**3GPP TSG-RAN3 #116-e R3-223323**

9th May – 29th May 2022

Online

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **36.413** | **CR** | 1879 | **rev** | **-** | **Current version:** | **16.9.0** |  |
|  | | | | | | | | |
| *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 |  |

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|  | | | | | | | | | | |
| ***Title:*** | Dynamic ACL over S1 CR 36.413 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson, Deutsche Telekom, Huawei | | | | | | | | | |
| ***Source to TSG:*** | R3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_newRAT-Core, TEI16 | | | | |  | ***Date:*** | | | 2022-05-09 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The direct data forwarding path availability solution for EN-DC to SA handover were agreed at previous meetings.  The ACL function should also be enhanced acoordingly to be workable if direct data forwarding is performed from source SN to targe node in EN-DC to SA handover case. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | The source SN’s IP address is transferred to the target node in source to target transparent container during S1 handover.  Impact Analysis:  Impact assessment towards the previous version of the specification (same release):  This CR has limited impact under funtional point of view. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | ACL function is not workable if direct data forwarding is performed from source SN to targe node in EN-DC to SA handover case. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 8.4.2, 9.2.1.7, 9.3.4 and 9.3.6 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS/TR 38.413 CR 214391  TS/TR 38.473 CR 214393  TS/TR 37.473 CR 214395  TS/TR 36.413 CR 215232  TS/TR 38.423 CR 215236  TS/TR 36.423 CR 215234 | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**<<<<<< 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 eNB for the handover of a UE.

#### 8.4.2.2 Successful Operation



Figure 8.4.2.2-1: Handover resource allocation: successful operation

The MME initiates the procedure by sending the HANDOVER REQUEST message to the target eNB. The HANDOVER REQUEST message may contain the *Handover Restriction List* IE, which contains roaming or access restrictions.

If the *Handover Restriction List* IE is contained in the HANDOVER REQUEST message, the target eNB shall store this information in the UE context. This information shall however not be considered whenever one of the handed over E-RABs has a particular ARP value (TS 23.401 [11]).

The target eNB shall use the information in *Handover Restriction List* IE if present in the HANDOVER REQUEST message to

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

- select a proper SCG during dual connectivity operation.

If the *Handover Restriction List* IE is not contained in the HANDOVER REQUEST message, the target eNB shall consider that no roaming and no access restriction apply to the UE.

Upon reception of the HANDOVER REQUEST message the eNB shall store the received *UE Security Capabilities* IE in the UE context and use it to prepare the configuration of the AS security relation with the UE.

If the *SRVCC Operation Possible* IE is included in the HANDOVER REQUEST message, the target eNB shall store the content of the received *SRVCC Operation Possible* IE in the UE context and, if supported, use it as defined in TS 23.216 [9].

Upon reception of the HANDOVER REQUEST message the eNB shall store the received *Security Context* IE in the UE context and the eNB shall use it to derive the security configuration as specified in TS 33.401 [15].

If the *Trace Activation* IE is included in the HANDOVER REQUEST message, the target eNB shall if supported, initiate the requested trace function as described in TS 32.422 [10]. In particular, the eNB shall, if supported:

- if the *Trace Activation* IE does not include the *MDT Configuration* IE, initiate the requested trace session as described in TS 32.422 [10];

- if the *Trace Activation* IE includes the *MDT Activation* IE, within the *MDT Configuration* IE, set to “Immediate MDT and Trace”, initiate the requested trace session and MDT session as described in TS 32.422 [10];

- if the *Trace Activation* IE includes the *MDT Activation* IE, within the *MDT Configuration* IE, set to “Immediate MDT Only”, “Logged MDT only” or “Logged MBSFN MDT”, initiate the requested MDT session as described in TS 32.422 [10] and the target eNB shall ignore *Interfaces To Trace* IE, and *Trace Depth* IE.

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

- if the *Trace Activation* IE includes the *Signalling based MDT PLMN List* IE, within the *MDT Configuration* IE, the eNB may use it to propagate the MDT Configuration as described in TS 37.320 [31].

- if the *Trace Activation* IE includes the *MBSFN-ResultToLog* IE, within the *MDT Configuration* IE, take it into account for MDT Configuration as described in TS 37.320 [31].

- if the *Trace Activation* IE includes the *MBSFN-AreaId* IE in the *MBSFN-ResultToLog* IE, within the *MDT Configuration* IE, take it into account for MDT Configuration as described in TS 37.320 [31].

- if the *Trace Activation* IE includes the *UE Application layer measurement configuration* IE, initiate the requested trace session and QoE Measurement Collection function as described in TS 36.300 [14].

- if the *Trace Activation* IE includes the *Bluetooth Measurement Configuration* IE, within the *MDT Configuration* IE, take it into account for MDT Configuration as described in TS 37.320 [31].

- if the *Trace Activation* IE includes the *WLAN Measurement Configuration* IE, within the *MDT Configuration* IE, take it into account for MDT Configuration as described in TS 37.320 [31].

- if the *Trace Activation* IE includes the *MDT Configuration NR* IE, store and forward the *MDT Configuration NR* IE to the SgNB, if the eNB has configured EN-DC for the UE.

If the *CSG Id* IE is received in the HANDOVER REQUEST message, the eNB shall compare the received value with the CSG Id broadcast by the target cell.

If the *CSG Membership Status* IE is received in the HANDOVER REQUEST message and the *CSG Membership Status* is set to “member”, the eNB may provide the QoS to the UE as for member provided that the CSG Id received in the HANDOVER REQUEST messages corresponds to the CSG Id broadcast by the target cell.

If the *CSG Membership Status* IE and the *CSG Id* IE are received in the HANDOVER REQUEST message and the CSG Id does not correspond to the CSG Id broadcast by the target cell, the eNB may provide the QoS to the UE as for a non member and shall send back in the HANDOVER REQUEST ACKNOWLEDGE message the actual CSG Id broadcast by the target cell.

If the target cell is CSG cell or hybrid cell, the target eNB shall include the *CSG ID* IE in the HANDOVER REQUEST ACKNOWLEDGE message.

If the target eNB receives the *CSG Id* IE and the *CSG Membership Status* IE is set to “non member” in the HANDOVER REQUEST message and the target cell is a closed cell and at least one of the E-RABs has a particular ARP value (see TS 23.401 [11]), the eNB shall send back the HANDOVER REQUEST ACKNOWLEDGE message to the MME accepting those E-RABs and failing the other E-RABs.

If the *Subscriber Profile ID* *for RAT/Frequency priority* IE is contained in the *Source eNB to Target eNB Transparent Container* IE, the target eNB shall store the content of the received *Subscriber Profile ID for RAT/Frequency priority* IE in the UE context and use it as defined in TS 36.300 [14].

If the *Additional RRM Policy Index* IE is contained in the *Source eNB to Target eNB Transparent Container* IE, the target eNB shall, if supported, store it and use it as defined in TS 36.300 [14].

Upon reception of the *UE History Information* IE, which is included within the *Source eNB to Target eNB Transparent Container* IE in the HANDOVER REQUEST message, the target eNB 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 reception of the *UE History Information from the UE* IE, which is included within the *Source eNB to Target eNB Transparent Container* IE in the HANDOVER REQUEST message, the target eNB shall, if supported, store the collected information, to be used for future handover preparations.

