**3GPP TSG-RAN3 Meeting #120R3-233326**

**Incheon, KR, 22nd – 26th May, 2023**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.423** | **CR** | **1057** | **rev** | **1** | **Current version:** | **17.4.0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
|  | | | | | | | | |

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

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Correction on QoS mapping information | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, Lenovo, Samsung, Nokia, Nokia Shanghai Bell | | | | | | | | | |
| ***Source to TSG:*** | R3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_IAB-Core | | | | |  | ***Date:*** | | | 2023-05-22 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **A** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | In the tabular, the *QoS Mapping Information* IE is included as a child IE of the *GTP tunnel* IE (refer to 9.2.3.30), which corresponds to the *GTPtunnelTransportLayerInformation* in ASN.1 part*.*  In ASN.1 part, the *QoS-Mapping-Information* is included as sub IE of *UPTransportParametersItem*, which corresponds to the *UP Transport Item* IE in the tabular (defined in 9.2.3.76).  However, from the tabular, we can see that the *UP Transport Item* IE is the parent IE of *UP Transport Layer Information* which contains the *GTP tunnel IE* as one option in choice structure.  Therefore, the *QoS-Mapping-Information* IE in ASN.1 was added in wrong place. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Move the *QoS-Mapping-Information* from the *UPTransportParametersItem* to the extension part of *GTPtunnelTransportLayerInformation* in ASN.1 part.  **Impact analysis**  Impact assessment towards the previous version of the specification (same release):  This CR has isolated impact with the previous version of the specification (same release).  This CR has impact on the QoS mapping information exchange function between MN and SN of the IAB node.  The impact can be considered isolated because the change affects only the IAB related procedure.  The changes are non backward compatible. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Incorrect design of *UPTransportParametersItem* and *GTPtunnelTransportLayerInformation,* the QoS of UE’s MN-terminated split bearer/SCG bearer or SN-terminated split bearer/MCG bearer cannot be guaranteed if one CG is served by an IAB node. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 9.3.5 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | R17 mirror is against the TS38.423 in CR1056 | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | Rev 0: Original version submit to RAN3 meeting #120.  Rev 1: revise the Consequences if not approved in the cover page. | | | | | | | | |

#### 9.2.3.30 UP Transport Layer Information

This element is used to provide the transport layer information associated with NG or Xn user plane transport. In this release it corresponds to an IP adress and a GTP Tunnel Endpoint Identifier. When the NR-DC UE is connected with an IAB, the QoS Mapping Information is used to set the IP header of packets in case that the S-NG-RAN node serves the IAB and the packets belonging to MN-terminated split bearer/SCG bearer are transmitted from M-NG-RAN node to S-NG-RAN node, and in case that the M-NG-RAN node serves the IAB and the packets belonging to SN-terminated split bearer/MCG bearer are transmitted from S-NG-RAN node to M-NG-RAN node.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| CHOICE *UP Transport Layer Information* | M |  |  |  |  |  |
| *>GTP tunnel* |  |  |  |  | – |  |
| >>Transport Layer Address | M |  | 9.2.3.29 | The Transport Layer Address is specified in TS 38.424 [19] and TS 38.414 [20]. | – |  |
| >>GTP-TEID | M |  | OCTET STRING (4) | The Tunnel Endpoint Identifier (TEID) is specified in TS 29.281 [18] | – |  |
| >>QoS Mapping Information | O |  | 9.2.3.144 |  | YES | reject |

