

ProtocolIE-SingleContainer{},

NGAP-PROTOCOL-IES

FROM NGAP-Containers;

-- A

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

AdditionalDLUPTNLInformationForHOItem ::= SEQUENCE {

additionalDL-NGU-UP-TNLInformation UPTransportLayerInformation,

additionalQosFlowSetupResponseList QosFlowListWithDataForwarding,

additionalDLForwardingUPTNLInformation UPTransportLayerInformation OPTIONAL,

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

...

}

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

...

}

AdditionalQosFlowInformation ::= ENUMERATED {

more-likely,

...

}

AllocationAndRetentionPriority ::= SEQUENCE {

priorityLevelARP PriorityLevelARP,

pre-emptionCapability Pre-emptionCapability,

pre-emptionVulnerability Pre-emptionVulnerability,

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

...

}

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

...

}

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

AllowedNSSAI-Item ::= SEQUENCE {

s-NSSAI S-NSSAI,

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

...

}

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

...

}

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

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

AMFPagingTarget ::= CHOICE {

globalRANNodeID GlobalRANNodeID,

tAI TAI,

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

}

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

...

}

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

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

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

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

AMF-TNLAssociationSetupItem ::= SEQUENCE {

aMF-TNLAssociationAddress CPTransportLayerInformation,

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

...

}

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

...

}

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

AMF-TNLAssociationToAddItem ::= SEQUENCE {

aMF-TNLAssociationAddress CPTransportLayerInformation,

tNLAssociationUsage TNLAssociationUsage OPTIONAL,

tNLAddressWeightFactor TNLAddressWeightFactor,

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

...

}

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

...

}

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

AMF-TNLAssociationToRemoveItem ::= SEQUENCE {

aMF-TNLAssociationAddress CPTransportLayerInformation,

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

...

}

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

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

...

}

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

AMF-TNLAssociationToUpdateItem ::= SEQUENCE {

aMF-TNLAssociationAddress CPTransportLayerInformation,

tNLAssociationUsage TNLAssociationUsage OPTIONAL,

tNLAddressWeightFactor TNLAddressWeightFactor OPTIONAL,

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

...

}

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

...

}

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

AreaOfInterest ::= SEQUENCE {

areaOfInterestTAIList AreaOfInterestTAIList OPTIONAL,

areaOfInterestCellList AreaOfInterestCellList OPTIONAL,

areaOfInterestRANNodeList AreaOfInterestRANNodeList OPTIONAL,

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

...

}

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

...

}

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

AreaOfInterestCellItem ::= SEQUENCE {

nGRAN-CGI NGRAN-CGI,

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

...

}

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

...

}

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

AreaOfInterestItem ::= SEQUENCE {

areaOfInterest AreaOfInterest,

locationReportingReferenceID LocationReportingReferenceID,

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

...

}

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

...

}

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

AreaOfInterestRANNodeItem ::= SEQUENCE {

globalRANNodeID GlobalRANNodeID,

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

...

}

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

...

}

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

AreaOfInterestTAIItem ::= SEQUENCE {

tAI TAI,

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

...

}

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

...

}

AssistanceDataForPaging ::= SEQUENCE {

assistanceDataForRecommendedCells AssistanceDataForRecommendedCells OPTIONAL,

pagingAttemptInformation PagingAttemptInformation OPTIONAL,

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

...

}

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

...

}

AssistanceDataForRecommendedCells ::= SEQUENCE {

recommendedCellsForPaging RecommendedCellsForPaging,

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

...

}

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

...

}

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

AssociatedQosFlowItem ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

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

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

...

}

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

...

}

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

-- B

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

BroadcastCancelledAreaList ::= CHOICE {

cellIDCancelledEUTRA CellIDCancelledEUTRA,

tAICancelledEUTRA TAICancelledEUTRA,

emergencyAreaIDCancelledEUTRA EmergencyAreaIDCancelledEUTRA,

cellIDCancelledNR CellIDCancelledNR,

tAICancelledNR TAICancelledNR,

emergencyAreaIDCancelledNR EmergencyAreaIDCancelledNR,

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

}

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

...

}

BroadcastCompletedAreaList ::= CHOICE {

cellIDBroadcastEUTRA CellIDBroadcastEUTRA,

tAIBroadcastEUTRA TAIBroadcastEUTRA,

emergencyAreaIDBroadcastEUTRA EmergencyAreaIDBroadcastEUTRA,

cellIDBroadcastNR CellIDBroadcastNR,

tAIBroadcastNR TAIBroadcastNR,

emergencyAreaIDBroadcastNR EmergencyAreaIDBroadcastNR,

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

}

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

...

}

BroadcastPLMNList ::= SEQUENCE (SIZE(1..maxnoofBPLMNs)) OF BroadcastPLMNItem

BroadcastPLMNItem ::= SEQUENCE {

pLMNIdentity PLMNIdentity,

tAISliceSupportList SliceSupportList,

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

...

}

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

...

}

-- C

CancelAllWarningMessages ::= ENUMERATED {

true,

...

}

CancelledCellsInEAI-EUTRA ::= SEQUENCE (SIZE(1..maxnoofCellinEAI)) OF CancelledCellsInEAI-EUTRA-Item

CancelledCellsInEAI-EUTRA-Item ::= SEQUENCE {

eUTRA-CGI EUTRA-CGI,

numberOfBroadcasts NumberOfBroadcasts,

iE-Extensions ProtocolExtensionContainer { {CancelledCellsInEAI-EUTRA-Item-ExtIEs} } OPTIONAL,

...

}

CancelledCellsInEAI-EUTRA-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CancelledCellsInEAI-NR ::= SEQUENCE (SIZE(1..maxnoofCellinEAI)) OF CancelledCellsInEAI-NR-Item

CancelledCellsInEAI-NR-Item ::= SEQUENCE {

nR-CGI NR-CGI,

numberOfBroadcasts NumberOfBroadcasts,

iE-Extensions ProtocolExtensionContainer { {CancelledCellsInEAI-NR-Item-ExtIEs} } OPTIONAL,

...

}

CancelledCellsInEAI-NR-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CancelledCellsInTAI-EUTRA ::= SEQUENCE (SIZE(1..maxnoofCellinTAI)) OF CancelledCellsInTAI-EUTRA-Item

CancelledCellsInTAI-EUTRA-Item ::= SEQUENCE {

eUTRA-CGI EUTRA-CGI,

numberOfBroadcasts NumberOfBroadcasts,

iE-Extensions ProtocolExtensionContainer { {CancelledCellsInTAI-EUTRA-Item-ExtIEs} } OPTIONAL,

...

}

CancelledCellsInTAI-EUTRA-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CancelledCellsInTAI-NR ::= SEQUENCE (SIZE(1..maxnoofCellinTAI)) OF CancelledCellsInTAI-NR-Item

CancelledCellsInTAI-NR-Item ::= SEQUENCE{

nR-CGI NR-CGI,

numberOfBroadcasts NumberOfBroadcasts,

iE-Extensions ProtocolExtensionContainer { {CancelledCellsInTAI-NR-Item-ExtIEs} } OPTIONAL,

...

}

CancelledCellsInTAI-NR-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CandidateCellList ::= SEQUENCE (SIZE(1.. maxnoofCandidateCells)) OF CandidateCell-Item

CandidateCell-Item::= CHOICE {

candidateCGI CandidateCellID,

candidatePCI CandidatePCI,

choice-Extensions ProtocolIE-SingleContainer { { CandidateCell-Item-ExtIEs} }

}

CandidateCell-Item-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

CandidateCellID::= SEQUENCE {

candidateCellID NR-CGI,

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

}

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

...

}

CandidatePCI::= SEQUENCE {

candidatePCI INTEGER (0..1007),

candidateNRARFCN INTEGER (0..3279165),

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

}

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

...

}

Cause ::= CHOICE {

radioNetwork CauseRadioNetwork,

transport CauseTransport,

nas CauseNas,

protocol CauseProtocol,

misc CauseMisc,

choice-Extensions ProtocolIE-SingleContainer { {Cause-ExtIEs} }

}

Cause-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

CauseMisc ::= ENUMERATED {

control-processing-overload,

not-enough-user-plane-processing-resources,

hardware-failure,

om-intervention,

unknown-PLMN,

unspecified,

...

}

CauseNas ::= ENUMERATED {

normal-release,

authentication-failure,

deregister,

unspecified,

...

}

CauseProtocol ::= ENUMERATED {

transfer-syntax-error,

abstract-syntax-error-reject,

abstract-syntax-error-ignore-and-notify,

message-not-compatible-with-receiver-state,

semantic-error,

abstract-syntax-error-falsely-constructed-message,

unspecified,

...

}

CauseRadioNetwork ::= ENUMERATED {

unspecified,

txnrelocoverall-expiry,

successful-handover,

release-due-to-ngran-generated-reason,

release-due-to-5gc-generated-reason,

handover-cancelled,

partial-handover,

ho-failure-in-target-5GC-ngran-node-or-target-system,

ho-target-not-allowed,

tngrelocoverall-expiry,

tngrelocprep-expiry,

cell-not-available,

unknown-targetID,

no-radio-resources-available-in-target-cell,

unknown-local-UE-NGAP-ID,

inconsistent-remote-UE-NGAP-ID,

handover-desirable-for-radio-reason,

time-critical-handover,

resource-optimisation-handover,

reduce-load-in-serving-cell,

user-inactivity,

radio-connection-with-ue-lost,

radio-resources-not-available,

invalid-qos-combination,

failure-in-radio-interface-procedure,

interaction-with-other-procedure,

unknown-PDU-session-ID,

unkown-qos-flow-ID,

multiple-PDU-session-ID-instances,

multiple-qos-flow-ID-instances,

encryption-and-or-integrity-protection-algorithms-not-supported,

ng-intra-system-handover-triggered,

ng-inter-system-handover-triggered,

xn-handover-triggered,

not-supported-5QI-value,

ue-context-transfer,

ims-voice-eps-fallback-or-rat-fallback-triggered,

up-integrity-protection-not-possible,

up-confidentiality-protection-not-possible,

slice-not-supported,

ue-in-rrc-inactive-state-not-reachable,

redirection,

resources-not-available-for-the-slice,

ue-max-integrity-protected-data-rate-reason,

release-due-to-cn-detected-mobility,

...,

n26-interface-not-available,

release-due-to-pre-emption,

multiple-location-reporting-reference-ID-instances

}

CauseTransport ::= ENUMERATED {

transport-resource-unavailable,

unspecified,

...

}

CellIDBroadcastEUTRA ::= SEQUENCE (SIZE(1..maxnoofCellIDforWarning)) OF CellIDBroadcastEUTRA-Item

CellIDBroadcastEUTRA-Item ::= SEQUENCE {

eUTRA-CGI EUTRA-CGI,

iE-Extensions ProtocolExtensionContainer { {CellIDBroadcastEUTRA-Item-ExtIEs} } OPTIONAL,

...

}

CellIDBroadcastEUTRA-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CellIDBroadcastNR ::= SEQUENCE (SIZE(1..maxnoofCellIDforWarning)) OF CellIDBroadcastNR-Item

CellIDBroadcastNR-Item ::= SEQUENCE {

nR-CGI NR-CGI,

iE-Extensions ProtocolExtensionContainer { {CellIDBroadcastNR-Item-ExtIEs} } OPTIONAL,

...

}

CellIDBroadcastNR-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CellIDCancelledEUTRA ::= SEQUENCE (SIZE(1..maxnoofCellIDforWarning)) OF CellIDCancelledEUTRA-Item

CellIDCancelledEUTRA-Item ::= SEQUENCE {

eUTRA-CGI EUTRA-CGI,

numberOfBroadcasts NumberOfBroadcasts,

iE-Extensions ProtocolExtensionContainer { {CellIDCancelledEUTRA-Item-ExtIEs} } OPTIONAL,

...

}

CellIDCancelledEUTRA-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CellIDCancelledNR ::= SEQUENCE (SIZE(1..maxnoofCellIDforWarning)) OF CellIDCancelledNR-Item

CellIDCancelledNR-Item ::= SEQUENCE {

nR-CGI NR-CGI,

numberOfBroadcasts NumberOfBroadcasts,

iE-Extensions ProtocolExtensionContainer { {CellIDCancelledNR-Item-ExtIEs} } OPTIONAL,

...

}

CellIDCancelledNR-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CellIDListForRestart ::= CHOICE {

eUTRA-CGIListforRestart EUTRA-CGIList,

nR-CGIListforRestart NR-CGIList,

choice-Extensions ProtocolIE-SingleContainer { {CellIDListForRestart-ExtIEs} }

}

CellIDListForRestart-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

CellSize ::= ENUMERATED {verysmall, small, medium, large, ...}

CellType ::= SEQUENCE {

cellSize CellSize,

iE-Extensions ProtocolExtensionContainer { {CellType-ExtIEs} } OPTIONAL,

...

}

CellType-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CNAssistedRANTuning ::= SEQUENCE {

expectedUEBehaviour ExpectedUEBehaviour OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {CNAssistedRANTuning-ExtIEs} } OPTIONAL,

...

}

CNAssistedRANTuning-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CNTypeRestrictionsForEquivalent ::= SEQUENCE (SIZE(1..maxnoofEPLMNs)) OF CNTypeRestrictionsForEquivalentItem

CNTypeRestrictionsForEquivalentItem ::= SEQUENCE {

plmnIdentity PLMNIdentity,

cn-Type ENUMERATED {epc-forbidden, fiveGC-forbidden, ...},

iE-Extensions ProtocolExtensionContainer { {CNTypeRestrictionsForEquivalentItem-ExtIEs} } OPTIONAL,

...

}

CNTypeRestrictionsForEquivalentItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::={

...

}

CNTypeRestrictionsForServing ::= ENUMERATED {

epc-forbidden,

...

}

CommonNetworkInstance ::= OCTET STRING

CompletedCellsInEAI-EUTRA ::= SEQUENCE (SIZE(1..maxnoofCellinEAI)) OF CompletedCellsInEAI-EUTRA-Item

CompletedCellsInEAI-EUTRA-Item ::= SEQUENCE {

eUTRA-CGI EUTRA-CGI,

iE-Extensions ProtocolExtensionContainer { {CompletedCellsInEAI-EUTRA-Item-ExtIEs} } OPTIONAL,

...

}

CompletedCellsInEAI-EUTRA-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CompletedCellsInEAI-NR ::= SEQUENCE (SIZE(1..maxnoofCellinEAI)) OF CompletedCellsInEAI-NR-Item

CompletedCellsInEAI-NR-Item ::= SEQUENCE {

nR-CGI NR-CGI,

iE-Extensions ProtocolExtensionContainer { {CompletedCellsInEAI-NR-Item-ExtIEs} } OPTIONAL,

...

}

CompletedCellsInEAI-NR-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CompletedCellsInTAI-EUTRA ::= SEQUENCE (SIZE(1..maxnoofCellinTAI)) OF CompletedCellsInTAI-EUTRA-Item

CompletedCellsInTAI-EUTRA-Item ::= SEQUENCE{

eUTRA-CGI EUTRA-CGI,

iE-Extensions ProtocolExtensionContainer { {CompletedCellsInTAI-EUTRA-Item-ExtIEs} } OPTIONAL,

...

}

CompletedCellsInTAI-EUTRA-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CompletedCellsInTAI-NR ::= SEQUENCE (SIZE(1..maxnoofCellinTAI)) OF CompletedCellsInTAI-NR-Item

CompletedCellsInTAI-NR-Item ::= SEQUENCE{

nR-CGI NR-CGI,

iE-Extensions ProtocolExtensionContainer { {CompletedCellsInTAI-NR-Item-ExtIEs} } OPTIONAL,

...

}

CompletedCellsInTAI-NR-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

ConcurrentWarningMessageInd ::= ENUMERATED {

true,

...

}

ConfidentialityProtectionIndication ::= ENUMERATED {

required,

preferred,

not-needed,

...

}

ConfidentialityProtectionResult ::= ENUMERATED {

performed,

not-performed,

...

}

CoreNetworkAssistanceInformationForInactive ::= SEQUENCE {

uEIdentityIndexValue UEIdentityIndexValue,

uESpecificDRX PagingDRX OPTIONAL,

periodicRegistrationUpdateTimer PeriodicRegistrationUpdateTimer,

mICOModeIndication MICOModeIndication OPTIONAL,

tAIListForInactive TAIListForInactive,

expectedUEBehaviour ExpectedUEBehaviour OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {CoreNetworkAssistanceInformationForInactive-ExtIEs} } OPTIONAL,

...

}

CoreNetworkAssistanceInformationForInactive-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

COUNTValueForPDCP-SN12 ::= SEQUENCE {

pDCP-SN12 INTEGER (0..4095),

hFN-PDCP-SN12 INTEGER (0..1048575),

iE-Extensions ProtocolExtensionContainer { {COUNTValueForPDCP-SN12-ExtIEs} } OPTIONAL,

...

}

COUNTValueForPDCP-SN12-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

COUNTValueForPDCP-SN18 ::= SEQUENCE {

pDCP-SN18 INTEGER (0..262143),

hFN-PDCP-SN18 INTEGER (0..16383),

iE-Extensions ProtocolExtensionContainer { {COUNTValueForPDCP-SN18-ExtIEs} } OPTIONAL,

...

}

COUNTValueForPDCP-SN18-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CPTransportLayerInformation ::= CHOICE {

endpointIPAddress TransportLayerAddress,

choice-Extensions ProtocolIE-SingleContainer { {CPTransportLayerInformation-ExtIEs} }

}

CPTransportLayerInformation-ExtIEs NGAP-PROTOCOL-IES ::= {

{ ID id-EndpointIPAddressAndPort CRITICALITY reject TYPE EndpointIPAddressAndPort PRESENCE mandatory},

...

