**3GPP TSG-RAN WG3 #117bis-eR3-225966**

**Online, 10th - 18th October 2022 was R3-225448**

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| --- |
| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **38.473** | **CR** |  | **rev** | **1** | **Current version:** | **17.2.0** |  |
|  |
| *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:***  | Introduction of multicast MBS session status in Multicast Context Management messages |
|  |  |
| ***Source to WG:*** | Ericsson, AT&T  |
| ***Source to TSG:*** | R3 |
|  |  |
| ***Work item code:*** | NR\_MBS-Core |  | ***Date:*** | 2022-09-27 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***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 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:*** | Discussions at RAN3#117 made it apparent, that an MBS Session context in the gNB-DU may exist for a multicast session during an inactive multicast MBS Session.In order to support such deployment, the gNB-DU would not be aware of the multicast MBS Session state as compared to deplyoments which keep the MBS Session context in the gNB-DU only in case of active MBS Sessions and would consequently not be able to perform admission control for the MBS Session Resources at multicast MBS Session activation.Therefore this CR introduces the MBS Session Status in appropriate Mulitcast Context Management messages. |
|  |  |
| ***Summary of change:*** | A new “MBS Session Status” is introduced, mandatory in the MULTICAST CONTEXT SETUP REQUEST message and optional in the MULTICAST CONTEXT MODIFICATION REQUEST message.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) because it introduces corrects the F1AP part of the multicast MBS Session Context handling in the gNB-DU.The impact can be considered isolated because the change affects only the F1AP part of the multicast MBS Session Context function in the gNB-DU.This CR changes ASN.1 in a non-backwards compatible way. |
|  |  |
| ***Consequences if not approved:*** | F1AP would not be able support to keep an MBS Session context in the gNB-DU for a multicast session during an inactive multicast MBS Session and perform admission control upon session activation. |
|  |  |
| ***Clauses affected:*** | 8.4.16.2, 8.4.16.3, 8.14.9.2, 9.2.14.2, 9.2.14.7, 9.3.1.x (new), 9.4.4, 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:*** | r0: submission to R3-117bis-er1: modifications along discussions |

<<<<<<<<<<<<<<<<<<<< First Change >>>>>>>>>>>>>>>>>>>>

### 8.14.6 Multicast Context Setup

#### 8.14.6.1 General

The purpose of the Multicast Context Setup procedure is to establish an MBS Session context in the gNB-DU for a multicast session.

The procedure uses MBS-associated signalling.

#### 8.14.6.2 Successful Operation



Figure 8.14.6.2-1: Multicast Context Setup procedure: Successful Operation

The gNB-CU initiates the procedure by sending MULTICAST CONTEXT SETUP REQUEST message to the gNB-DU. If the gNB-DU succeeds to establish the multicast MBS Session context, it replies to the gNB-CU with MULTICAST CONTEXT SETUP RESPONSE.

If the MBS Session Status IE in the MULTICAST CONTEXT SETUP REQUEST message is set to "activated" and the gNB-DU is able to activate respective MBS Session Resources it shall respond with the MULTICAST CONTEXT SESSION RESPONSE message.

If the *MBS Service Area* IE is included in the MULTICAST CONTEXT SETUP REQUEST message, the gNB-DU shall take this information into account for shared F1-U tunnel assignment.

The gNB-DU shall report to the gNB-CU, in the MULTICAST CONTEXT SETUP RSPONSE message, the result of all the requested Multicast MRBs in the following way:

- A list of MRBs which have been successfully established shall be included in the *Multicast MRB Setup List* IE;

- A list of MRBs which failed to be established shall be included in the *Multicast MRB Failed To Be Setup List* IE;

If the *Multicast MRB Failed To Setup List* IE is contained in the MULTICAST CONTEXT SETUP RESPONSE message, the gNB-CU shall regard the Multicast MRB(s) failed to be setup with an appropriate cause value for each Multicast MRB failed to setup.

**Interaction with the Multicast Distribution Context Setup procedure:**

Upon reception of the MULTICAST CONTEXT SETUP REQUEST procedure, the gNB-DU shall trigger either per cell or per MBS Area Session ID or for the whole gNB-DU the Multicast Distribution Context Setup procedure to establish per cell or per MBS Area Session ID or the the whole gNB DU per accepted MRB a shared F1-U tunnel.

#### 8.14.6.3 Unsuccessful Operation



Figure 8.14.6.3-1: Multicast Context Setup procedure: unsuccessful Operation

If the gNB-DU is not able to establish the MBS session context as requested it shall consider the procedure as failed and reply with the MULTICAST CONTEXT SETUP FAILURE message.

#### 8.14.6.4 Abnormal Conditions

Not applicable.

<<<<<<<<<<<<<<<<<<<< First Change >>>>>>>>>>>>>>>>>>>>

#### 8.14.9.1 General

The purpose of the Multicast Context Modification procedure is to modify an established MBS session context in the gNB-DU for a multicast session.

The procedure uses MBS-associated signalling.

#### 8.14.9.2 Successful Operation



Figure 8.14.9.2-1: Multicast Context Modification procedure. Successful operation

The MULTICAST CONTEXT MODIFICATION REQUEST message is initiated by the gNB-CU.

Upon reception of the MULTICAST CONTEXT MODIFICATION REQUEST message, the gNB-DU shall perform the modifications, and, if successful, report the update in the MULTICAST CONTEXT MODIFICATION RESPONSE message.

If the *MBS Session Status* IE set to "activated" is included in the MULTICAST CONTEXT MODIFICATION REQUEST message and if the gNB-DU is able to activate respective MBS Session Resources it shall repond with the MULTICAST CONTEXT MODIFICATION RESPONSE message. If the *MBS Session Status* IE set to "deactivated" is included in the MULTICAST CONTEXT MODIFICATION REQUEST message and the respective MBS Session Resources are activated the gNB-DU shall deactivate respective MBS Session Resources.

If the *Multicast MRB To Be Setup List* IE is contained in the MULTICAST CONTEXT MODIFICATION REQUEST message, the gNB-DU shall setup the corresponding resources for the requested MRB(s), and report to the gNB-CU, in the MULTICAST CONTEXT MODIFICATION RESPONSE message, the result of all the requested Multicast MRBs in the following way:

- A list of MRBs which have been successfully established shall be included in the *Multicast MRB Setup List* IE;

- A list of MRBs which failed to be established shall be included in the *Multicast MRB Failed To Be Setup List* IE;

If the *Multicast MRB Failed To Be Setup List* IE is contained in the MULTICAST CONTEXT MODIFICATION RESPONSE message, the gNB-CU shall regard the setup of the indicated MRB(s) as failed and indicated the resource for the failure with an appropriate cause value for each MRB failed to be setup.

If the *Multicast MRB To Be Modified List* IE is contained in the MULTICAST CONTEXT MODIFICATION REQUEST message, the gNB-DU shall update the corresponding context and resources for the requested MRB(s), and report to the gNB-CU, in the MULTICAST CONTEXT MODIFICATION RESPONSE message, the modification result of all the requested Multicast MRBs in the following way:

- A list of MRBs which have been successfully modified shall be included in the *Multicast MRB Modified List* IE;

- A list of MRBs which failed to be modified shall be included in the *Multicast MRB Failed To Be Modified List* IE;

If the *Multicast MRB Failed To Be Modified List* IE is contained in the MULTICAST CONTEXT MODIFICATION RESPONSE message, the gNB-CU shall regard the Multicast MRB(s) failed to be modified with an appropriate cause value for each Multicast MRB failed to modify.

