**3GPP TSG-RAN WG3 Meeting #116-e *R3-223832***

**E-meeting, 09 May – 19 May 2022**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **37.483** | **CR** | **0007** | **rev** | **1** | **Current version:** | **17.0.0** |  |
|  | | | | | | | | |
| *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 |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Correction on configuration of initial value of HFN and reference SN | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Lenovo, Huawei | | | | | | | | | |
| ***Source to TSG:*** | R3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_MBS-Core | | | | |  | ***Date:*** | | | 2022-05-09 |
|  |  | | | |  | |  | | |  |
| ***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 can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The gNB-CU-UP needs to provide the initial value of HFN and reference SN of an MRB to the gNB-CU-CP for RRC configuration. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | The gNB-CU-UP provides the initial HFN and reference SN of an MRB in the MC BEARER CONTEXT SETUP RESPONSE message.  The gNB-CU-CP can trigger a MC Bearer Context Modification procedure to request the initial HFN and reference SN of an MRB. The gNB-CU-UP sends the initial HFN and reference SN in the MC BEARER CONTEXT MODIFICATION RESPONSE message.  The initial HFN and reference SN is removed in the PDCP configuration.  The gNB-CU-UP to trigger a MC Bearer Context Modification Required procedure to provide the HFN and reference SN  Impact Analysis:  Impact assessment towards the previous version of the specification (same release):  This CR has isolated impact on because the change only affects MC bearer management. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The initial HFN and reference SN can not be configured for a MRB. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 9.3.1.38; 9.3.3.33; 9.3.3.34; 9.3.3.35; 9.3.3.36; 9.3.3.37; 9.4.5 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

-------------------------------------------Change Start---------------------------------------------------

#### 9.3.1.38 PDCP Configuration

This IE carries the PDCP configuration.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** | **Criticality** | **Assigned Criticality** |
| PDCP SN UL Size | M |  | PDCP SN Size  9.3.1.61 | Indicates the PDCP SN UL size in bits. For more information see *PDCP-Config IE* in TS 38.331 [10] for gNB or ng-eNB CP-UP separation, or in TS 36.331 [33] for eNB CP-UP separation.  Is ignored if received through *DRB To Modify List* IE in the BEARER CONTEXT MODIFICATION REQUEST message. | - | - |
| PDCP SN DL Size | M |  | PDCP SN Size  9.3.1.61 | Indicates the PDCP SN DL size in bits. For more information see *PDCP-Config IE* in TS 38.331 [10] for gNB or ng-eNB CP-UP separation, or in TS 36.331 [33] for eNB CP-UP separation.  Is ignored if received through *DRB To Modify List* IE in the BEARER CONTEXT MODIFICATION REQUEST message. | - | - |
| RLC mode | M |  | ENUMERATED (RLC-TM, RLC-AM, RLC-UM-Bidirectional, RLC-UM-Unidirectional-UL, RLC-UM-Unidirectional-DL, …) | Indicates the RLC mode for the DRB. For more information see *PDCP-Config IE* in TS 38.331 [10] for gNB or ng-eNB CP-UP separation, or in TS 36.331 [33] for eNB CP-UP separation.  Is ignored if received through *DRB To Modify List* IE in the BEARER CONTEXT MODIFICATION REQUEST message. | - | - |
| ROHC Parameters | O |  | 9.3.1.40 |  | - | - |
| T-Reordering Timer | O |  | 9.3.1.41 |  | - | - |
| Discard Timer | O |  | 9.3.1.42 |  | - | - |
| UL Data Split Threshold | O |  | 9.3.1.43 |  | - | - |
| PDCP Duplication | O |  | ENUMERATED (True, …) | Indicates whether PDCP duplication is to be configured for the DRB. This IE is ignored when the “*Additional PDCP duplication Information*” IE is present. | - | - |
| PDCP Re-establishment | O |  | ENUMERATED (true,…) | Indicates PDCP entity re-establishment to be triggered as defined in TS 38.323 [17] for gNB or ng-eNB CP-UP separation, or in TS 36.323 [34] for eNB CP-UP separation. | - | - |
| PDCP Data Recovery | O |  | ENUMERATED (true,…) | Indicates PDCP data recovery to be triggered as defined in TS 38.323 [17] for gNB or ng-eNB CP-UP separation, or in TS 36.323 [34] for eNB CP-UP separation. | - | - |
| Duplication Activation | O |  | ENUMERATED (  Active, Inactive, …) | Information on the initial state of DL PDCP duplication | - | - |
| Out Of Order Delivery | O |  | ENUMERATED (true,…) | Indicates whether or not outOfOrderDelivery specified in TS 38.323 [17] is configured. Out of order delivery is configured only when the radio bearer is established for gNB or ng-eNB CP-UP separation, or indicates whether or not rlc-OutOfOrderDelivery in TS 36.323 [34] is configured for eNB CP-UP separation. | - | - |
| PDCP Status Report Indication | O |  | ENUMERATED (downlink, uplink, both, …) | For AM DRB, “downlink” indicates that the PDCP entity is configured to send PDCP status report(s) to the UE, and “uplink” indicates that the UE is configured to send PDCP status report(s), as specified in TS 38.323 [17] for gNB or ng-eNB CP-UP separation, or in TS 36.323 [34] for eNB CP-UP separation. “both” indicates that both “downlink” and “uplink” should be applied. | YES | ignore |
| Additional PDCP duplication Information | O |  | ENUMERATED (three, four, …) | Indicates the number of PDCP duplication configured when it is more than 2 for the DRB | YES | ignore |
| EHC Parameters | O |  | 9.3.1.90 |  | YES | ignore |
| UDC Parameters | O |  | 9.3.1.104 |  | YES | ignore |