}

CriticalityDiagnostics ::= SEQUENCE {

procedureCode ProcedureCode OPTIONAL,

triggeringMessage TriggeringMessage OPTIONAL,

procedureCriticality Criticality OPTIONAL,

iEsCriticalityDiagnostics CriticalityDiagnostics-IE-List OPTIONAL,

iE-Extensions ProtocolExtensionContainer {{CriticalityDiagnostics-ExtIEs}} OPTIONAL,

...

}

CriticalityDiagnostics-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE(1..maxnoofErrors)) OF CriticalityDiagnostics-IE-Item

CriticalityDiagnostics-IE-Item ::= SEQUENCE {

iECriticality Criticality,

iE-ID ProtocolIE-ID,

typeOfError TypeOfError,

iE-Extensions ProtocolExtensionContainer {{CriticalityDiagnostics-IE-Item-ExtIEs}} OPTIONAL,

...

}

CriticalityDiagnostics-IE-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

-- D

DataCodingScheme ::= BIT STRING (SIZE(8))

DataForwardingAccepted ::= ENUMERATED {

data-forwarding-accepted,

...

}

DataForwardingNotPossible ::= ENUMERATED {

data-forwarding-not-possible,

...

}

DataForwardingResponseDRBList ::= SEQUENCE (SIZE(1..maxnoofDRBs)) OF DataForwardingResponseDRBItem

DataForwardingResponseDRBItem ::= SEQUENCE {

dRB-ID DRB-ID,

dLForwardingUP-TNLInformation UPTransportLayerInformation OPTIONAL,

uLForwardingUP-TNLInformation UPTransportLayerInformation OPTIONAL,

iE-Extensions ProtocolExtensionContainer {{DataForwardingResponseDRBItem-ExtIEs}} OPTIONAL,

...

}

DataForwardingResponseDRBItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

DataForwardingResponseERABList ::= SEQUENCE (SIZE(1..maxnoofE-RABs)) OF DataForwardingResponseERABListItem

DataForwardingResponseERABListItem ::= SEQUENCE {

e-RAB-ID E-RAB-ID,

dLForwarding DLForwarding OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {DataForwardingResponseERABListItem-ExtIEs} } OPTIONAL,

...

}

DataForwardingResponseERABListItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

DelayCritical ::= ENUMERATED {

delay-critical,

non-delay-critical,

...

}

DLForwarding ::= ENUMERATED {

dl-forwarding-proposed,

...

}

DL-NGU-TNLInformationReused ::= ENUMERATED {

true,

...

}

DirectForwardingPathAvailability ::= ENUMERATED {

direct-path-available,

...

}

DRB-ID ::= INTEGER (1..32, ...)

DRBsSubjectToStatusTransferList ::= SEQUENCE (SIZE(1..maxnoofDRBs)) OF DRBsSubjectToStatusTransferItem

DRBsSubjectToStatusTransferItem ::= SEQUENCE {

dRB-ID DRB-ID,

dRBStatusUL DRBStatusUL,

dRBStatusDL DRBStatusDL,

iE-Extension ProtocolExtensionContainer { {DRBsSubjectToStatusTransferItem-ExtIEs} } OPTIONAL,

...

}

DRBsSubjectToStatusTransferItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-OldAssociatedQosFlowList-ULendmarkerexpected CRITICALITY reject EXTENSION AssociatedQosFlowList PRESENCE optional },

...

}

DRBStatusDL ::= CHOICE {

dRBStatusDL12 DRBStatusDL12,

dRBStatusDL18 DRBStatusDL18,

choice-Extensions ProtocolIE-SingleContainer { {DRBStatusDL-ExtIEs} }

}

DRBStatusDL-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

DRBStatusDL12 ::= SEQUENCE {

dL-COUNTValue COUNTValueForPDCP-SN12,

iE-Extension ProtocolExtensionContainer { {DRBStatusDL12-ExtIEs} } OPTIONAL,

...

}

DRBStatusDL12-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

DRBStatusDL18 ::= SEQUENCE {

dL-COUNTValue COUNTValueForPDCP-SN18,

iE-Extension ProtocolExtensionContainer { {DRBStatusDL18-ExtIEs} } OPTIONAL,

...

}

DRBStatusDL18-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

DRBStatusUL ::= CHOICE {

dRBStatusUL12 DRBStatusUL12,

dRBStatusUL18 DRBStatusUL18,

choice-Extensions ProtocolIE-SingleContainer { {DRBStatusUL-ExtIEs} }

}

DRBStatusUL-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

DRBStatusUL12 ::= SEQUENCE {

uL-COUNTValue COUNTValueForPDCP-SN12,

receiveStatusOfUL-PDCP-SDUs BIT STRING (SIZE(1..2048)) OPTIONAL,

iE-Extension ProtocolExtensionContainer { {DRBStatusUL12-ExtIEs} } OPTIONAL,

...

}

DRBStatusUL12-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

DRBStatusUL18 ::= SEQUENCE {

uL-COUNTValue COUNTValueForPDCP-SN18,

receiveStatusOfUL-PDCP-SDUs BIT STRING (SIZE(1..131072)) OPTIONAL,

iE-Extension ProtocolExtensionContainer { {DRBStatusUL18-ExtIEs} } OPTIONAL,

...

}

DRBStatusUL18-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

DRBsToQosFlowsMappingList ::= SEQUENCE (SIZE(1..maxnoofDRBs)) OF DRBsToQosFlowsMappingItem

DRBsToQosFlowsMappingItem ::= SEQUENCE {

dRB-ID DRB-ID,

associatedQosFlowList AssociatedQosFlowList,

iE-Extensions ProtocolExtensionContainer { {DRBsToQosFlowsMappingItem-ExtIEs} } OPTIONAL,

...

}

DRBsToQosFlowsMappingItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

Dynamic5QIDescriptor ::= SEQUENCE {

priorityLevelQos PriorityLevelQos,

packetDelayBudget PacketDelayBudget,

packetErrorRate PacketErrorRate,

fiveQI FiveQI OPTIONAL,

delayCritical DelayCritical OPTIONAL,

-- The above IE shall be present in case of GBR QoS flow

averagingWindow AveragingWindow OPTIONAL,

-- The above IE shall be present in case of GBR QoS flow

maximumDataBurstVolume MaximumDataBurstVolume OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {Dynamic5QIDescriptor-ExtIEs} } OPTIONAL,

...

}

Dynamic5QIDescriptor-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

-- E

EmergencyAreaID ::= OCTET STRING (SIZE(3))

EmergencyAreaIDBroadcastEUTRA ::= SEQUENCE (SIZE(1..maxnoofEmergencyAreaID)) OF EmergencyAreaIDBroadcastEUTRA-Item

EmergencyAreaIDBroadcastEUTRA-Item ::= SEQUENCE {

emergencyAreaID EmergencyAreaID,

completedCellsInEAI-EUTRA CompletedCellsInEAI-EUTRA,

iE-Extensions ProtocolExtensionContainer { {EmergencyAreaIDBroadcastEUTRA-Item-ExtIEs} } OPTIONAL,

...

}

EmergencyAreaIDBroadcastEUTRA-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

EmergencyAreaIDBroadcastNR ::= SEQUENCE (SIZE(1..maxnoofEmergencyAreaID)) OF EmergencyAreaIDBroadcastNR-Item

EmergencyAreaIDBroadcastNR-Item ::= SEQUENCE {

emergencyAreaID EmergencyAreaID,

completedCellsInEAI-NR CompletedCellsInEAI-NR,

iE-Extensions ProtocolExtensionContainer { {EmergencyAreaIDBroadcastNR-Item-ExtIEs} } OPTIONAL,

...

}

EmergencyAreaIDBroadcastNR-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

EmergencyAreaIDCancelledEUTRA ::= SEQUENCE (SIZE(1..maxnoofEmergencyAreaID)) OF EmergencyAreaIDCancelledEUTRA-Item

EmergencyAreaIDCancelledEUTRA-Item ::= SEQUENCE {

emergencyAreaID EmergencyAreaID,

cancelledCellsInEAI-EUTRA CancelledCellsInEAI-EUTRA,

iE-Extensions ProtocolExtensionContainer { {EmergencyAreaIDCancelledEUTRA-Item-ExtIEs} } OPTIONAL,

...

}

EmergencyAreaIDCancelledEUTRA-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

EmergencyAreaIDCancelledNR ::= SEQUENCE (SIZE(1..maxnoofEmergencyAreaID)) OF EmergencyAreaIDCancelledNR-Item

EmergencyAreaIDCancelledNR-Item ::= SEQUENCE {

emergencyAreaID EmergencyAreaID,

cancelledCellsInEAI-NR CancelledCellsInEAI-NR,

iE-Extensions ProtocolExtensionContainer { {EmergencyAreaIDCancelledNR-Item-ExtIEs} } OPTIONAL,

...

}

EmergencyAreaIDCancelledNR-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

EmergencyAreaIDList ::= SEQUENCE (SIZE(1..maxnoofEmergencyAreaID)) OF EmergencyAreaID

EmergencyAreaIDListForRestart ::= SEQUENCE (SIZE(1..maxnoofEAIforRestart)) OF EmergencyAreaID

EmergencyFallbackIndicator ::= SEQUENCE {

emergencyFallbackRequestIndicator EmergencyFallbackRequestIndicator,

emergencyServiceTargetCN EmergencyServiceTargetCN OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {EmergencyFallbackIndicator-ExtIEs} } OPTIONAL,

...

}

EmergencyFallbackIndicator-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

EmergencyFallbackRequestIndicator ::= ENUMERATED {

emergency-fallback-requested,

...

}

EmergencyServiceTargetCN ::= ENUMERATED {

fiveGC,

epc,

...

}

EN-DCSONConfigurationTransfer ::= OCTET STRING

EndpointIPAddressAndPort ::=SEQUENCE {

endpointIPAddress TransportLayerAddress,

portNumber PortNumber,

iE-Extensions ProtocolExtensionContainer { { EndpointIPAddressAndPort-ExtIEs} } OPTIONAL

}

ENB-ID ::= CHOICE {

macroENB-ID BIT STRING (SIZE(20)),

homeENB-ID BIT STRING (SIZE(28)),

short-macroENB-ID BIT STRING (SIZE(18)),

long-macroENB-ID BIT STRING (SIZE(21)),

choice-Extensions ProtocolIE-SingleContainer { { ENB-ID-ExtIEs} }

}

ENB-ID-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

EndpointIPAddressAndPort-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

EquivalentPLMNs ::= SEQUENCE (SIZE(1..maxnoofEPLMNs)) OF PLMNIdentity

EPS-TAC ::= OCTET STRING (SIZE(2))

EPS-TAI ::= SEQUENCE {

pLMNIdentity PLMNIdentity,

ePS-TAC EPS-TAC,

iE-Extensions ProtocolExtensionContainer { {EPS-TAI-ExtIEs} } OPTIONAL,

...

}

EPS-TAI-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

E-RAB-ID ::= INTEGER (0..15, ...)

E-RABInformationList ::= SEQUENCE (SIZE(1..maxnoofE-RABs)) OF E-RABInformationItem

E-RABInformationItem ::= SEQUENCE {

e-RAB-ID E-RAB-ID,

dLForwarding DLForwarding OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {E-RABInformationItem-ExtIEs} } OPTIONAL,

...

}

E-RABInformationItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

EUTRACellIdentity ::= BIT STRING (SIZE(28))

EUTRA-CGI ::= SEQUENCE {

pLMNIdentity PLMNIdentity,

eUTRACellIdentity EUTRACellIdentity,

iE-Extensions ProtocolExtensionContainer { {EUTRA-CGI-ExtIEs} } OPTIONAL,

...

}

EUTRA-CGI-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

EUTRA-CGIList ::= SEQUENCE (SIZE(1..maxnoofCellsinngeNB)) OF EUTRA-CGI

EUTRA-CGIListForWarning ::= SEQUENCE (SIZE(1..maxnoofCellIDforWarning)) OF EUTRA-CGI

EUTRAencryptionAlgorithms ::= BIT STRING (SIZE(16, ...))

EUTRAintegrityProtectionAlgorithms ::= BIT STRING (SIZE(16, ...))

EventType ::= ENUMERATED {

direct,

change-of-serve-cell,

ue-presence-in-area-of-interest,

stop-change-of-serve-cell,

stop-ue-presence-in-area-of-interest,

cancel-location-reporting-for-the-ue,

...

}

ExpectedActivityPeriod ::= INTEGER (1..30|40|50|60|80|100|120|150|180|181, ...)

ExpectedHOInterval ::= ENUMERATED {

sec15, sec30, sec60, sec90, sec120, sec180, long-time,

...

}

ExpectedIdlePeriod ::= INTEGER (1..30|40|50|60|80|100|120|150|180|181, ...)

ExpectedUEActivityBehaviour ::= SEQUENCE {

expectedActivityPeriod ExpectedActivityPeriod OPTIONAL,

expectedIdlePeriod ExpectedIdlePeriod OPTIONAL,

sourceOfUEActivityBehaviourInformation SourceOfUEActivityBehaviourInformation OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {ExpectedUEActivityBehaviour-ExtIEs} } OPTIONAL,

...

}

ExpectedUEActivityBehaviour-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

ExpectedUEBehaviour ::= SEQUENCE {

expectedUEActivityBehaviour ExpectedUEActivityBehaviour OPTIONAL,

expectedHOInterval ExpectedHOInterval OPTIONAL,

expectedUEMobility ExpectedUEMobility OPTIONAL,

expectedUEMovingTrajectory ExpectedUEMovingTrajectory OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {ExpectedUEBehaviour-ExtIEs} } OPTIONAL,

...

}

ExpectedUEBehaviour-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

ExpectedUEMobility ::= ENUMERATED {

stationary,

mobile,

...

}

ExpectedUEMovingTrajectory ::= SEQUENCE (SIZE(1..maxnoofCellsUEMovingTrajectory)) OF ExpectedUEMovingTrajectoryItem

ExpectedUEMovingTrajectoryItem ::= SEQUENCE {

nGRAN-CGI NGRAN-CGI,

timeStayedInCell INTEGER (0..4095) OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {ExpectedUEMovingTrajectoryItem-ExtIEs} } OPTIONAL,

...

}

ExpectedUEMovingTrajectoryItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

ExtendedRATRestrictionInformation ::= SEQUENCE {

primaryRATRestriction BIT STRING (SIZE(8, ...)),

secondaryRATRestriction BIT STRING (SIZE(8, ...)),

iE-Extensions ProtocolExtensionContainer { {ExtendedRATRestrictionInformation-ExtIEs} } OPTIONAL,

...

}

ExtendedRATRestrictionInformation-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

ExtendedRNC-ID ::= INTEGER (4096..65535)

-- F

FailureIndication ::= SEQUENCE {

uERLFReportContainer UERLFReportContainer,

iE-Extensions ProtocolExtensionContainer { { FailureIndication-ExtIEs} } OPTIONAL

}

FailureIndication-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

FiveG-S-TMSI ::= SEQUENCE {

aMFSetID AMFSetID,

aMFPointer AMFPointer,

fiveG-TMSI FiveG-TMSI,

iE-Extensions ProtocolExtensionContainer { {FiveG-S-TMSI-ExtIEs} } OPTIONAL,

...

}

FiveG-S-TMSI-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

FiveG-TMSI ::= OCTET STRING (SIZE(4))

FiveQI ::= INTEGER (0..255, ...)

ForbiddenAreaInformation ::= SEQUENCE (SIZE(1.. maxnoofEPLMNsPlusOne)) OF ForbiddenAreaInformation-Item

ForbiddenAreaInformation-Item ::= SEQUENCE {

pLMNIdentity PLMNIdentity,

forbiddenTACs ForbiddenTACs,

iE-Extensions ProtocolExtensionContainer { {ForbiddenAreaInformation-Item-ExtIEs} } OPTIONAL,

...

}

ForbiddenAreaInformation-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

ForbiddenTACs ::= SEQUENCE (SIZE(1..maxnoofForbTACs)) OF TAC

FromEUTRANtoNGRAN ::= SEQUENCE {

sourceeNBID IntersystemSONeNBID,

targetNGRANnodeID IntersystemSONNGRANnodeID,

iE-Extensions ProtocolExtensionContainer { { FromEUTRANtoNGRAN-ExtIEs} } OPTIONAL

}

FromEUTRANtoNGRAN-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

FromNGRANtoEUTRAN ::= SEQUENCE {

sourceNGRANnodeID IntersystemSONNGRANnodeID,

targeteNBID IntersystemSONeNBID,

iE-Extensions ProtocolExtensionContainer { { FromNGRANtoEUTRAN-ExtIEs} } OPTIONAL

}

FromNGRANtoEUTRAN-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

-- G

GBR-QosInformation ::= SEQUENCE {

maximumFlowBitRateDL BitRate,

maximumFlowBitRateUL BitRate,

guaranteedFlowBitRateDL BitRate,

guaranteedFlowBitRateUL BitRate,

notificationControl NotificationControl OPTIONAL,

maximumPacketLossRateDL PacketLossRate OPTIONAL,

maximumPacketLossRateUL PacketLossRate OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {GBR-QosInformation-ExtIEs} } OPTIONAL,

...

}

GBR-QosInformation-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...}

GlobalENB-ID ::= SEQUENCE {

pLMNidentity PLMNIdentity,

eNB-ID ENB-ID,

iE-Extensions ProtocolExtensionContainer { {GlobalENB-ID-ExtIEs} } OPTIONAL,

...

}

GlobalENB-ID-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

GlobalGNB-ID ::= SEQUENCE {

pLMNIdentity PLMNIdentity,

gNB-ID GNB-ID,

iE-Extensions ProtocolExtensionContainer { {GlobalGNB-ID-ExtIEs} } OPTIONAL,

...