#### 8.14.9.3 Unsuccessful Operation



Figure 8.14.9.3-1: Multicast Context Modification procedure. Unsuccessful operation

In case none of the requested modifications of the multicast context can be successfully performed, the gNB-DU shall respond with the MULTICAST CONTEXT MODIFICATION FAILURE message with an appropriate cause value.

#### 8.14.9.4 Abnormal Conditions

Not applicable.

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

#### 9.2.14.2 MULTICAST CONTEXT SETUP REQUEST

This message is sent by the gNB-CU to request the setup of an MBS session context for a multicast session, and establish an MBS-associated logical F1-connection.

Direction: gNB-CU → gNB-DU.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| --- | --- | --- | --- | --- | --- | --- |
| Message Type | M |  | 9.3.1.1 |  | YES | reject |
| gNB-CU MBS F1AP ID | M |  | 9.3.1.219 |  | YES | reject |
| MBS Session ID | M |  | 9.3.1.218 |  | YES | reject |
| MBS Session Status | M |  | 9.3.1.x |  | YES | reject |
| MBS Service Area | O |  | 9.3.1.222 |  | YES | reject |
| S-NSSAI | M |  | 9.3.1.38 |  | YES | reject |
| **Multicast MRBs To Be Setup List** |  | *1* |  |  | YES | reject |
| **>Multicast MRBs to Be Setup Item IEs** |  | *1 .. <maxnoofMRBs>* |  |  | EACH | reject |
| >>MRB ID | M |  | MRB ID9.3.1.224 |  | - |  |
| >>MRB QoS Information | M |  | 9.3.1.45 |  | - |  |
| **>>MBS QoS Flows Mapped to MRB Item** |  | *1 .. <maxnoofMBSQoSFlows>* |  |  | - |  |
| >>>MBS QoS Flow Identifier | M |  | 9.3.1.63 |  | - |  |
| >>>MBS QoS Flow Level QoS Parameters | M |  | 9.3.1.45 |  | - |  |
| >>DL PDCP SN Length | M |  | ENUMERATED (12bits, 18bits, ...) |  | - |  |

|  |  |
| --- | --- |
| Range bound | Explanation |
| *maxnoofMRBs* | Maximum no. of MRB allowed to be setup for one MBS Session, the maximum value is 32. |
| *maxnoofMBSQoSFlows* | Maximum no. of flows allowed to be mapped to one MRB, the maximum value is 64. |

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

#### 9.2.14.7 MULTICAST CONTEXT MODIFICATION REQUEST

This message is sent by the gNB-CU to request the gNB-DU to modify multicast context information.

Direction: gNB-CU → gNB-DU

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| --- | --- | --- | --- | --- | --- | --- |
| Message Type | M |  | 9.3.1.1 |  | YES | reject |
| gNB-CU MBS F1AP ID | M |  | 9.3.1.219 |  | YES | reject |
| gNB-DU MBS F1AP ID | M |  | 9.3.1.220 |  | YES | reject |
| MBS Service Area | O |  | 9.3.1.222 |  | YES | reject |
| MBS Session Status | O |  | 9.3.1.x |  | YES | reject |
| **Multicast MRB To Be Setup List** |  | *0..1* |  |  | YES | reject |
| **>Multicast MRB to Be Setup Item IEs** |  | *1 .. <maxnoofMRBs>* |  |  | EACH | reject |
| >>MRB ID | M |  | 9.3.1.224 |  | - |  |
| >>MRB QoS Information | M |  | 9.3.1.45 |  | - |  |
| **>>MBS QoS Flows Mapped to MRB Item** |  | *1 .. <maxnoofMBSQoSFlows>* |  |  | - |  |
| >>>MBS QoS Flow Identifier | M |  | 9.3.1.63 |  | - |  |
| >>>MBS QoS Flow Level QoS Parameters | M |  | 9.3.1.45 |  | - |  |
| >>DL PDCP SN Length | M |  | ENUMERATED (12bits, 18bits, ...) |  | - |  |
| **Multicast MRB To Be Modified List** |  | *0..1* |  |  | YES | reject |
| **>Multicast MRB to Be Modified Item IEs** |  | *1 .. <maxnoofMRBs>* |  |  | EACH | reject |
| >>MRB ID | M |  | 9.3.1.224 |  | - |  |
| >>MRB QoS Information | O |  | DRB QoS9.3.1.45 |  | - |  |
| **>>MBS QoS Flows Mapped to MRB Item** |  | *0 .. <maxnoofMBSQoSFlows>* |  |  | - |  |
| >>>MBS QoS Flow Identifier | M |  | 9.3.1.63 |  | - |  |
| >>>MBS QoS Flow Level QoS Parameters | M |  | 9.3.1.45 |  | - |  |
| >>DL PDCP SN Length | O |  | ENUMERATED (12bits, 18bits, ...) |  | - |  |
| **Multicast MRB To Be Released List** |  | *0..1* |  |  | YES | reject |
| **>Multicast MRB to Be Released Item IEs** |  | *1 .. <maxnoofMRBs>* |  |  | YES | reject |
| >>MRB ID | M |  | 9.3.1.224 |  | - |  |

|  |  |
| --- | --- |
| Range bound | Explanation |
| *maxnoofMRBs* | Maximum no. of MRB allowed to be setup for one MBS Session, the maximum value is 32. |
| *maxnoofMBSQoSFlows* | Maximum no. of flows allowed to be mapped to one MRB, the maximum value is 64. |

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

#### 9.3.1.x MBS Session Status

This IE indicates whether the MBS session is activated or deactivated.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| MBS Session Status | M |  | ENUMERATED (activated, deactivated, …) |  |

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

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

### 9.4.4 PDU Definitions

-- ASN1START

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

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-- PDU definitions for F1AP.

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

F1AP-PDU-Contents {

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

ngran-access (22) modules (3) f1ap (3) version1 (1) f1ap-PDU-Contents (1) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

--

-- IE parameter types from other modules.

