**3GPP TSG-RAN WG3 Meeting #127-bisR3-252378**

**Wuhan, CN, 7 - 11 April, 2025**

Agenda Item: 21.3

Source: ZTE Corporation, Ericsson, China Telecom, Qualcomm Incorporated, CMCC, CATT, Huawei, Nokia, Nokia Shanghai Bell, Lenovo

Title: (TP to BL CR for TS 37.483) Addition of MMSID

Document for: Other

# 1 Introduction

This TP intends to capture the agreements made in RAN3#127bis:

**Introduce MMSID in NGAP, XnAP, F1AP and E1AP.**

# TP to BL CR for TS 37.483

**Start of change**

8.3 Bearer Context Management procedures

8.3.1 Bearer Context Setup

8.3.1.1 General

The purpose of the Bearer Context Setup procedure is to allow the gNB-CU-CP to establish a bearer context in the gNB-CU-UP. The procedure uses UE-associated signalling.

8.3.1.2 Successful Operation

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**Figure 8.3.1.2-1: Bearer Context Setup procedure: Successful Operation.**

The gNB-CU-CP initiates the procedure by sending the BEARER CONTEXT SETUP REQUEST message to the gNB-CU-UP. If the gNB-CU-UP succeeds to establish the requested resources, it replies to the gNB-CU-CP with the BEARER CONTEXT SETUP RESPONSE message.

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If the *PDU Set QoS Parameters* IE is contained in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall, if supported, store it and use the information as specified in TS 23.501 [20].

For each QoS flow, if the *MMSID* IE is contained in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall, if supported, store it and consider that the QoS flow is related to a multi-modal service, as specified in TS 23.501 [20] and TS 38.300[4].

**Interactions with DL Data Notification procedure:**

If the *MT-SDT Information Request* IE is included in the BEARER CONTEXT SETUP REQUEST message and the value is set to 'true', the gNB-CU-UP shall, if supported, store it and report the *MT-SDT Information* IE in the DL DATA NOTIFICATION message as specified in TS 38.401 [2].

If the *SDT Data Size Threshold* IE is included in the BEARER CONTEXT SETUP REQUEST message, the gNB-CU-UP shall, if supported, store it and act as specified in TS 38.401 [2].

**Next change**

8.3.2 Bearer Context Modification (gNB-CU-CP initiated)

8.3.2.1 General

The purpose of the Bearer Context Modification procedure is to allow the gNB-CU-CP to modify a bearer context in the gNB-CU-UP. The procedure uses UE-associated signalling.

8.3.2.2 Successful Operation

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**Figure 8.3.2.2-1: Bearer Context Modification procedure: Successful Operation.**

The gNB-CU-CP initiates the procedure by sending the BEARER CONTEXT MODIFICATION REQUEST message to the gNB-CU-UP. If the gNB-CU-UP succeeds to modify the bearer context, it replies to the gNB-CU-CP with the BEARER CONTEXT MODIFICATION RESPONSE message.

**//omitted text unchanged//**

If the *PDU Set QoS Parameters* IE is contained in the BEARER CONTEXT MODIFICATION REQUEST message, the gNB-CU-UP shall, if supported, store it and use the information as specified in TS 23.501 [20].

For a QoS flow established with PDU Set QoS parameters, if the *PDU Set based Handling Indicator* IE is included in the *PDU Session Data Forwarding Information* IE within the BEARER CONTEXT MODIFICATION REQUEST message and the value of the *PDU Set based Handling Indicator* IE is set to "supported", the gNB-CU-UP shall, if supported, include the PDU Set Information Container in the data to be forwarded.

For each PDU session, if the *User Plane Failure Indication* IE is included in the *PDU Session Resource To Modify List* IE in the BEARER CONTEXT MODIFICATION REQUEST message, the gNB-CU-UP shall, if supported, allocate the new NG-U DL endpoint address for the concerned GTP-U tunnel as specified in TS 23.527 [36].