}

GlobalGNB-ID-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

GlobalN3IWF-ID ::= SEQUENCE {

pLMNIdentity PLMNIdentity,

n3IWF-ID N3IWF-ID,

iE-Extensions ProtocolExtensionContainer { {GlobalN3IWF-ID-ExtIEs} } OPTIONAL,

...

}

GlobalN3IWF-ID-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

GlobalNgENB-ID ::= SEQUENCE {

pLMNIdentity PLMNIdentity,

ngENB-ID NgENB-ID,

iE-Extensions ProtocolExtensionContainer { {GlobalNgENB-ID-ExtIEs} } OPTIONAL,

...

}

GlobalNgENB-ID-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

GlobalRANNodeID ::= CHOICE {

globalGNB-ID GlobalGNB-ID,

globalNgENB-ID GlobalNgENB-ID,

globalN3IWF-ID GlobalN3IWF-ID,

choice-Extensions ProtocolIE-SingleContainer { {GlobalRANNodeID-ExtIEs} }

}

GlobalRANNodeID-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

GNB-ID ::= CHOICE {

gNB-ID BIT STRING (SIZE(22..32)),

choice-Extensions ProtocolIE-SingleContainer { {GNB-ID-ExtIEs} }

}

GNB-ID-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

GTP-TEID ::= OCTET STRING (SIZE(4))

GTPTunnel ::= SEQUENCE {

transportLayerAddress TransportLayerAddress,

gTP-TEID GTP-TEID,

iE-Extensions ProtocolExtensionContainer { {GTPTunnel-ExtIEs} } OPTIONAL,

...

}

GTPTunnel-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

GUAMI ::= SEQUENCE {

pLMNIdentity PLMNIdentity,

aMFRegionID AMFRegionID,

aMFSetID AMFSetID,

aMFPointer AMFPointer,

iE-Extensions ProtocolExtensionContainer { {GUAMI-ExtIEs} } OPTIONAL,

...

}

GUAMI-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

GUAMIType ::= ENUMERATED {native, mapped, ...}

-- H

HandoverCommandTransfer ::= SEQUENCE {

dLForwardingUP-TNLInformation UPTransportLayerInformation OPTIONAL,

qosFlowToBeForwardedList QosFlowToBeForwardedList OPTIONAL,

dataForwardingResponseDRBList DataForwardingResponseDRBList OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {HandoverCommandTransfer-ExtIEs} } OPTIONAL,

...

}

HandoverCommandTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-AdditionalDLForwardingUPTNLInformation CRITICALITY ignore EXTENSION QosFlowPerTNLInformationList PRESENCE optional}|

{ ID id-ULForwardingUP-TNLInformation CRITICALITY reject EXTENSION UPTransportLayerInformation PRESENCE optional}|

{ ID id-AdditionalULForwardingUPTNLInformation CRITICALITY reject EXTENSION UPTransportLayerInformationList PRESENCE optional}|

{ ID id-DataForwardingResponseERABList CRITICALITY ignore EXTENSION DataForwardingResponseERABList PRESENCE optional},

...

}

HandoverFlag ::= ENUMERATED {

handover-preparation,

...

}

HandoverPreparationUnsuccessfulTransfer ::= SEQUENCE {

cause Cause,

iE-Extensions ProtocolExtensionContainer { {HandoverPreparationUnsuccessfulTransfer-ExtIEs} } OPTIONAL,

...

}

HandoverPreparationUnsuccessfulTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

HandoverRequestAcknowledgeTransfer ::= SEQUENCE {

dL-NGU-UP-TNLInformation UPTransportLayerInformation,

dLForwardingUP-TNLInformation UPTransportLayerInformation OPTIONAL,

securityResult SecurityResult OPTIONAL,

qosFlowSetupResponseList QosFlowListWithDataForwarding,

qosFlowFailedToSetupList QosFlowListWithCause OPTIONAL,

dataForwardingResponseDRBList DataForwardingResponseDRBList OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {HandoverRequestAcknowledgeTransfer-ExtIEs} } OPTIONAL,

...

}

HandoverRequestAcknowledgeTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-AdditionalDLUPTNLInformationForHOList CRITICALITY ignore EXTENSION AdditionalDLUPTNLInformationForHOList PRESENCE optional }|

{ ID id-ULForwardingUP-TNLInformation CRITICALITY reject EXTENSION UPTransportLayerInformation PRESENCE optional}|

{ ID id-AdditionalULForwardingUPTNLInformation CRITICALITY reject EXTENSION UPTransportLayerInformationList PRESENCE optional}|

{ ID id-DataForwardingResponseERABList CRITICALITY ignore EXTENSION DataForwardingResponseERABList PRESENCE optional},

...

}

HandoverRequiredTransfer ::= SEQUENCE {

directForwardingPathAvailability DirectForwardingPathAvailability OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {HandoverRequiredTransfer-ExtIEs} } OPTIONAL,

...

}

HandoverRequiredTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

HandoverResourceAllocationUnsuccessfulTransfer ::= SEQUENCE {

cause Cause,

criticalityDiagnostics CriticalityDiagnostics OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {HandoverResourceAllocationUnsuccessfulTransfer-ExtIEs} } OPTIONAL,

...

}

HandoverResourceAllocationUnsuccessfulTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

HandoverType ::= ENUMERATED {

intra5gs,

fivegs-to-eps,

eps-to-5gs,

... ,

fivegs-to-utran

}

HOReport::= SEQUENCE {

handoverReportType ENUMERATED {ho-too-early, ho-to-wrong-cell, intersystem-ping-pong, ...},

handoverCause Cause,

sourcecellCGI NGRAN-CGI,

targetcellCGI NGRAN-CGI,

reestablishmentcellCGI NGRAN-CGI OPTIONAL,

-- This IE shall be present if the Handover Report Type IE is set to the value "HO to wrong cell" --

sourcecellC-RNTI BIT STRING (SIZE(16)),

targetcellinE-UTRAN EUTRA-CGI OPTIONAL,

-- This IE shall be present if the Handover Report Type IE is set to the value "Inter System ping-pong" --

mobilityInformation MobilityInformation,

uERLFReportContainer UERLFReportContainer OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { HOReport-ExtIEs} } OPTIONAL

}

HOReport-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

-- I

IMSVoiceSupportIndicator ::= ENUMERATED {

supported,

not-supported,

...

}

IndexToRFSP ::= INTEGER (1..256, ...)

InfoOnRecommendedCellsAndRANNodesForPaging ::= SEQUENCE {

recommendedCellsForPaging RecommendedCellsForPaging,

recommendRANNodesForPaging RecommendedRANNodesForPaging,

iE-Extensions ProtocolExtensionContainer { {InfoOnRecommendedCellsAndRANNodesForPaging-ExtIEs} } OPTIONAL,

...

}

InfoOnRecommendedCellsAndRANNodesForPaging-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

IntegrityProtectionIndication ::= ENUMERATED {

required,

preferred,

not-needed,

...

}

IntegrityProtectionResult ::= ENUMERATED {

performed,

not-performed,

...

}

IntendedNumberOfPagingAttempts ::= INTEGER (1..16, ...)

InterfacesToTrace ::= BIT STRING (SIZE(8))

InterSystemFailureIndication ::= SEQUENCE {

uERLFReportContainer UERLFReportContainer OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { InterSystemFailureIndication-ExtIEs} } OPTIONAL

}

InterSystemFailureIndication-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

IntersystemSONConfigurationTransfer ::= SEQUENCE {

transferType IntersystemSONTransferType,

intersystemSONInformation IntersystemSONInformation,

iE-Extensions ProtocolExtensionContainer { { IntersystemSONConfigurationTransfer-ExtIEs} } OPTIONAL

}

IntersystemSONConfigurationTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

IntersystemSONTransferType ::= CHOICE {

fromEUTRANtoNGRAN FromEUTRANtoNGRAN,

fromNGRANtoEUTRAN FromNGRANtoEUTRAN,

choice-Extensions ProtocolIE-SingleContainer { { IntersystemSONTransferType-ExtIEs} }

}

IntersystemSONTransferType-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

IntersystemSONeNBID ::= SEQUENCE {

globaleNBID GlobalENB-ID,

selectedEPSTAI EPS-TAI,

iE-Extensions ProtocolExtensionContainer { { IntersystemSONeNBID-ExtIEs} } OPTIONAL

}

IntersystemSONeNBID-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

IntersystemSONNGRANnodeID ::= SEQUENCE {

globalRANNodeID GlobalRANNodeID,

selectedTAI TAI,

iE-Extensions ProtocolExtensionContainer { { IntersystemSONNGRANnodeID-ExtIEs} } OPTIONAL

}

IntersystemSONNGRANnodeID-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

IntersystemSONInformation ::= CHOICE {

intersystemSONInformationReport IntersystemSONInformationReport,

choice-Extensions ProtocolIE-SingleContainer { { IntersystemSONInformation-ExtIEs} }

}

IntersystemSONInformation-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

IntersystemSONInformationReport::= CHOICE {

hOReportInformation InterSystemHOReport,

failureIndicationInformation InterSystemFailureIndication,

choice-Extensions ProtocolIE-SingleContainer { { IntersystemSONInformationReport-ExtIEs} }

}

IntersystemSONInformationReport-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

InterSystemHOReport ::= SEQUENCE {

handoverReportType InterSystemHandoverReportType,

iE-Extensions ProtocolExtensionContainer { { InterSystemHOReport-ExtIEs} } OPTIONAL

}

InterSystemHOReport-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

InterSystemHandoverReportType ::= CHOICE {

tooearlyIntersystemHO TooearlyIntersystemHO,

intersystemUnnecessaryHO IntersystemUnnecessaryHO,

choice-Extensions ProtocolIE-SingleContainer { { InterSystemHandoverReportType-ExtIEs} }

}

InterSystemHandoverReportType-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

IntersystemUnnecessaryHO ::= SEQUENCE {

sourcecellID EUTRA-CGI,

failurecellID NGRAN-CGI,

earlyIRATHO ENUMERATED{no, yes},

candidateCellList CandidateCellList,

iE-Extensions ProtocolExtensionContainer { { IntersystemUnnecessaryHO-ExtIEs} } OPTIONAL

}

IntersystemUnnecessaryHO-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

-- J

-- K

-- L

LAC ::= OCTET STRING (SIZE (2))

LAI ::= SEQUENCE {

pLMNidentity PLMNIdentity,

lAC LAC,

iE-Extensions ProtocolExtensionContainer { {LAI-ExtIEs} } OPTIONAL,

...

}

LAI-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

LastVisitedCellInformation ::= CHOICE {

nGRANCell LastVisitedNGRANCellInformation,

eUTRANCell LastVisitedEUTRANCellInformation,

uTRANCell LastVisitedUTRANCellInformation,

gERANCell LastVisitedGERANCellInformation,

choice-Extensions ProtocolIE-SingleContainer { {LastVisitedCellInformation-ExtIEs} }

}

LastVisitedCellInformation-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

LastVisitedCellItem ::= SEQUENCE {

lastVisitedCellInformation LastVisitedCellInformation,

iE-Extensions ProtocolExtensionContainer { {LastVisitedCellItem-ExtIEs} } OPTIONAL,

...

}

LastVisitedCellItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

LastVisitedEUTRANCellInformation ::= OCTET STRING

LastVisitedGERANCellInformation ::= OCTET STRING

LastVisitedNGRANCellInformation::= SEQUENCE {

globalCellID NGRAN-CGI,

cellType CellType,

timeUEStayedInCell TimeUEStayedInCell,

timeUEStayedInCellEnhancedGranularity TimeUEStayedInCellEnhancedGranularity OPTIONAL,

hOCauseValue Cause OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {LastVisitedNGRANCellInformation-ExtIEs} } OPTIONAL,

...

}

LastVisitedNGRANCellInformation-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

LastVisitedUTRANCellInformation ::= OCTET STRING

LocationReportingAdditionalInfo ::= ENUMERATED {

includePSCell,

...

}

LocationReportingReferenceID ::= INTEGER (1..64, ...)

LocationReportingRequestType ::= SEQUENCE {

eventType EventType,

reportArea ReportArea,

areaOfInterestList AreaOfInterestList OPTIONAL,

locationReportingReferenceIDToBeCancelled LocationReportingReferenceID OPTIONAL,

-- The above IE shall be present if the event type is set to “stop reporting UE presence in the area of interest”

iE-Extensions ProtocolExtensionContainer { {LocationReportingRequestType-ExtIEs} } OPTIONAL,

...

}

LocationReportingRequestType-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-LocationReportingAdditionalInfo CRITICALITY ignore EXTENSION LocationReportingAdditionalInfo PRESENCE optional },

...

}

LTEUERLFReportContainer ::= OCTET STRING

-- M

MaskedIMEISV ::= BIT STRING (SIZE(64))

MaximumDataBurstVolume ::= INTEGER (0..4095, ..., 4096.. 2000000)

MessageIdentifier ::= BIT STRING (SIZE(16))

MaximumIntegrityProtectedDataRate ::= ENUMERATED {

bitrate64kbs,

maximum-UE-rate,

...

}

MICOModeIndication ::= ENUMERATED {

true,

...

}

MobilityInformation ::= BIT STRING (SIZE(16))

MobilityRestrictionList ::= SEQUENCE {

servingPLMN PLMNIdentity,

equivalentPLMNs EquivalentPLMNs OPTIONAL,

rATRestrictions RATRestrictions OPTIONAL,

forbiddenAreaInformation ForbiddenAreaInformation OPTIONAL,

serviceAreaInformation ServiceAreaInformation OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {MobilityRestrictionList-ExtIEs} } OPTIONAL,

...

}

MobilityRestrictionList-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-LastEUTRAN-PLMNIdentity CRITICALITY ignore EXTENSION PLMNIdentity PRESENCE optional }|

{ ID id-CNTypeRestrictionsForServing CRITICALITY ignore EXTENSION CNTypeRestrictionsForServing PRESENCE optional}|

{ ID id-CNTypeRestrictionsForEquivalent CRITICALITY ignore EXTENSION CNTypeRestrictionsForEquivalent PRESENCE optional},

...

}

-- N

N3IWF-ID ::= CHOICE {

n3IWF-ID BIT STRING (SIZE(16)),

choice-Extensions ProtocolIE-SingleContainer { {N3IWF-ID-ExtIEs} }

}

N3IWF-ID-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

NAS-PDU ::= OCTET STRING

NASSecurityParametersFromNGRAN ::= OCTET STRING

NetworkInstance ::= INTEGER (1..256, ...)

NewSecurityContextInd ::= ENUMERATED {

true,

...

}

NextHopChainingCount ::= INTEGER (0..7)

NextPagingAreaScope ::= ENUMERATED {

same,

changed,

...

}

NgENB-ID ::= CHOICE {

macroNgENB-ID BIT STRING (SIZE(20)),

shortMacroNgENB-ID BIT STRING (SIZE(18)),

longMacroNgENB-ID BIT STRING (SIZE(21)),

choice-Extensions ProtocolIE-SingleContainer { {NgENB-ID-ExtIEs} }

}

NgENB-ID-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

NGRAN-CGI ::= CHOICE {

nR-CGI NR-CGI,

eUTRA-CGI EUTRA-CGI,

choice-Extensions ProtocolIE-SingleContainer { {NGRAN-CGI-ExtIEs} }

}

NGRAN-CGI-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

NGRAN-TNLAssociationToRemoveList ::= SEQUENCE (SIZE(1..maxnoofTNLAssociations)) OF NGRAN-TNLAssociationToRemoveItem

NGRAN-TNLAssociationToRemoveItem::= SEQUENCE {

tNLAssociationTransportLayerAddress CPTransportLayerInformation,

tNLAssociationTransportLayerAddressAMF CPTransportLayerInformation OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { NGRAN-TNLAssociationToRemoveItem-ExtIEs} } OPTIONAL

}

NGRAN-TNLAssociationToRemoveItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

NGRANTraceID ::= OCTET STRING (SIZE(8))

NonDynamic5QIDescriptor ::= SEQUENCE {

fiveQI FiveQI,

priorityLevelQos PriorityLevelQos OPTIONAL,

averagingWindow AveragingWindow OPTIONAL,

maximumDataBurstVolume MaximumDataBurstVolume OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {NonDynamic5QIDescriptor-ExtIEs} } OPTIONAL,

...

}

NonDynamic5QIDescriptor-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

NotAllowedTACs ::= SEQUENCE (SIZE(1..maxnoofAllowedAreas)) OF TAC

NotificationCause ::= ENUMERATED {

fulfilled,

not-fulfilled,

...

}

NotificationControl ::= ENUMERATED {

notification-requested,

...

}

NRCellIdentity ::= BIT STRING (SIZE(36))

NR-CGI ::= SEQUENCE {

pLMNIdentity PLMNIdentity,

nRCellIdentity NRCellIdentity,

iE-Extensions ProtocolExtensionContainer { {NR-CGI-ExtIEs} } OPTIONAL,

...

}

NR-CGI-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

NR-CGIList ::= SEQUENCE (SIZE(1..maxnoofCellsingNB)) OF NR-CGI

NR-CGIListForWarning ::= SEQUENCE (SIZE(1..maxnoofCellIDforWarning)) OF NR-CGI

NRencryptionAlgorithms ::= BIT STRING (SIZE(16, ...))

NRintegrityProtectionAlgorithms ::= BIT STRING (SIZE(16, ...))

