**3GPP TSG-RAN WG3 #116-eR3-22xxxx**

**Online, 9th - 19th May 2022 was R3-223376**

|  |
| --- |
| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  |  | **CR** | **0800** | **rev** | 1 | **Current version:** |  |  |
|  |
| *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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|  |  |  |  |  |  |  |  |  |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **X** | Core Network |  |

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|  |
| ***Title:***  |  |
|  |  |
| ***Source to WG:*** |  |
| ***Source to TSG:*** |  |
|  |  |
| ***Work item code:*** |  |  | ***Date:*** | 2022-04-25 |
|  |  |  |  |  |
| ***Category:*** |  |  | ***Release:*** |  |
|  | *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 canbe 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-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)* |
|  |  |
| ***Reason for change:*** | This CR introduces a new approach to gain information on the level of support for a certain feature based on supported functionality at the target NG-RAN side associated with an NGAP IE based on the respective IE-Id. |
|  |  |
| ***Summary of change:*** | The CR introduces the possibility to retrieve information on the level of support for a certain feature based on supported functionality at the target NG-RAN side associated with an NGAP IE based on the respective IE-Id by means of information provided within the CN transparent handover containers.A new NGAP IE Support Information Request List IE is introduced in the *Source NG-RAN Node to Target NG-RAN Node Transparent Container* IE containing a list of NGAP Protocol IE-Ids, for which the target NG-RAN node shall provide support information ("supported" or "not supported") within either the *Target NG-RAN Node to Source NG-RAN Node Transparent Container* IE or the *Target NG-RAN Node to Source NG-RAN Node Transparent Failure Transparent Container* IE. |
|  |  |
| ***Consequences if not approved:*** |  |
|  |  |
| ***Clauses affected:*** | 8.4.2.2, 8.4.2.3, 9.3.1.29, 9.3.1.30, 9.3.1.187, 9.3.1.x (new), 9.3.1.y (new), 9.3.1.z (new), 9.4.5, 9.4.7 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  |  |
| ***affected:*** |  | **X** |  Test specifications |  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications |  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** | r1: removing “not available” codepoint and some editorialsr0: submission to R3#116-e |

<<<<<<<<<<<<<<<<<<<< First 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. The procedure uses UE-associated signalling.

#### 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.

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If the *5G ProSe UE PC5 Aggregate Maximum Bit Rate* IE is included in the HANDOVER REQUEST message, the NG-RAN node shall, if supported, use the received value for the concerned UE’s sidelink communication in network scheduled mode for 5G ProSe services.

If the *5G ProSe PC5 QoS Parameters* IE is included in the HANDOVER REQUEST message, the NG-RAN node shall, if supported, use it as defined in TS 23.304 [47].

If the HANDOVER REQUEST message contains within the *Source NG-RAN Node to Target NG-RAN Node Transparent Container* IEthe *NGAP IE Support Information Request List* IE, the target NG-RAN node shall, if supported and the target NG-RAN node accepts the request for handover, for each included NGAP Protocol IE-Id provide within in the *Target NG-RAN Node to Source NG-RAN Node Transparent Container* IE in the HANDOVER REQUEST ACKNOWLEDGE message

- set the *NGAP Protocol IE Support Information* IE to "supported" if the target NG-RAN node has information that the functionality associated with the indicated IE is supported

- set the *NGAP Protocol IE Support Information* IE to "not-supported" if the target NG-RAN node has information that the functionality associated with the indicated IE is not supported

on the interface instance via which the HANDOVER REQUEST message has been received.

**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.

If the HANDOVER REQUEST message contains within the *Source NG-RAN Node to Target NG-RAN Node Transparent Container* IEthe *NGAP IE Support Information Request List* IE, the target NG-RAN node shall, if supported and the target NG-RAN node does not accept the request for handover, for each included NGAP Protocol IE-Id provide within in the *Target NG-RAN Node to Source NG-RAN Node Transparent Failure Transparent Container* IE in the HANDOVER FAILURE message

- set the *NGAP Protocol IE Support Information* IE to "supported" if the target NG-RAN node has information that the functionality associated with the indicated IE is supported

- set the *NGAP Protocol IE Support Information* IE to "not-supported" if the target NG-RAN node has information that the functionality associated with the indicated IE is not supported

on the interface instance via which the HANDOVER REQUEST message has been received.

<<<<<<<<<<<<<<<<<<<< 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 | ignore |
| >>>>Source Transport Layer Address | O |  | Transport Layer Address9.3.2.4 | Identifies the TNL address used by the sending node for direct data forwardingtowards the target NG-RAN node | YES | ignore |
| >>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 CGI9.3.1.73 |  | - |  |
| 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 UE | O |  | 9.3.1.166 |  | YES | ignore |
| Source Node ID | O |  | 9.3.1.195 | Source SN ID | YES | ignore |
| UE Context Reference at Source | O |  | RAN UE NGAP ID 9.3.3.2 |  | YES | ignore |
| **MBS Session Information Source to Target List** |  | *0..<maxnoofMBSSessionsofUE>* |  |  | YES | ignore |
| >MBS Session ID | M |  | 9.3.1.206 |  | - |  |
| >MBS Area Session ID | O |  | 9.3.1.207 | MBS Area Session ID of the UE at the NG-RAN node from which the UE context is transferred | - |  |
| >MBS Service Area | O |  | 9.3.1.208 |  | - |  |
| **>MBS QoS Flow List** |  | *1..<maxnoofMBSQoSFlows>* |  |  | - |  |
| *>>*MBS QoS Flow Identifier | M |  | QoS Flow Identifier9.3.1.51 |  | - |  |
| *>>*MBS QoS Flow Level QoS *Parameters* | M |  | QoS Flow Level QoS Parameters9.3.1.12 |  | - |  |
| **>MBS Mapping and Data Forwarding Request** |  | *1 .. <maxnoofMRBs>* |  |  | - |  |
| >>MRB ID | M |  | 9.3.1.218 |  | - |  |
| **>>MBS QoS Flow List** |  | *1..<maxnoofMBSQoSflows>* |  |  | - |  |
| >>>MBS QoS Flow Identifier | M |  | QoS Flow Identifier9.3.1.51 |  | - |  |
| >>MRB Progress Information | M |  | 9.3.1.219 | The SN information of the last packet which has already been delivered for the MRB.  | - |  |
| QMC Configuration Information | O |  | 9.3.1.223 | Used for passing the signalling based QoE measurement information from the source NG-RAN node to the target NG-RAN node in NG-based handover. | YES | ignore |
| **NGAP IE Support Information Request List** |  | *0..<maxnoofIESupportInfo>* |  |  | YES | ignore |
| >NGAP Protocol IE-Id | M |  | 9.3.1.x |  | - |  |