-------------------------------------------Next Change--------------------------------------------------

#### 9.3.3.33 MC Bearer Context To Setup Response

This IE contains MBS session resource related information used to confirm MC Bearer Context Context Setup.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| MC Bearer Context NG-U TNL Info at NG-RAN | C-ifunicast |  | 9.3.1.121 |  |
| **MC MRB Setup Response List** |  | *1..<maxnoofMRBs>* |  |  |
| >MRB ID | M |  | 9.3.1.16a |  |
| >MBS QoS Flow Setup List | M |  | QoS Flow List  9.3.1.12 |  |
| >MBS QoS Flow Failed List | O |  | Flow Failed List  9.3.1.45 |  |
| >MBS Initial HFN and Reference PDCP SN | O |  | BIT STRING (32) | Refer to the *multicastHFN-AndRefSN* IE as specified in the TS 38.331 [10]. |
| **MC MRB Failed List** |  | *0..<maxnoofMRBs>* |  |  |
| >MRB ID | M |  | 9.3.1.16a |  |
| >Cause | M |  | 9.3.1.2 |  |
| Available MC MRB Configuration | O |  | MC MRB Setup Configuration  9.3.1.120 | In case the shared MBS NG-U termination had a different MRB Configuration applied. |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxnoofMRBs | Maximum no. of MRBs for a UE. Value is 32. |

|  |  |
| --- | --- |
| Condition | Explanation |
| ifunicast | This IE shall be present if the *MBS NG-U Information at NG-RAN* IE within the *MC Bearer Context NG-U TNL Info at NG-RAN* IE contains *unicast* TNL information. |

-------------------------------------------Next Change---------------------------------------------------

#### 9.3.3.34 MC Bearer Context To Modify

This IE contains MBS session resource related information used to request a modification of a multicast MC Bearer Context.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| MC Bearer Context NG-U TNL Info at 5GC | O |  | 9.3.1.122 |  |
| MC Bearer Context NG-U TNL Info at NG-RAN Request | O |  | 9.3.1.123 | To request NG-U TNL information from the gNB-CU-UP, if not yet available at gNB-CU-CP |
| MBS Multicast F1-U Context Descriptor | C-ifSetupOrRemove |  | 9.3.1.125 |  |
| **MC MRB To Setup or Modify List** |  | *0..<maxnoofMRBs>* |  |  |
| >MRB ID | M |  | 9.3.1.16a |  |
| >MC Bearer Context F1-U TNL Info at DU | O |  | 9.3.1.124 |  |
| >SDAP Configuration | O |  | 9.3.1.39 |  |
| >MBS PDCP Configuration | O |  | PDCP Configuration  9.3.1.38 | Editor’s Note: along running RRC CR |
| >MBS QoS Flows Information To Be Setup | O |  | QoS Flow QoS Parameters List  9.3.1.25 |  |
| >MRB QoS | O |  | QoS Flow Level QoS Parameters 9.3.1.26 | Indicates the MRB QoS when more than one QoS Flow is mapped to the MRB. |
| > MBS Initial HFN and Reference PDCP SN Request | O |  | ENUMERATED (true, ...) | Indicates the MBS initial HFN and reference PDCP SN is requested. |
| **MC MRB To Remove List** |  | *0..<maxnoofMRBs>* |  |  |
| >MRB ID | M |  | 9.3.1.16a |  |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxnoofMRBs | Maximum no. of MRBs for a UE. Value is 32. |

|  |  |
| --- | --- |
| Condition | Explanation |
| ifSetupOrRemove | This IE shall be present if either the *MC MRB To Setup or Modify List* IE or the *MC MRB To Remove List* IE or both IEs are included. |