--

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

IMPORTS

 BroadcastMRBs-FailedToBeModified-Item,

 BroadcastMRBs-FailedToBeSetup-Item,

 BroadcastMRBs-FailedToBeSetupMod-Item,

 BroadcastMRBs-Modified-Item,

 BroadcastMRBs-Setup-Item,

 BroadcastMRBs-SetupMod-Item,

 BroadcastMRBs-ToBeModified-Item,

 BroadcastMRBs-ToBeReleased-Item,

 BroadcastMRBs-ToBeSetup-Item,

 BroadcastMRBs-ToBeSetupMod-Item,

 Candidate-SpCell-Item,

 Cause,

 Cells-Failed-to-be-Activated-List-Item,

 Cells-Status-Item,

 Cells-to-be-Activated-List-Item,

 Cells-to-be-Deactivated-List-Item,

 CellULConfigured,

 CriticalityDiagnostics,

 C-RNTI,

 CUtoDURRCInformation,

 DRB-Activity-Item,

 DRBID,

 DRBs-FailedToBeModified-Item,

 DRBs-FailedToBeSetup-Item,

 DRBs-FailedToBeSetupMod-Item,

 DRB-Notify-Item,

 DRBs-ModifiedConf-Item,

 DRBs-Modified-Item,

 DRBs-Required-ToBeModified-Item,

 DRBs-Required-ToBeReleased-Item,

 DRBs-Setup-Item,

 DRBs-SetupMod-Item,

 DRBs-ToBeModified-Item,

 DRBs-ToBeReleased-Item,

 DRBs-ToBeSetup-Item,

 DRBs-ToBeSetupMod-Item,

 DRXCycle,

 DRXConfigurationIndicator,

 DUtoCURRCInformation,

 EUTRANQoS,

 ExecuteDuplication,

 FullConfiguration,

 GNB-CU-MBS-F1AP-ID,

 GNB-CU-UE-F1AP-ID,

 GNB-DU-MBS-F1AP-ID,

 GNB-DU-UE-F1AP-ID,

 GNB-DU-ID,

 GNB-DU-Served-Cells-Item,

 GNB-DU-System-Information,

 GNB-CU-Name,

 GNB-DU-Name,

 InactivityMonitoringRequest,

 InactivityMonitoringResponse,

 LowerLayerPresenceStatusChange,

 MBS-Area-Session-ID,

 MBS-CUtoDURRCInformation,

 MBSMulticastF1UContextDescriptor,

 MBS-Session-ID,

 MBS-ServiceArea,

 MBS-SessionStatus,

 MulticastF1UContext-ToBeSetup-Item,

 MulticastF1UContext-Setup-Item,

 MulticastF1UContext-FailedToBeSetup-Item,

 MulticastMBSSessionList,

 MulticastMRBs-ToBeSetup-Item,

 MulticastMRBs-Setup-Item,

 MulticastMRBs-FailedToBeSetup-Item,

 MulticastMRBs-ToBeSetupMod-Item,

 MulticastMRBs-ToBeModified-Item,

 MulticastMRBs-ToBeReleased-Item,

 MulticastMRBs-SetupMod-Item,

 MulticastMRBs-FailedToBeSetupMod-Item,

 MulticastMRBs-Modified-Item,

 MulticastMRBs-FailedToBeModified-Item,

 BroadcastAreaScope,

 NotificationControl,

 NRCGI,

 NRPCI,

 UEContextNotRetrievable,

 Potential-SpCell-Item,

 RAT-FrequencyPriorityInformation,

 RequestedSRSTransmissionCharacteristics,

 ResourceCoordinationTransferContainer,

 RRCContainer,

 RRCContainer-RRCSetupComplete,

 RRCReconfigurationCompleteIndicator,

 SCellIndex,

 SCell-ToBeRemoved-Item,

 SCell-ToBeSetup-Item,

 SCell-ToBeSetupMod-Item,

 SCell-FailedtoSetup-Item,

 SCell-FailedtoSetupMod-Item,

 ServCellIndex,

 Served-Cell-Information,

 Served-Cells-To-Add-Item,

 Served-Cells-To-Delete-Item,

 Served-Cells-To-Modify-Item,

 ServingCellMO,

 SNSSAI,

 SRBID,

 SRBs-FailedToBeSetup-Item,

 SRBs-FailedToBeSetupMod-Item,

 SRBs-Required-ToBeReleased-Item,

 SRBs-ToBeReleased-Item,

 SRBs-ToBeSetup-Item,

 SRBs-ToBeSetupMod-Item,

 SRBs-Modified-Item,

 SRBs-Setup-Item,

 SRBs-SetupMod-Item,

 TimeToWait,

 TransactionID,

 TransmissionActionIndicator,

 UE-associatedLogicalF1-ConnectionItem,

 UEIdentity-List-For-Paging-Item,

 DUtoCURRCContainer,

 PagingCell-Item,

 SItype-List,

 UEIdentityIndexValue,

 GNB-CU-TNL-Association-Setup-Item,

 GNB-CU-TNL-Association-Failed-To-Setup-Item,

 GNB-CU-TNL-Association-To-Add-Item,

 GNB-CU-TNL-Association-To-Remove-Item,

 GNB-CU-TNL-Association-To-Update-Item,

 MaskedIMEISV,

 PagingDRX,

 PagingPriority,

 PagingIdentity,

 Cells-to-be-Barred-Item,

 PWSSystemInformation,

 Broadcast-To-Be-Cancelled-Item,

 Cells-Broadcast-Cancelled-Item,

 NR-CGI-List-For-Restart-Item,

 PWS-Failed-NR-CGI-Item,

 RepetitionPeriod,

 NumberofBroadcastRequest,

 Cells-To-Be-Broadcast-Item,

 Cells-Broadcast-Completed-Item,

 Cancel-all-Warning-Messages-Indicator,

 EUTRA-NR-CellResourceCoordinationReq-Container,

 EUTRA-NR-CellResourceCoordinationReqAck-Container,

 RequestType,

 PLMN-Identity,

 RLCFailureIndication,

 UplinkTxDirectCurrentListInformation,

 SULAccessIndication,

 Protected-EUTRA-Resources-Item,

 GNB-DUConfigurationQuery,

 BitRate,

 RRC-Version,

 GNBDUOverloadInformation,

 RRCDeliveryStatusRequest,

 NeedforGap,

 RRCDeliveryStatus,

 ResourceCoordinationTransferInformation,

 Dedicated-SIDelivery-NeededUE-Item,

 Associated-SCell-Item,

 IgnoreResourceCoordinationContainer,

 PagingOrigin,

 UAC-Assistance-Info,

 RANUEID,

 GNB-DU-TNL-Association-To-Remove-Item,

 NotificationInformation,

 TraceActivation,

 TraceID,

 Neighbour-Cell-Information-Item,

 SymbolAllocInSlot,

 NumDLULSymbols,

 AdditionalRRMPriorityIndex,

 DUCURadioInformationType,

 CUDURadioInformationType,

 Transport-Layer-Address-Info,

 BHChannels-ToBeSetup-Item,

 BHChannels-Setup-Item,

 BHChannels-FailedToBeSetup-Item,

 BHChannels-ToBeModified-Item,

 BHChannels-ToBeReleased-Item,

 BHChannels-ToBeSetupMod-Item,

 BHChannels-FailedToBeModified-Item,

 BHChannels-FailedToBeSetupMod-Item,

 BHChannels-Modified-Item,

 BHChannels-SetupMod-Item,

 BHChannels-Required-ToBeReleased-Item,

 BAPAddress,

 BAPPathID,

 BAPRoutingID,

 BH-Routing-Information-Added-List-Item,

 BH-Routing-Information-Removed-List-Item,

 Child-Nodes-List,

 Child-Nodes-List-Item,

 Child-Node-Cells-List,