|  |  |
| --- | --- |
| 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. |
| maxnoofMBSSessions | Maximum no. of MBS sessions allowed within one PDU session. Value is 32. |
| maxnoofMBSSessionsofUE | Maximum no. of MBS sessions allowed towards one UE. Value is 8192. |
| maxnoofMBSQoSflows | Maximum no. of MBS QoS flows allowed within one MBS session. Value is 64. |
| maxnoofMRBs | Maximum no. of MRBs. Value is 32. |
| maxnoofIESupportInfo | Maximum no. of IE Support Information. Value is 32. |

Editor’s note: FFS whether to add an indication of which MBS session is active.

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

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

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 *HandoverCommand* message as defined in TS 38.331 [18] if the target is a gNB.Includes the RRC *HandoverCommand* message as defined in TS 36.331 [21] if the target is an ng-eNB. | - |  |
| DAPS Response Information List  |  | *0..1* |  |  | YES | ignore |
| >DAPS Response Information Item |  | *1..<maxnoofDRBs>* |  |  | - |  |
| >>DRB ID | M |  | 9.3.1.53 |  | - |  |
| >>DAPS Response Information | M |  | 9.3.1.189 | Indicates the response to a requested DAPS Handover | - |  |
| Direct Forwarding Path Availability | O |  | 9.3.1.64 | Indicates whether a direct forwarding path between the source SN and the target NG-RAN node is available for inter-system handover | YES | ignore |
| **MBS Session Information Response Target to Source List** |  | *0..<maxnoofMBSSessionsofUE>* |  |  | YES | ignore |
| >MBS Session ID | M |  | 9.3.1.206 |  | - |  |
| **>Data Forwarding Response MRB List** |  | *1..<maxnoofMRBs>* |  |  | - |  |
| >>MRB ID | M |  | 9.3.1.218 |  | - |  |
| >>DL Forwarding UP TNL Information | M |  | UP Transport Layer Information9.3.2.2 |  | - |  |
| >>MRB Progress Information | O |  | 9.3.1.219 | This IE includes the information of the oldest packet available at the target NG-RAN node for the MRB. | - |  |
| NGAP IE Support Information Response List |  |  | 9.3.1.z |  | YES | ignore |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxnoofDRBs | Maximum no. of DRBs allowed towards one UE. Value is 32. |
| maxnoofMBSSessionsofUE | Maximum no. of MBS sessions allowed towards one UE. Value is 8192. |
| maxnoofMRBs | Maximum no. of MRBs. Value is 32. |

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

#### 9.3.1.187 Target NG-RAN Node to Source NG-RAN Node Failure Transparent Container

This IE is produced by the target NG-RAN node and is transmitted to the source NG-RAN node in case of preparation failure.

This IE is transparent to the 5GC.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Cell CAG Information | O |  | 9.3.1.185 |  | - |  |
| NGAP IE Support Information Response List |  |  | 9.3.1.z |  | YES | ignore |

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

#### 9.3.1.x NGAP Protocol IE-Id

The *NGAP Protocol IE-Id* IE uniquely identifies an NGAP Protocol IE.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| NGAP Protocol IE-Id | M |  | INTEGER (0..65535) |  |

#### 9.3.1.y NGAP Protocol IE Support Information

The *NGAP Protocol IE-Support Information* IE provides information about support of functions associated to an NGAP Protocol IE-Id.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| NGAP Protocol IE Support Information | M |  | ENUMERATED (supported, not-supported, ...) |  |

#### 9.3.1.z NGAP IE Support Information Response List

The *NGAP IE Support Information Response List* IE provides information about support of functions associated to a list of NGAP Protocol IE-Ids.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| **NGAP IE Support Information Response Item** |  | *0..<maxnoofIESupportInfo>* |  |  |
| >NGAP Protocol IE-Id | M |  | 9.3.1.x |  |
| >NGAP Protocol IE Support Information | M |  | 9.3.1.y |  |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxnoofIESupportInfo | Maximum no. of IE Support Information. Value is 32. |

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

### 9.4.5 Information Element Definitions

-- ASN1START

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

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-- Information Element Definitions