-------------------------------------------Next Change---------------------------------------------------

#### 9.3.3.35 MC Bearer Context To Modify Response

This IE contains MBS session resource related information used to confirm a MC Bearer Context Modification.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| MC Bearer Context NG-U TNL Info at NG-RAN Modify Response | O |  | 9.3.1.127 |  |
| MBS Multicast F1-U Context Descriptor | C-ifSetupOrFailed |  | 9.3.1.125 |  |
| **MC MRB Setup or Modify Response List** |  | *0..<maxnoofMRBs>* |  |  |
| >MRB ID | M |  | 9.3.1.16a |  |
| >MBS QoS Flow Setup List | O |  | QoS Flow List  9.3.1.12 |  |
| >MBS QoS Flow Failed List | O |  | Flow Failed List  9.3.1.45 |  |
| >MC Bearer Context F1-U TNL Info at CU | O |  | UP Transport Layer Information  9.3.2.1 |  |
| >MBS Initial HFN and Reference PDCP SN | O |  | BIT STRING (32) | Refer to the *multicastHFN-AndRefSN* IE as specified in the TS 38.331 [10]. |
| **MC MRB Failed List** |  | *0..<maxnoofMRBs>* |  |  |
| >MRB ID | M |  | 9.3.1.16a |  |
| >Cause | M |  | 9.3.1.2 |  |
| Available MC MRB Configuration | O |  | MC MRB Setup Configuration  9.3.1.120 | In case the shared MBS NG-U termination had a different MRB Configuration applied. |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxnoofMRBs | Maximum no. of MRBs for a UE. Value is 32. |

|  |  |
| --- | --- |
| Condition | Explanation |
| ifSetupOrFailed | This IE shall be present if either the *MC MRB Setup or Modify Response List* IE or the *MC MRB Failed List*IE or both IEs are included. |

-------------------------------------------Next Change---------------------------------------------------

#### 9.3.3.36 MC Bearer Context To Modify Required

This IE contains MBS session resource related information used to request MC Bearer Context Modification.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| MBS Multicast F1-U Context Descriptor | C-ifRemoved |  | 9.3.1.125 |  |
| **MC MRB To Remove List Required** |  | *0..<maxnoofMRBs>* |  |  |
| >MRB ID | M |  | 9.3.1.16a |  |
| **MC MRB To Modify List Required** |  | *0..<maxnoofMRBs>* |  |  |
| >MRB ID | M |  | 9.3.1.16a |  |
| >MBS Initial HFN and Reference PDCP SN | O |  | BIT STRING (32) | Refer to the *multicastHFN-AndRefSN* IE as specified in the TS 38.331 [10]. |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxnoofMRBs | Maximum no. of MRBs for a UE. Value is 32. |

|  |  |
| --- | --- |
| Condition | Explanation |
| ifRemove | This IE shall be present if either the *MC MRB To Remove List Required* IE is included. |

-------------------------------------------Next Change---------------------------------------------------

#### 9.3.3.37 MC Bearer Context To Modify Confirm

This IE contains MBS session resource related information used to confirm a MC Bearer Context Modification.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| MBS Multicast F1-U Context Descriptor | O |  | 9.3.1.125 |  |
| **MC MRB Modify List Required** |  | *0..<maxnoofMRBs>* |  |  |
| >MRB ID | M |  | 9.3.1.16a |  |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxnoofMRBs | Maximum no. of MRBs for a UE. Value is 32. |

### 9.4.5 Information Element Definitions

-- MCBearerContextToSetupResponse

MCBearerContextToSetupResponse ::= SEQUENCE {

mcBearerContextNGU-TNLInfoatNGRAN MCBearerContextNGU-TNLInfoatNGRAN OPTIONAL,

-- This IE shall be present if the *MBS NG-U Information at NG-RAN* IE within the *BC Bearer Context NG-U TNL Info at NG-RAN* IE contains *unicast* TNL information

mcMRBSetupResponseList MCMRBSetupResponseList,

mcMRBFailedList MCMRBFailedList OPTIONAL,

availableMCMRBConfig MCMRBSetupConfiguration OPTIONAL,

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

...