*Start of Change*

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

9.3.5 Information Element definitions

-- ASN1START

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

--

-- Information Element Definitions

--

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

XnAP-IEs {

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS

id-CNTypeRestrictionsForEquivalent,

id-CNTypeRestrictionsForServing,

id-Additional-UL-NG-U-TNLatUPF-List,

id-ConfiguredTACIndication,

id-AlternativeQoSParaSetList,

id-CurrentQoSParaSetIndex,

id-DefaultDRB-Allowed,

id-DLCarrierList,

id-EndpointIPAddressAndPort,

id-ExtendedReportIntervalMDT,

id-ExtendedTAISliceSupportList,

id-FiveGCMobilityRestrictionListContainer,

id-SecondarydataForwardingInfoFromTarget-List,

id-LastE-UTRANPLMNIdentity,

id-IntendedTDD-DL-ULConfiguration-NR,

id-MaxIPrate-DL,

id-SecurityResult,

id-OldQoSFlowMap-ULendmarkerexpected,

id-PDUSessionCommonNetworkInstance,

id-PDUSession-PairID,

id-BPLMN-ID-Info-EUTRA,

id-BPLMN-ID-Info-NR,

id-DRBsNotAdmittedSetupModifyList,

id-Secondary-MN-Xn-U-TNLInfoatM,

id-ULForwardingProposal,

id-DRB-IDs-takenintouse,

id-SplitSessionIndicator,

id-NonGBRResources-Offered,

id-MDT-Configuration,

id-TraceCollectionEntityURI,

id-NPN-Broadcast-Information,

id-NPNPagingAssistanceInformation,

id-NPNMobilityInformation,

id-NPN-Support,

id-LTEUESidelinkAggregateMaximumBitRate,

id-NRUESidelinkAggregateMaximumBitRate,

id-ExtendedRATRestrictionInformation,

id-QoSMonitoringRequest,

id-QoSMonitoringDisabled,

id-QosMonitoringReportingFrequency,

id-DAPSRequestInfo,

id-OffsetOfNbiotChannelNumberToDL-EARFCN,

id-OffsetOfNbiotChannelNumberToUL-EARFCN,

id-NBIoT-UL-DL-AlignmentOffset,

id-TDDULDLConfigurationCommonNR,

id-CarrierList,

id-ULCarrierList,

id-FrequencyShift7p5khz,

id-SSB-PositionsInBurst,

id-NRCellPRACHConfig,

id-Redundant-UL-NG-U-TNLatUPF,

id-Redundant-DL-NG-U-TNLatNG-RAN,

id-CNPacketDelayBudgetDownlink,

id-CNPacketDelayBudgetUplink,

id-ExtendedPacketDelayBudget,

id-Additional-Redundant-UL-NG-U-TNLatUPF-List,

id-RedundantCommonNetworkInstance,

id-TSCTrafficCharacteristics,

id-RedundantQoSFlowIndicator,

id-Additional-PDCP-Duplication-TNL-List,

id-RedundantPDUSessionInformation,

id-UsedRSNInformation,

id-RLCDuplicationInformation,

id-CSI-RSTransmissionIndication,

id-UERadioCapabilityID,

id-secondary-SN-UL-PDCP-UP-TNLInfo,

id-pdcpDuplicationConfiguration,

id-duplicationActivation,

id-NPRACHConfiguration,

id-QoSFlowsMappedtoDRB-SetupResponse-MNterminated,

id-DL-scheduling-PDCCH-CCE-usage,

id-UL-scheduling-PDCCH-CCE-usage,

id-SFN-Offset,

id-QoS-Mapping-Information,

id-AdditionLocationInformation,

id-dataForwardingInfoFromTargetE-UTRANnode,

id-Cause,

id-SecurityIndication,

id-RRCConnReestab-Indicator,

id-SourceDLForwardingIPAddress,

id-SourceNodeDLForwardingIPAddress,

id-M4ReportAmount,

id-M5ReportAmount,

id-M6ReportAmount,

id-M7ReportAmount,

id-BeamMeasurementIndicationM1,

id-Supported-MBS-FSA-ID-List,

id-MBS-SessionAssociatedInformation,

id-MBS-SessionInformation-List,

id-SliceRadioResourceStatus-List,

id-CompositeAvailableCapacitySupplementaryUplink,

id-SSBOffsets-List,

id-NG-RANnode2SSBOffsetsModificationRange,

id-NR-U-Channel-List,

id-NR-U-ChannelInfo-List,

id-MIMOPRBusageInformation,

id-UEAssistantIdentifier,

id-IAB-MT-Cell-List,