If the *Mobility Information* IE is included within the *Source eNB to Target eNB Transparent Container* IE in the HANDOVER REQUEST message, the target eNB shall, if supported, store this information and use it as defined in TS 36.300 [14].

If the *Emergency Indicator* IE is included within the *Source eNB to Target eNB Transparent Container* IE in the HANDOVER REQUEST message, the target eNB shall, if supported, use it to allocate radio bearer resources as specified in TS 23.502 [51].

If the *Expected UE Behaviour* IE is included in the HANDOVER REQUEST message, the eNB shall, if supported, store this information and may use it to determine the RRC connection time.

If the *Bearer Type* IE is included in the HANDOVER REQUEST message and is set to "non IP", then the eNB shall not perform IP header compression for the concerned E-RAB.

If the *Ethernet Type* IE is included in the HANDOVER REQUEST message and is set to "True", then the eNB shall, if supported, take this into account to perform header compression appropriately for the concerned E-RAB.

In case of inter-system handover from gNB with direct forwarding, if the target eNB receives the *UE Context Reference at Source* IE in the *Source eNB to Target eNB Transparent Container* IE, it may use it for internal forwarding as specified in TS 37.340 [47].

After all necessary resources for the admitted E-RABs have been allocated, the target eNB shall generate the HANDOVER REQUEST ACKNOWLEDGE message. The target eNB shall include in the *E-RABs Admitted List* IE the E-RABs for which resources have been prepared at the target cell. The E-RABs that have not been admitted in the target cell, if any, shall be included in the *E-RABs Failed to Setup List* IE.

If the HANDOVER REQUEST message contains the *Data Forwarding Not Possible* IE associated with a given E-RAB within the *E-RABs To Be Setup List* IE set to “Data forwarding not possible”, then the target eNB may decide not to include the *DL Transport Layer Address* IE and the *DL GTP-TEID* IE and for intra LTE handover the *UL Transport Layer Address* IE and the *UL GTP-TEID* IE within the *E-RABs Admitted List* IE of the HANDOVER REQUEST ACKNOWLEDGE message for that E-RAB.

For each bearer that target eNB has decided to admit and for which *DL forwarding* IE is set to “DL forwarding proposed”, the target eNB may include the *DL GTP-TEID* IE and the *DL Transport Layer Address* IE within the *E-RABs Admitted List* IE of the HANDOVER REQUEST ACKNOWLEDGE message indicating that it accepts the proposed forwarding of downlink data for this bearer.

If the HANDOVER REQUEST ACKNOWLEDGE message contains the *UL GTP-TEID* IE and the *UL Transport Layer Address* IE for a given bearer in the *E-RABs Admitted List* IE, then it means the target eNB has requested the forwarding of uplink data for this given bearer.

If the *Request Type* IE is included in the HANDOVER REQUEST message, then the target eNB should perform the requested location reporting functionality for the UE as described in subclause 8.11.

If the *UE Security Capabilities* IE included in the HANDOVER REQUEST message only contains the EIA0 algorithm as defined in TS 33.401 [15] and if this EIA0 algorithm is defined in the configured list of allowed integrity protection algorithms in the eNB (TS 33.401 [15]), the eNB shall take it into use and ignore the keys received in the *Security Context* IE.

The *GUMMEI* IE shall only be contained in the HANDOVER REQUEST message according to subclauses 4.6.2 and 4.7.6.6 of TS 36.300 [14]. If the *GUMMEI* IE is present, the target eNB shall store this information in the UE context and use it for subsequent X2 handovers.

The *MME UE S1AP ID 2* IE shall only be contained in the HANDOVER REQUEST message according to subclause 4.6.2 of TS 36.300 [14].If the *MME UE S1AP ID 2* IE is present, the target eNB shall store this information in the UE context and use it for subsequent X2 handovers.

If the *Management Based MDT Allowed* IE only or the *Management Based MDT Allowed* IE and the *Management Based MDT PLMN List* IE is contained in the HANDOVER REQUEST message, the target eNB shall, if supported, store the received information in the UE context, and use this information to allow subsequent selections of the UE for management based MDT defined in TS 32.422 [10].

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

If the HANDOVER REQUEST contains a *Target Cell ID* IE, as part of the *Source eNB to Target eNB Transparent Container* IE, for a cell which is no longer active, the eNB may respond with an HANDOVER REQUEST ACKNOWLEDGE in case the PCI of the deactivated cell is in use by another active cell.

If the *ProSe Authorized* IE is contained in the HANDOVER REQUEST message and it contains one or more IEs set to “authorized”, the eNB shall, if supported, consider that the UE is authorized for the relevant ProSe service(s).

If the *UE User Plane CIoT Support Indicator* IE is included in the HANDOVER REQUEST message and is set to "supported", the eNB shall, if supported, consider that User Plane CIoT EPS Optimisation as specified in TS 23.401 [11] is supported for the UE.

If the *CE-mode-B Support Indicator* IE is included in the HANDOVER REQUEST ACKNOWLEDGE message and set to "supported", the MME shall, if supported, take this information into account when setting NAS timer values for the UE as specified in TS 24.301[24].

If the *V2X Services Authorized* IE is contained in the HANDOVER REQUEST message and it contains one or more IEs set to “authorized”, the eNB shall, if supported, consider that the UE is authorized for the relevant service(s).

If the *UE Sidelink Aggregate Maximum Bit Rate* IE is included in the HANDOVER REQUEST message, the eNB shall, if supported, use the received value for the concerned UE’s sidelink communication in network scheduled mode for V2X services.

If the *Enhanced Coverage Restricted* IE is included in the HANDOVER REQUEST message, the eNB shall store this information in the UE context and use it as defined in TS 23.401 [11].

If the *CE-Mode-B Restricted* IE is included in the HANDOVER REQUEST message and the *Enhanced Coverage Restricted* IE is not set to *restricted* and the Enhanced Coverage Restricted information stored in the UE context is not set to *restricted*, the eNB shall store this information in the UE context and use it as defined in TS 23.401 [11].

If the *NR UE Security Capabilities* IE is included in the HANDOVER REQUEST message, the eNB shall, if supported, store this information in the UE context and use it as defined in TS 33.401 [15].

If the *Aerial UE subscription information* IE is included in the HANDOVER REQUEST message, the eNB shall, if supported, store this information in the UE context and use it as defined in TS 36.300 [14].

If the *Pending Data Indication* IE is included in the HANDOVER REQUEST message, the eNB shall use it as defined in TS 23.401 [11].

If the *Subscription Based UE Differentiation Information* IE is included in the HANDOVER REQUEST message, the eNB shall, if supported, store this information in the UE context for further use according to TS 23.401 [11].

If the *Additional RRM Policy Index* IE is contained in the HANDOVER REQUEST message, the eNB shall, if supported, store it and use it as defined in TS 36.300 [14].

If the HANDOVER REQUEST message is received for an handover originating from a source NG-RAN node, the list of E-RABs contained in the source eNB to target eNB Transparent Container which are not included in the HANDOVER REQUEST message shall be considered as not to be handed over and ignored.