}

MCBearerContextToSetupResponse-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

MCBearerContextNGU-TNLInfoatNGRAN::= CHOICE {

locationindpendent MBSNGUInformationAtNGRAN,

locationdependent LocationDependentMBSNGUInformationAtNGRAN,

choice-extension ProtocolIE-SingleContainer {{MCBearerContextNGU-TNLInfoatNGRAN-ExtIEs}}

}

MCBearerContextNGU-TNLInfoatNGRAN-ExtIEs E1AP-PROTOCOL-IES ::= {

...

}

MCMRBSetupResponseList ::= SEQUENCE (SIZE(1..maxnoofMRBs)) OF MCMRBSetupResponseList-Item

MCMRBSetupResponseList-Item ::= SEQUENCE {

mrb-ID MRB-ID,

qosflow-setup QoS-Flow-List,

qosflow-failed QoS-Flow-Failed-List OPTIONAL,

mBSInitialHFNRefSN MBS-Initial-HFN-Ref-SN OPTIONAL,

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

...

}

MCMRBSetupResponseList-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

MBS-Initial-HFN-Ref-SN ::= BIT STRING (SIZE (32))

MCMRBFailedList ::= SEQUENCE (SIZE(1..maxnoofMRBs)) OF MCMRBFailedList-Item

MCMRBFailedList-Item ::= SEQUENCE {

mrb-ID MRB-ID,

cause Cause,

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

...

}

MCMRBFailedList-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

-------------------------------------------Next Change---------------------------------------------------

-- MCBearerContextToModify

MCBearerContextToModify ::= SEQUENCE {

mcBearerContextNGUTNLInfoat5GC MCBearerContextNGUTNLInfoat5GC OPTIONAL,

mcBearerContextNGUTnlInfoatNGRANRequest MCBearerContextNGUTnlInfoatNGRANRequest OPTIONAL,

mbsMulticastF1UContextDescriptor MBSMulticastF1UContextDescriptor OPTIONAL,

-- This IE shall be present if either the *MC MRB To Setup or Modify List* IE or the *MC MRB To Remove List* IE or both IEs are included.

mcMRBToSetupModifyList MCMRBSetupModifyConfiguration OPTIONAL,

mcMRBToRemoveList MCMRBRemoveConfiguration OPTIONAL,

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

...

}

MCBearerContextToModify-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

MCBearerContextNGUTNLInfoat5GC ::= SEQUENCE {

mbsNGUInformationAt5GC MBSNGUInformationAt5GC,

mbsAreaSession-ID MBSAreaSessionID OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {MCBearerContextNGUTNLInfoat5GC-ExtIEs} } OPTIONAL,

...

}

MCBearerContextNGUTNLInfoat5GC-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

MCBearerContextNGUTnlInfoatNGRANRequest ::= SEQUENCE {

ngRANNGUTNLRequested ENUMERATED {requested, ...},

mbsAreaSession-ID MBSAreaSessionID OPTIONAL,

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

...

}

MCBearerContextNGUTnlInfoatNGRANRequest-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

MCMRBSetupModifyConfiguration ::= SEQUENCE {

mrb-ID MRB-ID,

f1uTNLatDU MCBearerContextF1UTNLInfoatDU OPTIONAL,

sdap-config SDAP-Configuration OPTIONAL,

mbs-pdcp-config PDCP-Configuration OPTIONAL,

qoS-Flow-QoS-Parameter-List QoS-Flow-QoS-Parameter-List OPTIONAL,

mrbQoS QoSFlowLevelQoSParameters OPTIONAL,

mbsInitialHFNRefSNReq MBS-Initial-HFN-Ref-SN-Req OPTIONAL,

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

...

}

MCMRBSetupModifyConfiguration-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

MCBearerContextF1UTNLInfoatDU ::= SEQUENCE {

mbsF1UInfoatDU UP-TNL-Information,

mbsMulticastF1UContextDescriptor MBSMulticastF1UContextDescriptor,

iE-Extensions ProtocolExtensionContainer { {MCBearerContextF1UTNLInfoatDU-ExtIEs} } OPTIONAL,

...

}

MCBearerContextF1UTNLInfoatDU-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

MBSMulticastF1UContextDescriptor ::= CHOICE {

du NULL,

mbsAreaSession MBSAreaSessionID,

cell MCDUCellReference,

ptp-retransmission MBSPTPUEReference,

ptp-only-MRB MBSPTPUEReference,

choice-extension ProtocolIE-SingleContainer {{MBSMulticastF1UContextDescriptor-ExtIEs}}

}

MBSMulticastF1UContextDescriptor-ExtIEs E1AP-PROTOCOL-IES ::= {

...