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

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-AdditionalRedundantDL-NGU-UP-TNLInformation,

 id-AdditionalRedundantDLQosFlowPerTNLInformation,

 id-AdditionalRedundantNGU-UP-TNLInformation,

 id-AdditionalRedundantUL-NGU-UP-TNLInformation,

 id-AdditionalUL-NGU-UP-TNLInformation,

 id-Alternative-SharedNG-U-Multicast-TNL-Information,

 id-AlternativeQoSParaSetList,

 id-BurstArrivalTimeDownlink,

 id-Cause,

 id-CNPacketDelayBudgetDL,

 id-CNPacketDelayBudgetUL,

 id-CNTypeRestrictionsForEquivalent,

 id-CNTypeRestrictionsForServing,

 id-CommonNetworkInstance,

 id-ConfiguredTACIndication,

 id-CurrentQoSParaSetIndex,

 id-DAPSRequestInfo,

 id-DAPSResponseInfoList,

 id-DataForwardingNotPossible,

 id-DataForwardingResponseERABList,

 id-DirectForwardingPathAvailability,

 id-DL-NGU-UP-TNLInformation,

 id-EndpointIPAddressAndPort,

 id-EnergySavingIndication,

 id-ExtendedPacketDelayBudget,

 id-ExtendedRATRestrictionInformation,

 id-ExtendedReportIntervalMDT,

 id-ExtendedSliceSupportList,

 id-ExtendedTAISliceSupportList,

 id-ExtendedUEIdentityIndexValue,

 id-EUTRA-PagingeDRXInformation,

 id-GlobalCable-ID,

 id-GlobalRANNodeID,

 id-GlobalTNGF-ID,

 id-GlobalTWIF-ID,

 id-GlobalW-AGF-ID,

 id-GUAMIType,

 id-IncludeBeamMeasurementsIndication,

 id-IntersystemSONInformationRequest,

 id-IntersystemSONInformationResponse,

 id-IntersystemResourceStatusUpdate,

 id-LastEUTRAN-PLMNIdentity,

 id-LastVisitedPSCellList,

 id-LocationReportingAdditionalInfo,

 id-M4ReportAmount,

 id-M5ReportAmount,

 id-M6ReportAmount,

 id-M6DelayThreshold,

 id-M7ReportAmount,

 id-MaximumIntegrityProtectedDataRate-DL,

 id-MBS-AreaSessionID,

 id-MBS-QoSFlows-ToBeSetupList,

 id-MBS-QoSFlows-ToBeSetupModList,

 id-MBS-ServiceArea,

 id-MBS-SessionID,

 id-MBS-SessionInformation-SourcetoTargetList,

 id-MBS-SessionInformation-TargettoSourceList,

 id-MBS-SupportIndicator,

 id-MBSSessionInformationFailedtoSetupList,

 id-MBSSessionInformationFailedtoSetuporModifyList,

 id-MBSSessionInformationSetupList,

 id-MBSSessionInformationSetuporModifyList,

 id-MBSSessionInformationToBeRemoveList,

 id-MBSSessionInformationToBeSetupList,

 id-MBSSessionInformationToBeSetuporModifyList,

 id-MBSSessionStatus,

 id-MDTConfiguration,

 id-MicoAllPLMN,

 id-NetworkInstance,

 id-NGAPIESupportInformationRequestList,

 id-NGAPIESupportInformationResponseList,

 id-NID,

 id-NRNTNTAIInformation,

 id-NPN-MobilityInformation,

 id-NPN-PagingAssistanceInformation,

 id-NPN-Support,

 id-NR-PagingeDRXInformation,

 id-OldAssociatedQosFlowList-ULendmarkerexpected,

 id-OnboardingSupport,

 id-PagingAssisDataforCEcapabUE,

 id-PagingCauseIndicationForVoiceService,

 id-PDUSessionAggregateMaximumBitRate,

 id-PduSessionExpectedUEActivityBehaviour,

 id-PDUSessionPairID,

 id-PDUSessionResourceFailedToSetupListCxtFail,

 id-PDUSessionResourceReleaseResponseTransfer,

 id-PDUSessionType,

 id-PEIPSassistanceInformation,

 id-PSCellInformation,

 id-QMCConfigInfo,

 id-QosFlowAddOrModifyRequestList,

 id-QosFlowFailedToSetupList,

 id-QosFlowFeedbackList,

 id-QosFlowParametersList,

 id-QosFlowSetupRequestList,

 id-QosFlowToReleaseList,

 id-QosMonitoringRequest,

 id-QosMonitoringReportingFrequency,

 id-SuccessfulHandoverReportList,

 id-UEContextReferenceAtSource,

 id-RAT-Information,

 id-RedundantCommonNetworkInstance,

 id-RedundantDL-NGU-TNLInformationReused,

 id-RedundantDL-NGU-UP-TNLInformation,

 id-RedundantDLQosFlowPerTNLInformation,

 id-RedundantPDUSessionInformation,

 id-RedundantQosFlowIndicator,

 id-RedundantUL-NGU-UP-TNLInformation,

 id-SCTP-TLAs,

 id-SecondaryRATUsageInformation,

 id-SecurityIndication,

 id-SecurityResult,

 id-SharedNG-U-Multicast-TNL-Information,

 id-SharedNG-U-Unicast-TNL-Information,

 id-SgNB-UE-X2AP-ID,

 id-S-NSSAI,

 id-SONInformationReport,

 id-SourceNodeID,

 id-SourceTNLAddrInfo,

 id-SurvivalTime,

 id-TNLAssociationTransportLayerAddressNGRAN,

 id-TargetRNC-ID,

 id-TraceCollectionEntityURI,

 id-TSCTrafficCharacteristics,

 id-UEHistoryInformationFromTheUE,

 id-UERadioCapabilityForPaging,

 id-UERadioCapabilityForPagingOfNB-IoT,

 id-UL-NGU-UP-TNLInformation,

 id-UL-NGU-UP-TNLModifyList,

 id-ULForwarding,

 id-ULForwardingUP-TNLInformation,

 id-UsedRSNInformation,

 id-UserLocationInformationTNGF,

 id-UserLocationInformationTWIF,

 id-UserLocationInformationW-AGF,

 maxnoofAllowedAreas,

 maxnoofAllowedCAGsperPLMN,

 maxnoofAllowedS-NSSAIs,

 maxnoofBluetoothName,

 maxnoofBPLMNs,

 maxnoofCAGSperCell,

 maxnoofCandidateCells,

 maxnoofCellIDforMDT,

 maxnoofCellIDforQMC,

 maxnoofCellIDforWarning,

 maxnoofCellinAoI,

 maxnoofCellinEAI,

 maxnoofCellsforMBS,