id-NoPDUSessionIndication,

id-permutation,

id-UL-GNB-DU-Cell-Resource-Configuration,

id-DL-GNB-DU-Cell-Resource-Configuration,

id-tdd-GNB-DU-Cell-Resource-Configuration,

id-Additional-Measurement-Timing-Configuration-List,

id-SurvivalTime,

id-Local-NG-RAN-Node-Identifier,

id-Neighbour-NG-RAN-Node-List,

id-FiveGProSeUEPC5AggregateMaximumBitRate,

id-Redcap-Bcast-Information,

id-UESliceMaximumBitRateList,

id-PositioningInformation,

id-ServedCellSpecificInfoReq-NR,

id-TAINSAGSupportList,

id-earlyMeasurement,

id-BeamMeasurementsReportConfiguration,

id-CoverageModificationCause,

id-UERLFReportContainerLTEExtension,

id-ExcessPacketDelayThresholdConfiguration,

maxEARFCN,

maxnoofAllowedAreas,

maxnoofAMFRegions,

maxnoofAoIs,

maxnoofBPLMNs,

maxnoofCAGs,

maxnoofCAGsperPLMN,

maxnoofCellsinAoI,

maxnoofCellsinNG-RANnode,

maxnoofCellsinRNA,

maxnoofCellsinUEHistoryInfo,

maxnoofCellsUEMovingTrajectory,

maxnoofDRBs,

maxnoofEPLMNs,

maxnoofEPLMNsplus1,

maxnoofEUTRABands,

maxnoofEUTRABPLMNs,

maxnoofForbiddenTACs,

maxnoofMBSFNEUTRA,

maxnoofMultiConnectivityMinusOne,

maxnoofNeighbours,

maxnoofNIDs,

maxnoofNRCellBands,

maxnoofPDUSessions,

maxnoofPLMNs,

maxnoofProtectedResourcePatterns,

maxnoofQoSFlows,

maxnoofQoSParaSets,

maxnoofRANAreaCodes,

maxnoofRANAreasinRNA,

maxnoofSCellGroups,

maxnoofSCellGroupsplus1,

maxnoofSliceItems,

maxnoofExtSliceItems,

maxnoofSNPNIDs,

maxnoofsupportedTACs,

maxnoofsupportedPLMNs,

maxnoofTAI,

maxnoofTAIsinAoI,

maxnoofTNLAssociations,

maxnoofUEContexts,

maxNRARFCN,

maxNrOfErrors,

maxnoofRANNodesinAoI,

maxnooftimeperiods,

maxnoofslots,

maxnoofExtTLAs,

maxnoofGTPTLAs,

maxnoofCHOcells,

maxnoofPC5QoSFlows,

maxnoofSSBAreas,

maxnoofNRSCSs,

maxnoofPhysicalResourceBlocks,

maxnoofRACHReports,

maxnoofAdditionalPDCPDuplicationTNL,

maxnoofRLCDuplicationstate,

maxnoofBluetoothName,

maxnoofCellIDforMDT,

maxnoofMDTPLMNs,

maxnoofTAforMDT,

maxnoofWLANName,

maxnoofSensorName,

maxnoofNeighPCIforMDT,

maxnoofFreqforMDT,

maxnoofNonAnchorCarrierFreqConfig,

maxnoofDataForwardingTunneltoE-UTRAN,

maxnoofUEIDIndicesforMBSPaging,

maxnoofMBSFSAs,

maxnoofMBSQoSFlows,

maxnoofMRBs,

maxnoofCellsforMBS,

maxnoofMBSServiceAreaInformation,

maxnoofTAIforMBS,

maxnoofAssociatedMBSSessions,

maxnoofMBSSessions,

maxnoofSuccessfulHOReports,

maxnoofPSCellsPerSN,

maxnoofNR-UChannelIDs,

maxnoofCellsinCHO,

maxnoofCHOexecutioncond,

maxnoofServingCells,

maxnoofBHInfo,

maxnoofTLAsIAB,

maxnoofTrafficIndexEntries,

maxnoofBAPControlPDURLCCHs,

maxnoofServedCellsIAB,

maxnoofDUFSlots,

maxnoofSymbols,

maxnoofHSNASlots,

maxnoofRBsetsPerCell,

maxnoofChildIABNodes,

maxnoofIABSTCInfo,

maxnoofPSCellCandidates,

maxnoofTargetSNs,

maxnoofUEAppLayerMeas,

maxnoofSNSSAIforQMC,

maxnoofCellIDforQMC,

maxnoofPLMNforQMC,

maxnoofTAforQMC,

maxnoofMTCItems,

maxnoofCSIRSconfigurations,

maxnoofCSIRSneighbourCells,

maxnoofCSIRSneighbourCellsInMTC,

maxnoofNeighbour-NG-RAN-Nodes,

maxnoofSRBs,

maxnoofSMBR,

maxnoofNSAGs,

maxnoofRBsetsPerCell1,

maxnoofTargetSNsMinusOne,

maxnoofThresholdsForExcessPacketDelay

FROM XnAP-Constants

Criticality,

ProcedureCode,

ProtocolIE-ID,

TriggeringMessage

FROM XnAP-CommonDataTypes

ProtocolExtensionContainer{},

ProtocolIE-Single-Container{},

XNAP-PROTOCOL-EXTENSION,

XNAP-PROTOCOL-IES

FROM XnAP-Containers;