If the *IAB Authorized* IE is contained in the HANDOVER REQUEST message, the target eNB shall, if supported, consider that the handover is for an IAB-node.

If the *NR V2X Services Authorized* IE is contained in the HANDOVER REQUEST message and it contains one or more IEs set to “authorized”, the eNB shall, if supported, consider that the UE is authorized for the relevant service(s).

If the *NR UE Sidelink Aggregate Maximum Bit Rate* IE is included in the HANDOVER REQUEST message, the eNB shall, if supported, use the received value for the concerned UE’s sidelink communication in network scheduled mode for NR V2X services.

If the *PC5 QoS Parameters* IE is included in the HANDOVER REQUEST message, the eNB shall, if supported, use it for the concerned UE’s NR sidelink communication as specified in TS 23.285 [49].

If the *Inter-system measurement Configuration* IE is included within the *Source eNB to Target eNB Transparent Container* IE in the HANDOVER REQUEST message, the target eNB shall, if supported, use it as defined in TS 38.300 [45]. The *Inter System Measurement Configuration* IE shall contain at least one of the RSRP, RSRQ or SINR thresholds. If only one of the thresholds is present, the LTE eNB shall use the present threshold to compare against the measurement results received from the UE. If more than one thresholds are present, the received radio measurements must exceed all thresholds in order to satisfy the indicated radio conditions. The target eNB shall, if supported, report the measurement results to the source NR node by including the *Inter-System Handover Report* IE (defined in TS 38. 413 [44]) in the eNB CONFIGURATION TRANSFER message only if:

- there is either a single source NR related cell whose measurement results exceed the threshold(s) for the whole measurement duration, or a group of source NR associated cells which together provide such coverage; and

- the above is fulfilled for the whole measurement duration, in which case the *Early IRAT HO* IE contained in the *Inter-System Handover Report* IE (defined in TS 38. 413 [44]) shall be set to "false", or the above is fulfilled until the UE is handed over back to NR within the measurement duration, in which case the *Early IRAT HO* IE contained in the *Inter-System Handover Report* IE (defined in TS 38. 413 [44]) shall be set to "true".

The cells that exceed the threshold in the first UE measurement report are included in the Inter-system Handover Report.

If the *UE Radio Capability ID* IE is included in the HANDOVER REQUEST message, the eNB shall, if supported, use it as defined in TS 23.401 [11].

If the *DAPS Request Information* IE is included for an E-RAB in the *Source eNB to Target eNB Transparent Container* IE within the HANDOVER REQUEST message, the target eNB shall consider that the request concerns a DAPS Handover for that E-RAB, as described in TS 36.300 [14]. The target eNB shall include the *DAPS Response information List* IE in the *Target eNB to Source eNB Transparent Container* IE within the HANDOVER REQUEST ACKNOWLEDGE message, containing the *DAPS Response Information* IE for each E-RAB requested to be configured with DAPS Handover.

If the *IMS voice EPS fallback from 5G* IE is included in the *Source eNB to Target eNB Transparent Container* IE within the HANDOVER REQUEST message, the target eNB shall, if supported, store the information in the UE context and consider that the UE is handed over from NG-RAN to E-UTRAN due to an IMS voice fallback.

If for a given E-RAB the *Source Transport Layer Address* IE is included within the *Source eNB to Target eNB Transparent Container* IE in the HANDOVER REQUEST message, the target eNB shall, if supported, store this information and use it as part of its ACL functionality configuration actions for direct data forwarding, if such ACL functionality is deployed.

If for a given E-RAB the *Source Node Transport Layer Address* IE is included within the *Source eNB to Target eNB Transparent Container* IE in the HANDOVER REQUEST message, the target eNB shall, if supported, store this information and use it as part of its ACL functionality configuration actions for direct data forwarding, if such ACL functionality is deployed.

#### 8.4.2.3 Unsuccessful Operation



Figure 8.4.2.3-1: Handover resource allocation: unsuccessful operation

If the target eNB does not admit at least one non-GBR E-RAB, or a failure occurs during the Handover Preparation, it shall send the HANDOVER FAILURE message to the MME with an appropriate cause value.

If the target eNB does not receive the *CSG Membership Status* IE but does receive the *CSG Id* IE in the HANDOVER REQUEST message and the CSG Id does not correspond to the CSG Id of the target cell, the target eNB shall send the HANDOVER FAILURE message to the MME with an appropriate cause value.

If the target eNB receives a HANDOVER REQUEST message containing *RRC Container* IE that does not include required information as specified in TS 36.331 [16], the target eNB shall send the HANDOVER FAILURE message to the MME.

#### 8.4.2.4 Abnormal Conditions

If the target eNB receives a HANDOVER REQUEST message containing a *E-RAB Level QoS Parameters* IE which contains a *QCI* IE indicating a GBR bearer (as defined in TS 23.203 [13]), and which does not contain the *GBR QoS Information* IE, the target eNB shall not admit the corresponding E-RAB.

If the target eNB receives a HANDOVER REQUEST message containing several *E-RAB ID* IEs (in the *E-RABs To Be Setup List* IE) set to the same value, the target eNB shall not admit the corresponding E-RABs.

If the *Subscriber Profile ID* *for RAT/Frequency priority* IE is not contained in the *Source eNB to Target eNB Transparent Container* IE whereas available in the source eNB, the target eNB shall trigger a local error handling.

NOTE: It is assumed that the information needed to verify this condition is visible within the system, see subclause 4.1.

If the supported algorithms for encryption defined in the *Encryption Algorithms* IE in the *UE Security Capabilities* IE, plus the mandated support of EEA0 in all UEs (TS 33.401 [15]), do not match any allowed algorithms defined in the configured list of allowed encryption algorithms in the eNB (TS 33.401 [15]), the target eNB 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 algorithm in all UEs (TS 33.401 [15]), do not match any allowed algorithms defined in the configured list of allowed integrity protection algorithms in the eNB (TS 33.401 [15]), the target eNB shall reject the procedure using the HANDOVER FAILURE message.

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

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

**<<<<<< NEXT CHANGE >>>>>>**

#### 9.2.1.7 Source eNB to Target eNB Transparent Container

The *Source eNB to target eNB Transparent Container* IE is an information element that is produced by the source eNB and is transmitted to the target eNB. For inter-system handovers to E-UTRAN, the IE is transmitted from the external handover source to the target eNB.

This IE is transparent to the EPC.