 maxnoofCellsingNB,

 maxnoofCellsinngeNB,

 maxnoofCellsinNGRANNode,

 maxnoofCellinTAI,

 maxnoofCellsinUEHistoryInfo,

 maxnoofCellsUEMovingTrajectory,

 maxnoofDRBs,

 maxnoofEmergencyAreaID,

 maxnoofEAIforRestart,

 maxnoofEPLMNs,

 maxnoofEPLMNsPlusOne,

 maxnoofE-RABs,

 maxnoofErrors,

 maxnoofExtSliceItems,

 maxnoofForbTACs,

 maxnoofFreqforMDT,

 maxnoofMBSQoSFlows,

 maxnoofMBSServiceAreaInformation,

 maxnoofMBSAreaSessionIDs,

 maxnoofMBSSessions,

 maxnoofMBSSessionsofUE,

 maxnoofMDTPLMNs,

 maxnoofMRBs,

 maxnoofMultiConnectivity,

 maxnoofMultiConnectivityMinusOne,

 maxnoofNeighPCIforMDT,

 maxnoofNGAPIESupportInfo,

 maxnoofNGConnectionsToReset,

 maxNRARFCN,

 maxnoofNRCellBands,

 maxnoofPagingAreas,

 maxnoofPC5QoSFlows,

 maxnoofPDUSessions,

 maxnoofPLMNs,

 maxnoofPLMNforQMC,

 maxnoofQosFlows,

 maxnoofQosParaSets,

 maxnoofRANNodeinAoI,

 maxnoofRecommendedCells,

 maxnoofRecommendedRANNodes,

 maxnoofAoI,

 maxnoofPSCellsPerPrimaryCellinUEHistoryInfo,

 maxnoofReportedCells,

 maxnoofSensorName,

 maxnoofServedGUAMIs,

 maxnoofSliceItems,

 maxnoofSNSSAIforQMC,

 maxnoofSuccessfulHOReports,

 maxnoofTACs,

 maxnoofTACsinNTN,

 maxnoofTAforMDT,

 maxnoofTAforQMC,

 maxnoofTAIforInactive,

 maxnoofTAIforMBS,

 maxnoofTAIforPaging,

 maxnoofTAIforRestart,

 maxnoofTAIforWarning,

 maxnoofTAIinAoI,

 maxnoofTargetS-NSSAIs,

 maxnoofTimePeriods,

 maxnoofTNLAssociations,

 maxnoofUEAppLayerMeas,

 maxnoofUEsforPaging,

 maxnoofWLANName,

 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

<<<<<<<<<<<<<<<<<<<< Unmodified Text Omitted >>>>>>>>>>>>>>>>>>>>

NGAPIESupportInformationRequestList ::= SEQUENCE (SIZE(1.. maxnoofNGAPIESupportInfo)) OF NGAPIESupportInformationRequestItem

NGAPIESupportInformationRequestItem ::= SEQUENCE {

 ngap-IE-Id ProtocolIE-ID,

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

 ...

}

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

 ...

}

NGAPIESupportInformationResponseList ::= SEQUENCE (SIZE(1.. maxnoofNGAPIESupportInfo)) OF NGAPIESupportInformationResponseItem

NGAPIESupportInformationResponseItem ::= SEQUENCE {

 ngap-IE-Id ProtocolIE-ID,

 ngap-ProtocolIESupportInfo ENUMERATED {supported, not-supported, ...},

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

 ...

}

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

 ...

}

<<<<<<<<<<<<<<<<<<<< Unmodified Text Omitted >>>>>>>>>>>>>>>>>>>>

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 }|

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

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

 { ID id-MBS-SessionInformation-SourcetoTargetList CRITICALITY ignore EXTENSION MBS-SessionInformation-SourcetoTargetList PRESENCE optional }|

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

 { ID id- id-NGAPIESupportInformationRequestList CRITICALITY ignore EXTENSION NGAPIESupportInformationRequestList PRESENCE optional },

 ...

}

<<<<<<<<<<<<<<<<<<<< Unmodified Text Omitted >>>>>>>>>>>>>>>>>>>>

TargetNGRANNode-ToSourceNGRANNode-TransparentContainer ::= SEQUENCE {

 rRCContainer RRCContainer,

 iE-Extensions ProtocolExtensionContainer { {TargetNGRANNode-ToSourceNGRANNode-TransparentContainer-ExtIEs} } OPTIONAL,

 ...

}

TargetNGRANNode-ToSourceNGRANNode-TransparentContainer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

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

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

 { ID id-MBS-SessionInformation-TargettoSourceList CRITICALITY ignore EXTENSION MBS-SessionInformation-TargettoSourceList PRESENCE optional }|

 { ID id- id-NGAPIESupportInformationResponseList CRITICALITY ignore EXTENSION NGAPIESupportInformationResponseList PRESENCEoptional },

 ...

}

TargetNGRANNode-ToSourceNGRANNode-FailureTransparentContainer ::= SEQUENCE {

 cell-CAGInformation Cell-CAGInformation OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { {TargetNGRANNode-ToSourceNGRANNode-FailureTransparentContainer-ExtIEs} } OPTIONAL,

 ...

}

TargetNGRANNode-ToSourceNGRANNode-FailureTransparentContainer-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 { ID id- id-NGAPIESupportInformationResponseList CRITICALITY ignore EXTENSION NGAPIESupportInformationResponseList PRESENCEoptional }, ...

}

<<<<<<<<<<<<<<<<<<<< Last Change >>>>>>>>>>>>>>>>>>>>

### 9.4.7 Constant Definitions

-- ASN1START

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

--

-- Constant definitions

--

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

NGAP-Constants {

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

ngran-Access (22) modules (3) ngap (1) version1 (1) ngap-Constants (4) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

--

-- IE parameter types from other modules.