NRMobilityHistoryReport ::= OCTET STRING

NRPPa-PDU ::= OCTET STRING

NRUERLFReportContainer ::= OCTET STRING

NumberOfBroadcasts ::= INTEGER (0..65535)

NumberOfBroadcastsRequested ::= INTEGER (0..65535)

-- O

OverloadAction ::= ENUMERATED {

reject-non-emergency-mo-dt,

reject-rrc-cr-signalling,

permit-emergency-sessions-and-mobile-terminated-services-only,

permit-high-priority-sessions-and-mobile-terminated-services-only,

...

}

OverloadResponse ::= CHOICE {

overloadAction OverloadAction,

choice-Extensions ProtocolIE-SingleContainer { {OverloadResponse-ExtIEs} }

}

OverloadResponse-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

OverloadStartNSSAIList ::= SEQUENCE (SIZE (1..maxnoofSliceItems)) OF OverloadStartNSSAIItem

OverloadStartNSSAIItem ::= SEQUENCE {

sliceOverloadList SliceOverloadList,

sliceOverloadResponse OverloadResponse OPTIONAL,

sliceTrafficLoadReductionIndication TrafficLoadReductionIndication OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {OverloadStartNSSAIItem-ExtIEs} } OPTIONAL,

...

}

OverloadStartNSSAIItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

-- P

PacketDelayBudget ::= INTEGER (0..1023, ...)

PacketErrorRate ::= SEQUENCE {

pERScalar INTEGER (0..9, ...),

pERExponent INTEGER (0..9, ...),

iE-Extensions ProtocolExtensionContainer { {PacketErrorRate-ExtIEs} } OPTIONAL,

...

}

PacketErrorRate-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PacketLossRate ::= INTEGER (0..1000, ...)

PagingAttemptInformation ::= SEQUENCE {

pagingAttemptCount PagingAttemptCount,

intendedNumberOfPagingAttempts IntendedNumberOfPagingAttempts,

nextPagingAreaScope NextPagingAreaScope OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {PagingAttemptInformation-ExtIEs} } OPTIONAL,

...

}

PagingAttemptInformation-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PagingAttemptCount ::= INTEGER (1..16, ...)

PagingDRX ::= ENUMERATED {

v32,

v64,

v128,

v256,

...

}

PagingOrigin ::= ENUMERATED {

non-3gpp,

...

}

PagingPriority ::= ENUMERATED {

priolevel1,

priolevel2,

priolevel3,

priolevel4,

priolevel5,

priolevel6,

priolevel7,

priolevel8,

...

}

PathSwitchRequestAcknowledgeTransfer ::= SEQUENCE {

uL-NGU-UP-TNLInformation UPTransportLayerInformation OPTIONAL,

securityIndication SecurityIndication OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {PathSwitchRequestAcknowledgeTransfer-ExtIEs} } OPTIONAL,

...

}

PathSwitchRequestAcknowledgeTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-AdditionalNGU-UP-TNLInformation CRITICALITY ignore EXTENSION UPTransportLayerInformationPairList PRESENCE optional },

...

}

PathSwitchRequestSetupFailedTransfer ::= SEQUENCE {

cause Cause,

iE-Extensions ProtocolExtensionContainer { {PathSwitchRequestSetupFailedTransfer-ExtIEs} } OPTIONAL,

...

}

PathSwitchRequestSetupFailedTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PathSwitchRequestTransfer ::= SEQUENCE {

dL-NGU-UP-TNLInformation UPTransportLayerInformation,

dL-NGU-TNLInformationReused DL-NGU-TNLInformationReused OPTIONAL,

userPlaneSecurityInformation UserPlaneSecurityInformation OPTIONAL,

qosFlowAcceptedList QosFlowAcceptedList,

iE-Extensions ProtocolExtensionContainer { {PathSwitchRequestTransfer-ExtIEs} } OPTIONAL,

...

}

PathSwitchRequestTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-AdditionalDLQosFlowPerTNLInformation CRITICALITY ignore EXTENSION QosFlowPerTNLInformationList PRESENCE optional },

...

}

PathSwitchRequestUnsuccessfulTransfer ::= SEQUENCE {

cause Cause,

iE-Extensions ProtocolExtensionContainer { {PathSwitchRequestUnsuccessfulTransfer-ExtIEs} } OPTIONAL,

...

}

PathSwitchRequestUnsuccessfulTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionAggregateMaximumBitRate ::= SEQUENCE {

pDUSessionAggregateMaximumBitRateDL BitRate,

pDUSessionAggregateMaximumBitRateUL BitRate,

iE-Extensions ProtocolExtensionContainer { {PDUSessionAggregateMaximumBitRate-ExtIEs} } OPTIONAL,

...

}

PDUSessionAggregateMaximumBitRate-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionID ::= INTEGER (0..255)

PDUSessionResourceAdmittedList ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceAdmittedItem

PDUSessionResourceAdmittedItem ::= SEQUENCE {

pDUSessionID PDUSessionID,

handoverRequestAcknowledgeTransfer OCTET STRING (CONTAINING HandoverRequestAcknowledgeTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceAdmittedItem-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceAdmittedItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceFailedToModifyListModCfm ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceFailedToModifyItemModCfm

PDUSessionResourceFailedToModifyItemModCfm ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceModifyIndicationUnsuccessfulTransfer OCTET STRING (CONTAINING PDUSessionResourceModifyIndicationUnsuccessfulTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceFailedToModifyItemModCfm-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceFailedToModifyItemModCfm-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceFailedToModifyListModRes ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceFailedToModifyItemModRes

PDUSessionResourceFailedToModifyItemModRes ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceModifyUnsuccessfulTransfer OCTET STRING (CONTAINING PDUSessionResourceModifyUnsuccessfulTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceFailedToModifyItemModRes-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceFailedToModifyItemModRes-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceFailedToSetupListCxtFail ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceFailedToSetupItemCxtFail

PDUSessionResourceFailedToSetupItemCxtFail ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceSetupUnsuccessfulTransfer OCTET STRING (CONTAINING PDUSessionResourceSetupUnsuccessfulTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceFailedToSetupItemCxtFail-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceFailedToSetupItemCxtFail-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceFailedToSetupListCxtRes ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceFailedToSetupItemCxtRes

PDUSessionResourceFailedToSetupItemCxtRes ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceSetupUnsuccessfulTransfer OCTET STRING (CONTAINING PDUSessionResourceSetupUnsuccessfulTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceFailedToSetupItemCxtRes-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceFailedToSetupItemCxtRes-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceFailedToSetupListHOAck ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceFailedToSetupItemHOAck

PDUSessionResourceFailedToSetupItemHOAck ::= SEQUENCE {

pDUSessionID PDUSessionID,

handoverResourceAllocationUnsuccessfulTransfer OCTET STRING (CONTAINING HandoverResourceAllocationUnsuccessfulTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceFailedToSetupItemHOAck-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceFailedToSetupItemHOAck-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceFailedToSetupListPSReq ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceFailedToSetupItemPSReq

PDUSessionResourceFailedToSetupItemPSReq ::= SEQUENCE {

pDUSessionID PDUSessionID,

pathSwitchRequestSetupFailedTransfer OCTET STRING (CONTAINING PathSwitchRequestSetupFailedTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceFailedToSetupItemPSReq-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceFailedToSetupItemPSReq-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceFailedToSetupListSURes ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceFailedToSetupItemSURes

PDUSessionResourceFailedToSetupItemSURes ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceSetupUnsuccessfulTransfer OCTET STRING (CONTAINING PDUSessionResourceSetupUnsuccessfulTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceFailedToSetupItemSURes-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceFailedToSetupItemSURes-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceHandoverList ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceHandoverItem

PDUSessionResourceHandoverItem ::= SEQUENCE {

pDUSessionID PDUSessionID,

handoverCommandTransfer OCTET STRING (CONTAINING HandoverCommandTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceHandoverItem-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceHandoverItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceInformationList ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceInformationItem

PDUSessionResourceInformationItem ::= SEQUENCE {

pDUSessionID PDUSessionID,

qosFlowInformationList QosFlowInformationList,

dRBsToQosFlowsMappingList DRBsToQosFlowsMappingList OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceInformationItem-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceInformationItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceListCxtRelCpl ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceItemCxtRelCpl

PDUSessionResourceItemCxtRelCpl ::= SEQUENCE {

pDUSessionID PDUSessionID,

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceItemCxtRelCpl-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceItemCxtRelCpl-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-PDUSessionResourceReleaseResponseTransfer CRITICALITY ignore EXTENSION OCTET STRING (CONTAINING PDUSessionResourceReleaseResponseTransfer) PRESENCE optional },

...

}

PDUSessionResourceListCxtRelReq ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceItemCxtRelReq

PDUSessionResourceItemCxtRelReq ::= SEQUENCE {

pDUSessionID PDUSessionID,

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceItemCxtRelReq-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceItemCxtRelReq-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceListHORqd ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceItemHORqd

PDUSessionResourceItemHORqd ::= SEQUENCE {

pDUSessionID PDUSessionID,

handoverRequiredTransfer OCTET STRING (CONTAINING HandoverRequiredTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceItemHORqd-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceItemHORqd-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceModifyConfirmTransfer ::= SEQUENCE {

qosFlowModifyConfirmList QosFlowModifyConfirmList,

uLNGU-UP-TNLInformation UPTransportLayerInformation,

additionalNG-UUPTNLInformation UPTransportLayerInformationPairList OPTIONAL,

qosFlowFailedToModifyList QosFlowListWithCause OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceModifyConfirmTransfer-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceModifyConfirmTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceModifyIndicationUnsuccessfulTransfer ::= SEQUENCE {

cause Cause,

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceModifyIndicationUnsuccessfulTransfer-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceModifyIndicationUnsuccessfulTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceModifyRequestTransfer ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PDUSessionResourceModifyRequestTransferIEs} },

...

}

PDUSessionResourceModifyRequestTransferIEs NGAP-PROTOCOL-IES ::= {

{ ID id-PDUSessionAggregateMaximumBitRate CRITICALITY reject TYPE PDUSessionAggregateMaximumBitRate PRESENCE optional }|

{ ID id-UL-NGU-UP-TNLModifyList CRITICALITY reject TYPE UL-NGU-UP-TNLModifyList PRESENCE optional }|

{ ID id-NetworkInstance CRITICALITY reject TYPE NetworkInstance PRESENCE optional }|

{ ID id-QosFlowAddOrModifyRequestList CRITICALITY reject TYPE QosFlowAddOrModifyRequestList PRESENCE optional }|

{ ID id-QosFlowToReleaseList CRITICALITY reject TYPE QosFlowListWithCause PRESENCE optional }|

{ ID id-AdditionalUL-NGU-UP-TNLInformation CRITICALITY reject TYPE UPTransportLayerInformationList PRESENCE optional }|

{ ID id-CommonNetworkInstance CRITICALITY ignore TYPE CommonNetworkInstance PRESENCE optional },

...

}

PDUSessionResourceModifyResponseTransfer ::= SEQUENCE {

dL-NGU-UP-TNLInformation UPTransportLayerInformation OPTIONAL,

uL-NGU-UP-TNLInformation UPTransportLayerInformation OPTIONAL,

qosFlowAddOrModifyResponseList QosFlowAddOrModifyResponseList OPTIONAL,

additionalDLQosFlowPerTNLInformation QosFlowPerTNLInformationList OPTIONAL,

qosFlowFailedToAddOrModifyList QosFlowListWithCause OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceModifyResponseTransfer-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceModifyResponseTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-AdditionalNGU-UP-TNLInformation CRITICALITY ignore EXTENSION UPTransportLayerInformationPairList PRESENCE optional },

...

}

PDUSessionResourceModifyIndicationTransfer ::= SEQUENCE {

dLQosFlowPerTNLInformation QosFlowPerTNLInformation,

additionalDLQosFlowPerTNLInformation QosFlowPerTNLInformationList OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceModifyIndicationTransfer-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceModifyIndicationTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-SecondaryRATUsageInformation CRITICALITY ignore EXTENSION SecondaryRATUsageInformation PRESENCE optional }|

{ ID id-SecurityResult CRITICALITY ignore EXTENSION SecurityResult PRESENCE optional },

...

}

PDUSessionResourceModifyListModCfm ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceModifyItemModCfm

PDUSessionResourceModifyItemModCfm ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceModifyConfirmTransfer OCTET STRING (CONTAINING PDUSessionResourceModifyConfirmTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceModifyItemModCfm-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceModifyItemModCfm-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceModifyListModInd ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceModifyItemModInd

PDUSessionResourceModifyItemModInd ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceModifyIndicationTransfer OCTET STRING (CONTAINING PDUSessionResourceModifyIndicationTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceModifyItemModInd-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceModifyItemModInd-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceModifyListModReq ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceModifyItemModReq

PDUSessionResourceModifyItemModReq ::= SEQUENCE {

pDUSessionID PDUSessionID,

nAS-PDU NAS-PDU OPTIONAL,

pDUSessionResourceModifyRequestTransfer OCTET STRING (CONTAINING PDUSessionResourceModifyRequestTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceModifyItemModReq-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceModifyItemModReq-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ID id-S-NSSAI CRITICALITY reject EXTENSION S-NSSAI PRESENCE optional },

...

}

PDUSessionResourceModifyListModRes ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceModifyItemModRes

PDUSessionResourceModifyItemModRes ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceModifyResponseTransfer OCTET STRING (CONTAINING PDUSessionResourceModifyResponseTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceModifyItemModRes-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceModifyItemModRes-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceModifyUnsuccessfulTransfer ::= SEQUENCE {

cause Cause,

criticalityDiagnostics CriticalityDiagnostics OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceModifyUnsuccessfulTransfer-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceModifyUnsuccessfulTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceNotifyList ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceNotifyItem

PDUSessionResourceNotifyItem ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceNotifyTransfer OCTET STRING (CONTAINING PDUSessionResourceNotifyTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceNotifyItem-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceNotifyItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceNotifyReleasedTransfer ::= SEQUENCE {

cause Cause,

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceNotifyReleasedTransfer-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceNotifyReleasedTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-SecondaryRATUsageInformation CRITICALITY ignore EXTENSION SecondaryRATUsageInformation PRESENCE optional },

...

}

PDUSessionResourceNotifyTransfer ::= SEQUENCE {

qosFlowNotifyList QosFlowNotifyList OPTIONAL,

qosFlowReleasedList QosFlowListWithCause OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceNotifyTransfer-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceNotifyTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-SecondaryRATUsageInformation CRITICALITY ignore EXTENSION SecondaryRATUsageInformation PRESENCE optional },

...

}

PDUSessionResourceReleaseCommandTransfer ::= SEQUENCE {

cause Cause,

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceReleaseCommandTransfer-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceReleaseCommandTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceReleasedListNot ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceReleasedItemNot

PDUSessionResourceReleasedItemNot ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceNotifyReleasedTransfer OCTET STRING (CONTAINING PDUSessionResourceNotifyReleasedTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceReleasedItemNot-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceReleasedItemNot-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceReleasedListPSAck ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceReleasedItemPSAck

PDUSessionResourceReleasedItemPSAck ::= SEQUENCE {

pDUSessionID PDUSessionID,

pathSwitchRequestUnsuccessfulTransfer OCTET STRING (CONTAINING PathSwitchRequestUnsuccessfulTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceReleasedItemPSAck-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceReleasedItemPSAck-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceReleasedListPSFail ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceReleasedItemPSFail

PDUSessionResourceReleasedItemPSFail ::= SEQUENCE {

pDUSessionID PDUSessionID,

pathSwitchRequestUnsuccessfulTransfer OCTET STRING (CONTAINING PathSwitchRequestUnsuccessfulTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceReleasedItemPSFail-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceReleasedItemPSFail-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceReleasedListRelRes ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceReleasedItemRelRes

PDUSessionResourceReleasedItemRelRes ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceReleaseResponseTransfer OCTET STRING (CONTAINING PDUSessionResourceReleaseResponseTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceReleasedItemRelRes-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceReleasedItemRelRes-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceReleaseResponseTransfer ::= SEQUENCE {

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceReleaseResponseTransfer-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceReleaseResponseTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-SecondaryRATUsageInformation CRITICALITY ignore EXTENSION SecondaryRATUsageInformation PRESENCE optional },

...

}

PDUSessionResourceSecondaryRATUsageList ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceSecondaryRATUsageItem

PDUSessionResourceSecondaryRATUsageItem ::= SEQUENCE {

pDUSessionID PDUSessionID,

secondaryRATDataUsageReportTransfer OCTET STRING (CONTAINING SecondaryRATDataUsageReportTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceSecondaryRATUsageItem-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceSecondaryRATUsageItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceSetupListCxtReq ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceSetupItemCxtReq

PDUSessionResourceSetupItemCxtReq ::= SEQUENCE {

pDUSessionID PDUSessionID,

nAS-PDU NAS-PDU OPTIONAL,

s-NSSAI S-NSSAI,

pDUSessionResourceSetupRequestTransfer OCTET STRING (CONTAINING PDUSessionResourceSetupRequestTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceSetupItemCxtReq-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceSetupItemCxtReq-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceSetupListCxtRes ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceSetupItemCxtRes

PDUSessionResourceSetupItemCxtRes ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceSetupResponseTransfer OCTET STRING (CONTAINING PDUSessionResourceSetupResponseTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceSetupItemCxtRes-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceSetupItemCxtRes-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceSetupListHOReq ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceSetupItemHOReq

PDUSessionResourceSetupItemHOReq ::= SEQUENCE {

pDUSessionID PDUSessionID,

s-NSSAI S-NSSAI,

handoverRequestTransfer OCTET STRING (CONTAINING PDUSessionResourceSetupRequestTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceSetupItemHOReq-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceSetupItemHOReq-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceSetupListSUReq ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceSetupItemSUReq

PDUSessionResourceSetupItemSUReq ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionNAS-PDU NAS-PDU OPTIONAL,

s-NSSAI S-NSSAI,

pDUSessionResourceSetupRequestTransfer OCTET STRING (CONTAINING PDUSessionResourceSetupRequestTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceSetupItemSUReq-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceSetupItemSUReq-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceSetupListSURes ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceSetupItemSURes

PDUSessionResourceSetupItemSURes ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceSetupResponseTransfer OCTET STRING (CONTAINING PDUSessionResourceSetupResponseTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceSetupItemSURes-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceSetupItemSURes-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceSetupRequestTransfer ::= SEQUENCE {

protocolIEs ProtocolIE-Container { {PDUSessionResourceSetupRequestTransferIEs} },

...