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| IE/Group Name | | Presence | | Range | | IE type and reference | | Semantics description | | Criticality | | Assigned Criticality | |
| RRC Container | | M | |  | | OCTET STRING | | Includes the RRC Handover Preparation Information message as defined in subclause 10.2.2 of TS 36.331 [16]. | | - | |  | |
| **E-RABs Information List** | |  | | *0..1* | |  | |  | | - | |  | |
| **>E-RABs Information Item** | |  | | *1 .. <maxnoof E-RABs>* | |  | |  | | EACH | | ignore | |
| >>E-RAB ID | | M | |  | | 9.2.1.2 | |  | | - | |  | |
| >>DL Forwarding | | O | |  | | 9.2.3.14 | |  | | - | |  | |
| >>DAPS Request Information | | O | |  | | 9.2.1.155 | |  | | YES | | ignore | |
| >>Source Transport Layer Address | | O | |  | | 9.2.2.1 | | Identifies the TNL address used by the sending node for direct data forwarding  towards the target eNB | | YES | | ignore | |
| >>Source Node Transport Layer Address | | O | |  | | 9.2.2.1 | | Identifies the TNL address used by the source SN node for direct data forwarding  towards the target eNB | | YES | | ignore | |
| Target Cell ID | | M | |  | | E-UTRAN CGI  9.2.1.38 | |  | | - | |  | |
| Subscriber Profile IDfor RAT/Frequency priority | | O | |  | | 9.2.1.39 | |  | | - | |  | |
| UE History Information | | M | |  | | 9.2.1.42 | |  | | - | |  | |
| Mobility Information | | O | |  | | BIT STRING (SIZE (32)) | | Information related to the handover; the external handover source provides it in order to enable later analysis of the conditions that led to a wrong HO. | | YES | | ignore | |
| UE History Information from the UE | | O | |  | | OCTET STRING | | VisitedCellInfoList contained in the UEInformationResponse message (TS 36.331 [16]) | | YES | | ignore | |
| IMS voice EPS fallback from 5G | | O | |  | | ENUMERATED (true, …) | |  | | YES | | ignore | |
| Additional RRM Policy Index | | O | |  | | 9.2.1.39a | |  | | YES | | ignore | |
| UE Context Reference at Source | | O | |  | | 9.2.1.144 | |  | | YES | | ignore | |
| Inter-system measurement Configuration | | O | |  | | 9.2.1.151 | |  | | YES | | ignore | |
| Source Node ID | | O | |  | | 9.2.1.152 | |  | | YES | | ignore | |
| Emergency Indicator | | O | |  | | ENUMERATED (true, …) | | Indicates an emergency EPS voice fallback | | YES | | ignore | |

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| Range bound | Explanation |
| maxnoofE-RABs | Maximum no. of E-RABs for one UE. Value is 256. |

**<<<<<< NEXT CHANGE >>>>>>**

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### 9.3.4 Information Element Definitions

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-- Information Element Definitions

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S1AP-IEs {

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

eps-Access (21) modules (3) s1ap (1) version1 (1) s1ap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS

id-E-RABInformationListItem,

id-E-RABItem,

id-GUMMEIType,

id-Bearers-SubjectToStatusTransfer-Item,

id-Time-Synchronisation-Info,

id-x2TNLConfigurationInfo,

id-eNBX2ExtendedTransportLayerAddresses,

id-MDTConfiguration,

id-Time-UE-StayedInCell-EnhancedGranularity,

id-HO-Cause,

id-M3Configuration,

id-M4Configuration,

id-M5Configuration,

id-MDT-Location-Info,

id-SignallingBasedMDTPLMNList,

id-MobilityInformation,

id-ULCOUNTValueExtended,

id-DLCOUNTValueExtended,

id-ReceiveStatusOfULPDCPSDUsExtended,

id-eNBIndirectX2TransportLayerAddresses,

id-Muting-Availability-Indication,

id-Muting-Pattern-Information,

id-NRrestrictioninEPSasSecondaryRAT,

id-NRrestrictionin5GS,

id-Synchronisation-Information,

id-uE-HistoryInformationFromTheUE,

id-LoggedMBSFNMDT,

id-SON-Information-Report,

id-RecommendedCellItem,

id-RecommendedENBItem,

id-ProSeUEtoNetworkRelaying,

id-ULCOUNTValuePDCP-SNlength18,

id-DLCOUNTValuePDCP-SNlength18,

id-ReceiveStatusOfULPDCPSDUsPDCP-SNlength18,

id-M6Configuration,

id-M7Configuration,

id-RAT-Type,

id-extended-e-RAB-MaximumBitrateDL,

id-extended-e-RAB-MaximumBitrateUL,

id-extended-e-RAB-GuaranteedBitrateDL,

id-extended-e-RAB-GuaranteedBitrateUL,

id-extended-uEaggregateMaximumBitRateDL,

id-extended-uEaggregateMaximumBitRateUL,

id-SecondaryRATDataUsageReportItem,

id-E-RABUsageReportItem,

id-UEAppLayerMeasConfig,

id-serviceType,

id-UnlicensedSpectrumRestriction,

id-CNTypeRestrictions,

id-DownlinkPacketLossRate,

id-UplinkPacketLossRate,

id-BluetoothMeasurementConfiguration,

id-WLANMeasurementConfiguration,

id-LastNG-RANPLMNIdentity,

id-PSCellInformation,

id-IMSvoiceEPSfallbackfrom5G,

id-RequestTypeAdditionalInfo,

id-AdditionalRRMPriorityIndex,

id-ContextatSource,

id-IntersystemMeasurementConfiguration,

id-SourceNodeID,

id-NB-IoT-RLF-Report-Container,

id-MDTConfigurationNR,

id-DAPSRequestInfo,

id-DAPSResponseInfoList,

id-DAPSResponseInfoItem,

id-Bearers-SubjectToEarlyStatusTransfer-Item,

id-TraceCollectionEntityURI,

id-EmergencyIndicator,

id-SourceTransportLayerAddress,

id-SourceNodeTransportLayerAddress,

maxnoofCSGs,

maxnoofE-RABs,

maxnoofErrors,

maxnoofBPLMNs,

maxnoofPLMNsPerMME,

maxnoofTACs,

maxnoofEPLMNs,

maxnoofEPLMNsPlusOne,

maxnoofForbLACs,

maxnoofForbTACs,

maxnoofCellsinUEHistoryInfo,

maxnoofCellID,

maxnoofDCNs,

maxnoofEmergencyAreaID,

maxnoofTAIforWarning,

maxnoofCellinTAI,

maxnoofCellinEAI,

maxnoofeNBX2TLAs,

maxnoofeNBX2ExtTLAs,

maxnoofeNBX2GTPTLAs,

maxnoofRATs,

maxnoofGroupIDs,

maxnoofMMECs,

maxnoofTAforMDT,

maxnoofCellIDforMDT,

maxnoofMDTPLMNs,

maxnoofCellsforRestart,

maxnoofRestartTAIs,

maxnoofRestartEmergencyAreaIDs,

maxnoofMBSFNAreaMDT,

maxEARFCN,

maxnoofCellsineNB,

maxnoofRecommendedCells,

maxnoofRecommendedENBs,

maxnooftimeperiods,

maxnoofCellIDforQMC,

maxnoofTAforQMC,

maxnoofPLMNforQMC,

maxnoofBluetoothName,

maxnoofWLANName,

maxnoofConnectedengNBs,

maxnoofPC5QoSFlows,

maxnooffrequencies,

maxNARFCN,

maxRS-IndexCellQual

**<<<<<< NEXT CHANGE >>>>>>**

E-RABInformationList ::= SEQUENCE (SIZE (1.. maxnoofE-RABs)) OF ProtocolIE-SingleContainer { { E-RABInformationListIEs } }

E-RABInformationListIEs S1AP-PROTOCOL-IES ::= {

{ ID id-E-RABInformationListItem CRITICALITY ignore TYPE E-RABInformationListItem PRESENCE mandatory },

...