>>>>>>>>>>>>>>>unchanged parts are skipped<<<<<<<<<<<<<<<

-- G

GBRQoSFlowInfo ::= SEQUENCE {

maxFlowBitRateDL BitRate,

maxFlowBitRateUL BitRate,

guaranteedFlowBitRateDL BitRate,

guaranteedFlowBitRateUL BitRate,

notificationControl ENUMERATED {notification-requested, ...} OPTIONAL,

maxPacketLossRateDL PacketLossRate OPTIONAL,

maxPacketLossRateUL PacketLossRate OPTIONAL,

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

...

}

GBRQoSFlowInfo-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

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

...

}

GlobalgNB-ID ::= SEQUENCE {

plmn-id PLMN-Identity,

gnb-id GNB-ID-Choice,

iE-Extensions ProtocolExtensionContainer { {GlobalgNB-ID-ExtIEs} } OPTIONAL,

...

}

GlobalgNB-ID-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

...

}

GNB-DU-Cell-Resource-Configuration ::= SEQUENCE {

subcarrierSpacing SSB-subcarrierSpacing,

dUFTransmissionPeriodicity DUFTransmissionPeriodicity OPTIONAL,

dUF-Slot-Config-List DUF-Slot-Config-List OPTIONAL,

hSNATransmissionPeriodicity HSNATransmissionPeriodicity,

hNSASlotConfigList HSNASlotConfigList OPTIONAL,

rBsetConfiguration RBsetConfiguration OPTIONAL,

freqDomainHSNAconfiguration-List FreqDomainHSNAconfiguration-List OPTIONAL,

nACellResourceConfigurationList NACellResourceConfigurationList OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { GNB-DU-Cell-Resource-Configuration-ExtIEs } } OPTIONAL,

...

}

GNB-DU-Cell-Resource-Configuration-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

...

}

GNB-ID-Choice ::= CHOICE {

gnb-ID BIT STRING (SIZE(22..32)),

choice-extension ProtocolIE-Single-Container { {GNB-ID-Choice-ExtIEs} }

}

GNB-ID-Choice-ExtIEs XNAP-PROTOCOL-IES ::= {

...

}

GNB-RadioResourceStatus ::= SEQUENCE {

ssbAreaRadioResourceStatus-List SSBAreaRadioResourceStatus-List,

iE-Extensions ProtocolExtensionContainer { { GNB-RadioResourceStatus-ExtIEs} } OPTIONAL,

...

}

GNB-RadioResourceStatus-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

{ ID id-SliceRadioResourceStatus-List CRITICALITY ignore EXTENSION SliceRadioResourceStatus-List PRESENCE optional }|

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

...

}

GlobalCell-ID ::= SEQUENCE {

plmn-id PLMN-Identity,

cell-type Cell-Type-Choice,

iE-Extensions ProtocolExtensionContainer { { GlobalCell-ID-ExtIEs} } OPTIONAL,

...

}

GlobalCell-ID-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

...

}

GlobalngeNB-ID ::= SEQUENCE {

plmn-id PLMN-Identity,

enb-id ENB-ID-Choice,

iE-Extensions ProtocolExtensionContainer { {GlobaleNB-ID-ExtIEs} } OPTIONAL,

...

}

GlobaleNB-ID-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

...

}

ENB-ID-Choice ::= CHOICE {

enb-ID-macro BIT STRING (SIZE(20)),

enb-ID-shortmacro BIT STRING (SIZE(18)),

enb-ID-longmacro BIT STRING (SIZE(21)),

choice-extension ProtocolIE-Single-Container { {ENB-ID-Choice-ExtIEs} }

}

ENB-ID-Choice-ExtIEs XNAP-PROTOCOL-IES ::= {

...

}

GlobalNG-RANCell-ID ::= SEQUENCE {

plmn-id PLMN-Identity,

ng-RAN-Cell-id NG-RAN-Cell-Identity,

iE-Extensions ProtocolExtensionContainer { {GlobalNG-RANCell-ID-ExtIEs} } OPTIONAL,

...