 Child-Node-Cells-List-Item,

 Activated-Cells-to-be-Updated-List,

 Activated-Cells-to-be-Updated-List-Item,

 UL-BH-Non-UP-Traffic-Mapping,

 IABTNLAddressesRequested,

 IABIPv6RequestType,

 IAB-TNL-Addresses-To-Remove-Item,

 IABTNLAddress,

 IAB-Allocated-TNL-Address-Item,

 IABv4AddressesRequested,

 TrafficMappingInfo,

 UL-UP-TNL-Information-to-Update-List-Item,

 UL-UP-TNL-Address-to-Update-List-Item,

 DL-UP-TNL-Address-to-Update-List-Item,

 NRV2XServicesAuthorized,

 LTEV2XServicesAuthorized,

 NRUESidelinkAggregateMaximumBitrate,

 LTEUESidelinkAggregateMaximumBitrate,

 SLDRBs-SetupMod-Item,

 SLDRBs-ModifiedConf-Item,

 SLDRBID,

 SLDRBs-FailedToBeModified-Item,

 SLDRBs-FailedToBeSetup-Item,

 SLDRBs-FailedToBeSetupMod-Item,

 SLDRBs-Modified-Item,

 SLDRBs-Required-ToBeModified-Item,

 SLDRBs-Required-ToBeReleased-Item,

 SLDRBs-Setup-Item,

 SLDRBs-ToBeModified-Item,

 SLDRBs-ToBeReleased-Item,

 SLDRBs-ToBeSetup-Item,

 SLDRBs-ToBeSetupMod-Item,

 GNBCUMeasurementID,

 GNBDUMeasurementID,

 RegistrationRequest,

 ReportCharacteristics,

 CellToReportList,

 HardwareLoadIndicator,

 CellMeasurementResultList,

 ReportingPeriodicity,

 TNLCapacityIndicator,

 RACHReportInformationList,

 RLFReportInformationList,

 ReportingRequestType,

 TimeReferenceInformation,

 ConditionalInterDUMobilityInformation,

 ConditionalIntraDUMobilityInformation,

 TargetCellList,

 MDTPLMNList,

 PrivacyIndicator,

 TransportLayerAddress,

 URI-address,

 NID,

 PosAssistance-Information,

 PosBroadcast,

 PositioningBroadcastCells,

 RoutingID,

 PosAssistanceInformationFailureList,

 PosMeasurementQuantities,

 PosMeasurementResultList,

 PosReportCharacteristics,

 TRPInformationTypeItem,

 TRPInformationItem,

 LMF-MeasurementID,

 RAN-MeasurementID,

 SDT-Termination-Request,

 SRSResourceSetID,

 SpatialRelationInfo,

 SRSResourceTrigger,

 SRSConfiguration,

 TRPList,

 E-CID-MeasurementQuantities,

 MeasurementPeriodicity,

 E-CID-MeasurementResult,

 Cell-Portion-ID,

 LMF-UE-MeasurementID,

 RAN-UE-MeasurementID,

 RelativeTime1900,

 SystemFrameNumber,

 SlotNumber,

 AbortTransmission,

 TRP-MeasurementRequestList,

 MeasurementBeamInfoRequest,

 E-CID-ReportCharacteristics,

 Extended-GNB-CU-Name,

 Extended-GNB-DU-Name,

 F1CTransferPath,

 SCGIndicator,

 SpatialRelationPerSRSResource,

 MeasurementPeriodicityExtended,

 SuccessfulHOReportInformationList,

 Coverage-Modification-Notification,

 CCO-Assistance-Information,

 CellsForSON-List,

 IABCongestionIndication,

 IABConditionalRRCMessageDeliveryIndication,

 F1CTransferPathNRDC,

 BufferSizeThresh,

 IAB-TNL-Addresses-Exception,

 BAP-Header-Rewriting-Added-List-Item,

 Re-routingEnableIndicator,

 NonF1terminatingTopologyIndicator,

 EgressNonF1terminatingTopologyIndicator,

 IngressNonF1terminatingTopologyIndicator,

 Neighbour-Node-Cells-List,

 Neighbour-Node-Cells-List-Item,

 NA-Resource-Configuration-List,

 NA-Resource-Configuration-Item,

 Serving-Cells-List,

 Serving-Cells-List-Item,

 RBSetConfiguration,

 PDCMeasurementPeriodicity,

 PDCMeasurementQuantities,

 PDCMeasurementResult,

 PDCReportType,

 RAN-UE-PDC-MeasID,

 SCGActivationRequest,

 SCGActivationStatus,

 TRP-MeasurementUpdateList,

 PRSTRPList,

 PRSTransmissionTRPList,

 ResponseTime,

 TRP-PRS-Info-List,

 PRS-Measurement-Info-List,

 PRSConfigRequestType,

 MeasurementCharacteristicsRequestIndicator,

 MeasurementTimeOccasion,

 UEReportingInformation,

 PosConextRevIndication,

 NRRedCapUEIndication,

 NRPagingeDRXInformation,

 NRPagingeDRXInformationforRRCINACTIVE,

 QoEInformation,

 CG-SDTQueryIndication,

 CG-SDTKeptIndicator,

 CG-SDTSessionInfo,

 SDTInformation,

 FiveG-ProSeAuthorized,

 UuRLCChannelToBeSetupList,

 UuRLCChannelToBeModifiedList,

 UuRLCChannelToBeReleasedList,

 UuRLCChannelSetupList,

 UuRLCChannelFailedToBeSetupList,

 UuRLCChannelModifiedList,

 UuRLCChannelFailedToBeModifiedList,

 UuRLCChannelRequiredToBeModifiedList,

 UuRLCChannelRequiredToBeReleasedList,

 PC5RLCChannelToBeSetupList,

 PC5RLCChannelToBeModifiedList,

 PC5RLCChannelToBeReleasedList,

 PC5RLCChannelSetupList,

 PC5RLCChannelFailedToBeSetupList,

 PC5RLCChannelFailedToBeModifiedList,

 PC5RLCChannelRequiredToBeModifiedList,

 PC5RLCChannelRequiredToBeReleasedList,

 PC5RLCChannelModifiedList,

 RemoteUELocalID,

 PathSwitchConfiguration,

 SidelinkRelayConfiguration,

 PagingCause,

 PEIPSAssistanceInfo,

 UEPagingCapability,

 GNBDUUESliceMaximumBitRateList,

 MDTPollutedMeasurementIndicator,

 UE-MulticastMRBs-ConfirmedToBeModified-Item,

 UE-MulticastMRBs-RequiredToBeModified-Item,

 UE-MulticastMRBs-RequiredToBeReleased-Item,

 UE-MulticastMRBs-ToBeReleased-Item,

 UE-MulticastMRBs-ToBeSetup-Item,

 PosMeasurementAmount,

 BAP-Header-Rewriting-Removed-List-Item,

 SLDRXCycleList,

 MDTPLMNModificationList,

 ActivationRequestType,

 PosMeasGapPreConfigList,

 PosMeasurementPeriodicityNR-AoA,

 SRSPosRRCInactiveConfig,

 SDTBearerConfigurationQueryIndication,

 SDTBearerConfigurationInfo

FROM F1AP-IEs

 PrivateIE-Container{},

 ProtocolExtensionContainer{},

 ProtocolIE-Container{},

 ProtocolIE-ContainerPair{},

 ProtocolIE-SingleContainer{},

 F1AP-PRIVATE-IES,

 F1AP-PROTOCOL-EXTENSION,

 F1AP-PROTOCOL-IES,