For each QoS flow, if the *MMSID* IE is contained in the BEARER CONTEXT MODIFICATION REQUEST message, the gNB-CU-UP shall, if supported, store it and consider that the QoS flow is related to a multi-modal service, as specified in TS 23.501 [20] and TS 38.300[4].

**Interactions with DL Data Notification procedure:**

If the *MT-SDT Information Request* IE is included in the BEARER CONTEXT MODIFICATION REQUEST message and the value is set to 'true', the gNB-CU-UP shall, if supported, store it and report the *MT-SDT Information* IE in the DL DATA NOTIFICATION message as specified in TS 38.401 [2].

If the *SDT Data Size Threshold* IE is included in the BEARER CONTEXT MODIFICATION REQUEST message, the gNB-CU-UP shall, if supported, store it and act as specified in TS 38.401 [2].

**Interaction with the Bearer Context Modification (gNB-CU-CP initiated)**

If the BEARER CONTEXT MODIFICATION REQUEST message includes for a DRB in the *DRB To Modify List* IE the *PDCP SN Status Request IE* set to “requested” and if the gNB-CU-UP has not yet received a SDAP end marker packet for a QoS flow which has been previously re-configured to another DRB by means of a gNB-CU-CP initiated Bearer Context Modification procedure, the gNB-CU-UP shall includes the QoS Flow Identifier of that QoS flow in the *Old QoS Flow List - UL End Marker expected* IE in the *PDU Session Resource Modified List* IE in the BEARER CONTEXT MODIFICATION RESPONSE message.

**Next change**

#### 9.3.1.26 QoS Flow Level QoS Parameters

This IE defines the QoS parameters to be applied to a QoS Flow.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| --- | --- | --- | --- | --- | --- | --- |
| CHOICE *QoS Characteristics* | M |  |  |  | - |  |
| *>Non-dynamic 5QI* |  |  |  |  |  |  |
| >>Non Dynamic 5QI Descriptor | M |  | 9.3.1.27 |  | - |  |
| *>Dynamic 5QI* |  |  |  |  |  |  |
| >>Dynamic 5QI Descriptor | M |  | 9.3.1.28 |  | - |  |
| NG-RAN Allocation and Retention Priority | M |  | 9.3.1.29 |  | - |  |
| GBR QoS Flow Information | O |  | 9.3.1.30 | This IE shall be present for GBR QoS Flows and is ignored otherwise. | - |  |
| Reflective QoS Attribute | O |  | ENUMERATED (subject to, …) | Details in TS 23.501 [20]. This IE applies to Non-GBR flows only and is ignored otherwise. | - |  |
| Additional QoS Flow Information | O |  | ENUMERATED (more likely, …) | This IE indicates that traffic for this QoS flow is likely to appear more often than traffic for other flows established for the PDU Session. | - |  |
| Paging Priority Index | O |  | INTEGER  (1.. 8, …) | This IE is not used in this version of the specification. | - |  |
| RDI | O |  | ENUMERATED (enabled, …) | Indicates whether Reflective QoS flow to DRB mapping should be applied. | - |  |
| QoS Monitoring Request | O |  | ENUMERATED (UL, DL, Both, …) | Indicates to measure UL, or DL, or both UL/DL delays for the associated QoS flow. | YES | ignore |
| MCG Offered GBR QoS Flow Information | O |  | GBR QoS Flow Information 9.3.1.30 | This IE contains M-Node offered GBR QoS Flow Information. | YES | ignore |
| QoS Monitoring Reporting Frequency | O |  | INTEGER (1..1800, …) | Indicates the Reporting Frequency for RAN part delay for Qos monitoring.  Units: second | YES | ignore |
| QoS Monitoring Disabled | O |  | ENUMERATED (true, ...) | Indicates to stop the QoS monitoring. | YES | ignore |
| Data Forwarding Source IP Address | O |  | Transport Layer Address  9.3.2.4 | Identifies the TNL address used by the source node for data forwarding. | YES | ignore |
| **PDU Set QoS Parameters** |  | *0..1* |  |  | YES | ignore |
| >UL PDU Set QoS Information | O |  | PDU Set QoS Information  9.3.1.143 |  | - |  |
| >DL PDU Set QoS Information | O |  | PDU Set QoS Information  9.3.1.143 |  | - |  |
| MMSID | O |  | OCTET STRING (SIZE(1)) | Multi-modal service ID from the application, used to indicate QoS flows are related to a multi-modal service, as specified in TS 23.501 [20] and TS 38.300[4]. | YES | ignore |