}

GlobalNG-RANCell-ID-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

...

}

GlobalNG-RANNode-ID ::= CHOICE {

gNB GlobalgNB-ID,

ng-eNB GlobalngeNB-ID,

choice-extension ProtocolIE-Single-Container { {GlobalNG-RANNode-ID-ExtIEs} }

}

GlobalNG-RANNode-ID-ExtIEs XNAP-PROTOCOL-IES ::= {

...

}

GTP-TEID ::= OCTET STRING (SIZE(4))

GTPtunnelTransportLayerInformation ::= SEQUENCE {

tnl-address TransportLayerAddress,

gtp-teid GTP-TEID,

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

...

}

GTPtunnelTransportLayerInformation-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

{ID id-QoS-Mapping-Information CRITICALITY reject EXTENSION QoS-Mapping-Information PRESENCE optional},

...

}

GUAMI ::= SEQUENCE {

plmn-ID PLMN-Identity,

amf-region-id BIT STRING (SIZE (8)),

amf-set-id BIT STRING (SIZE (10)),

amf-pointer BIT STRING (SIZE (6)),

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

...

}

GUAMI-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

...

}

>>>>>>>>>>>>>>>unchanged parts are skipped<<<<<<<<<<<<<<<

-- U

UEAggregateMaximumBitRate ::= SEQUENCE {

dl-UE-AMBR BitRate,

ul-UE-AMBR BitRate,

iE-Extension ProtocolExtensionContainer { {UEAggregateMaximumBitRate-ExtIEs} } OPTIONAL,

...

}

UEAggregateMaximumBitRate-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

...

}

UEAppLayerMeasConfigInfo ::= SEQUENCE {

qOEReference QOEReference,

qOEMeasConfigAppLayerID QOEMeasConfAppLayerID OPTIONAL,

serviceType ServiceType,

qOEMeasStatus QOEMeasStatus OPTIONAL,

containerAppLayerMeasConfig ContainerAppLayerMeasConfig OPTIONAL,

mDTAlignmentInfo MDTAlignmentInfo OPTIONAL,

measCollectionEntityIPAddress MeasCollectionEntityIPAddress OPTIONAL,

areaScopeOfQMC AreaScopeOfQMC OPTIONAL,

s-NSSAIListQoE S-NSSAIListQoE OPTIONAL,

availableRVQoEMetrics AvailableRVQoEMetrics OPTIONAL,

iE-Extension ProtocolExtensionContainer { {UEAppLayerMeasConfigInfo-ExtIEs} } OPTIONAL,

...

}

UEAppLayerMeasConfigInfo-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

...

}

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

UEContextID ::= CHOICE {

rRCResume UEContextIDforRRCResume,

rRRCReestablishment UEContextIDforRRCReestablishment,

choice-extension ProtocolIE-Single-Container { {UEContextID-ExtIEs} }

}

UEContextID-ExtIEs XNAP-PROTOCOL-IES ::= {

...

}

UEContextIDforRRCResume ::= SEQUENCE {

i-rnti I-RNTI,

allocated-c-rnti C-RNTI,

accessPCI NG-RAN-CellPCI,

iE-Extension ProtocolExtensionContainer { {UEContextIDforRRCResume-ExtIEs} } OPTIONAL,

...

}

UEContextIDforRRCResume-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

...

}

UEContextIDforRRCReestablishment ::= SEQUENCE {

c-rnti C-RNTI,

failureCellPCI NG-RAN-CellPCI,

iE-Extension ProtocolExtensionContainer { {UEContextIDforRRCReestablishment-ExtIEs} } OPTIONAL,

...

}

UEContextIDforRRCReestablishment-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

...

}

UEContextInfoRetrUECtxtResp ::= SEQUENCE {

ng-c-UE-signalling-ref AMF-UE-NGAP-ID,

signalling-TNL-at-source CPTransportLayerInformation,

ueSecurityCapabilities UESecurityCapabilities,

securityInformation AS-SecurityInformation,

ue-AMBR UEAggregateMaximumBitRate,

pduSessionResourcesToBeSetup-List PDUSessionResourcesToBeSetup-List,

rrc-Context OCTET STRING,

mobilityRestrictionList MobilityRestrictionList OPTIONAL,

indexToRatFrequencySelectionPriority RFSP-Index OPTIONAL,

iE-Extension ProtocolExtensionContainer { {UEContextInfoRetrUECtxtResp-ExtIEs} } OPTIONAL,

...