 F1AP-PROTOCOL-IES-PAIR

FROM F1AP-Containers

 id-BroadcastMRBs-FailedToBeModified-List,

 id-BroadcastMRBs-FailedToBeModified-Item,

 id-BroadcastMRBs-FailedToBeSetup-List,

 id-BroadcastMRBs-FailedToBeSetup-Item,

 id-BroadcastMRBs-FailedToBeSetupMod-List,

 id-BroadcastMRBs-FailedToBeSetupMod-Item,

 id-BroadcastMRBs-Modified-List,

 id-BroadcastMRBs-Modified-Item,

 id-BroadcastMRBs-Setup-List,

 id-BroadcastMRBs-Setup-Item,

 id-BroadcastMRBs-SetupMod-List,

 id-BroadcastMRBs-SetupMod-Item,

 id-BroadcastMRBs-ToBeModified-List,

 id-BroadcastMRBs-ToBeModified-Item,

 id-BroadcastMRBs-ToBeReleased-List,

 id-BroadcastMRBs-ToBeReleased-Item,

 id-BroadcastMRBs-ToBeSetup-List,

 id-BroadcastMRBs-ToBeSetup-Item,

 id-BroadcastMRBs-ToBeSetupMod-List,

 id-BroadcastMRBs-ToBeSetupMod-Item,

 id-Candidate-SpCell-Item,

 id-Candidate-SpCell-List,

 id-Cause,

 id-Cancel-all-Warning-Messages-Indicator,

 id-Cells-Failed-to-be-Activated-List,

 id-Cells-Failed-to-be-Activated-List-Item,

 id-Cells-Status-Item,

 id-Cells-Status-List,

 id-Cells-to-be-Activated-List,

 id-Cells-to-be-Activated-List-Item,

 id-Cells-to-be-Deactivated-List,

 id-Cells-to-be-Deactivated-List-Item,

 id-ConfirmedUEID,

 id-CriticalityDiagnostics,

 id-C-RNTI,

 id-CUtoDURRCInformation,

 id-DRB-Activity-Item,

 id-DRB-Activity-List,

 id-DRBs-FailedToBeModified-Item,

 id-DRBs-FailedToBeModified-List,

 id-DRBs-FailedToBeSetup-Item,

 id-DRBs-FailedToBeSetup-List,

 id-DRBs-FailedToBeSetupMod-Item,

 id-DRBs-FailedToBeSetupMod-List,

 id-DRBs-ModifiedConf-Item,

 id-DRBs-ModifiedConf-List,

 id-DRBs-Modified-Item,

 id-DRBs-Modified-List,

 id-DRB-Notify-Item,

 id-DRB-Notify-List,

 id-DRBs-Required-ToBeModified-Item,

 id-DRBs-Required-ToBeModified-List,

 id-DRBs-Required-ToBeReleased-Item,

 id-DRBs-Required-ToBeReleased-List,

 id-DRBs-Setup-Item,

 id-DRBs-Setup-List,

 id-DRBs-SetupMod-Item,

 id-DRBs-SetupMod-List,

 id-DRBs-ToBeModified-Item,

 id-DRBs-ToBeModified-List,

 id-DRBs-ToBeReleased-Item,

 id-DRBs-ToBeReleased-List,

 id-DRBs-ToBeSetup-Item,

 id-DRBs-ToBeSetup-List,

 id-DRBs-ToBeSetupMod-Item,

 id-DRBs-ToBeSetupMod-List,

 id-DRXCycle,

 id-DUtoCURRCInformation,

 id-ExecuteDuplication,

 id-FullConfiguration,

 id-gNB-CU-MBS-F1AP-ID,

 id-gNB-CU-UE-F1AP-ID,

 id-gNB-DU-MBS-F1AP-ID,

 id-gNB-DU-UE-F1AP-ID,

 id-gNB-DU-ID,

 id-GNB-DU-Served-Cells-Item,

 id-gNB-DU-Served-Cells-List,

 id-gNB-CU-Name,

 id-gNB-DU-Name,

 id-Extended-GNB-CU-Name,

 id-Extended-GNB-DU-Name,

 id-InactivityMonitoringRequest,

 id-InactivityMonitoringResponse,

 id-MBS-Area-Session-ID,

 id-MBS-CUtoDURRCInformation,

 id-MBS-Session-ID,

 id-MBS-ServiceArea,

 id-MBS-SessionStatus,

 id-MBSMulticastF1UContextDescriptor,

 id-MulticastMBSSessionSetupList,

 id-MulticastMBSSessionRemoveList,

 id-MulticastMRBs-FailedToBeModified-List,

 id-MulticastMRBs-FailedToBeModified-Item,

 id-MulticastMRBs-FailedToBeSetup-List,

 id-MulticastMRBs-FailedToBeSetup-Item,

 id-MulticastMRBs-FailedToBeSetupMod-List,

 id-MulticastMRBs-FailedToBeSetupMod-Item,

 id-MulticastMRBs-Modified-List,

 id-MulticastMRBs-Modified-Item,

 id-MulticastMRBs-Setup-List,

 id-MulticastMRBs-Setup-Item,

 id-MulticastMRBs-SetupMod-List,

 id-MulticastMRBs-SetupMod-Item,

 id-MulticastMRBs-ToBeModified-List,

 id-MulticastMRBs-ToBeModified-Item,

 id-MulticastMRBs-ToBeReleased-List,

 id-MulticastMRBs-ToBeReleased-Item,

 id-MulticastMRBs-ToBeSetup-List,

 id-MulticastMRBs-ToBeSetup-Item,

 id-MulticastMRBs-ToBeSetupMod-List,

 id-MulticastMRBs-ToBeSetupMod-Item,

 id-MulticastF1UContext-ToBeSetup-List,

 id-MulticastF1UContext-ToBeSetup-Item,

 id-MulticastF1UContext-Setup-List,

 id-MulticastF1UContext-Setup-Item,

 id-MulticastF1UContext-FailedToBeSetup-List,

 id-MulticastF1UContext-FailedToBeSetup-Item,

 id-BroadcastAreaScope,

 id-new-gNB-CU-UE-F1AP-ID,

 id-new-gNB-DU-UE-F1AP-ID,

 id-oldgNB-DU-UE-F1AP-ID,

 id-PLMNAssistanceInfoForNetShar,

 id-Potential-SpCell-Item,

 id-Potential-SpCell-List,

 id-RAT-FrequencyPriorityInformation,

 id-RedirectedRRCmessage,

 id-ResetType,

 id-RequestedSRSTransmissionCharacteristics,

 id-ResourceCoordinationTransferContainer,

 id-RRCContainer,

 id-RRCContainer-RRCSetupComplete,

 id-RRCReconfigurationCompleteIndicator,

 id-SCell-FailedtoSetup-List,

 id-SCell-FailedtoSetup-Item,

 id-SCell-FailedtoSetupMod-List,

 id-SCell-FailedtoSetupMod-Item,

 id-SCell-ToBeRemoved-Item,

 id-SCell-ToBeRemoved-List,

 id-SCell-ToBeSetup-Item,

 id-SCell-ToBeSetup-List,

 id-SCell-ToBeSetupMod-Item,

 id-SCell-ToBeSetupMod-List,

 id-SDT-Termination-Request,

 id-SelectedPLMNID,

 id-Served-Cells-To-Add-Item,

 id-Served-Cells-To-Add-List,

 id-Served-Cells-To-Delete-Item,

 id-Served-Cells-To-Delete-List,

 id-Served-Cells-To-Modify-Item,

 id-Served-Cells-To-Modify-List,

 id-ServCellIndex,

 id-ServingCellMO,

 id-SNSSAI,

 id-SpCell-ID,

 id-SpCellULConfigured,

 id-SRBID,

 id-SRBs-FailedToBeSetup-Item,

 id-SRBs-FailedToBeSetup-List,

 id-SRBs-FailedToBeSetupMod-Item,

 id-SRBs-FailedToBeSetupMod-List,

 id-SRBs-Required-ToBeReleased-Item,

 id-SRBs-Required-ToBeReleased-List,

 id-SRBs-ToBeReleased-Item,

 id-SRBs-ToBeReleased-List,

 id-SRBs-ToBeSetup-Item,

 id-SRBs-ToBeSetup-List,