--

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

IMPORTS

 ProcedureCode,

 ProtocolIE-ID

FROM NGAP-CommonDataTypes;

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

--

-- Elementary Procedures

--

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

id-AMFConfigurationUpdate ProcedureCode ::= 0

id-AMFStatusIndication ProcedureCode ::= 1

id-CellTrafficTrace ProcedureCode ::= 2

id-DeactivateTrace ProcedureCode ::= 3

id-DownlinkNASTransport ProcedureCode ::= 4

id-DownlinkNonUEAssociatedNRPPaTransport ProcedureCode ::= 5

id-DownlinkRANConfigurationTransfer ProcedureCode ::= 6

id-DownlinkRANStatusTransfer ProcedureCode ::= 7

id-DownlinkUEAssociatedNRPPaTransport ProcedureCode ::= 8

id-ErrorIndication ProcedureCode ::= 9

id-HandoverCancel ProcedureCode ::= 10

id-HandoverNotification ProcedureCode ::= 11

id-HandoverPreparation ProcedureCode ::= 12

id-HandoverResourceAllocation ProcedureCode ::= 13

id-InitialContextSetup ProcedureCode ::= 14

id-InitialUEMessage ProcedureCode ::= 15

id-LocationReportingControl ProcedureCode ::= 16

id-LocationReportingFailureIndication ProcedureCode ::= 17

id-LocationReport ProcedureCode ::= 18

id-NASNonDeliveryIndication ProcedureCode ::= 19

id-NGReset ProcedureCode ::= 20

id-NGSetup ProcedureCode ::= 21

id-OverloadStart ProcedureCode ::= 22

id-OverloadStop ProcedureCode ::= 23

id-Paging ProcedureCode ::= 24

id-PathSwitchRequest ProcedureCode ::= 25

id-PDUSessionResourceModify ProcedureCode ::= 26

id-PDUSessionResourceModifyIndication ProcedureCode ::= 27

id-PDUSessionResourceRelease ProcedureCode ::= 28

id-PDUSessionResourceSetup ProcedureCode ::= 29

id-PDUSessionResourceNotify ProcedureCode ::= 30

id-PrivateMessage ProcedureCode ::= 31

id-PWSCancel ProcedureCode ::= 32

id-PWSFailureIndication ProcedureCode ::= 33

id-PWSRestartIndication ProcedureCode ::= 34

id-RANConfigurationUpdate ProcedureCode ::= 35

id-RerouteNASRequest ProcedureCode ::= 36

id-RRCInactiveTransitionReport ProcedureCode ::= 37

id-TraceFailureIndication ProcedureCode ::= 38

id-TraceStart ProcedureCode ::= 39

id-UEContextModification ProcedureCode ::= 40

id-UEContextRelease ProcedureCode ::= 41

id-UEContextReleaseRequest ProcedureCode ::= 42

id-UERadioCapabilityCheck ProcedureCode ::= 43

id-UERadioCapabilityInfoIndication ProcedureCode ::= 44

id-UETNLABindingRelease ProcedureCode ::= 45

id-UplinkNASTransport ProcedureCode ::= 46

id-UplinkNonUEAssociatedNRPPaTransport ProcedureCode ::= 47

id-UplinkRANConfigurationTransfer ProcedureCode ::= 48

id-UplinkRANStatusTransfer ProcedureCode ::= 49

id-UplinkUEAssociatedNRPPaTransport ProcedureCode ::= 50

id-WriteReplaceWarning ProcedureCode ::= 51

id-SecondaryRATDataUsageReport ProcedureCode ::= 52

id-UplinkRIMInformationTransfer ProcedureCode ::= 53

id-DownlinkRIMInformationTransfer ProcedureCode ::= 54

id-RetrieveUEInformation ProcedureCode ::= 55

id-UEInformationTransfer ProcedureCode ::= 56

id-RANCPRelocationIndication ProcedureCode ::= 57

id-UEContextResume ProcedureCode ::= 58

id-UEContextSuspend ProcedureCode ::= 59

id-UERadioCapabilityIDMapping ProcedureCode ::= 60

id-HandoverSuccess ProcedureCode ::= 61

id-UplinkRANEarlyStatusTransfer ProcedureCode ::= 62

id-DownlinkRANEarlyStatusTransfer ProcedureCode ::= 63

id-AMFCPRelocationIndication ProcedureCode ::= 64

id-ConnectionEstablishmentIndication ProcedureCode ::= 65

id-BroadcastSessionModification ProcedureCode ::= 66

id-BroadcastSessionRelease ProcedureCode ::= 67

id-BroadcastSessionSetup ProcedureCode ::= 68

id-DistributionSetup ProcedureCode ::= 69