}

PDUSessionResourceSetupRequestTransferIEs NGAP-PROTOCOL-IES ::= {

{ ID id-PDUSessionAggregateMaximumBitRate CRITICALITY reject TYPE PDUSessionAggregateMaximumBitRate PRESENCE optional }|

{ ID id-UL-NGU-UP-TNLInformation CRITICALITY reject TYPE UPTransportLayerInformation PRESENCE mandatory }|

{ ID id-AdditionalUL-NGU-UP-TNLInformation CRITICALITY reject TYPE UPTransportLayerInformationList PRESENCE optional }|

{ ID id-DataForwardingNotPossible CRITICALITY reject TYPE DataForwardingNotPossible PRESENCE optional }|

{ ID id-PDUSessionType CRITICALITY reject TYPE PDUSessionType PRESENCE mandatory }|

{ ID id-SecurityIndication CRITICALITY reject TYPE SecurityIndication PRESENCE optional }|

{ ID id-NetworkInstance CRITICALITY reject TYPE NetworkInstance PRESENCE optional }|

{ ID id-QosFlowSetupRequestList CRITICALITY reject TYPE QosFlowSetupRequestList PRESENCE mandatory }|

{ ID id-CommonNetworkInstance CRITICALITY ignore TYPE CommonNetworkInstance PRESENCE optional }|

{ ID id-DirectForwardingPathAvailability CRITICALITY ignore TYPE DirectForwardingPathAvailability PRESENCE optional },

...

}

PDUSessionResourceSetupResponseTransfer ::= SEQUENCE {

dLQosFlowPerTNLInformation QosFlowPerTNLInformation,

additionalDLQosFlowPerTNLInformation QosFlowPerTNLInformationList OPTIONAL,

securityResult SecurityResult OPTIONAL,

qosFlowFailedToSetupList QosFlowListWithCause OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceSetupResponseTransfer-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceSetupResponseTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceSetupUnsuccessfulTransfer ::= SEQUENCE {

cause Cause,

criticalityDiagnostics CriticalityDiagnostics OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceSetupUnsuccessfulTransfer-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceSetupUnsuccessfulTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceSwitchedList ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceSwitchedItem

PDUSessionResourceSwitchedItem ::= SEQUENCE {

pDUSessionID PDUSessionID,

pathSwitchRequestAcknowledgeTransfer OCTET STRING (CONTAINING PathSwitchRequestAcknowledgeTransfer),

iE-Extensions ProtocolExtensionContainer { { PDUSessionResourceSwitchedItem-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceSwitchedItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceToBeSwitchedDLList ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceToBeSwitchedDLItem

PDUSessionResourceToBeSwitchedDLItem ::= SEQUENCE {

pDUSessionID PDUSessionID,

pathSwitchRequestTransfer OCTET STRING (CONTAINING PathSwitchRequestTransfer),

iE-Extensions ProtocolExtensionContainer { { PDUSessionResourceToBeSwitchedDLItem-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceToBeSwitchedDLItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceToReleaseListHOCmd ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceToReleaseItemHOCmd

PDUSessionResourceToReleaseItemHOCmd ::= SEQUENCE {

pDUSessionID PDUSessionID,

handoverPreparationUnsuccessfulTransfer OCTET STRING (CONTAINING HandoverPreparationUnsuccessfulTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceToReleaseItemHOCmd-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceToReleaseItemHOCmd-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionResourceToReleaseListRelCmd ::= SEQUENCE (SIZE(1..maxnoofPDUSessions)) OF PDUSessionResourceToReleaseItemRelCmd

PDUSessionResourceToReleaseItemRelCmd ::= SEQUENCE {

pDUSessionID PDUSessionID,

pDUSessionResourceReleaseCommandTransfer OCTET STRING (CONTAINING PDUSessionResourceReleaseCommandTransfer),

iE-Extensions ProtocolExtensionContainer { {PDUSessionResourceToReleaseItemRelCmd-ExtIEs} } OPTIONAL,

...

}

PDUSessionResourceToReleaseItemRelCmd-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PDUSessionType ::= ENUMERATED {

ipv4,

ipv6,

ipv4v6,

ethernet,

unstructured,

...

}

PDUSessionUsageReport ::= SEQUENCE {

rATType ENUMERATED {nr, eutra, ..., nr-unlicensed, e-utra-unlicensed },

pDUSessionTimedReportList VolumeTimedReportList,

iE-Extensions ProtocolExtensionContainer { {PDUSessionUsageReport-ExtIEs} } OPTIONAL,

...

}

PDUSessionUsageReport-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PeriodicRegistrationUpdateTimer ::= BIT STRING (SIZE(8))

PLMNIdentity ::= OCTET STRING (SIZE(3))

PLMNSupportList ::= SEQUENCE (SIZE(1..maxnoofPLMNs)) OF PLMNSupportItem

PLMNSupportItem ::= SEQUENCE {

pLMNIdentity PLMNIdentity,

sliceSupportList SliceSupportList,

iE-Extensions ProtocolExtensionContainer { {PLMNSupportItem-ExtIEs} } OPTIONAL,

...

}

PLMNSupportItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

PortNumber ::= OCTET STRING (SIZE(2))

Pre-emptionCapability ::= ENUMERATED {

shall-not-trigger-pre-emption,

may-trigger-pre-emption,

...

}

Pre-emptionVulnerability ::= ENUMERATED {

not-pre-emptable,

pre-emptable,

...

}

PriorityLevelARP ::= INTEGER (1..15)

PriorityLevelQos ::= INTEGER (1..127, ...)

PWSFailedCellIDList ::= CHOICE {

eUTRA-CGI-PWSFailedList EUTRA-CGIList,

nR-CGI-PWSFailedList NR-CGIList,

choice-Extensions ProtocolIE-SingleContainer { {PWSFailedCellIDList-ExtIEs} }

}

PWSFailedCellIDList-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

-- Q

QosCharacteristics ::= CHOICE {

nonDynamic5QI NonDynamic5QIDescriptor,

dynamic5QI Dynamic5QIDescriptor,

choice-Extensions ProtocolIE-SingleContainer { {QosCharacteristics-ExtIEs} }

}

QosCharacteristics-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

QosFlowAcceptedList ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QosFlowAcceptedItem

QosFlowAcceptedItem ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

iE-Extensions ProtocolExtensionContainer { {QosFlowAcceptedItem-ExtIEs} } OPTIONAL,

...

}

QosFlowAcceptedItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

QosFlowAddOrModifyRequestList ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QosFlowAddOrModifyRequestItem

QosFlowAddOrModifyRequestItem ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

qosFlowLevelQosParameters QosFlowLevelQosParameters OPTIONAL,

e-RAB-ID E-RAB-ID OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {QosFlowAddOrModifyRequestItem-ExtIEs} } OPTIONAL,

...

}

QosFlowAddOrModifyRequestItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

QosFlowAddOrModifyResponseList ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QosFlowAddOrModifyResponseItem

QosFlowAddOrModifyResponseItem ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

iE-Extensions ProtocolExtensionContainer { {QosFlowAddOrModifyResponseItem-ExtIEs} } OPTIONAL,

...

}

QosFlowAddOrModifyResponseItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

QosFlowIdentifier ::= INTEGER (0..63, ...)

QosFlowInformationList ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QosFlowInformationItem

QosFlowInformationItem ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

dLForwarding DLForwarding OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {QosFlowInformationItem-ExtIEs} } OPTIONAL,

...

}

QosFlowInformationItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ID id-ULForwarding CRITICALITY reject EXTENSION ULForwarding PRESENCE optional},

...

}

QosFlowLevelQosParameters ::= SEQUENCE {

qosCharacteristics QosCharacteristics,

allocationAndRetentionPriority AllocationAndRetentionPriority,

gBR-QosInformation GBR-QosInformation OPTIONAL,

reflectiveQosAttribute ReflectiveQosAttribute OPTIONAL,

additionalQosFlowInformation AdditionalQosFlowInformation OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {QosFlowLevelQosParameters-ExtIEs} } OPTIONAL,

...

}

QosFlowLevelQosParameters-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ID id-QosMonitoringRequest CRITICALITY ignore EXTENSION QosMonitoringRequest PRESENCE optional},

...

}

QosMonitoringRequest ::= ENUMERATED {ul, dl, both}

QosFlowListWithCause ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QosFlowWithCauseItem

QosFlowWithCauseItem ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

cause Cause,

iE-Extensions ProtocolExtensionContainer { {QosFlowWithCauseItem-ExtIEs} } OPTIONAL,

...

}

QosFlowWithCauseItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

QosFlowModifyConfirmList ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QosFlowModifyConfirmItem

QosFlowModifyConfirmItem ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

iE-Extensions ProtocolExtensionContainer { {QosFlowModifyConfirmItem-ExtIEs} } OPTIONAL,

...

}

QosFlowModifyConfirmItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

QosFlowNotifyList ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QosFlowNotifyItem

QosFlowNotifyItem ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

notificationCause NotificationCause,

iE-Extensions ProtocolExtensionContainer { {QosFlowNotifyItem-ExtIEs} } OPTIONAL,

...

}

QosFlowNotifyItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

QosFlowPerTNLInformation ::= SEQUENCE {

uPTransportLayerInformation UPTransportLayerInformation,

associatedQosFlowList AssociatedQosFlowList,

iE-Extensions ProtocolExtensionContainer { { QosFlowPerTNLInformation-ExtIEs} } OPTIONAL,

...

}

QosFlowPerTNLInformation-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

QosFlowPerTNLInformationList ::= SEQUENCE (SIZE(1..maxnoofMultiConnectivityMinusOne)) OF QosFlowPerTNLInformationItem

QosFlowPerTNLInformationItem ::= SEQUENCE {

qosFlowPerTNLInformation QosFlowPerTNLInformation,

iE-Extensions ProtocolExtensionContainer { { QosFlowPerTNLInformationItem-ExtIEs} } OPTIONAL,

...

}

QosFlowPerTNLInformationItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

QosFlowSetupRequestList ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QosFlowSetupRequestItem

QosFlowSetupRequestItem ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

qosFlowLevelQosParameters QosFlowLevelQosParameters,

e-RAB-ID E-RAB-ID OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {QosFlowSetupRequestItem-ExtIEs} } OPTIONAL,

...

}

QosFlowSetupRequestItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

QosFlowListWithDataForwarding ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QosFlowItemWithDataForwarding

QosFlowItemWithDataForwarding ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

dataForwardingAccepted DataForwardingAccepted OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {QosFlowItemWithDataForwarding-ExtIEs} } OPTIONAL,

...

}

QosFlowItemWithDataForwarding-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

QosFlowToBeForwardedList ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QosFlowToBeForwardedItem

QosFlowToBeForwardedItem ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

iE-Extensions ProtocolExtensionContainer { {QosFlowToBeForwardedItem-ExtIEs} } OPTIONAL,

...

}

QosFlowToBeForwardedItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

QoSFlowsUsageReportList ::= SEQUENCE (SIZE(1..maxnoofQosFlows)) OF QoSFlowsUsageReport-Item

QoSFlowsUsageReport-Item ::= SEQUENCE {

qosFlowIdentifier QosFlowIdentifier,

rATType ENUMERATED {nr, eutra, ..., nr-unlicensed, e-utra-unlicensed },

qoSFlowsTimedReportList VolumeTimedReportList,

iE-Extensions ProtocolExtensionContainer { {QoSFlowsUsageReport-Item-ExtIEs} } OPTIONAL,

...

}

QoSFlowsUsageReport-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

-- R

RANNodeName ::= PrintableString (SIZE(1..150, ...))

RANPagingPriority ::= INTEGER (1..256)

RANStatusTransfer-TransparentContainer ::= SEQUENCE {

dRBsSubjectToStatusTransferList DRBsSubjectToStatusTransferList,

iE-Extensions ProtocolExtensionContainer { {RANStatusTransfer-TransparentContainer-ExtIEs} } OPTIONAL,

...

}

RANStatusTransfer-TransparentContainer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

RAN-UE-NGAP-ID ::= INTEGER (0..4294967295)

RAT-Information ::= ENUMERATED {

unlicensed,

...

}

RATRestrictions ::= SEQUENCE (SIZE(1..maxnoofEPLMNsPlusOne)) OF RATRestrictions-Item

RATRestrictions-Item ::= SEQUENCE {

pLMNIdentity PLMNIdentity,

rATRestrictionInformation RATRestrictionInformation,

iE-Extensions ProtocolExtensionContainer { {RATRestrictions-Item-ExtIEs} } OPTIONAL,

...

}

RATRestrictions-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ID id-ExtendedRATRestrictionInformation CRITICALITY ignore EXTENSION ExtendedRATRestrictionInformation PRESENCE optional},

...

}

RATRestrictionInformation ::= BIT STRING (SIZE(8, ...))

RecommendedCellsForPaging ::= SEQUENCE {

recommendedCellList RecommendedCellList,

iE-Extensions ProtocolExtensionContainer { {RecommendedCellsForPaging-ExtIEs} } OPTIONAL,

...

}

RecommendedCellsForPaging-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

RecommendedCellList ::= SEQUENCE (SIZE(1..maxnoofRecommendedCells)) OF RecommendedCellItem

RecommendedCellItem ::= SEQUENCE {

nGRAN-CGI NGRAN-CGI,

timeStayedInCell INTEGER (0..4095) OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {RecommendedCellItem-ExtIEs} } OPTIONAL,

...

}

RecommendedCellItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

RecommendedRANNodesForPaging ::= SEQUENCE {

recommendedRANNodeList RecommendedRANNodeList,

iE-Extensions ProtocolExtensionContainer { {RecommendedRANNodesForPaging-ExtIEs} } OPTIONAL,

...

}

RecommendedRANNodesForPaging-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

RecommendedRANNodeList::= SEQUENCE (SIZE(1..maxnoofRecommendedRANNodes)) OF RecommendedRANNodeItem

RecommendedRANNodeItem ::= SEQUENCE {

aMFPagingTarget AMFPagingTarget,

iE-Extensions ProtocolExtensionContainer { {RecommendedRANNodeItem-ExtIEs} } OPTIONAL,

...

}

RecommendedRANNodeItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

RedirectionVoiceFallback ::= ENUMERATED {

possible,

not-possible,

...

}

ReflectiveQosAttribute ::= ENUMERATED {

subject-to,

...

}

RelativeAMFCapacity ::= INTEGER (0..255)

ReportArea ::= ENUMERATED {

cell,

...

}

RepetitionPeriod ::= INTEGER (0..131071)

ResetAll ::= ENUMERATED {

reset-all,

...

}

ResetType ::= CHOICE {

nG-Interface ResetAll,

partOfNG-Interface UE-associatedLogicalNG-connectionList,

choice-Extensions ProtocolIE-SingleContainer { {ResetType-ExtIEs} }

}

ResetType-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

RNC-ID ::= INTEGER (0..4095)

RoutingID ::= OCTET STRING

RRCContainer ::= OCTET STRING

RRCEstablishmentCause ::= ENUMERATED {

emergency,

highPriorityAccess,

mt-Access,

mo-Signalling,

mo-Data,

mo-VoiceCall,

mo-VideoCall,

mo-SMS,

mps-PriorityAccess,

mcs-PriorityAccess,

...,

notAvailable

}

RRCInactiveTransitionReportRequest ::= ENUMERATED {

subsequent-state-transition-report,

single-rrc-connected-state-report,

cancel-report,

...

}

RRCState ::= ENUMERATED {

inactive,

connected,

...

}

RIMInformationTransfer ::= SEQUENCE {

targetRANNodeID TargetRANNodeID,

sourceRANNodeID SourceRANNodeID,

rIMInformation RIMInformation,

iE-Extensions ProtocolExtensionContainer { {RIMInformationTransfer-ExtIEs} } OPTIONAL,

...

}

RIMInformationTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

RIMInformation ::= SEQUENCE {

targetgNBSetID GNBSetID,

rIM-RSDetection ENUMERATED {rs-detected, rs-disappeared, ...},

...

}

GNBSetID ::= BIT STRING (SIZE(22))

-- S

SCTP-TLAs ::= SEQUENCE (SIZE(1..maxnoofXnTLAs)) OF TransportLayerAddress

SD ::= OCTET STRING (SIZE(3))

SecondaryRATUsageInformation ::= SEQUENCE {

pDUSessionUsageReport PDUSessionUsageReport OPTIONAL,

qosFlowsUsageReportList QoSFlowsUsageReportList OPTIONAL,

iE-Extension ProtocolExtensionContainer { {SecondaryRATUsageInformation-ExtIEs} } OPTIONAL,

...