 id-SRBs-ToBeSetupMod-Item,

 id-SRBs-ToBeSetupMod-List,

 id-SRBs-Modified-Item,

 id-SRBs-Modified-List,

 id-SRBs-Setup-Item,

 id-SRBs-Setup-List,

 id-SRBs-SetupMod-Item,

 id-SRBs-SetupMod-List,

 id-TimeToWait,

 id-TransactionID,

 id-TransmissionActionIndicator,

 id-UEContextNotRetrievable,

 id-UE-associatedLogicalF1-ConnectionItem,

 id-UE-associatedLogicalF1-ConnectionListResAck,

 id-UEIdentity-List-For-Paging-List,

 id-UEIdentity-List-For-Paging-Item,

 id-UE-MulticastMRBs-ConfirmedToBeModified-List,

 id-UE-MulticastMRBs-ConfirmedToBeModified-Item,

 id-UE-MulticastMRBs-RequiredToBeModified-List,

 id-UE-MulticastMRBs-RequiredToBeModified-Item,

 id-UE-MulticastMRBs-RequiredToBeReleased-List,

 id-UE-MulticastMRBs-RequiredToBeReleased-Item,

 id-UE-MulticastMRBs-ToBeReleased-List,

 id-UE-MulticastMRBs-ToBeReleased-Item,

 id-UE-MulticastMRBs-ToBeSetup-List,

 id-UE-MulticastMRBs-ToBeSetup-Item,

 id-DUtoCURRCContainer,

 id-NRCGI,

 id-PagingCell-Item,

 id-PagingCell-List,

 id-PagingDRX,

 id-PagingPriority,

 id-SItype-List,

 id-UEIdentityIndexValue,

 id-GNB-CU-TNL-Association-Setup-List,

 id-GNB-CU-TNL-Association-Setup-Item,

 id-GNB-CU-TNL-Association-Failed-To-Setup-List,

 id-GNB-CU-TNL-Association-Failed-To-Setup-Item,

 id-GNB-CU-TNL-Association-To-Add-Item,

 id-GNB-CU-TNL-Association-To-Add-List,

 id-GNB-CU-TNL-Association-To-Remove-Item,

 id-GNB-CU-TNL-Association-To-Remove-List,

 id-GNB-CU-TNL-Association-To-Update-Item,

 id-GNB-CU-TNL-Association-To-Update-List,

 id-MaskedIMEISV,

 id-PagingIdentity,

 id-Cells-to-be-Barred-List,

 id-Cells-to-be-Barred-Item,

 id-PWSSystemInformation,

 id-RepetitionPeriod,

 id-NumberofBroadcastRequest,

 id-Cells-To-Be-Broadcast-List,

 id-Cells-To-Be-Broadcast-Item,

 id-Cells-Broadcast-Completed-List,

 id-Cells-Broadcast-Completed-Item,

 id-Broadcast-To-Be-Cancelled-List,

 id-Broadcast-To-Be-Cancelled-Item,

 id-Cells-Broadcast-Cancelled-List,

 id-Cells-Broadcast-Cancelled-Item,

 id-NR-CGI-List-For-Restart-List,

 id-NR-CGI-List-For-Restart-Item,

 id-PWS-Failed-NR-CGI-List,

 id-PWS-Failed-NR-CGI-Item,

 id-EUTRA-NR-CellResourceCoordinationReq-Container,

 id-EUTRA-NR-CellResourceCoordinationReqAck-Container,

 id-Protected-EUTRA-Resources-List,

 id-RequestType,

 id-ServingPLMN,

 id-DRXConfigurationIndicator,

 id-RLCFailureIndication,

 id-UplinkTxDirectCurrentListInformation,

 id-SULAccessIndication,

 id-Protected-EUTRA-Resources-Item,

 id-GNB-DUConfigurationQuery,

 id-GNB-DU-UE-AMBR-UL,

 id-GNB-CU-RRC-Version,

 id-GNB-DU-RRC-Version,

 id-GNBDUOverloadInformation,

 id-NeedforGap,

 id-RRCDeliveryStatusRequest,

 id-RRCDeliveryStatus,

 id-Dedicated-SIDelivery-NeededUE-List,

 id-Dedicated-SIDelivery-NeededUE-Item,

 id-ResourceCoordinationTransferInformation,

 id-Associated-SCell-List,

 id-Associated-SCell-Item,

 id-IgnoreResourceCoordinationContainer,

 id-UAC-Assistance-Info,

 id-RANUEID,

 id-PagingOrigin,

 id-GNB-DU-TNL-Association-To-Remove-Item,

 id-GNB-DU-TNL-Association-To-Remove-List,

 id-NotificationInformation,

 id-TraceActivation,

 id-TraceID,

 id-Neighbour-Cell-Information-List,

 id-Neighbour-Cell-Information-Item,

 id-SymbolAllocInSlot,

 id-NumDLULSymbols,

 id-AdditionalRRMPriorityIndex,

 id-DUCURadioInformationType,

 id-CUDURadioInformationType,

 id-LowerLayerPresenceStatusChange,

 id-Transport-Layer-Address-Info,

 id-BHChannels-ToBeSetup-List,

 id-BHChannels-ToBeSetup-Item,

 id-BHChannels-Setup-List,

 id-BHChannels-Setup-Item,

 id-BHChannels-ToBeModified-Item,

 id-BHChannels-ToBeModified-List,

 id-BHChannels-ToBeReleased-Item,

 id-BHChannels-ToBeReleased-List,

 id-BHChannels-ToBeSetupMod-Item,

 id-BHChannels-ToBeSetupMod-List,

 id-BHChannels-FailedToBeSetup-Item,

 id-BHChannels-FailedToBeSetup-List,

 id-BHChannels-FailedToBeModified-Item,

 id-BHChannels-FailedToBeModified-List,

 id-BHChannels-FailedToBeSetupMod-Item,

 id-BHChannels-FailedToBeSetupMod-List,

 id-BHChannels-Modified-Item,

 id-BHChannels-Modified-List,

 id-BHChannels-SetupMod-Item,

 id-BHChannels-SetupMod-List,

 id-BHChannels-Required-ToBeReleased-Item,

 id-BHChannels-Required-ToBeReleased-List,

 id-BAPAddress,

 id-ConfiguredBAPAddress,

 id-BH-Routing-Information-Added-List,

 id-BH-Routing-Information-Added-List-Item,

 id-BH-Routing-Information-Removed-List,

 id-BH-Routing-Information-Removed-List-Item,

 id-UL-BH-Non-UP-Traffic-Mapping,

 id-Child-Nodes-List,

 id-Activated-Cells-to-be-Updated-List,

 id-IABIPv6RequestType,

 id-IAB-TNL-Addresses-To-Remove-List,

 id-IAB-TNL-Addresses-To-Remove-Item,

 id-IAB-Allocated-TNL-Address-List,

 id-IAB-Allocated-TNL-Address-Item,

 id-IABv4AddressesRequested,

 id-TrafficMappingInformation,

 id-UL-UP-TNL-Information-to-Update-List,

 id-UL-UP-TNL-Information-to-Update-List-Item,

 id-UL-UP-TNL-Address-to-Update-List,

 id-UL-UP-TNL-Address-to-Update-List-Item,

 id-DL-UP-TNL-Address-to-Update-List,

 id-DL-UP-TNL-Address-to-Update-List-Item,

 id-NRV2XServicesAuthorized,

 id-LTEV2XServicesAuthorized,

 id-NRUESidelinkAggregateMaximumBitrate,

 id-LTEUESidelinkAggregateMaximumBitrate,

 id-PC5LinkAMBR,

 id-SLDRBs-FailedToBeModified-Item,

 id-SLDRBs-FailedToBeModified-List,