}

UEContextInfoRetrUECtxtResp-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

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

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

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

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

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

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

{ ID id-FiveGProSeUEPC5AggregateMaximumBitRate CRITICALITY ignore EXTENSION NRUESidelinkAggregateMaximumBitRate PRESENCE optional }|

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

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

...

}

UEHistoryInformation ::= SEQUENCE (SIZE(1..maxnoofCellsinUEHistoryInfo)) OF LastVisitedCell-Item

UEHistoryInformationFromTheUE ::= CHOICE {

nR NRMobilityHistoryReport,

choice-extension ProtocolIE-Single-Container { {UEHistoryInformationFromTheUE-ExtIEs} }

}

UEHistoryInformationFromTheUE-ExtIEs XNAP-PROTOCOL-IES ::= {

...

}

UEIdentityIndexValue ::= CHOICE {

indexLength10 BIT STRING (SIZE(10)),

choice-extension ProtocolIE-Single-Container { {UEIdentityIndexValue-ExtIEs} }

}

UEIdentityIndexValue-ExtIEs XNAP-PROTOCOL-IES ::= {

...

}

UEIdentityIndexList-MBSGroupPaging ::= SEQUENCE (SIZE(1..maxnoofUEIDIndicesforMBSPaging)) OF UEIdentityIndexList-MBSGroupPaging-Item

UEIdentityIndexList-MBSGroupPaging-Item ::= SEQUENCE {

ueIdentityIndexList-MBSGroupPagingValue UEIdentityIndexList-MBSGroupPagingValue,

pagingDRX UESpecificDRX OPTIONAL,

iE-Extension ProtocolExtensionContainer { {UEIdentityIndexList-MBSGroupPaging-Item-ExtIEs} } OPTIONAL,

...

}

UEIdentityIndexList-MBSGroupPaging-Item-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

...

}

UEIdentityIndexList-MBSGroupPagingValue ::= CHOICE {

uEIdentityIndexValueMBSGroupPaging BIT STRING (SIZE(10)),

choice-extension ProtocolIE-Single-Container { {UEIdentityIndexValueMBSGroupPaging-ExtIEs} }

}

UEIdentityIndexValueMBSGroupPaging-ExtIEs XNAP-PROTOCOL-IES ::= {

...

}

UERadioCapabilityForPaging ::= SEQUENCE {

uERadioCapabilityForPagingOfNR UERadioCapabilityForPagingOfNR OPTIONAL,

uERadioCapabilityForPagingOfEUTRA UERadioCapabilityForPagingOfEUTRA OPTIONAL,

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

...

}

UERadioCapabilityForPaging-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

...

}

UERadioCapabilityForPagingOfNR ::= OCTET STRING

UERadioCapabilityForPagingOfEUTRA ::= OCTET STRING

UERadioCapabilityID ::= OCTET STRING

UERANPagingIdentity ::= CHOICE {

i-RNTI-full BIT STRING ( SIZE (40)),

choice-extension ProtocolIE-Single-Container { {UERANPagingIdentity-ExtIEs} }

}

UERANPagingIdentity-ExtIEs XNAP-PROTOCOL-IES ::= {

...

}

UERLFReportContainer ::= CHOICE {

nR-UERLFReportContainer UERLFReportContainerNR,

lTE-UERLFReportContainer UERLFReportContainerLTE,

choice-Extension ProtocolIE-Single-Container { {UERLFReportContainer-ExtIEs} }

}

UERLFReportContainer-ExtIEs XNAP-PROTOCOL-IES ::= {

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

...

}

UERLFReportContainerLTE ::= OCTET STRING

-- This IE is a transparent container and includes the *RLF-Report-r9* IE contained in the *UEInformationResponse* message as defined in TS 36.331 [14].

UERLFReportContainerLTEExtension ::= SEQUENCE {

ueRLFReportContainerLTE UERLFReportContainerLTE,

ueRLFReportContainerLTEExtendBand UERLFReportContainerLTEExtendBand,

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

...

}

UERLFReportContainerLTEExtendBand ::= OCTET STRING

-- This IE is a transparent container and includes the *rLF-Report-v9e0* contained in the *UEInformationResponse* message as defined in TS 36.331 [14].