}

E-RABInformationListItem ::= SEQUENCE {

e-RAB-ID E-RAB-ID,

dL-Forwarding DL-Forwarding OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {E-RABInformationListItem-ExtIEs} } OPTIONAL,

...

}

E-RABInformationListItem-ExtIEs S1AP-PROTOCOL-EXTENSION ::= {

{ ID id-DAPSRequestInfo CRITICALITY ignore EXTENSION DAPSRequestInfo PRESENCE optional }|

{ ID id-SourceTransportLayerAddress CRITICALITY ignore EXTENSION TransportLayerAddress PRESENCE optional}|

{ ID id-SourceNodeTransportLayerAddress CRITICALITY ignore EXTENSION TransportLayerAddress PRESENCE optional},

...

}

**<<<<<< NEXT CHANGE >>>>>>**

### 9.3.6 Constant Definitions

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

--

-- Constant definitions

--

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

S1AP-Constants {

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

eps-Access (21) modules (3) s1ap (1) version1 (1) s1ap-Constants (4) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

--

-- IE parameter types from other modules.

--

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

IMPORTS

ProcedureCode,

ProtocolIE-ID

FROM S1AP-CommonDataTypes;

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

--

-- Elementary Procedures

--

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

id-HandoverPreparation ProcedureCode ::= 0

id-HandoverResourceAllocation ProcedureCode ::= 1

id-HandoverNotification ProcedureCode ::= 2

id-PathSwitchRequest ProcedureCode ::= 3

id-HandoverCancel ProcedureCode ::= 4

id-E-RABSetup ProcedureCode ::= 5

id-E-RABModify ProcedureCode ::= 6

id-E-RABRelease ProcedureCode ::= 7

id-E-RABReleaseIndication ProcedureCode ::= 8

id-InitialContextSetup ProcedureCode ::= 9

id-Paging ProcedureCode ::= 10

id-downlinkNASTransport ProcedureCode ::= 11

id-initialUEMessage ProcedureCode ::= 12

id-uplinkNASTransport ProcedureCode ::= 13

id-Reset ProcedureCode ::= 14

id-ErrorIndication ProcedureCode ::= 15

id-NASNonDeliveryIndication ProcedureCode ::= 16

id-S1Setup ProcedureCode ::= 17

id-UEContextReleaseRequest ProcedureCode ::= 18

id-DownlinkS1cdma2000tunnelling ProcedureCode ::= 19

id-UplinkS1cdma2000tunnelling ProcedureCode ::= 20

id-UEContextModification ProcedureCode ::= 21

id-UECapabilityInfoIndication ProcedureCode ::= 22

id-UEContextRelease ProcedureCode ::= 23

id-eNBStatusTransfer ProcedureCode ::= 24

id-MMEStatusTransfer ProcedureCode ::= 25

id-DeactivateTrace ProcedureCode ::= 26

id-TraceStart ProcedureCode ::= 27

id-TraceFailureIndication ProcedureCode ::= 28

id-ENBConfigurationUpdate ProcedureCode ::= 29

id-MMEConfigurationUpdate ProcedureCode ::= 30

id-LocationReportingControl ProcedureCode ::= 31

id-LocationReportingFailureIndication ProcedureCode ::= 32

id-LocationReport ProcedureCode ::= 33

id-OverloadStart ProcedureCode ::= 34

id-OverloadStop ProcedureCode ::= 35

id-WriteReplaceWarning ProcedureCode ::= 36

id-eNBDirectInformationTransfer ProcedureCode ::= 37

id-MMEDirectInformationTransfer ProcedureCode ::= 38

id-PrivateMessage ProcedureCode ::= 39

id-eNBConfigurationTransfer ProcedureCode ::= 40

id-MMEConfigurationTransfer ProcedureCode ::= 41

id-CellTrafficTrace ProcedureCode ::= 42

id-Kill ProcedureCode ::= 43

id-downlinkUEAssociatedLPPaTransport ProcedureCode ::= 44

id-uplinkUEAssociatedLPPaTransport ProcedureCode ::= 45

id-downlinkNonUEAssociatedLPPaTransport ProcedureCode ::= 46

id-uplinkNonUEAssociatedLPPaTransport ProcedureCode ::= 47

id-UERadioCapabilityMatch ProcedureCode ::= 48

id-PWSRestartIndication ProcedureCode ::= 49

id-E-RABModificationIndication ProcedureCode ::= 50

id-PWSFailureIndication ProcedureCode ::= 51

id-RerouteNASRequest ProcedureCode ::= 52

id-UEContextModificationIndication ProcedureCode ::= 53

id-ConnectionEstablishmentIndication ProcedureCode ::= 54

id-UEContextSuspend ProcedureCode ::= 55

id-UEContextResume ProcedureCode ::= 56

id-NASDeliveryIndication ProcedureCode ::= 57

id-RetrieveUEInformation ProcedureCode ::= 58

id-UEInformationTransfer ProcedureCode ::= 59

id-eNBCPRelocationIndication ProcedureCode ::= 60

id-MMECPRelocationIndication ProcedureCode ::= 61

id-SecondaryRATDataUsageReport ProcedureCode ::= 62

id-UERadioCapabilityIDMapping ProcedureCode ::= 63

id-HandoverSuccess ProcedureCode ::= 64

id-eNBEarlyStatusTransfer ProcedureCode ::= 65

id-MMEEarlyStatusTransfer ProcedureCode ::= 66

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

--

-- Extension constants

--

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

maxPrivateIEs INTEGER ::= 65535

maxProtocolExtensions INTEGER ::= 65535

maxProtocolIEs INTEGER ::= 65535

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

--

-- Lists

--

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

maxnoofCSGs INTEGER ::= 256

maxnoofE-RABs INTEGER ::= 256

maxnoofTAIs INTEGER ::= 256

maxnoofTACs INTEGER ::= 256

maxnoofErrors INTEGER ::= 256

maxnoofBPLMNs INTEGER ::= 6

maxnoofPLMNsPerMME INTEGER ::= 32