 id-SLDRBs-FailedToBeSetup-Item,

 id-SLDRBs-FailedToBeSetup-List,

 id-SLDRBs-Modified-Item,

 id-SLDRBs-Modified-List,

 id-SLDRBs-Required-ToBeModified-Item,

 id-SLDRBs-Required-ToBeModified-List,

 id-SLDRBs-Required-ToBeReleased-Item,

 id-SLDRBs-Required-ToBeReleased-List,

 id-SLDRBs-Setup-Item,

 id-SLDRBs-Setup-List,

 id-SLDRBs-ToBeModified-Item,

 id-SLDRBs-ToBeModified-List,

 id-SLDRBs-ToBeReleased-Item,

 id-SLDRBs-ToBeReleased-List,

 id-SLDRBs-ToBeSetup-Item,

 id-SLDRBs-ToBeSetup-List,

 id-SLDRBs-ToBeSetupMod-Item,

 id-SLDRBs-ToBeSetupMod-List,

 id-SLDRBs-SetupMod-List,

 id-SLDRBs-FailedToBeSetupMod-List,

 id-SLDRBs-SetupMod-Item,

 id-SLDRBs-FailedToBeSetupMod-Item,

 id-SLDRBs-ModifiedConf-List,

 id-SLDRBs-ModifiedConf-Item,

 id-gNBCUMeasurementID,

 id-gNBDUMeasurementID,

 id-RegistrationRequest,

 id-ReportCharacteristics,

 id-CellToReportList,

 id-CellMeasurementResultList,

 id-HardwareLoadIndicator,

 id-ReportingPeriodicity,

 id-TNLCapacityIndicator,

 id-RACHReportInformationList,

 id-RLFReportInformationList,

 id-ReportingRequestType,

 id-TimeReferenceInformation,

 id-ConditionalInterDUMobilityInformation,

 id-ConditionalIntraDUMobilityInformation,

 id-targetCellsToCancel,

 id-requestedTargetCellGlobalID,

 id-TraceCollectionEntityIPAddress,

 id-ManagementBasedMDTPLMNList,

 id-PrivacyIndicator,

 id-TraceCollectionEntityURI,

 id-ServingNID,

 id-PosAssistance-Information,

 id-PosBroadcast,

 id-PositioningBroadcastCells,

 id-RoutingID,

 id-PosAssistanceInformationFailureList,

 id-PosMeasurementQuantities,

 id-PosMeasurementResultList,

 id-PosMeasurementPeriodicity,

 id-PosReportCharacteristics,

 id-TRPInformationTypeListTRPReq,

 id-TRPInformationTypeItem,

 id-TRPInformationListTRPResp,

 id-TRPInformationItem,

 id-LMF-MeasurementID,

 id-RAN-MeasurementID,

 id-SRSType,

 id-ActivationTime,

 id-AbortTransmission,

 id-SRSConfiguration,

 id-TRPList,

 id-E-CID-MeasurementQuantities,

 id-E-CID-MeasurementPeriodicity,

 id-E-CID-MeasurementResult,

 id-Cell-Portion-ID,

 id-LMF-UE-MeasurementID,

 id-RAN-UE-MeasurementID,

 id-SFNInitialisationTime,

 id-SystemFrameNumber,

 id-SlotNumber,

 id-TRP-MeasurementRequestList,

 id-MeasurementBeamInfoRequest,

 id-E-CID-ReportCharacteristics,

 id-F1CTransferPath,

 id-SCGIndicator,

 id-SRSSpatialRelationPerSRSResource,

 id-PosMeasurementPeriodicityExtended,

 id-SuccessfulHOReportInformationList,

 id-Coverage-Modification-Notification,

 id-CCO-Assistance-Information,

 id-CellsForSON-List,

 id-IABCongestionIndication,

 id-IABConditionalRRCMessageDeliveryIndication,

 id-F1CTransferPathNRDC,

 id-BufferSizeThresh,

 id-IAB-TNL-Addresses-Exception,

 id-BAP-Header-Rewriting-Added-List,

 id-BAP-Header-Rewriting-Added-List-Item,

 id-Re-routingEnableIndicator,

 id-NonF1terminatingTopologyIndicator,

 id-EgressNonF1terminatingTopologyIndicator,

 id-IngressNonF1terminatingTopologyIndicator,

 id-Neighbour-Node-Cells-List,

 id-Serving-Cells-List,

 id-MDTPollutedMeasurementIndicator,

 id-PDCMeasurementPeriodicity,

 id-PDCMeasurementQuantities,

 id-PDCMeasurementResult,

 id-PDCReportType,

 id-RAN-UE-PDC-MeasID,

 id-SCGActivationRequest,

 id-SCGActivationStatus,

 id-TRP-MeasurementUpdateList,

 id-PRSTRPList,

 id-PRSTransmissionTRPList,

 id-ResponseTime,

 id-TRP-PRS-Info-List,

 id-PRS-Measurement-Info-List,

 id-PRSConfigRequestType,

 id-MeasurementCharacteristicsRequestIndicator,

 id-MeasurementTimeOccasion,

 id-UEReportingInformation,

 id-PosConextRevIndication,

 id-NRRedCapUEIndication,

 id-RANUEPagingDRX,

 id-CNUEPagingDRX,

 id-NRPagingeDRXInformation,

 id-NRPagingeDRXInformationforRRCINACTIVE,

 id-QoEInformation,

 id-CG-SDTQueryIndication,

 id-CG-SDTKeptIndicator,

 id-CG-SDTSessionInfoOld,

 id-SDTInformation,

 id-FiveG-ProSeAuthorized,

 id-FiveG-ProSePC5LinkAMBR,

 id-FiveG-ProSeUEPC5AggregateMaximumBitrate,

 id-UuRLCChannelToBeSetupList,

 id-UuRLCChannelToBeModifiedList,

 id-UuRLCChannelToBeReleasedList,

 id-UuRLCChannelSetupList,

 id-UuRLCChannelFailedToBeSetupList,

 id-UuRLCChannelModifiedList,

 id-UuRLCChannelFailedToBeModifiedList,

 id-UuRLCChannelRequiredToBeModifiedList,

 id-UuRLCChannelRequiredToBeReleasedList,

 id-PC5RLCChannelToBeSetupList,

 id-PC5RLCChannelToBeModifiedList,

 id-PC5RLCChannelToBeReleasedList,

 id-PC5RLCChannelSetupList,

 id-PC5RLCChannelFailedToBeSetupList,

 id-PC5RLCChannelModifiedList,

 id-PC5RLCChannelFailedToBeModifiedList,

 id-PC5RLCChannelRequiredToBeModifiedList,

 id-PC5RLCChannelRequiredToBeReleasedList,

 id-SidelinkRelayConfiguration,

 id-UpdatedRemoteUELocalID,

 id-PathSwitchConfiguration,

 id-PagingCause,

 id-PEIPSAssistanceInfo,

 id-UEPagingCapability,

 id-GNBDUUESliceMaximumBitRateList,

 id-PosMeasurementAmount,

 id-BAP-Header-Rewriting-Removed-List,

 id-BAP-Header-Rewriting-Removed-List-Item,

 id-SLDRXCycleList,

 id-ManagementBasedMDTPLMNModificationList,

 id-ActivationRequestType,

 id-PosMeasGapPreConfigList,

 id-PosMeasurementPeriodicityNR-AoA,

 id-SRSPosRRCInactiveConfig,

 id-SDTBearerConfigurationQueryIndication,

 id-SDTBearerConfigurationInfo,

 maxCellingNBDU,

 maxnoofCandidateSpCells,

 maxnoofDRBs,

 maxnoofErrors,

 maxnoofIndividualF1ConnectionsToReset,