}

SecondaryRATUsageInformation-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

SecondaryRATDataUsageReportTransfer ::= SEQUENCE {

secondaryRATUsageInformation SecondaryRATUsageInformation OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {SecondaryRATDataUsageReportTransfer-ExtIEs} } OPTIONAL,

...

}

SecondaryRATDataUsageReportTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

SecurityContext ::= SEQUENCE {

nextHopChainingCount NextHopChainingCount,

nextHopNH SecurityKey,

iE-Extensions ProtocolExtensionContainer { {SecurityContext-ExtIEs} } OPTIONAL,

...

}

SecurityContext-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

SecurityIndication ::= SEQUENCE {

integrityProtectionIndication IntegrityProtectionIndication,

confidentialityProtectionIndication ConfidentialityProtectionIndication,

maximumIntegrityProtectedDataRate-UL MaximumIntegrityProtectedDataRate OPTIONAL,

-- The above IE shall be present if integrity protection is required or preferred

iE-Extensions ProtocolExtensionContainer { {SecurityIndication-ExtIEs} } OPTIONAL,

...

}

SecurityIndication-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-MaximumIntegrityProtectedDataRate-DL CRITICALITY ignore EXTENSION MaximumIntegrityProtectedDataRate PRESENCE optional },

...

}

SecurityKey ::= BIT STRING (SIZE(256))

SecurityResult ::= SEQUENCE {

integrityProtectionResult IntegrityProtectionResult,

confidentialityProtectionResult ConfidentialityProtectionResult,

iE-Extensions ProtocolExtensionContainer { {SecurityResult-ExtIEs} } OPTIONAL,

...

}

SecurityResult-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

SerialNumber ::= BIT STRING (SIZE(16))

ServedGUAMIList ::= SEQUENCE (SIZE(1..maxnoofServedGUAMIs)) OF ServedGUAMIItem

ServedGUAMIItem ::= SEQUENCE {

gUAMI GUAMI,

backupAMFName AMFName OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {ServedGUAMIItem-ExtIEs} } OPTIONAL,

...

}

ServedGUAMIItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ID id-GUAMIType CRITICALITY ignore EXTENSION GUAMIType PRESENCE optional},

...

}

ServiceAreaInformation ::= SEQUENCE (SIZE(1.. maxnoofEPLMNsPlusOne)) OF ServiceAreaInformation-Item

ServiceAreaInformation-Item ::= SEQUENCE {

pLMNIdentity PLMNIdentity,

allowedTACs AllowedTACs OPTIONAL,

notAllowedTACs NotAllowedTACs OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {ServiceAreaInformation-Item-ExtIEs} } OPTIONAL,

...

}

ServiceAreaInformation-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

SgNB-UE-X2AP-ID ::= INTEGER (0..4294967295)

SliceOverloadList ::= SEQUENCE (SIZE(1..maxnoofSliceItems)) OF SliceOverloadItem

SliceOverloadItem ::= SEQUENCE {

s-NSSAI S-NSSAI,

iE-Extensions ProtocolExtensionContainer { {SliceOverloadItem-ExtIEs} } OPTIONAL,

...

}

SliceOverloadItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

SliceSupportList ::= SEQUENCE (SIZE(1..maxnoofSliceItems)) OF SliceSupportItem

SliceSupportItem ::= SEQUENCE {

s-NSSAI S-NSSAI,

iE-Extensions ProtocolExtensionContainer { {SliceSupportItem-ExtIEs} } OPTIONAL,

...

}

SliceSupportItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

S-NSSAI ::= SEQUENCE {

sST SST,

sD SD OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { S-NSSAI-ExtIEs} } OPTIONAL,

...

}

S-NSSAI-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

SONConfigurationTransfer ::= SEQUENCE {

targetRANNodeID TargetRANNodeID,

sourceRANNodeID SourceRANNodeID,

sONInformation SONInformation,

xnTNLConfigurationInfo XnTNLConfigurationInfo OPTIONAL,

-- The above IE shall be present if the SON Information IE contains the SON Information Request IE set to “Xn TNL Configuration Info”

iE-Extensions ProtocolExtensionContainer { {SONConfigurationTransfer-ExtIEs} } OPTIONAL,

...

}

SONConfigurationTransfer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

SONInformation ::= CHOICE {

sONInformationRequest SONInformationRequest,

sONInformationReply SONInformationReply,

choice-Extensions ProtocolIE-SingleContainer { {SONInformation-ExtIEs} }

}

SONInformation-ExtIEs NGAP-PROTOCOL-IES ::= {

{ID id-SONInformationReport CRITICALITY ignore TYPE SONInformationReport PRESENCE mandatory},

...

}

SONInformationReply ::= SEQUENCE {

xnTNLConfigurationInfo XnTNLConfigurationInfo OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {SONInformationReply-ExtIEs} } OPTIONAL,

...

}

SONInformationReply-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

SONInformationReport::= CHOICE {

failureIndicationInformation FailureIndication,

hOReportInformation HOReport,

choice-Extensions ProtocolIE-SingleContainer { { SONInformationReport-ExtIEs} }

}

SONInformationReport-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

SONInformationRequest ::= ENUMERATED {

xn-TNL-configuration-info,

...

}

SourceNGRANNode-ToTargetNGRANNode-TransparentContainer ::= SEQUENCE {

rRCContainer RRCContainer,

pDUSessionResourceInformationList PDUSessionResourceInformationList OPTIONAL,

e-RABInformationList E-RABInformationList OPTIONAL,

targetCell-ID NGRAN-CGI,

indexToRFSP IndexToRFSP OPTIONAL,

uEHistoryInformation UEHistoryInformation,

iE-Extensions ProtocolExtensionContainer { {SourceNGRANNode-ToTargetNGRANNode-TransparentContainer-ExtIEs} } OPTIONAL,

...

}

SourceNGRANNode-ToTargetNGRANNode-TransparentContainer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-SgNB-UE-X2AP-ID CRITICALITY ignore EXTENSION SgNB-UE-X2AP-ID PRESENCE optional}|

{ ID id-UEHistoryInformationFromTheUE CRITICALITY ignore EXTENSION UEHistoryInformationFromTheUE PRESENCE optional },

...

}

SourceOfUEActivityBehaviourInformation ::= ENUMERATED {

subscription-information,

statistics,

...

}

SourceRANNodeID ::= SEQUENCE {

globalRANNodeID GlobalRANNodeID,

selectedTAI TAI,

iE-Extensions ProtocolExtensionContainer { {SourceRANNodeID-ExtIEs} } OPTIONAL,

...

}

SourceRANNodeID-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

SourceToTarget-TransparentContainer ::= OCTET STRING

-- This IE includes a transparent container from the source RAN node to the target RAN node.

-- The octets of the OCTET STRING are encoded according to the specifications of the target system.

SRVCCOperationPossible ::= ENUMERATED {

possible, notPossible,

...

}

SourceToTarget-AMFInformationReroute ::= SEQUENCE {

configuredNSSAI ConfiguredNSSAI OPTIONAL,

rejectedNSSAIinPLMN RejectedNSSAIinPLMN OPTIONAL,

rejectedNSSAIinTA RejectedNSSAIinTA OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {SourceToTarget-AMFInformationReroute-ExtIEs} } OPTIONAL,

...

}

SourceToTarget-AMFInformationReroute-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

-- This IE includes information from the source Core node to the target Core node for reroute information provide by NSSF.

-- The octets of the OCTET STRING are encoded according to the specifications of the Core network.

ConfiguredNSSAI ::= OCTET STRING (SIZE(128))

RejectedNSSAIinPLMN ::= OCTET STRING (SIZE(32))

RejectedNSSAIinTA ::= OCTET STRING (SIZE(32))

SST ::= OCTET STRING (SIZE(1))

SupportedTAList ::= SEQUENCE (SIZE(1..maxnoofTACs)) OF SupportedTAItem

SupportedTAItem ::= SEQUENCE {

tAC TAC,

broadcastPLMNList BroadcastPLMNList,

iE-Extensions ProtocolExtensionContainer { {SupportedTAItem-ExtIEs} } OPTIONAL,

...

}

SupportedTAItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ID id-RAT-Information CRITICALITY reject EXTENSION RAT-Information PRESENCE optional},

...

}

-- T

TAC ::= OCTET STRING (SIZE(3))

TAI ::= SEQUENCE {

pLMNIdentity PLMNIdentity,

tAC TAC,

iE-Extensions ProtocolExtensionContainer { {TAI-ExtIEs} } OPTIONAL,

...

}

TAI-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TAIBroadcastEUTRA ::= SEQUENCE (SIZE(1..maxnoofTAIforWarning)) OF TAIBroadcastEUTRA-Item

TAIBroadcastEUTRA-Item ::= SEQUENCE {

tAI TAI,

completedCellsInTAI-EUTRA CompletedCellsInTAI-EUTRA,

iE-Extensions ProtocolExtensionContainer { {TAIBroadcastEUTRA-Item-ExtIEs} } OPTIONAL,

...

}

TAIBroadcastEUTRA-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TAIBroadcastNR ::= SEQUENCE (SIZE(1..maxnoofTAIforWarning)) OF TAIBroadcastNR-Item

TAIBroadcastNR-Item ::= SEQUENCE {

tAI TAI,

completedCellsInTAI-NR CompletedCellsInTAI-NR,

iE-Extensions ProtocolExtensionContainer { {TAIBroadcastNR-Item-ExtIEs} } OPTIONAL,

...

}

TAIBroadcastNR-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TAICancelledEUTRA ::= SEQUENCE (SIZE(1..maxnoofTAIforWarning)) OF TAICancelledEUTRA-Item

TAICancelledEUTRA-Item ::= SEQUENCE {

tAI TAI,

cancelledCellsInTAI-EUTRA CancelledCellsInTAI-EUTRA,

iE-Extensions ProtocolExtensionContainer { {TAICancelledEUTRA-Item-ExtIEs} } OPTIONAL,

...

}

TAICancelledEUTRA-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TAICancelledNR ::= SEQUENCE (SIZE(1..maxnoofTAIforWarning)) OF TAICancelledNR-Item

TAICancelledNR-Item ::= SEQUENCE {

tAI TAI,

cancelledCellsInTAI-NR CancelledCellsInTAI-NR,

iE-Extensions ProtocolExtensionContainer { {TAICancelledNR-Item-ExtIEs} } OPTIONAL,

...

}

TAICancelledNR-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TAIListForInactive ::= SEQUENCE (SIZE(1..maxnoofTAIforInactive)) OF TAIListForInactiveItem

TAIListForInactiveItem ::= SEQUENCE {

tAI TAI,

iE-Extensions ProtocolExtensionContainer { {TAIListForInactiveItem-ExtIEs} } OPTIONAL,

...

}

TAIListForInactiveItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TAIListForPaging ::= SEQUENCE (SIZE(1..maxnoofTAIforPaging)) OF TAIListForPagingItem

TAIListForPagingItem ::= SEQUENCE {

tAI TAI,

iE-Extensions ProtocolExtensionContainer { {TAIListForPagingItem-ExtIEs} } OPTIONAL,

...

}

TAIListForPagingItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TAIListForRestart ::= SEQUENCE (SIZE(1..maxnoofTAIforRestart)) OF TAI

TAIListForWarning ::= SEQUENCE (SIZE(1..maxnoofTAIforWarning)) OF TAI

TargeteNB-ID ::= SEQUENCE {

globalENB-ID GlobalNgENB-ID,

selected-EPS-TAI EPS-TAI,

iE-Extensions ProtocolExtensionContainer { {TargeteNB-ID-ExtIEs} } OPTIONAL,

...

}

TargeteNB-ID-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TargetID ::= CHOICE {

targetRANNodeID TargetRANNodeID,

targeteNB-ID TargeteNB-ID,

choice-Extensions ProtocolIE-SingleContainer { {TargetID-ExtIEs} }

}

TargetID-ExtIEs NGAP-PROTOCOL-IES ::= {

{ID id-TargetRNC-ID CRITICALITY reject TYPE TargetRNC-ID PRESENCE mandatory },

...

}

TargetNGRANNode-ToSourceNGRANNode-TransparentContainer ::= SEQUENCE {

rRCContainer RRCContainer,

iE-Extensions ProtocolExtensionContainer { {TargetNGRANNode-ToSourceNGRANNode-TransparentContainer-ExtIEs} } OPTIONAL,

...

}

TargetNGRANNode-ToSourceNGRANNode-TransparentContainer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TargetRANNodeID ::= SEQUENCE {

globalRANNodeID GlobalRANNodeID,

selectedTAI TAI,

iE-Extensions ProtocolExtensionContainer { {TargetRANNodeID-ExtIEs} } OPTIONAL,

...

}

TargetRNC-ID ::= SEQUENCE {

lAI LAI,

rNC-ID RNC-ID,

extendedRNC-ID ExtendedRNC-ID OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {TargetRNC-ID-ExtIEs} } OPTIONAL,

...

}

TargetRNC-ID-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TargetRANNodeID-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TargetToSource-TransparentContainer ::= OCTET STRING

-- This IE includes a transparent container from the target RAN node to the source RAN node.

-- The octets of the OCTET STRING are encoded according to the specifications of the target system.

TimerApproachForGUAMIRemoval ::= ENUMERATED {

apply-timer,

...

}

TimeStamp ::= OCTET STRING (SIZE(4))

TimeToWait ::= ENUMERATED {v1s, v2s, v5s, v10s, v20s, v60s, ...}

TimeUEStayedInCell ::= INTEGER (0..4095)

TimeUEStayedInCellEnhancedGranularity ::= INTEGER (0..40950)

TNLAddressWeightFactor ::= INTEGER (0..255)

TNLAssociationList ::= SEQUENCE (SIZE(1..maxnoofTNLAssociations)) OF TNLAssociationItem

TNLAssociationItem ::= SEQUENCE {

tNLAssociationAddress CPTransportLayerInformation,

cause Cause,

iE-Extensions ProtocolExtensionContainer { {TNLAssociationItem-ExtIEs} } OPTIONAL,

...

}

TNLAssociationItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TNLAssociationUsage ::= ENUMERATED {

ue,

non-ue,

both,

...

}

TooearlyIntersystemHO::= SEQUENCE {

sourcecellID EUTRA-CGI,

failurecellID NGRAN-CGI,

uERLFReportContainer UERLFReportContainer OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { TooearlyIntersystemHO-ExtIEs} } OPTIONAL

}

TooearlyIntersystemHO-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TraceActivation ::= SEQUENCE {

nGRANTraceID NGRANTraceID,

interfacesToTrace InterfacesToTrace,

traceDepth TraceDepth,

traceCollectionEntityIPAddress TransportLayerAddress,

iE-Extensions ProtocolExtensionContainer { {TraceActivation-ExtIEs} } OPTIONAL,

...

}

TraceActivation-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

TraceDepth ::= ENUMERATED {

minimum,

medium,

maximum,

minimumWithoutVendorSpecificExtension,

mediumWithoutVendorSpecificExtension,

maximumWithoutVendorSpecificExtension,

...

}

TrafficLoadReductionIndication ::= INTEGER (1..99)

TransportLayerAddress ::= BIT STRING (SIZE(1..160, ...))

TypeOfError ::= ENUMERATED {

not-understood,

missing,

...

}

-- U

UEAggregateMaximumBitRate ::= SEQUENCE {

uEAggregateMaximumBitRateDL BitRate,

uEAggregateMaximumBitRateUL BitRate,

iE-Extensions ProtocolExtensionContainer { {UEAggregateMaximumBitRate-ExtIEs} } OPTIONAL,

...

}

UEAggregateMaximumBitRate-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

UE-associatedLogicalNG-connectionList ::= SEQUENCE (SIZE(1..maxnoofNGConnectionsToReset)) OF UE-associatedLogicalNG-connectionItem

UE-associatedLogicalNG-connectionItem ::= SEQUENCE {

aMF-UE-NGAP-ID AMF-UE-NGAP-ID OPTIONAL,

rAN-UE-NGAP-ID RAN-UE-NGAP-ID OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {UE-associatedLogicalNG-connectionItem-ExtIEs} } OPTIONAL,

...

}

UE-associatedLogicalNG-connectionItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...}

UEContextRequest ::= ENUMERATED {requested, ...}

UEHistoryInformation ::= SEQUENCE (SIZE(1..maxnoofCellsinUEHistoryInfo)) OF LastVisitedCellItem

UEHistoryInformationFromTheUE ::= CHOICE {

nR NRMobilityHistoryReport,

choice-Extensions ProtocolIE-SingleContainer { {UEHistoryInformationFromTheUE-ExtIEs} }

}

UEHistoryInformationFromTheUE-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

UEIdentityIndexValue ::= CHOICE {

indexLength10 BIT STRING (SIZE(10)),

choice-Extensions ProtocolIE-SingleContainer { {UEIdentityIndexValue-ExtIEs} }

}

UEIdentityIndexValue-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

UE-NGAP-IDs ::= CHOICE {

uE-NGAP-ID-pair UE-NGAP-ID-pair,

aMF-UE-NGAP-ID AMF-UE-NGAP-ID,

choice-Extensions ProtocolIE-SingleContainer { {UE-NGAP-IDs-ExtIEs} }

}

UE-NGAP-IDs-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

UE-NGAP-ID-pair ::= SEQUENCE{

aMF-UE-NGAP-ID AMF-UE-NGAP-ID,

rAN-UE-NGAP-ID RAN-UE-NGAP-ID,

iE-Extensions ProtocolExtensionContainer { {UE-NGAP-ID-pair-ExtIEs} } OPTIONAL,

...