id-DistributionRelease ProcedureCode ::= 70

id-MulticastSessionActivation ProcedureCode ::= 71

id-MulticastSessionDeactivation ProcedureCode ::= 72

id-MulticastSessionUpdate ProcedureCode ::= 73

id-MulticastGroupPaging ProcedureCode ::= 74

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

--

-- Extension constants

--

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

maxPrivateIEs INTEGER ::= 65535

maxProtocolExtensions INTEGER ::= 65535

maxProtocolIEs INTEGER ::= 65535

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

--

-- Lists

--

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

 maxnoofAllowedAreas INTEGER ::= 16

 maxnoofAllowedCAGsperPLMN INTEGER ::= 256

 maxnoofAllowedS-NSSAIs INTEGER ::= 8

 maxnoofBluetoothName INTEGER ::= 4

 maxnoofBPLMNs INTEGER ::= 12

 maxnoofCAGSperCell INTEGER ::= 64

 maxnoofCellIDforMDT INTEGER ::= 32

 maxnoofCellIDforWarning INTEGER ::= 65535

 maxnoofCellinAoI INTEGER ::= 256

 maxnoofCellinEAI INTEGER ::= 65535

 maxnoofCellinTAI INTEGER ::= 65535

 maxnoofCellsforMBS INTEGER ::= 8192

 maxnoofCellsingNB INTEGER ::= 16384

 maxnoofCellsinngeNB INTEGER ::= 256

 maxnoofCellsinNGRANNode INTEGER ::= 16384

 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

 maxnoofExtSliceItems INTEGER ::= 65535

 maxnoofForbTACs INTEGER ::= 4096

 maxnoofFreqforMDT INTEGER ::= 8

 maxnoofMBSAreaSessionIDs INTEGER ::= 256 -- FFS

 maxnoofMBSQoSFlows INTEGER ::= 64

 maxnoofMBSSessions INTEGER ::= 32

 maxnoofMBSSessionsofUE INTEGER ::= 8192

 maxnoofMBSServiceAreaInformation INTEGER ::= 256 -- FFS

 maxnoofMDTPLMNs INTEGER ::= 16

 maxnoofMRBs INTEGER ::= 32

 maxnoofMultiConnectivity INTEGER ::= 4

 maxnoofMultiConnectivityMinusOne INTEGER ::= 3

 maxnoofNeighPCIforMDT INTEGER ::= 32

 maxnoofNGAPIESupportInfo INTEGER ::= 32

 maxnoofNGConnectionsToReset INTEGER ::= 65536

 maxnoofNRCellBands INTEGER ::= 32

 maxnoofPagingAreas INTEGER ::= 64

 maxnoofPC5QoSFlows INTEGER ::= 2048

 maxnoofPDUSessions INTEGER ::= 256

 maxnoofPLMNs INTEGER ::= 12

 maxnoofPSCellsPerPrimaryCellinUEHistoryInfo INTEGER ::= 8

 maxnoofQosFlows INTEGER ::= 64

 maxnoofQosParaSets INTEGER ::= 8

 maxnoofRANNodeinAoI INTEGER ::= 64

 maxnoofRecommendedCells INTEGER ::= 16

 maxnoofRecommendedRANNodes INTEGER ::= 16

 maxnoofAoI INTEGER ::= 64

 maxnoofReportedCells INTEGER ::= 256

 maxnoofSensorName INTEGER ::= 3

 maxnoofServedGUAMIs INTEGER ::= 256

 maxnoofSliceItems INTEGER ::= 1024

 maxnoofSuccessfulHOReports INTEGER ::= 64

 maxnoofTACs INTEGER ::= 256

 maxnoofTACsinNTN INTEGER ::= 12

 maxnoofTAforMDT INTEGER ::= 8

 maxnoofTAIforInactive INTEGER ::= 16

 maxnoofTAIforMBS INTEGER ::= 1024

 maxnoofTAIforPaging INTEGER ::= 16

 maxnoofTAIforRestart INTEGER ::= 2048

 maxnoofTAIforWarning INTEGER ::= 65535

 maxnoofTAIinAoI INTEGER ::= 16

 maxnoofTimePeriods INTEGER ::= 2

 maxnoofTNLAssociations INTEGER ::= 32

 maxnoofUEsforPaging INTEGER ::= 4096

 maxnoofWLANName INTEGER ::= 4

 maxnoofXnExtTLAs INTEGER ::= 16

 maxnoofXnGTP-TLAs INTEGER ::= 16

 maxnoofXnTLAs INTEGER ::= 2

 maxnoofCandidateCells INTEGER ::= 32

 maxnoofTargetS-NSSAIs INTEGER ::= 8

 maxNRARFCN INTEGER ::= 3279165

 maxnoofCellIDforQMC INTEGER ::= 32

 maxnoofPLMNforQMC INTEGER ::= 16

 maxnoofUEAppLayerMeas INTEGER ::= 16

 maxnoofSNSSAIforQMC INTEGER ::= 16

 maxnoofTAforQMC INTEGER ::= 8

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

--

-- 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-SelectedPLMNIdentity 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-AdditionalRedundantDL-NGU-UP-TNLInformation ProtocolIE-ID ::= 183