 maxnoofPotentialSpCells,

 maxnoofSCells,

 maxnoofSRBs,

 maxnoofPagingCells,

 maxnoofTNLAssociations,

 maxCellineNB,

 maxnoofUEIDs,

 maxnoofBHRLCChannels,

 maxnoofRoutingEntries,

 maxnoofChildIABNodes,

 maxnoofServedCellsIAB,

 maxnoofTLAsIAB,

 maxnoofULUPTNLInformationforIAB,

 maxnoofUPTNLAddresses,

 maxnoofSLDRBs,

 maxnoofTRPInfoTypes,

 maxnoofTRPs,

 maxnoofMRBs,

 maxnoofUEIDforPaging,

 maxnoofNeighbourNodeCellsIAB,

 maxnoofMRBsforUE

FROM F1AP-Constants;

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

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-- MULTICAST CONTEXT SETUP REQUEST

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

MulticastContextSetupRequest ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{ MulticastContextSetupRequestIEs}},

 ...

}

MulticastContextSetupRequestIEs F1AP-PROTOCOL-IES ::= {

 { ID id-gNB-CU-MBS-F1AP-ID CRITICALITY reject TYPE GNB-CU-MBS-F1AP-ID PRESENCE mandatory }|

 { ID id-MBS-Session-ID CRITICALITY reject TYPE MBS-Session-ID PRESENCE mandatory }|

 { ID id-MBS-SessionStatus CRITICALITY reject TYPE MBS-SessionStatus PRESENCE mandatory }| { ID id-MBS-ServiceArea CRITICALITY reject TYPE MBS-ServiceArea PRESENCE optional }|

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

 { ID id-MulticastMRBs-ToBeSetup-List CRITICALITY reject TYPE MulticastMRBs-ToBeSetup-List PRESENCE mandatory },

 ...

}

MulticastMRBs-ToBeSetup-List ::= SEQUENCE (SIZE(1..maxnoofMRBs)) OF ProtocolIE-SingleContainer { { MulticastMRBs-ToBeSetup-ItemIEs} }

MulticastMRBs-ToBeSetup-ItemIEs F1AP-PROTOCOL-IES ::= {

 { ID id-MulticastMRBs-ToBeSetup-Item CRITICALITY reject TYPE MulticastMRBs-ToBeSetup-Item PRESENCE mandatory },

 ...

}

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

--

-- MULTICAST CONTEXT MODIFICATION REQUEST

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

MulticastContextModificationRequest ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{ MulticastContextModificationRequestIEs}},

 ...

}

MulticastContextModificationRequestIEs F1AP-PROTOCOL-IES ::= {

 { ID id-gNB-CU-MBS-F1AP-ID CRITICALITY reject TYPE GNB-CU-MBS-F1AP-ID PRESENCE mandatory }|

 { ID id-gNB-DU-MBS-F1AP-ID CRITICALITY reject TYPE GNB-DU-MBS-F1AP-ID PRESENCE mandatory }|

 { ID id-MBS-SessionStatus CRITICALITY reject TYPE MBS-SessionStatus PRESENCE optional }|

 { ID id-MBS-ServiceArea CRITICALITY reject TYPE MBS-ServiceArea PRESENCE optional }|

 { ID id-MulticastMRBs-ToBeSetupMod-List CRITICALITY reject TYPE MulticastMRBs-ToBeSetupMod-List PRESENCE optional }|

 { ID id-MulticastMRBs-ToBeModified-List CRITICALITY reject TYPE MulticastMRBs-ToBeModified-List PRESENCE optional }|

 { ID id-MulticastMRBs-ToBeReleased-List CRITICALITY reject TYPE MulticastMRBs-ToBeReleased-List PRESENCE optional },

 ...

}

MulticastMRBs-ToBeSetupMod-List ::= SEQUENCE (SIZE(1..maxnoofMRBs)) OF ProtocolIE-SingleContainer { { MulticastMRBs-ToBeSetupMod-ItemIEs} }

MulticastMRBs-ToBeSetupMod-ItemIEs F1AP-PROTOCOL-IES ::= {

 { ID id-MulticastMRBs-ToBeSetupMod-Item CRITICALITY reject TYPE MulticastMRBs-ToBeSetupMod-Item PRESENCE mandatory},

 ...

}

MulticastMRBs-ToBeModified-List ::= SEQUENCE (SIZE(1..maxnoofMRBs)) OF ProtocolIE-SingleContainer { { MulticastMRBs-ToBeModified-ItemIEs} }

MulticastMRBs-ToBeModified-ItemIEs F1AP-PROTOCOL-IES ::= {

 { ID id-MulticastMRBs-ToBeModified-Item CRITICALITY reject TYPE MulticastMRBs-ToBeModified-Item PRESENCE mandatory},

 ...

}

MulticastMRBs-ToBeReleased-List ::= SEQUENCE (SIZE(1..maxnoofMRBs)) OF ProtocolIE-SingleContainer { { MulticastMRBs-ToBeReleased-ItemIEs} }

MulticastMRBs-ToBeReleased-ItemIEs F1AP-PROTOCOL-IES ::= {

 { ID id-MulticastMRBs-ToBeReleased-Item CRITICALITY reject TYPE MulticastMRBs-ToBeReleased-Item PRESENCE mandatory},

 ...

}

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

### 9.4.5 Information Element Definitions

-- ASN1START

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

--

-- Information Element Definitions

--

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

F1AP-IEs {

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

ngran-access (22) modules (3) f1ap (3) version1 (1) f1ap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

MBS-SessionStatus ::= ENUMERATED {

 activated,

 deactivated,

 ...

}

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

### 9.4.7 Constant Definitions

-- ASN1START

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

--

-- Constant definitions

--

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

F1AP-Constants {

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

ngran-access (22) modules (3) f1ap (3) version1 (1) f1ap-Constants (4) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

id-Source-MRB-ID ProtocolIE-ID ::= 671

id-PosMeasurementPeriodicityNR-AoA ProtocolIE-ID ::= 672

id-RedCapIndication ProtocolIE-ID ::= 673

id-SRSPosRRCInactiveConfig ProtocolIE-ID ::= 674

id-SDTBearerConfigurationQueryIndication ProtocolIE-ID ::= 675

id-SDTBearerConfigurationInfo ProtocolIE-ID ::= 676

id-UL-GapFR2-Config ProtocolIE-ID ::= 677

id-MBS-SessionStatus ProtocolIE-ID ::= 900 -- to be assigned

END

-- ASN1STOP

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