maxnoofEPLMNs INTEGER ::= 15

maxnoofEPLMNsPlusOne INTEGER ::= 16

maxnoofForbLACs INTEGER ::= 4096

maxnoofForbTACs INTEGER ::= 4096

maxnoofIndividualS1ConnectionsToReset INTEGER ::= 256

maxnoofCellsinUEHistoryInfo INTEGER ::= 16

maxnoofCellsineNB INTEGER ::= 256

maxnoofTAIforWarning INTEGER ::= 65535

maxnoofCellID INTEGER ::= 65535

maxnoofDCNs INTEGER ::= 32

maxnoofEmergencyAreaID INTEGER ::= 65535

maxnoofCellinTAI INTEGER ::= 65535

maxnoofCellinEAI INTEGER ::= 65535

maxnoofeNBX2TLAs INTEGER ::= 2

maxnoofeNBX2ExtTLAs INTEGER ::= 16

maxnoofeNBX2GTPTLAs INTEGER ::= 16

maxnoofRATs INTEGER ::= 8

maxnoofGroupIDs INTEGER ::= 65535

maxnoofMMECs INTEGER ::= 256

maxnoofCellIDforMDT INTEGER ::= 32

maxnoofTAforMDT INTEGER ::= 8

maxnoofMDTPLMNs INTEGER ::= 16

maxnoofCellsforRestart INTEGER ::= 256

maxnoofRestartTAIs INTEGER ::= 2048

maxnoofRestartEmergencyAreaIDs INTEGER ::= 256

maxEARFCN INTEGER ::= 262143

maxnoofMBSFNAreaMDT INTEGER ::= 8

maxnoofRecommendedCells INTEGER ::= 16

maxnoofRecommendedENBs INTEGER ::= 16

maxnooftimeperiods INTEGER ::= 2

maxnoofCellIDforQMC INTEGER ::= 32

maxnoofTAforQMC INTEGER ::= 8

maxnoofPLMNforQMC INTEGER ::= 16

maxnoofBluetoothName INTEGER ::= 4

maxnoofWLANName INTEGER ::= 4

maxnoofConnectedengNBs INTEGER ::= 256

maxnoofPC5QoSFlows INTEGER ::= 2048

maxnooffrequencies INTEGER ::= 64

maxNARFCN INTEGER ::= 3279165

maxRS-IndexCellQual INTEGER ::= 16

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

--

-- IEs

--

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

id-MME-UE-S1AP-ID ProtocolIE-ID ::= 0

id-HandoverType ProtocolIE-ID ::= 1

id-Cause ProtocolIE-ID ::= 2

id-SourceID ProtocolIE-ID ::= 3

id-TargetID ProtocolIE-ID ::= 4

id-eNB-UE-S1AP-ID ProtocolIE-ID ::= 8

id-E-RABSubjecttoDataForwardingList ProtocolIE-ID ::= 12

id-E-RABtoReleaseListHOCmd ProtocolIE-ID ::= 13

id-E-RABDataForwardingItem ProtocolIE-ID ::= 14

id-E-RABReleaseItemBearerRelComp ProtocolIE-ID ::= 15

id-E-RABToBeSetupListBearerSUReq ProtocolIE-ID ::= 16

id-E-RABToBeSetupItemBearerSUReq ProtocolIE-ID ::= 17

id-E-RABAdmittedList ProtocolIE-ID ::= 18

id-E-RABFailedToSetupListHOReqAck ProtocolIE-ID ::= 19

id-E-RABAdmittedItem ProtocolIE-ID ::= 20

id-E-RABFailedtoSetupItemHOReqAck ProtocolIE-ID ::= 21

id-E-RABToBeSwitchedDLList ProtocolIE-ID ::= 22

id-E-RABToBeSwitchedDLItem ProtocolIE-ID ::= 23

id-E-RABToBeSetupListCtxtSUReq ProtocolIE-ID ::= 24

id-TraceActivation ProtocolIE-ID ::= 25

id-NAS-PDU ProtocolIE-ID ::= 26

id-E-RABToBeSetupItemHOReq ProtocolIE-ID ::= 27

id-E-RABSetupListBearerSURes ProtocolIE-ID ::= 28

id-E-RABFailedToSetupListBearerSURes ProtocolIE-ID ::= 29

id-E-RABToBeModifiedListBearerModReq ProtocolIE-ID ::= 30

id-E-RABModifyListBearerModRes ProtocolIE-ID ::= 31

id-E-RABFailedToModifyList ProtocolIE-ID ::= 32

id-E-RABToBeReleasedList ProtocolIE-ID ::= 33

id-E-RABFailedToReleaseList ProtocolIE-ID ::= 34

id-E-RABItem ProtocolIE-ID ::= 35

id-E-RABToBeModifiedItemBearerModReq ProtocolIE-ID ::= 36

id-E-RABModifyItemBearerModRes ProtocolIE-ID ::= 37

id-E-RABReleaseItem ProtocolIE-ID ::= 38

id-E-RABSetupItemBearerSURes ProtocolIE-ID ::= 39

id-SecurityContext ProtocolIE-ID ::= 40

id-HandoverRestrictionList ProtocolIE-ID ::= 41

id-UEPagingID ProtocolIE-ID ::= 43

id-pagingDRX ProtocolIE-ID ::= 44

id-TAIList ProtocolIE-ID ::= 46

id-TAIItem ProtocolIE-ID ::= 47

id-E-RABFailedToSetupListCtxtSURes ProtocolIE-ID ::= 48

id-E-RABReleaseItemHOCmd ProtocolIE-ID ::= 49

id-E-RABSetupItemCtxtSURes ProtocolIE-ID ::= 50

id-E-RABSetupListCtxtSURes ProtocolIE-ID ::= 51

id-E-RABToBeSetupItemCtxtSUReq ProtocolIE-ID ::= 52

id-E-RABToBeSetupListHOReq ProtocolIE-ID ::= 53

id-GERANtoLTEHOInformationRes ProtocolIE-ID ::= 55

id-UTRANtoLTEHOInformationRes ProtocolIE-ID ::= 57

id-CriticalityDiagnostics ProtocolIE-ID ::= 58

id-Global-ENB-ID ProtocolIE-ID ::= 59

id-eNBname ProtocolIE-ID ::= 60

id-MMEname ProtocolIE-ID ::= 61

id-ServedPLMNs ProtocolIE-ID ::= 63

id-SupportedTAs ProtocolIE-ID ::= 64

id-TimeToWait ProtocolIE-ID ::= 65

id-uEaggregateMaximumBitrate ProtocolIE-ID ::= 66

id-TAI ProtocolIE-ID ::= 67

id-E-RABReleaseListBearerRelComp ProtocolIE-ID ::= 69

id-cdma2000PDU ProtocolIE-ID ::= 70

id-cdma2000RATType ProtocolIE-ID ::= 71

id-cdma2000SectorID ProtocolIE-ID ::= 72

id-SecurityKey ProtocolIE-ID ::= 73

id-UERadioCapability ProtocolIE-ID ::= 74

id-GUMMEI-ID ProtocolIE-ID ::= 75

id-E-RABInformationListItem ProtocolIE-ID ::= 78

id-Direct-Forwarding-Path-Availability ProtocolIE-ID ::= 79

id-UEIdentityIndexValue ProtocolIE-ID ::= 80

id-cdma2000HOStatus ProtocolIE-ID ::= 83

id-cdma2000HORequiredIndication ProtocolIE-ID ::= 84

id-E-UTRAN-Trace-ID ProtocolIE-ID ::= 86

id-RelativeMMECapacity ProtocolIE-ID ::= 87

id-SourceMME-UE-S1AP-ID ProtocolIE-ID ::= 88

id-Bearers-SubjectToStatusTransfer-Item ProtocolIE-ID ::= 89

id-eNB-StatusTransfer-TransparentContainer ProtocolIE-ID ::= 90