}

UE-NGAP-ID-pair-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

UEPagingIdentity ::= CHOICE {

fiveG-S-TMSI FiveG-S-TMSI,

choice-Extensions ProtocolIE-SingleContainer { {UEPagingIdentity-ExtIEs} }

}

UEPagingIdentity-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

UEPresence ::= ENUMERATED {in, out, unknown, ...}

UEPresenceInAreaOfInterestList ::= SEQUENCE (SIZE(1..maxnoofAoI)) OF UEPresenceInAreaOfInterestItem

UEPresenceInAreaOfInterestItem ::= SEQUENCE {

locationReportingReferenceID LocationReportingReferenceID,

uEPresence UEPresence,

iE-Extensions ProtocolExtensionContainer { {UEPresenceInAreaOfInterestItem-ExtIEs} } OPTIONAL,

...

}

UEPresenceInAreaOfInterestItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

UERadioCapability ::= OCTET STRING

UERadioCapabilityForPaging ::= SEQUENCE {

uERadioCapabilityForPagingOfNR UERadioCapabilityForPagingOfNR OPTIONAL,

uERadioCapabilityForPagingOfEUTRA UERadioCapabilityForPagingOfEUTRA OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {UERadioCapabilityForPaging-ExtIEs} } OPTIONAL,

...

}

UERadioCapabilityForPaging-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

UERadioCapabilityForPagingOfNR ::= OCTET STRING

UERadioCapabilityForPagingOfEUTRA ::= OCTET STRING

UERetentionInformation ::= ENUMERATED {

ues-retained,

...

}

UERLFReportContainer ::= CHOICE {

nR NRUERLFReportContainer,

lTE LTEUERLFReportContainer,

choice-Extensions ProtocolIE-SingleContainer { {UERLFReportContainer-ExtIEs} }

}

UERLFReportContainer-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

UESecurityCapabilities ::= SEQUENCE {

nRencryptionAlgorithms NRencryptionAlgorithms,

nRintegrityProtectionAlgorithms NRintegrityProtectionAlgorithms,

eUTRAencryptionAlgorithms EUTRAencryptionAlgorithms,

eUTRAintegrityProtectionAlgorithms EUTRAintegrityProtectionAlgorithms,

iE-Extensions ProtocolExtensionContainer { {UESecurityCapabilities-ExtIEs} } OPTIONAL,

...

}

UESecurityCapabilities-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

UL-NGU-UP-TNLModifyList ::= SEQUENCE (SIZE(1..maxnoofMultiConnectivity)) OF UL-NGU-UP-TNLModifyItem

UL-NGU-UP-TNLModifyItem ::= SEQUENCE {

uL-NGU-UP-TNLInformation UPTransportLayerInformation,

dL-NGU-UP-TNLInformation UPTransportLayerInformation,

iE-Extensions ProtocolExtensionContainer { {UL-NGU-UP-TNLModifyItem-ExtIEs} } OPTIONAL,

...

}

UL-NGU-UP-TNLModifyItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

UnavailableGUAMIList ::= SEQUENCE (SIZE(1..maxnoofServedGUAMIs)) OF UnavailableGUAMIItem

UnavailableGUAMIItem ::= SEQUENCE {

gUAMI GUAMI,

timerApproachForGUAMIRemoval TimerApproachForGUAMIRemoval OPTIONAL,

backupAMFName AMFName OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {UnavailableGUAMIItem-ExtIEs} } OPTIONAL,

...

}

UnavailableGUAMIItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

ULForwarding ::= ENUMERATED {

ul-forwarding-proposed,

...

}

UPTransportLayerInformation ::= CHOICE {

gTPTunnel GTPTunnel,

choice-Extensions ProtocolIE-SingleContainer { {UPTransportLayerInformation-ExtIEs} }

}

UPTransportLayerInformation-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

UPTransportLayerInformationList ::= SEQUENCE (SIZE(1..maxnoofMultiConnectivityMinusOne)) OF UPTransportLayerInformationItem

UPTransportLayerInformationItem ::= SEQUENCE {

nGU-UP-TNLInformation UPTransportLayerInformation,

iE-Extensions ProtocolExtensionContainer { {UPTransportLayerInformationItem-ExtIEs} } OPTIONAL,

...

}

UPTransportLayerInformationItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

UPTransportLayerInformationPairList ::= SEQUENCE (SIZE(1..maxnoofMultiConnectivityMinusOne)) OF UPTransportLayerInformationPairItem

UPTransportLayerInformationPairItem ::= SEQUENCE {

uL-NGU-UP-TNLInformation UPTransportLayerInformation,

dL-NGU-UP-TNLInformation UPTransportLayerInformation,

iE-Extensions ProtocolExtensionContainer { {UPTransportLayerInformationPairItem-ExtIEs} } OPTIONAL,

...

}

UPTransportLayerInformationPairItem-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

UserLocationInformation ::= CHOICE {

userLocationInformationEUTRA UserLocationInformationEUTRA,

userLocationInformationNR UserLocationInformationNR,

userLocationInformationN3IWF UserLocationInformationN3IWF,

choice-Extensions ProtocolIE-SingleContainer { {UserLocationInformation-ExtIEs} }

}

UserLocationInformation-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

UserLocationInformationEUTRA ::= SEQUENCE {

eUTRA-CGI EUTRA-CGI,

tAI TAI,

timeStamp TimeStamp OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {UserLocationInformationEUTRA-ExtIEs} } OPTIONAL,

...

}

UserLocationInformationEUTRA-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-PSCellInformation CRITICALITY ignore EXTENSION NGRAN-CGI PRESENCE optional},

...

}

UserLocationInformationN3IWF ::= SEQUENCE {

iPAddress TransportLayerAddress,

portNumber PortNumber,

iE-Extensions ProtocolExtensionContainer { {UserLocationInformationN3IWF-ExtIEs} } OPTIONAL,

...

}

UserLocationInformationN3IWF-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

UserLocationInformationNR ::= SEQUENCE {

nR-CGI NR-CGI,

tAI TAI,

timeStamp TimeStamp OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {UserLocationInformationNR-ExtIEs} } OPTIONAL,

...

}

UserLocationInformationNR-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-PSCellInformation CRITICALITY ignore EXTENSION NGRAN-CGI PRESENCE optional},

...

}

UserPlaneSecurityInformation ::= SEQUENCE {

securityResult SecurityResult,

securityIndication SecurityIndication,

iE-Extensions ProtocolExtensionContainer { {UserPlaneSecurityInformation-ExtIEs} } OPTIONAL,

...

}

UserPlaneSecurityInformation-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

-- V

VolumeTimedReportList ::= SEQUENCE (SIZE(1..maxnoofTimePeriods)) OF VolumeTimedReport-Item

VolumeTimedReport-Item ::= SEQUENCE {

startTimeStamp OCTET STRING (SIZE(4)),

endTimeStamp OCTET STRING (SIZE(4)),

usageCountUL INTEGER (0..18446744073709551615),

usageCountDL INTEGER (0..18446744073709551615),

iE-Extensions ProtocolExtensionContainer { {VolumeTimedReport-Item-ExtIEs} } OPTIONAL,

...

}

VolumeTimedReport-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

-- W

WarningAreaCoordinates ::= OCTET STRING (SIZE(1..1024))

WarningAreaList ::= CHOICE {

eUTRA-CGIListForWarning EUTRA-CGIListForWarning,

nR-CGIListForWarning NR-CGIListForWarning,

tAIListForWarning TAIListForWarning,

emergencyAreaIDList EmergencyAreaIDList,

choice-Extensions ProtocolIE-SingleContainer { {WarningAreaList-ExtIEs} }

}

WarningAreaList-ExtIEs NGAP-PROTOCOL-IES ::= {

...

}

WarningMessageContents ::= OCTET STRING (SIZE(1..9600))

WarningSecurityInfo ::= OCTET STRING (SIZE(50))

WarningType ::= OCTET STRING (SIZE(2))

-- X

XnExtTLAs ::= SEQUENCE (SIZE(1..maxnoofXnExtTLAs)) OF XnExtTLA-Item

XnExtTLA-Item ::= SEQUENCE {

iPsecTLA TransportLayerAddress OPTIONAL,

gTP-TLAs XnGTP-TLAs OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {XnExtTLA-Item-ExtIEs} } OPTIONAL,

...

}

XnExtTLA-Item-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

{ ID id-SCTP-TLAs CRITICALITY ignore EXTENSION SCTP-TLAs PRESENCE optional },

...

}

XnGTP-TLAs ::= SEQUENCE (SIZE(1..maxnoofXnGTP-TLAs)) OF TransportLayerAddress

XnTLAs ::= SEQUENCE (SIZE(1..maxnoofXnTLAs)) OF TransportLayerAddress

XnTNLConfigurationInfo ::= SEQUENCE {

xnTransportLayerAddresses XnTLAs,

xnExtendedTransportLayerAddresses XnExtTLAs OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {XnTNLConfigurationInfo-ExtIEs} } OPTIONAL,

...

}

XnTNLConfigurationInfo-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

...

}

-- Y

-- Z

END

-- ASN1STOP

9.4.6 Common Definitions

-- ASN1START

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Common definitions

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

NGAP-CommonDataTypes {

itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)

ngran-Access (22) modules (3) ngap (1) version1 (1) ngap-CommonDataTypes (3) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

Criticality ::= ENUMERATED { reject, ignore, notify }

Presence ::= ENUMERATED { optional, conditional, mandatory }

PrivateIE-ID ::= CHOICE {

local INTEGER (0..65535),

global OBJECT IDENTIFIER

}

ProcedureCode ::= INTEGER (0..255)

ProtocolExtensionID ::= INTEGER (0..65535)

ProtocolIE-ID ::= INTEGER (0..65535)

TriggeringMessage ::= ENUMERATED { initiating-message, successful-outcome, unsuccessfull-outcome }

END

-- ASN1STOP

9.4.7 Constant Definitions

-- ASN1START

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Constant definitions

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

NGAP-Constants {

itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)

ngran-Access (22) modules (3) ngap (1) version1 (1) ngap-Constants (4) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- IE parameter types from other modules.

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

IMPORTS

ProcedureCode,

ProtocolIE-ID

FROM NGAP-CommonDataTypes;