 id-AdditionalRedundantDLQosFlowPerTNLInformation ProtocolIE-ID ::= 184

 id-AdditionalRedundantNGU-UP-TNLInformation ProtocolIE-ID ::= 185

 id-AdditionalRedundantUL-NGU-UP-TNLInformation ProtocolIE-ID ::= 186

 id-CNPacketDelayBudgetDL ProtocolIE-ID ::= 187

 id-CNPacketDelayBudgetUL ProtocolIE-ID ::= 188

 id-ExtendedPacketDelayBudget ProtocolIE-ID ::= 189

 id-RedundantCommonNetworkInstance ProtocolIE-ID ::= 190

 id-RedundantDL-NGU-TNLInformationReused ProtocolIE-ID ::= 191

 id-RedundantDL-NGU-UP-TNLInformation ProtocolIE-ID ::= 192

 id-RedundantDLQosFlowPerTNLInformation ProtocolIE-ID ::= 193

 id-RedundantQosFlowIndicator ProtocolIE-ID ::= 194

 id-RedundantUL-NGU-UP-TNLInformation ProtocolIE-ID ::= 195

 id-TSCTrafficCharacteristics ProtocolIE-ID ::= 196

 id-RedundantPDUSessionInformation ProtocolIE-ID ::= 197

 id-UsedRSNInformation ProtocolIE-ID ::= 198

 id-IAB-Authorized ProtocolIE-ID ::= 199

 id-IAB-Supported ProtocolIE-ID ::= 200

 id-IABNodeIndication ProtocolIE-ID ::= 201

 id-NB-IoT-PagingDRX ProtocolIE-ID ::= 202

 id-NB-IoT-Paging-eDRXInfo ProtocolIE-ID ::= 203

 id-NB-IoT-DefaultPagingDRX ProtocolIE-ID ::= 204

 id-Enhanced-CoverageRestriction ProtocolIE-ID ::= 205

 id-Extended-ConnectedTime ProtocolIE-ID ::= 206

 id-PagingAssisDataforCEcapabUE ProtocolIE-ID ::= 207

 id-WUS-Assistance-Information ProtocolIE-ID ::= 208

 id-UE-DifferentiationInfo ProtocolIE-ID ::= 209

 id-NB-IoT-UEPriority ProtocolIE-ID ::= 210

 id-UL-CP-SecurityInformation ProtocolIE-ID ::= 211

 id-DL-CP-SecurityInformation ProtocolIE-ID ::= 212

 id-TAI ProtocolIE-ID ::= 213

 id-UERadioCapabilityForPagingOfNB-IoT ProtocolIE-ID ::= 214

 id-LTEV2XServicesAuthorized ProtocolIE-ID ::= 215

 id-NRV2XServicesAuthorized ProtocolIE-ID ::= 216

 id-LTEUESidelinkAggregateMaximumBitrate ProtocolIE-ID ::= 217

 id-NRUESidelinkAggregateMaximumBitrate ProtocolIE-ID ::= 218

 id-PC5QoSParameters ProtocolIE-ID ::= 219

 id-AlternativeQoSParaSetList ProtocolIE-ID ::= 220

 id-CurrentQoSParaSetIndex ProtocolIE-ID ::= 221

 id-CEmodeBrestricted ProtocolIE-ID ::= 222

 id-EUTRA-PagingeDRXInformation ProtocolIE-ID ::= 223

 id-CEmodeBSupport-Indicator ProtocolIE-ID ::= 224

 id-LTEM-Indication ProtocolIE-ID ::= 225

 id-EndIndication ProtocolIE-ID ::= 226

 id-EDT-Session ProtocolIE-ID ::= 227

 id-UECapabilityInfoRequest ProtocolIE-ID ::= 228

 id-PDUSessionResourceFailedToResumeListRESReq ProtocolIE-ID ::= 229

 id-PDUSessionResourceFailedToResumeListRESRes ProtocolIE-ID ::= 230

 id-PDUSessionResourceSuspendListSUSReq ProtocolIE-ID ::= 231

 id-PDUSessionResourceResumeListRESReq ProtocolIE-ID ::= 232

 id-PDUSessionResourceResumeListRESRes ProtocolIE-ID ::= 233

 id-UE-UP-CIoT-Support ProtocolIE-ID ::= 234

 id-Suspend-Request-Indication ProtocolIE-ID ::= 235

 id-Suspend-Response-Indication ProtocolIE-ID ::= 236

 id-RRC-Resume-Cause ProtocolIE-ID ::= 237

 id-RGLevelWirelineAccessCharacteristics ProtocolIE-ID ::= 238

 id-W-AGFIdentityInformation ProtocolIE-ID ::= 239

 id-GlobalTNGF-ID ProtocolIE-ID ::= 240

 id-GlobalTWIF-ID ProtocolIE-ID ::= 241

 id-GlobalW-AGF-ID ProtocolIE-ID ::= 242

 id-UserLocationInformationW-AGF ProtocolIE-ID ::= 243

 id-UserLocationInformationTNGF ProtocolIE-ID ::= 244

 id-AuthenticatedIndication ProtocolIE-ID ::= 245

 id-TNGFIdentityInformation ProtocolIE-ID ::= 246

 id-TWIFIdentityInformation ProtocolIE-ID ::= 247

 id-UserLocationInformationTWIF ProtocolIE-ID ::= 248

 id-DataForwardingResponseERABList ProtocolIE-ID ::= 249

 id-IntersystemSONConfigurationTransferDL ProtocolIE-ID ::= 250

 id-IntersystemSONConfigurationTransferUL ProtocolIE-ID ::= 251

 id-SONInformationReport ProtocolIE-ID ::= 252

 id-UEHistoryInformationFromTheUE ProtocolIE-ID ::= 253

 id-ManagementBasedMDTPLMNList ProtocolIE-ID ::= 254

 id-MDTConfiguration ProtocolIE-ID ::= 255

 id-PrivacyIndicator ProtocolIE-ID ::= 256

 id-TraceCollectionEntityURI ProtocolIE-ID ::= 257

 id-NPN-Support ProtocolIE-ID ::= 258

 id-NPN-AccessInformation ProtocolIE-ID ::= 259

 id-NPN-PagingAssistanceInformation ProtocolIE-ID ::= 260

 id-NPN-MobilityInformation ProtocolIE-ID ::= 261

 id-TargettoSource-Failure-TransparentContainer ProtocolIE-ID ::= 262

 id-NID ProtocolIE-ID ::= 263

 id-UERadioCapabilityID ProtocolIE-ID ::= 264

 id-UERadioCapability-EUTRA-Format ProtocolIE-ID ::= 265

 id-DAPSRequestInfo ProtocolIE-ID ::= 266

 id-DAPSResponseInfoList ProtocolIE-ID ::= 267

 id-EarlyStatusTransfer-TransparentContainer ProtocolIE-ID ::= 268