}

MCDUCellReference ::= SEQUENCE {

du-CellIndex INTEGER (1..512),

nr-CGI NR-CGI,

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

...

}

MCDUCellReference-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

MBSPTPUEReference::= SEQUENCE {

ueReferenceID INTEGER (0..65535, ...),

du-CellIndex INTEGER (1..512),

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

...

}

MBSPTPUEReference-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

MCMRBRemoveConfiguration ::= SEQUENCE (SIZE(1..maxnoofMRBs)) OF DRB-ID

MBS-Initial-HFN-Ref-SN-Req ::= ENUMERATED {ture, ... }

-------------------------------------------Next Change---------------------------------------------------

-- MCBearerContextToModifyResponse

MCBearerContextToModifyResponse ::= SEQUENCE {

mcBearerContextNGU-TNLInfoatNGRANModifyResponse MCBearerContextNGU-TNLInfoatNGRANModifyResponse OPTIONAL,

mbsMulticastF1UContextDescriptor MBSMulticastF1UContextDescriptor OPTIONAL,

-- This IE shall be present if either the *MC MRB Setup or Modify Response List* IE or the *MC MRB Failed List*IE or both IEs are included.

mcMRBModifySetupResponseList MCMRBSetupModifyResponseList OPTIONAL,

mcMRBFailedList MCMRBFailedList OPTIONAL,

availableMCMRBConfig MCMRBSetupConfiguration OPTIONAL,

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

...

}

MCBearerContextToModifyResponse-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

MCBearerContextNGU-TNLInfoatNGRANModifyResponse ::= SEQUENCE {

mbs-NGU-InfoatNGRAN MBSNGUInformationAtNGRAN,

mbsAreaSession MBSAreaSessionID OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {MCBearerContextNGU-TNLInfoatNGRANModifyResponse-ExtIEs} } OPTIONAL,

...

}

MCBearerContextNGU-TNLInfoatNGRANModifyResponse-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

MCMRBSetupModifyResponseList ::= SEQUENCE (SIZE(1..maxnoofMRBs)) OF MCMRBSetupModifyResponseList-Item

MCMRBSetupModifyResponseList-Item ::= SEQUENCE {

mrb-ID MRB-ID,

qosflow-setup QoS-Flow-List OPTIONAL,

qosflow-failed QoS-Flow-Failed-List OPTIONAL,

mcBearerContextF1UTNLInfoatCU UP-TNL-Information OPTIONAL,

mBSInitialHFNRefSN MBS-Initial-HFN-Ref-SN OPTIONAL,

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

...

}

MCMRBSetupModifyResponseList-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

-------------------------------------------Next Change---------------------------------------------------

-- MCBearerContextToModifyRequired

MCBearerContextToModifyRequired ::= SEQUENCE {

mbsMulticastF1UContextDescriptor MBSMulticastF1UContextDescriptor OPTIONAL,

-- This IE shall be present if either the *MC MRB To Remove List Required* IE is included.

mcMRBToRemoveRequiredList MCMRBRemoveConfiguration OPTIONAL,

mcMRBToModifyRequiredList MCMRBModifyRequiredConfiguration OPTIONAL,

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

...

}

MCBearerContextToModifyRequired-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

MCMRBModifyRequiredConfiguration ::= SEQUENCE (SIZE(1..maxnoofMRBs)) OF MCMRBModifyRequiredConfiguration-Item

MCMRBModifyRequiredConfiguration-Item ::= SEQUENCE {

mrb-ID MRB-ID,

mBSInitialHFNRefSN MBS-Initial-HFN-Ref-SN OPTIONAL,

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

...

}

MCMRBModifyRequiredConfiguration-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}

-------------------------------------------Next Change---------------------------------------------------

-- MCBearerContextToModifyConfirm

MCBearerContextToModifyConfirm ::= SEQUENCE {

mbsMulticastF1UContextDescriptor MBSMulticastF1UContextDescriptor OPTIONAL,

mcMRBModifyConfirmList MCMRBModifyConfirmList OPTIONAL,

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

...

}

MCMRBModifyConfirmList ::= SEQUENCE (SIZE(1..maxnoofMRBs)) OF MCMRBModifyConfirmList-Item

MCMRBModifyConfirmList-Item ::= SEQUENCE {

mrb-ID MRB-ID,

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

...

}

MCMRBModifyConfirmList-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

...

}