id-UE-associatedLogicalS1-ConnectionItem ProtocolIE-ID ::= 91

id-ResetType ProtocolIE-ID ::= 92

id-UE-associatedLogicalS1-ConnectionListResAck ProtocolIE-ID ::= 93

id-E-RABToBeSwitchedULItem ProtocolIE-ID ::= 94

id-E-RABToBeSwitchedULList ProtocolIE-ID ::= 95

id-S-TMSI ProtocolIE-ID ::= 96

id-cdma2000OneXRAND ProtocolIE-ID ::= 97

id-RequestType ProtocolIE-ID ::= 98

id-UE-S1AP-IDs ProtocolIE-ID ::= 99

id-EUTRAN-CGI ProtocolIE-ID ::= 100

id-OverloadResponse ProtocolIE-ID ::= 101

id-cdma2000OneXSRVCCInfo ProtocolIE-ID ::= 102

id-E-RABFailedToBeReleasedList ProtocolIE-ID ::= 103

id-Source-ToTarget-TransparentContainer ProtocolIE-ID ::= 104

id-ServedGUMMEIs ProtocolIE-ID ::= 105

id-SubscriberProfileIDforRFP ProtocolIE-ID ::= 106

id-UESecurityCapabilities ProtocolIE-ID ::= 107

id-CSFallbackIndicator ProtocolIE-ID ::= 108

id-CNDomain ProtocolIE-ID ::= 109

id-E-RABReleasedList ProtocolIE-ID ::= 110

id-MessageIdentifier ProtocolIE-ID ::= 111

id-SerialNumber ProtocolIE-ID ::= 112

id-WarningAreaList ProtocolIE-ID ::= 113

id-RepetitionPeriod ProtocolIE-ID ::= 114

id-NumberofBroadcastRequest ProtocolIE-ID ::= 115

id-WarningType ProtocolIE-ID ::= 116

id-WarningSecurityInfo ProtocolIE-ID ::= 117

id-DataCodingScheme ProtocolIE-ID ::= 118

id-WarningMessageContents ProtocolIE-ID ::= 119

id-BroadcastCompletedAreaList ProtocolIE-ID ::= 120

id-Inter-SystemInformationTransferTypeEDT ProtocolIE-ID ::= 121

id-Inter-SystemInformationTransferTypeMDT ProtocolIE-ID ::= 122

id-Target-ToSource-TransparentContainer ProtocolIE-ID ::= 123

id-SRVCCOperationPossible ProtocolIE-ID ::= 124

id-SRVCCHOIndication ProtocolIE-ID ::= 125

id-NAS-DownlinkCount ProtocolIE-ID ::= 126

id-CSG-Id ProtocolIE-ID ::= 127

id-CSG-IdList ProtocolIE-ID ::= 128

id-SONConfigurationTransferECT ProtocolIE-ID ::= 129

id-SONConfigurationTransferMCT ProtocolIE-ID ::= 130

id-TraceCollectionEntityIPAddress ProtocolIE-ID ::= 131

id-MSClassmark2 ProtocolIE-ID ::= 132

id-MSClassmark3 ProtocolIE-ID ::= 133

id-RRC-Establishment-Cause ProtocolIE-ID ::= 134

id-NASSecurityParametersfromE-UTRAN ProtocolIE-ID ::= 135

id-NASSecurityParameterstoE-UTRAN ProtocolIE-ID ::= 136

id-DefaultPagingDRX ProtocolIE-ID ::= 137

id-Source-ToTarget-TransparentContainer-Secondary ProtocolIE-ID ::= 138

id-Target-ToSource-TransparentContainer-Secondary ProtocolIE-ID ::= 139

id-EUTRANRoundTripDelayEstimationInfo ProtocolIE-ID ::= 140

id-BroadcastCancelledAreaList ProtocolIE-ID ::= 141

id-ConcurrentWarningMessageIndicator ProtocolIE-ID ::= 142

id-Data-Forwarding-Not-Possible ProtocolIE-ID ::= 143

id-ExtendedRepetitionPeriod ProtocolIE-ID ::= 144

id-CellAccessMode ProtocolIE-ID ::= 145

id-CSGMembershipStatus ProtocolIE-ID ::= 146

id-LPPa-PDU ProtocolIE-ID ::= 147

id-Routing-ID ProtocolIE-ID ::= 148

id-Time-Synchronisation-Info ProtocolIE-ID ::= 149

id-PS-ServiceNotAvailable ProtocolIE-ID ::= 150

id-PagingPriority ProtocolIE-ID ::= 151

id-x2TNLConfigurationInfo ProtocolIE-ID ::= 152

id-eNBX2ExtendedTransportLayerAddresses ProtocolIE-ID ::= 153

id-GUMMEIList ProtocolIE-ID ::= 154

id-GW-TransportLayerAddress ProtocolIE-ID ::= 155

id-Correlation-ID ProtocolIE-ID ::= 156

id-SourceMME-GUMMEI ProtocolIE-ID ::= 157

id-MME-UE-S1AP-ID-2 ProtocolIE-ID ::= 158

id-RegisteredLAI ProtocolIE-ID ::= 159

id-RelayNode-Indicator ProtocolIE-ID ::= 160

id-TrafficLoadReductionIndication ProtocolIE-ID ::= 161

id-MDTConfiguration ProtocolIE-ID ::= 162

id-MMERelaySupportIndicator ProtocolIE-ID ::= 163

id-GWContextReleaseIndication ProtocolIE-ID ::= 164

id-ManagementBasedMDTAllowed ProtocolIE-ID ::= 165

id-PrivacyIndicator ProtocolIE-ID ::= 166

id-Time-UE-StayedInCell-EnhancedGranularity ProtocolIE-ID ::= 167

id-HO-Cause ProtocolIE-ID ::= 168

id-VoiceSupportMatchIndicator ProtocolIE-ID ::= 169

id-GUMMEIType ProtocolIE-ID ::= 170

id-M3Configuration ProtocolIE-ID ::= 171

id-M4Configuration ProtocolIE-ID ::= 172

id-M5Configuration ProtocolIE-ID ::= 173

id-MDT-Location-Info ProtocolIE-ID ::= 174

id-MobilityInformation ProtocolIE-ID ::= 175

id-Tunnel-Information-for-BBF ProtocolIE-ID ::= 176

id-ManagementBasedMDTPLMNList ProtocolIE-ID ::= 177

id-SignallingBasedMDTPLMNList ProtocolIE-ID ::= 178

id-ULCOUNTValueExtended ProtocolIE-ID ::= 179

id-DLCOUNTValueExtended ProtocolIE-ID ::= 180

id-ReceiveStatusOfULPDCPSDUsExtended ProtocolIE-ID ::= 181

id-ECGIListForRestart ProtocolIE-ID ::= 182

id-SIPTO-Correlation-ID ProtocolIE-ID ::= 183

id-SIPTO-L-GW-TransportLayerAddress ProtocolIE-ID ::= 184

id-TransportInformation ProtocolIE-ID ::= 185

id-LHN-ID ProtocolIE-ID ::= 186

id-AdditionalCSFallbackIndicator ProtocolIE-ID ::= 187

id-TAIListForRestart ProtocolIE-ID ::= 188

id-UserLocationInformation ProtocolIE-ID ::= 189

id-EmergencyAreaIDListForRestart ProtocolIE-ID ::= 190

id-KillAllWarningMessages ProtocolIE-ID ::= 191

id-Masked-IMEISV ProtocolIE-ID ::= 192

id-eNBIndirectX2TransportLayerAddresses ProtocolIE-ID ::= 193