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Elementary Procedures

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

id-AMFConfigurationUpdate ProcedureCode ::= 0

id-AMFStatusIndication ProcedureCode ::= 1

id-CellTrafficTrace ProcedureCode ::= 2

id-DeactivateTrace ProcedureCode ::= 3

id-DownlinkNASTransport ProcedureCode ::= 4

id-DownlinkNonUEAssociatedNRPPaTransport ProcedureCode ::= 5

id-DownlinkRANConfigurationTransfer ProcedureCode ::= 6

id-DownlinkRANStatusTransfer ProcedureCode ::= 7

id-DownlinkUEAssociatedNRPPaTransport ProcedureCode ::= 8

id-ErrorIndication ProcedureCode ::= 9

id-HandoverCancel ProcedureCode ::= 10

id-HandoverNotification ProcedureCode ::= 11

id-HandoverPreparation ProcedureCode ::= 12

id-HandoverResourceAllocation ProcedureCode ::= 13

id-InitialContextSetup ProcedureCode ::= 14

id-InitialUEMessage ProcedureCode ::= 15

id-LocationReportingControl ProcedureCode ::= 16

id-LocationReportingFailureIndication ProcedureCode ::= 17

id-LocationReport ProcedureCode ::= 18

id-NASNonDeliveryIndication ProcedureCode ::= 19

id-NGReset ProcedureCode ::= 20

id-NGSetup ProcedureCode ::= 21

id-OverloadStart ProcedureCode ::= 22

id-OverloadStop ProcedureCode ::= 23

id-Paging ProcedureCode ::= 24

id-PathSwitchRequest ProcedureCode ::= 25

id-PDUSessionResourceModify ProcedureCode ::= 26

id-PDUSessionResourceModifyIndication ProcedureCode ::= 27

id-PDUSessionResourceRelease ProcedureCode ::= 28

id-PDUSessionResourceSetup ProcedureCode ::= 29

id-PDUSessionResourceNotify ProcedureCode ::= 30

id-PrivateMessage ProcedureCode ::= 31

id-PWSCancel ProcedureCode ::= 32

id-PWSFailureIndication ProcedureCode ::= 33

id-PWSRestartIndication ProcedureCode ::= 34

id-RANConfigurationUpdate ProcedureCode ::= 35

id-RerouteNASRequest ProcedureCode ::= 36

id-RRCInactiveTransitionReport ProcedureCode ::= 37

id-TraceFailureIndication ProcedureCode ::= 38

id-TraceStart ProcedureCode ::= 39

id-UEContextModification ProcedureCode ::= 40

id-UEContextRelease ProcedureCode ::= 41

id-UEContextReleaseRequest ProcedureCode ::= 42

id-UERadioCapabilityCheck ProcedureCode ::= 43

id-UERadioCapabilityInfoIndication ProcedureCode ::= 44

id-UETNLABindingRelease ProcedureCode ::= 45

id-UplinkNASTransport ProcedureCode ::= 46

id-UplinkNonUEAssociatedNRPPaTransport ProcedureCode ::= 47

id-UplinkRANConfigurationTransfer ProcedureCode ::= 48

id-UplinkRANStatusTransfer ProcedureCode ::= 49

id-UplinkUEAssociatedNRPPaTransport ProcedureCode ::= 50

id-WriteReplaceWarning ProcedureCode ::= 51

id-SecondaryRATDataUsageReport ProcedureCode ::= 52

id-UplinkRIMInformationTransfer ProcedureCode ::= 53

id-DownlinkRIMInformationTransfer ProcedureCode ::= 54

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Extension constants

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

maxPrivateIEs INTEGER ::= 65535

maxProtocolExtensions INTEGER ::= 65535

maxProtocolIEs INTEGER ::= 65535

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Lists

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

maxnoofAllowedAreas INTEGER ::= 16

maxnoofAllowedS-NSSAIs INTEGER ::= 8

maxnoofBPLMNs INTEGER ::= 12

maxnoofCellIDforWarning INTEGER ::= 65535

maxnoofCellinAoI INTEGER ::= 256

maxnoofCellinEAI INTEGER ::= 65535

maxnoofCellinTAI INTEGER ::= 65535

maxnoofCellsingNB INTEGER ::= 16384

maxnoofCellsinngeNB INTEGER ::= 256

maxnoofCellsinUEHistoryInfo INTEGER ::= 16

maxnoofCellsUEMovingTrajectory INTEGER ::= 16

maxnoofDRBs INTEGER ::= 32

maxnoofEmergencyAreaID INTEGER ::= 65535

maxnoofEAIforRestart INTEGER ::= 256

maxnoofEPLMNs INTEGER ::= 15

maxnoofEPLMNsPlusOne INTEGER ::= 16

maxnoofE-RABs INTEGER ::= 256

maxnoofErrors INTEGER ::= 256

maxnoofForbTACs INTEGER ::= 4096

maxnoofMultiConnectivity INTEGER ::= 4

maxnoofMultiConnectivityMinusOne INTEGER ::= 3

maxnoofNGConnectionsToReset INTEGER ::= 65536

maxnoofPDUSessions INTEGER ::= 256

maxnoofPLMNs INTEGER ::= 12

maxnoofQosFlows INTEGER ::= 64

maxnoofRANNodeinAoI INTEGER ::= 64

maxnoofRecommendedCells INTEGER ::= 16

maxnoofRecommendedRANNodes INTEGER ::= 16

maxnoofAoI INTEGER ::= 64

maxnoofServedGUAMIs INTEGER ::= 256

maxnoofSliceItems INTEGER ::= 1024

maxnoofTACs INTEGER ::= 256

maxnoofTAIforInactive INTEGER ::= 16

maxnoofTAIforPaging INTEGER ::= 16

maxnoofTAIforRestart INTEGER ::= 2048

maxnoofTAIforWarning INTEGER ::= 65535

maxnoofTAIinAoI INTEGER ::= 16

maxnoofTimePeriods INTEGER ::= 2

maxnoofTNLAssociations INTEGER ::= 32

maxnoofXnExtTLAs INTEGER ::= 16

maxnoofXnGTP-TLAs INTEGER ::= 16

maxnoofXnTLAs INTEGER ::= 2

maxnoofCandidateCells INTEGER ::= 32

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- IEs

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

id-AllowedNSSAI ProtocolIE-ID ::= 0

id-AMFName ProtocolIE-ID ::= 1

id-AMFOverloadResponse ProtocolIE-ID ::= 2

id-AMFSetID ProtocolIE-ID ::= 3

id-AMF-TNLAssociationFailedToSetupList ProtocolIE-ID ::= 4

id-AMF-TNLAssociationSetupList ProtocolIE-ID ::= 5

id-AMF-TNLAssociationToAddList ProtocolIE-ID ::= 6

id-AMF-TNLAssociationToRemoveList ProtocolIE-ID ::= 7

id-AMF-TNLAssociationToUpdateList ProtocolIE-ID ::= 8

id-AMFTrafficLoadReductionIndication ProtocolIE-ID ::= 9

id-AMF-UE-NGAP-ID ProtocolIE-ID ::= 10

id-AssistanceDataForPaging ProtocolIE-ID ::= 11

id-BroadcastCancelledAreaList ProtocolIE-ID ::= 12

id-BroadcastCompletedAreaList ProtocolIE-ID ::= 13

id-CancelAllWarningMessages ProtocolIE-ID ::= 14

id-Cause ProtocolIE-ID ::= 15

id-CellIDListForRestart ProtocolIE-ID ::= 16

id-ConcurrentWarningMessageInd ProtocolIE-ID ::= 17

id-CoreNetworkAssistanceInformationForInactive ProtocolIE-ID ::= 18

id-CriticalityDiagnostics ProtocolIE-ID ::= 19

id-DataCodingScheme ProtocolIE-ID ::= 20

id-DefaultPagingDRX ProtocolIE-ID ::= 21

id-DirectForwardingPathAvailability ProtocolIE-ID ::= 22

id-EmergencyAreaIDListForRestart ProtocolIE-ID ::= 23

id-EmergencyFallbackIndicator ProtocolIE-ID ::= 24

id-EUTRA-CGI ProtocolIE-ID ::= 25

id-FiveG-S-TMSI ProtocolIE-ID ::= 26

id-GlobalRANNodeID ProtocolIE-ID ::= 27

id-GUAMI ProtocolIE-ID ::= 28

id-HandoverType ProtocolIE-ID ::= 29

id-IMSVoiceSupportIndicator ProtocolIE-ID ::= 30

id-IndexToRFSP ProtocolIE-ID ::= 31

id-InfoOnRecommendedCellsAndRANNodesForPaging ProtocolIE-ID ::= 32

id-LocationReportingRequestType ProtocolIE-ID ::= 33

id-MaskedIMEISV ProtocolIE-ID ::= 34

id-MessageIdentifier ProtocolIE-ID ::= 35

id-MobilityRestrictionList ProtocolIE-ID ::= 36

id-NASC ProtocolIE-ID ::= 37

id-NAS-PDU ProtocolIE-ID ::= 38

id-NASSecurityParametersFromNGRAN ProtocolIE-ID ::= 39

id-NewAMF-UE-NGAP-ID ProtocolIE-ID ::= 40

id-NewSecurityContextInd ProtocolIE-ID ::= 41

id-NGAP-Message ProtocolIE-ID ::= 42

id-NGRAN-CGI ProtocolIE-ID ::= 43

id-NGRANTraceID ProtocolIE-ID ::= 44

id-NR-CGI ProtocolIE-ID ::= 45

id-NRPPa-PDU ProtocolIE-ID ::= 46

id-NumberOfBroadcastsRequested ProtocolIE-ID ::= 47

id-OldAMF ProtocolIE-ID ::= 48

id-OverloadStartNSSAIList ProtocolIE-ID ::= 49

id-PagingDRX ProtocolIE-ID ::= 50

id-PagingOrigin ProtocolIE-ID ::= 51

id-PagingPriority ProtocolIE-ID ::= 52

id-PDUSessionResourceAdmittedList ProtocolIE-ID ::= 53

id-PDUSessionResourceFailedToModifyListModRes ProtocolIE-ID ::= 54

id-PDUSessionResourceFailedToSetupListCxtRes ProtocolIE-ID ::= 55

id-PDUSessionResourceFailedToSetupListHOAck ProtocolIE-ID ::= 56

id-PDUSessionResourceFailedToSetupListPSReq ProtocolIE-ID ::= 57

id-PDUSessionResourceFailedToSetupListSURes ProtocolIE-ID ::= 58

id-PDUSessionResourceHandoverList ProtocolIE-ID ::= 59

id-PDUSessionResourceListCxtRelCpl ProtocolIE-ID ::= 60

id-PDUSessionResourceListHORqd ProtocolIE-ID ::= 61

id-PDUSessionResourceModifyListModCfm ProtocolIE-ID ::= 62

id-PDUSessionResourceModifyListModInd ProtocolIE-ID ::= 63

id-PDUSessionResourceModifyListModReq ProtocolIE-ID ::= 64

id-PDUSessionResourceModifyListModRes ProtocolIE-ID ::= 65

id-PDUSessionResourceNotifyList ProtocolIE-ID ::= 66

id-PDUSessionResourceReleasedListNot ProtocolIE-ID ::= 67

id-PDUSessionResourceReleasedListPSAck ProtocolIE-ID ::= 68

id-PDUSessionResourceReleasedListPSFail ProtocolIE-ID ::= 69

id-PDUSessionResourceReleasedListRelRes ProtocolIE-ID ::= 70

id-PDUSessionResourceSetupListCxtReq ProtocolIE-ID ::= 71

id-PDUSessionResourceSetupListCxtRes ProtocolIE-ID ::= 72

id-PDUSessionResourceSetupListHOReq ProtocolIE-ID ::= 73

id-PDUSessionResourceSetupListSUReq ProtocolIE-ID ::= 74

id-PDUSessionResourceSetupListSURes ProtocolIE-ID ::= 75

id-PDUSessionResourceToBeSwitchedDLList ProtocolIE-ID ::= 76

id-PDUSessionResourceSwitchedList ProtocolIE-ID ::= 77

id-PDUSessionResourceToReleaseListHOCmd ProtocolIE-ID ::= 78

id-PDUSessionResourceToReleaseListRelCmd ProtocolIE-ID ::= 79

id-PLMNSupportList ProtocolIE-ID ::= 80

id-PWSFailedCellIDList ProtocolIE-ID ::= 81

id-RANNodeName ProtocolIE-ID ::= 82

id-RANPagingPriority ProtocolIE-ID ::= 83

id-RANStatusTransfer-TransparentContainer ProtocolIE-ID ::= 84

id-RAN-UE-NGAP-ID ProtocolIE-ID ::= 85

id-RelativeAMFCapacity ProtocolIE-ID ::= 86

id-RepetitionPeriod ProtocolIE-ID ::= 87

id-ResetType ProtocolIE-ID ::= 88

id-RoutingID ProtocolIE-ID ::= 89

id-RRCEstablishmentCause ProtocolIE-ID ::= 90

id-RRCInactiveTransitionReportRequest ProtocolIE-ID ::= 91

id-RRCState ProtocolIE-ID ::= 92

id-SecurityContext ProtocolIE-ID ::= 93

id-SecurityKey ProtocolIE-ID ::= 94

id-SerialNumber ProtocolIE-ID ::= 95

id-ServedGUAMIList ProtocolIE-ID ::= 96

id-SliceSupportList ProtocolIE-ID ::= 97

id-SONConfigurationTransferDL ProtocolIE-ID ::= 98

id-SONConfigurationTransferUL ProtocolIE-ID ::= 99

id-SourceAMF-UE-NGAP-ID ProtocolIE-ID ::= 100

id-SourceToTarget-TransparentContainer ProtocolIE-ID ::= 101

id-SupportedTAList ProtocolIE-ID ::= 102

id-TAIListForPaging ProtocolIE-ID ::= 103

id-TAIListForRestart ProtocolIE-ID ::= 104

id-TargetID ProtocolIE-ID ::= 105

id-TargetToSource-TransparentContainer ProtocolIE-ID ::= 106

id-TimeToWait ProtocolIE-ID ::= 107

id-TraceActivation ProtocolIE-ID ::= 108

id-TraceCollectionEntityIPAddress ProtocolIE-ID ::= 109

id-UEAggregateMaximumBitRate ProtocolIE-ID ::= 110

id-UE-associatedLogicalNG-connectionList ProtocolIE-ID ::= 111

id-UEContextRequest ProtocolIE-ID ::= 112

id-UE-NGAP-IDs ProtocolIE-ID ::= 114

id-UEPagingIdentity ProtocolIE-ID ::= 115

id-UEPresenceInAreaOfInterestList ProtocolIE-ID ::= 116

id-UERadioCapability ProtocolIE-ID ::= 117

id-UERadioCapabilityForPaging ProtocolIE-ID ::= 118

id-UESecurityCapabilities ProtocolIE-ID ::= 119

id-UnavailableGUAMIList ProtocolIE-ID ::= 120

id-UserLocationInformation ProtocolIE-ID ::= 121

id-WarningAreaList ProtocolIE-ID ::= 122

id-WarningMessageContents ProtocolIE-ID ::= 123

id-WarningSecurityInfo ProtocolIE-ID ::= 124

id-WarningType ProtocolIE-ID ::= 125

id-AdditionalUL-NGU-UP-TNLInformation ProtocolIE-ID ::= 126

id-DataForwardingNotPossible ProtocolIE-ID ::= 127

id-DL-NGU-UP-TNLInformation ProtocolIE-ID ::= 128

id-NetworkInstance ProtocolIE-ID ::= 129

id-PDUSessionAggregateMaximumBitRate ProtocolIE-ID ::= 130

id-PDUSessionResourceFailedToModifyListModCfm ProtocolIE-ID ::= 131

id-PDUSessionResourceFailedToSetupListCxtFail ProtocolIE-ID ::= 132

id-PDUSessionResourceListCxtRelReq ProtocolIE-ID ::= 133

id-PDUSessionType ProtocolIE-ID ::= 134

id-QosFlowAddOrModifyRequestList ProtocolIE-ID ::= 135

id-QosFlowSetupRequestList ProtocolIE-ID ::= 136

id-QosFlowToReleaseList ProtocolIE-ID ::= 137

id-SecurityIndication ProtocolIE-ID ::= 138

id-UL-NGU-UP-TNLInformation ProtocolIE-ID ::= 139

id-UL-NGU-UP-TNLModifyList ProtocolIE-ID ::= 140

id-WarningAreaCoordinates ProtocolIE-ID ::= 141

id-PDUSessionResourceSecondaryRATUsageList ProtocolIE-ID ::= 142

id-HandoverFlag ProtocolIE-ID ::= 143

id-SecondaryRATUsageInformation ProtocolIE-ID ::= 144

id-PDUSessionResourceReleaseResponseTransfer ProtocolIE-ID ::= 145

id-RedirectionVoiceFallback ProtocolIE-ID ::= 146

id-UERetentionInformation ProtocolIE-ID ::= 147

id-S-NSSAI ProtocolIE-ID ::= 148

id-PSCellInformation ProtocolIE-ID ::= 149

id-LastEUTRAN-PLMNIdentity ProtocolIE-ID ::= 150

id-MaximumIntegrityProtectedDataRate-DL ProtocolIE-ID ::= 151

id-AdditionalDLForwardingUPTNLInformation ProtocolIE-ID ::= 152

id-AdditionalDLUPTNLInformationForHOList ProtocolIE-ID ::= 153

id-AdditionalNGU-UP-TNLInformation ProtocolIE-ID ::= 154

id-AdditionalDLQosFlowPerTNLInformation ProtocolIE-ID ::= 155

id-SecurityResult ProtocolIE-ID ::= 156

id-ENDC-SONConfigurationTransferDL ProtocolIE-ID ::= 157

id-ENDC-SONConfigurationTransferUL ProtocolIE-ID ::= 158

id-OldAssociatedQosFlowList-ULendmarkerexpected ProtocolIE-ID ::= 159

id-CNTypeRestrictionsForEquivalent ProtocolIE-ID ::= 160

id-CNTypeRestrictionsForServing ProtocolIE-ID ::= 161

id-NewGUAMI ProtocolIE-ID ::= 162

id-ULForwarding ProtocolIE-ID ::= 163

id-ULForwardingUP-TNLInformation ProtocolIE-ID ::= 164

id-CNAssistedRANTuning ProtocolIE-ID ::= 165

id-CommonNetworkInstance ProtocolIE-ID ::= 166

id-NGRAN-TNLAssociationToRemoveList ProtocolIE-ID ::= 167

id-TNLAssociationTransportLayerAddressNGRAN ProtocolIE-ID ::= 168

id-EndpointIPAddressAndPort ProtocolIE-ID ::= 169

id-LocationReportingAdditionalInfo ProtocolIE-ID ::= 170

id-SourceToTarget-AMFInformationReroute ProtocolIE-ID ::= 171

id-AdditionalULForwardingUPTNLInformation ProtocolIE-ID ::= 172

id-SCTP-TLAs ProtocolIE-ID ::= 173

id-DataForwardingResponseERABList ProtocolIE-ID ::= 174

id-RIMInformationTransfer ProtocolIE-ID ::= 175

id-GUAMIType ProtocolIE-ID ::= 176

id-SRVCCOperationPossible ProtocolIE-ID ::= 177

id-TargetRNC-ID ProtocolIE-ID ::= 178

id-RAT-Information ProtocolIE-ID ::= 179

id-ExtendedRATRestrictionInformation ProtocolIE-ID ::= 180

id-QosMonitoringRequest ProtocolIE-ID ::= 181

id-SgNB-UE-X2AP-ID ProtocolIE-ID ::= 182

id-IntersystemSONConfigurationTransferDL ProtocolIE-ID ::= 999 -- to be assigned by MCC

id-IntersystemSONConfigurationTransferUL ProtocolIE-ID ::= 998 -- to be assigned by MCC

id-SONInformationReport ProtocolIE-ID ::= 997 -- to be assigned by MCC

id-UEHistoryInformationFromTheUE ProtocolIE-ID ::= 997 -- to be assigned by MCC

END

-- ASN1STOP

9.4.8 Container Definitions

-- ASN1START

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Container definitions

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

NGAP-Containers {

itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)

ngran-Access (22) modules (3) ngap (1) version1 (1) ngap-Containers (5) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- IE parameter types from other modules.

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

IMPORTS

Criticality,

Presence,

PrivateIE-ID,

ProtocolExtensionID,

ProtocolIE-ID

FROM NGAP-CommonDataTypes

maxPrivateIEs,

maxProtocolExtensions,

maxProtocolIEs

FROM NGAP-Constants;

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Class Definition for Protocol IEs

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

NGAP-PROTOCOL-IES ::= CLASS {

&id ProtocolIE-ID UNIQUE,

&criticality Criticality,

&Value,

&presence Presence

}

WITH SYNTAX {

ID &id

CRITICALITY &criticality

TYPE &Value

PRESENCE &presence

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Class Definition for Protocol IEs

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

NGAP-PROTOCOL-IES-PAIR ::= CLASS {

&id ProtocolIE-ID UNIQUE,

&firstCriticality Criticality,

&FirstValue,

&secondCriticality Criticality,

&SecondValue,

&presence Presence

}

WITH SYNTAX {

ID &id

FIRST CRITICALITY &firstCriticality

FIRST TYPE &FirstValue

SECOND CRITICALITY &secondCriticality

SECOND TYPE &SecondValue

PRESENCE &presence

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Class Definition for Protocol Extensions

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

NGAP-PROTOCOL-EXTENSION ::= CLASS {

&id ProtocolExtensionID UNIQUE,

&criticality Criticality,

&Extension,

&presence Presence

}

WITH SYNTAX {

ID &id

CRITICALITY &criticality

EXTENSION &Extension

PRESENCE &presence

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Class Definition for Private IEs

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

NGAP-PRIVATE-IES ::= CLASS {

&id PrivateIE-ID,

&criticality Criticality,

&Value,

&presence Presence

}

WITH SYNTAX {

ID &id

CRITICALITY &criticality

TYPE &Value

PRESENCE &presence

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Container for Protocol IEs

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

ProtocolIE-Container {NGAP-PROTOCOL-IES : IEsSetParam} ::=

SEQUENCE (SIZE (0..maxProtocolIEs)) OF

ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-SingleContainer {NGAP-PROTOCOL-IES : IEsSetParam} ::=

ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-Field {NGAP-PROTOCOL-IES : IEsSetParam} ::= SEQUENCE {

id NGAP-PROTOCOL-IES.&id ({IEsSetParam}),

criticality NGAP-PROTOCOL-IES.&criticality ({IEsSetParam}{@id}),

value NGAP-PROTOCOL-IES.&Value ({IEsSetParam}{@id})

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Container for Protocol IE Pairs

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

ProtocolIE-ContainerPair {NGAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=

SEQUENCE (SIZE (0..maxProtocolIEs)) OF

ProtocolIE-FieldPair {{IEsSetParam}}

ProtocolIE-FieldPair {NGAP-PROTOCOL-IES-PAIR : IEsSetParam} ::= SEQUENCE {

id NGAP-PROTOCOL-IES-PAIR.&id ({IEsSetParam}),

firstCriticality NGAP-PROTOCOL-IES-PAIR.&firstCriticality ({IEsSetParam}{@id}),

firstValue NGAP-PROTOCOL-IES-PAIR.&FirstValue ({IEsSetParam}{@id}),

secondCriticality NGAP-PROTOCOL-IES-PAIR.&secondCriticality ({IEsSetParam}{@id}),

secondValue NGAP-PROTOCOL-IES-PAIR.&SecondValue ({IEsSetParam}{@id})

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Container Lists for Protocol IE Containers

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

ProtocolIE-ContainerList {INTEGER : lowerBound, INTEGER : upperBound, NGAP-PROTOCOL-IES : IEsSetParam} ::=

SEQUENCE (SIZE (lowerBound..upperBound)) OF

ProtocolIE-SingleContainer {{IEsSetParam}}

ProtocolIE-ContainerPairList {INTEGER : lowerBound, INTEGER : upperBound, NGAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=

SEQUENCE (SIZE (lowerBound..upperBound)) OF

ProtocolIE-ContainerPair {{IEsSetParam}}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Container for Protocol Extensions

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

ProtocolExtensionContainer {NGAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::=

SEQUENCE (SIZE (1..maxProtocolExtensions)) OF

ProtocolExtensionField {{ExtensionSetParam}}

ProtocolExtensionField {NGAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::= SEQUENCE {

id NGAP-PROTOCOL-EXTENSION.&id ({ExtensionSetParam}),

criticality NGAP-PROTOCOL-EXTENSION.&criticality ({ExtensionSetParam}{@id}),

extensionValue NGAP-PROTOCOL-EXTENSION.&Extension ({ExtensionSetParam}{@id})

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Container for Private IEs

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

PrivateIE-Container {NGAP-PRIVATE-IES : IEsSetParam } ::=

SEQUENCE (SIZE (1..maxPrivateIEs)) OF

PrivateIE-Field {{IEsSetParam}}

PrivateIE-Field {NGAP-PRIVATE-IES : IEsSetParam} ::= SEQUENCE {

id NGAP-PRIVATE-IES.&id ({IEsSetParam}),

criticality NGAP-PRIVATE-IES.&criticality ({IEsSetParam}{@id}),

value NGAP-PRIVATE-IES.&Value ({IEsSetParam}{@id})

}

END

-- ASN1STOP