 id-NotifySourceNGRANNode ProtocolIE-ID ::= 269

 id-ExtendedSliceSupportList ProtocolIE-ID ::= 270

 id-ExtendedTAISliceSupportList ProtocolIE-ID ::= 271

 id-ConfiguredTACIndication ProtocolIE-ID ::= 272

 id-Extended-RANNodeName ProtocolIE-ID ::= 273

 id-Extended-AMFName ProtocolIE-ID ::= 274

 id-GlobalCable-ID ProtocolIE-ID ::= 275

 id-QosMonitoringReportingFrequency ProtocolIE-ID ::= 276

 id-QosFlowParametersList ProtocolIE-ID ::= 277

 id-QosFlowFeedbackList ProtocolIE-ID ::= 278

 id-BurstArrivalTimeDownlink ProtocolIE-ID ::= 279

 id-ExtendedUEIdentityIndexValue ProtocolIE-ID ::= 280

 id-PduSessionExpectedUEActivityBehaviour ProtocolIE-ID ::= 281

 id-MicoAllPLMN ProtocolIE-ID ::= 282

 id-QosFlowFailedToSetupList ProtocolIE-ID ::= 283

 id-SourceTNLAddrInfo ProtocolIE-ID ::= 284

 id-ExtendedReportIntervalMDT ProtocolIE-ID ::= 285

 id-SourceNodeID ProtocolIE-ID ::= 286

 id-NRNTNTAIInformation ProtocolIE-ID ::= 287

 id-UEContextReferenceAtSource ProtocolIE-ID ::= 288

 id-LastVisitedPSCellList ProtocolIE-ID ::= 289

 id-IntersystemSONInformationRequest ProtocolIE-ID ::= 290

 id-IntersystemSONInformationResponse ProtocolIE-ID ::= 291

 id-EnergySavingIndication ProtocolIE-ID ::= 292

 id-IntersystemResourceStatusUpdate ProtocolIE-ID ::= 293

 id-SuccessfulHandoverReportList ProtocolIE-ID ::= 294

 id-MBS-AreaSessionID ProtocolIE-ID ::= 295

 id-MBS-QoSFlows-ToBeSetupList ProtocolIE-ID ::= 296

 id-MBS-QoSFlows-ToBeSetupModList ProtocolIE-ID ::= 297

 id-MBS-ServiceArea ProtocolIE-ID ::= 298

 id-MBS-SessionID ProtocolIE-ID ::= 299

 id-MBS-DistributionReleaseRequestTransfer ProtocolIE-ID ::= 300

 id-MBS-DistributionSetupRequestTransfer ProtocolIE-ID ::= 301

 id-MBS-DistributionSetupResponseTransfer ProtocolIE-ID ::= 302

 id-MBS-DistributionSetupUnsuccessfulTransfer ProtocolIE-ID ::= 303

 id-MulticastSessionActivationRequestTransfer ProtocolIE-ID ::= 304

 id-MulticastSessionDeactivationRequestTransfer ProtocolIE-ID ::= 305

 id-MulticastSessionUpdateRequestTransfer ProtocolIE-ID ::= 306

 id-MulticastGroupPagingAreaList ProtocolIE-ID ::= 307

 id-Alternative-SharedNG-U-Multicast-TNL-Information ProtocolIE-ID ::= 308

 id-MBS-SupportIndicator ProtocolIE-ID ::= 309

 id-MBSSessionInformationFailedtoSetupList ProtocolIE-ID ::= 310

 id-MBSSessionInformationFailedtoSetuporModifyList ProtocolIE-ID ::= 311

 id-MBSSessionInformationSetupList ProtocolIE-ID ::= 312

 id-MBSSessionInformationSetuporModifyList ProtocolIE-ID ::= 313

 id-MBSSessionInformationFailureTransfer ProtocolIE-ID ::= 314

 id-MBSSessionInformationRequestTransfer ProtocolIE-ID ::= 315

 id-MBSSessionInformationResponseTransfer ProtocolIE-ID ::= 316

 id-MBSSessionInformationToBeRemoveList ProtocolIE-ID ::= 317

 id-MBSSessionInformationToBeSetupList ProtocolIE-ID ::= 318

 id-MBSSessionInformationToBeSetuporModifyList ProtocolIE-ID ::= 319

 id-MBSSessionStatus ProtocolIE-ID ::= 320

 id-SharedNG-U-Multicast-TNL-Information ProtocolIE-ID ::= 321

 id-SharedNG-U-Unicast-TNL-Information ProtocolIE-ID ::= 322

 id-MBS-SessionInformation-SourcetoTargetList ProtocolIE-ID ::= 323

 id-MBS-SessionInformation-TargettoSourceList ProtocolIE-ID ::= 324

 id-OnboardingSupport ProtocolIE-ID ::= 325

 id-TimeSyncAssistanceInfo ProtocolIE-ID ::= 326

 id-SurvivalTime ProtocolIE-ID ::= 327

 id-QMCConfigInfo ProtocolIE-ID ::= 328

 id-QMCDeactivation ProtocolIE-ID ::= 329

 id-UE-QMC-Capability ProtocolIE-ID ::= 330

 id-PDUSessionPairID ProtocolIE-ID ::= 331

 id-NR-PagingeDRXInformation ProtocolIE-ID ::= 332

 id-RedCapIndication ProtocolIE-ID ::= 333

 id-TargetNSSAIInformation ProtocolIE-ID ::= 334

 id-UESliceMaximumBitRateList ProtocolIE-ID ::= 335

 id-M4ReportAmount ProtocolIE-ID ::= 336

 id-M5ReportAmount ProtocolIE-ID ::= 337

 id-M6ReportAmount ProtocolIE-ID ::= 338

 id-M7ReportAmount ProtocolIE-ID ::= 339

 id-IncludeBeamMeasurementsIndication ProtocolIE-ID ::= 340

 id-M6DelayThreshold ProtocolIE-ID ::= 341

 id-PagingCause ProtocolIE-ID ::= 342

 id-PagingCauseIndicationForVoiceService ProtocolIE-ID ::= 343

 id-PEIPSassistanceInformation ProtocolIE-ID ::= 344

 id-FiveG-ProSeAuthorized ProtocolIE-ID ::= 345

 id-FiveG-ProSeUEPC5AggregateMaximumBitRate ProtocolIE-ID ::= 346

 id-FiveG-ProSePC5QoSParameters ProtocolIE-ID ::= 347

 id-NGAPIESupportInformationRequestList ProtocolIE-ID ::= 990 -- to be assigned

 id-NGAPIESupportInformationResponseList ProtocolIE-ID ::= 991 -- to be assigned

END

-- ASN1STOP

<<<<<<<<<<<<<<<<<<<< End of Changes >>>>>>>>>>>>>>>>>>>>