id-uE-HistoryInformationFromTheUE ProtocolIE-ID ::= 194

id-ProSeAuthorized ProtocolIE-ID ::= 195

id-ExpectedUEBehaviour ProtocolIE-ID ::= 196

id-LoggedMBSFNMDT ProtocolIE-ID ::= 197

id-UERadioCapabilityForPaging ProtocolIE-ID ::= 198

id-E-RABToBeModifiedListBearerModInd ProtocolIE-ID ::= 199

id-E-RABToBeModifiedItemBearerModInd ProtocolIE-ID ::= 200

id-E-RABNotToBeModifiedListBearerModInd ProtocolIE-ID ::= 201

id-E-RABNotToBeModifiedItemBearerModInd ProtocolIE-ID ::= 202

id-E-RABModifyListBearerModConf ProtocolIE-ID ::= 203

id-E-RABModifyItemBearerModConf ProtocolIE-ID ::= 204

id-E-RABFailedToModifyListBearerModConf ProtocolIE-ID ::= 205

id-SON-Information-Report ProtocolIE-ID ::= 206

id-Muting-Availability-Indication ProtocolIE-ID ::= 207

id-Muting-Pattern-Information ProtocolIE-ID ::= 208

id-Synchronisation-Information ProtocolIE-ID ::= 209

id-E-RABToBeReleasedListBearerModConf ProtocolIE-ID ::= 210

id-AssistanceDataForPaging ProtocolIE-ID ::= 211

id-CellIdentifierAndCELevelForCECapableUEs ProtocolIE-ID ::= 212

id-InformationOnRecommendedCellsAndENBsForPaging ProtocolIE-ID ::= 213

id-RecommendedCellItem ProtocolIE-ID ::= 214

id-RecommendedENBItem ProtocolIE-ID ::= 215

id-ProSeUEtoNetworkRelaying ProtocolIE-ID ::= 216

id-ULCOUNTValuePDCP-SNlength18 ProtocolIE-ID ::= 217

id-DLCOUNTValuePDCP-SNlength18 ProtocolIE-ID ::= 218

id-ReceiveStatusOfULPDCPSDUsPDCP-SNlength18 ProtocolIE-ID ::= 219

id-M6Configuration ProtocolIE-ID ::= 220

id-M7Configuration ProtocolIE-ID ::= 221

id-PWSfailedECGIList ProtocolIE-ID ::= 222

id-MME-Group-ID ProtocolIE-ID ::= 223

id-Additional-GUTI ProtocolIE-ID ::= 224

id-S1-Message ProtocolIE-ID ::= 225

id-CSGMembershipInfo ProtocolIE-ID ::= 226

id-Paging-eDRXInformation ProtocolIE-ID ::= 227

id-UE-RetentionInformation ProtocolIE-ID ::= 228

id-UE-Usage-Type ProtocolIE-ID ::= 230

id-extended-UEIdentityIndexValue ProtocolIE-ID ::= 231

id-RAT-Type ProtocolIE-ID ::= 232

id-BearerType ProtocolIE-ID ::= 233

id-NB-IoT-DefaultPagingDRX ProtocolIE-ID ::= 234

id-E-RABFailedToResumeListResumeReq ProtocolIE-ID ::= 235

id-E-RABFailedToResumeItemResumeReq ProtocolIE-ID ::= 236

id-E-RABFailedToResumeListResumeRes ProtocolIE-ID ::= 237

id-E-RABFailedToResumeItemResumeRes ProtocolIE-ID ::= 238

id-NB-IoT-Paging-eDRXInformation ProtocolIE-ID ::= 239

id-V2XServicesAuthorized ProtocolIE-ID ::= 240

id-UEUserPlaneCIoTSupportIndicator ProtocolIE-ID ::= 241

id-CE-mode-B-SupportIndicator ProtocolIE-ID ::= 242

id-SRVCCOperationNotPossible ProtocolIE-ID ::= 243

id-NB-IoT-UEIdentityIndexValue ProtocolIE-ID ::= 244

id-RRC-Resume-Cause ProtocolIE-ID ::= 245

id-DCN-ID ProtocolIE-ID ::= 246

id-ServedDCNs ProtocolIE-ID ::= 247

id-UESidelinkAggregateMaximumBitrate ProtocolIE-ID ::= 248

id-DLNASPDUDeliveryAckRequest ProtocolIE-ID ::= 249

id-Coverage-Level ProtocolIE-ID ::= 250

id-EnhancedCoverageRestricted ProtocolIE-ID ::= 251

id-UE-Level-QoS-Parameters ProtocolIE-ID ::= 252

id-DL-CP-SecurityInformation ProtocolIE-ID ::= 253

id-UL-CP-SecurityInformation ProtocolIE-ID ::= 254

id-extended-e-RAB-MaximumBitrateDL ProtocolIE-ID ::= 255

id-extended-e-RAB-MaximumBitrateUL ProtocolIE-ID ::= 256

id-extended-e-RAB-GuaranteedBitrateDL ProtocolIE-ID ::= 257

id-extended-e-RAB-GuaranteedBitrateUL ProtocolIE-ID ::= 258

id-extended-uEaggregateMaximumBitRateDL ProtocolIE-ID ::= 259

id-extended-uEaggregateMaximumBitRateUL ProtocolIE-ID ::= 260

id-NRrestrictioninEPSasSecondaryRAT ProtocolIE-ID ::= 261

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id-SecondaryRATDataUsageRequest ProtocolIE-ID ::= 268

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id-LTE-M-Indication ProtocolIE-ID ::= 272

id-DownlinkPacketLossRate ProtocolIE-ID ::= 273

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id-UECapabilityInfoRequest ProtocolIE-ID ::= 275

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id-AerialUEsubscriptionInformation ProtocolIE-ID ::= 277

id-Subscription-Based-UE-DifferentiationInfo ProtocolIE-ID ::= 278

id-EndIndication ProtocolIE-ID ::= 280

id-EDT-Session ProtocolIE-ID ::= 281

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id-PendingDataIndication ProtocolIE-ID ::= 283

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id-WLANMeasurementConfiguration ProtocolIE-ID ::= 285

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id-PSCellInformation ProtocolIE-ID ::= 288

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id-ConnectedengNBToAddList ProtocolIE-ID ::= 292

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id-WUS-Assistance-Information ProtocolIE-ID ::= 323

id-NB-IoT-PagingDRX ProtocolIE-ID ::= 324

id-TraceCollectionEntityURI ProtocolIE-ID ::= 325

id-EmergencyIndicator ProtocolIE-ID ::= 326

id-UERadioCapabilityForPaging-NR-Format ProtocolIE-ID ::= 327

id-SourceTransportLayerAddress ProtocolIE-ID ::= 328

id-SourceNodeTransportLayerAddress ProtocolIE-ID ::= xxx

END

**<<<<<< END OF CHANGES >>>>>>**