**Next change**

### 9.4.5 Information Element Definitions

-- ASN1START

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

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-- Information Element Definitions

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

**//omitted text unchanged//**

id-UserPlaneErrorIndicator,

id-MaximumDataBurstVolume,

id-PDCPSNGapReport,

id-UserPlaneFailureIndication,

id-MMSID,

maxnoofMBSAreaSessionIDs,

maxnoofSharedNG-UTerminations,

**Next change**

-- M

MaxDataBurstVolume ::= INTEGER (0..4095, ..., 4096.. 2000000)

MaximumIPdatarate ::= SEQUENCE {

maxIPrate MaxIPrate,

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

...

}

MMSID ::= OCTET STRING (SIZE (1))

**Next change**

-- Q

**//omitted text unchanged//**

QoS-Flow-QoS-Parameter-List ::= SEQUENCE (SIZE(1.. maxnoofQoSFlows)) OF QoS-Flow-QoS-Parameter-Item

QoS-Flow-QoS-Parameter-Item ::= SEQUENCE {

qoS-Flow-Identifier QoS-Flow-Identifier,

qoSFlowLevelQoSParameters QoSFlowLevelQoSParameters,

qoSFlowMappingIndication QoS-Flow-Mapping-Indication OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { QoS-Flow-QoS-Parameter-Item-ExtIEs } } OPTIONAL,

...

}

QoS-Flow-QoS-Parameter-Item-ExtIEs E1AP-PROTOCOL-EXTENSION ::= {

{ID id-RedundantQosFlowIndicator CRITICALITY ignore EXTENSION RedundantQoSFlowIndicator PRESENCE optional}|

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

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

...

}

QoSFlowLevelQoSParameters ::= SEQUENCE {

qoS-Characteristics QoS-Characteristics,

nGRANallocationRetentionPriority NGRANAllocationAndRetentionPriority,

gBR-QoS-Flow-Information GBR-QoSFlowInformation OPTIONAL,

reflective-QoS-Attribute ENUMERATED {subject-to, ...} OPTIONAL,

additional-QoS-Information ENUMERATED {more-likely, ...} OPTIONAL,

paging-Policy-Index INTEGER (1..8, ...) OPTIONAL,

-- The paging-Policy-Index IE is not used in this version of the specification.

reflective-QoS-Indicator ENUMERATED {enabled, ...} OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { QoSFlowLevelQoSParameters-ExtIEs } } OPTIONAL

}

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

{ID id-QoSMonitoringRequest CRITICALITY ignore EXTENSION QosMonitoringRequest PRESENCE optional}|

{ID id-MCG-OfferedGBRQoSFlowInfo CRITICALITY ignore EXTENSION GBR-QoSFlowInformation PRESENCE optional}|

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

{ID id-QoSMonitoringDisabled CRITICALITY ignore EXTENSION QosMonitoringDisabled PRESENCE optional}|

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

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

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

...

}

**Next change**

9.4.7 Constant Definitions

-- ASN1START

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-- Constant definitions

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

**//omitted text unchanged//**

id-MaximumDataBurstVolume ProtocolIE-ID ::= 216

id-BCBearerContextNGU-TNLInfoatNGRAN-Request ProtocolIE-ID ::= 217

id-PDCPSNGapReport ProtocolIE-ID ::= 218

id-UserPlaneFailureIndication ProtocolIE-ID ::= 219

id-MMSID ProtocolIE-ID ::= xxx

END

-- ASN1STOP

**End of change**