UERLFReportContainerLTEExtension-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

...

}

UERLFReportContainerNR ::= OCTET STRING

-- This IE is a transparent container and includes the *nr-RLF-Report-r*16 IE contained in the *UEInformationResponse* message as defined in TS 38.331 [10].

UESliceMaximumBitRateList ::= SEQUENCE (SIZE(1.. maxnoofSMBR)) OF UESliceMaximumBitRate-Item

UESliceMaximumBitRate-Item ::= SEQUENCE {

s-NSSAI S-NSSAI,

dl-UE-Slice-MBR BitRate,

ul-UE-Slice-MBR BitRate,

iE-Extensions ProtocolExtensionContainer { { UESliceMaximumBitRate-Item-ExtIEs} } OPTIONAL,

...

}

UESliceMaximumBitRate-Item-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

...

}

UESecurityCapabilities ::= SEQUENCE {

nr-EncyptionAlgorithms BIT STRING {nea1-128(1),

nea2-128(2),

nea3-128(3)} (SIZE(16, ...)),

nr-IntegrityProtectionAlgorithms BIT STRING {nia1-128(1),

nia2-128(2),

nia3-128(3)} (SIZE(16, ...)),

e-utra-EncyptionAlgorithms BIT STRING {eea1-128(1),

eea2-128(2),

eea3-128(3)} (SIZE(16, ...)),

e-utra-IntegrityProtectionAlgorithms BIT STRING {eia1-128(1),

eia2-128(2),

eia3-128(3)} (SIZE(16, ...)),

iE-Extension ProtocolExtensionContainer { {UESecurityCapabilities-ExtIEs} } OPTIONAL,

...

}

UESecurityCapabilities-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

...

}

UESpecificDRX ::= ENUMERATED {

v32,

v64,

v128,

v256,

...

}

ULConfiguration::= SEQUENCE {

uL-PDCP UL-UE-Configuration,

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

...

}

ULConfiguration-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

...

}

UL-UE-Configuration::= ENUMERATED {no-data, shared, only, ...}

ULF1Terminating-BHInfo ::= SEQUENCE {

ingressBAPRoutingID BAPRoutingID,

ingressBHRLCCHID BHRLCChannelID,

iE-Extensions ProtocolExtensionContainer { { ULF1Terminating-BHInfo-ExtIEs} } OPTIONAL,

...

}

ULF1Terminating-BHInfo-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

...

}

ULNonF1Terminating-BHInfo ::= SEQUENCE {

egressBAPRoutingID BAPRoutingID,

egressBHRLCCHID BHRLCChannelID,

nexthopBAPAddress BAPAddress,

iE-Extensions ProtocolExtensionContainer { { ULNonF1Terminating-BHInfo-ExtIEs} } OPTIONAL,

...

}

ULNonF1Terminating-BHInfo-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

...

}

ULForwarding ::= ENUMERATED {ul-forwarding-proposed, ...}

ULForwardingProposal ::= ENUMERATED {ul-forwarding-proposed, ...}

UL-GBR-PRB-usage::= INTEGER (0..100)

UL-GBR-PRB-usage-for-MIMO::= INTEGER (0..100)

UL-non-GBR-PRB-usage::= INTEGER (0..100)

UL-non-GBR-PRB-usage-for-MIMO::= INTEGER (0..100)

UL-Total-PRB-usage::= INTEGER (0..100)

UL-Total-PRB-usage-for-MIMO::= INTEGER (0..100)

UPTransportLayerInformation ::= CHOICE {

gtpTunnel GTPtunnelTransportLayerInformation,

choice-extension ProtocolIE-Single-Container { {UPTransportLayerInformation-ExtIEs} }

}

UPTransportLayerInformation-ExtIEs XNAP-PROTOCOL-IES ::= {

...

}

UPTransportParameters ::= SEQUENCE (SIZE(1..maxnoofSCellGroupsplus1)) OF UPTransportParametersItem

UPTransportParametersItem ::= SEQUENCE {

upTNLInfo UPTransportLayerInformation,

cellGroupID CellGroupID,

iE-Extension ProtocolExtensionContainer { {UPTransportParametersItem-ExtIEs} } OPTIONAL,

...

}

UPTransportParametersItem-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

...

}

UserPlaneTrafficActivityReport ::= ENUMERATED {inactive, re-activated, ...}

URIaddress ::= VisibleString

*End of Change*