**3GPP TSG-RAN WG3 Meeting #127 Bis R3-252377**

Wuhan, China, 7 – 11 April 2025

Agenda Item: 21.3

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

Title: (TP to BL CR for TS 38.473) Addition of MMSID

Document for: Approval

1. Introduction

To support multi-modality awareness at RAN, F1AP should be enhanced to transfer the MMSID from the CU to the DU.

A TP for TS 38.473 is provided.

Annex: TP to BL CR for TS 38.473 for Addition of MMSID

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8.3.1 UE Context Setup

8.3.1.1 General

The purpose of the UE Context Setup procedure is to establish the UE Context including, among others, SRB, DRB, BH RLC channel, Uu Relay RLC channel, PC5 Relay RLC channel, and SL DRB configuration. The procedure uses UE-associated signalling.

8.3.1.2 Successful Operation

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**Figure** **8.3.1.2-1: UE Context Setup Request procedure: Successful Operation**

The gNB-CU initiates the procedure by sending UE CONTEXT SETUP REQUEST message to the gNB-DU. If the gNB-DU succeeds to establish the UE context, it replies to the gNB-CU with UE CONTEXT SETUP RESPONSE. If no UE-associated logical F1-connection exists, the UE-associated logical F1-connection shall be established as part of the procedure. Except for RACH based SDT and UE configured with BWP specific ServingCellMO, the gNB-CU shall perform RRC Reconfiguration or RRC connection resume to send UE to the RRC\_CONNECTED state as described in TS 38.331 [8], and in this case, the *CellGroupConfig* IE shall transparently be signaled to the UE as specified in TS 38.331 [8]. In the cases of RACH based SDT procedure and UE configured with BWP specific ServingCellMO, the *CellGroupConfig* IE shall be ignored by the gNB-CU.

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If the *DL LBT Failure Information Request* IE is included in the UE CONTEXT SETUP REQUEST message, the gNB-DU shall, if supported, consider that the gNB- CU requests collection of DL LBT failure information for the analysis of the MRO events of the UE specified in TS 38.300 [6], and act as specified in TS 38.401 [4].

If the *Ranging and Sidelink Positioning Service Information* IE is contained in the UE CONTEXT SETUP REQUEST message, the gNB-DU shall, if supported, take it into account for the UE’s Ranging and Sidelink Positioning service.

For each QoS flow whose DRB to be established, if the *MMSID* IE was included in the *QoS Flow Level QoS Parameters* IE contained in the UE CONTEXT SETUP REQUEST message, the gNB-DU shall, if supported, store this information and consider that the QoS flow is related to a multi-modal service, as described in TS 23.501 [21] and TS 38.300 [6].

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8.3.4 UE Context Modification (gNB-CU initiated)

8.3.4.1 General

The purpose of the UE Context Modification procedure is to modify the established UE Context, e.g., establishing, modifying and releasing radio resources or sidelink resources. This procedure is also used to command the gNB-DU to stop data transmission for the UE for mobility (see TS 38.401 [4]). The procedure uses UE-associated signalling.

8.3.4.2 Successful Operation

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**Figure 8.3.4.2-1: UE Context Modification procedure. Successful operation**

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

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

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If the *DL LBT Failure Information Request* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the gNB-DU shall, if supported, consider that the gNB-CU requests collection of DL LBT failure information for the analysis of the MRO events of the UE specified in TS 38.300 [6], , and act as specified in TS 38.401 [4].

If the *Ranging and Sidelink Positioning Service Information* IE is contained in the UE CONTEXT MODIFICATION REQUEST message, the gNB-DU shall, if supported, update its service information for the UE accordingly. If the *Ranging and Sidelink Positioning Authorized* IE within the *Ranging and Sidelink Positioning Service Information* IE is set to "not authorized", the gNB-DU shall, if supported, initiate actions to ensure that the UE is no longer accessing the Ranging and Sidelink Positioning service.

For each QoS flow whose DRB to be established or modified, if the *MMSID* IE was included in the *QoS Flow Level QoS Parameters* IE contained in the UE CONTEXT MODIFICATION REQUEST message, the gNB-DU shall, if supported, store this information and consider that the QoS flow is related to a multi-modal service, as described in TS 23.501 [21] and TS 38.300 [6].

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9.3.1.45 QoS Flow Level QoS Parameters

This IE defines the QoS to be applied to a QoS flow, or to a DRB, or to a BH RLC channel, or to a Uu Relay RLC channel, or to a PC5 Relay RLC channel, or to a MRB.

NOTE: For a BH RLC channel, the listed mandatory IEs and the *GBR QoS Flow Information* IE are applicable, where *GBR QoS Flow Information* IE may be present if BH RLC channel conveys the traffic belonging to a GBR 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 |  | 9.3.1.49 |  | - |  |
| *>Dynamic 5QI* |  |  |  |  | - |  |
| >>Dynamic 5QI Descriptor | M |  | 9.3.1.47 |  | - |  |
| NG-RAN Allocation and Retention Priority | M |  | 9.3.1.48 |  | - |  |
| GBR QoS Flow Information | O |  | 9.3.1.46 | This IE shall be present for GBR QoS Flows only and is ignored otherwise. | - |  |
| Reflective QoS Attribute | O |  | ENUMERATED (subject to, ...) | Details in TS 23.501 [21]. This IE applies to non-GBR flows only and is ignored otherwise. | - |  |
| PDU Session ID | O |  | INTEGER (0 ..255) | As specified in TS 23.501 [21]. | YES | ignore |
| UL PDU Session Aggregate Maximum Bit Rate | O |  | Bit Rate9.3.1.22 | The PDU session Aggregate Maximum Bit Rate Uplink which is associated with the involved PDU session. | YES | ignore |
| QoS Monitoring Request | O |  | ENUMERATED (UL, DL, Both, …, stop) | Indicates to measure UL, or DL, or both UL/DL delays for the associated QoS flow or stop the corresponding QoS monitoring.  | YES | ignore |
| PDCP Terminating Node DL Transport Layer Address | O |  | Transport Layer Address9.3.2.3 | DL Transport Layer Address of node terminating PDCP. Included for MN-terminated SCG bearers and SN-terminated MCG bearers. | YES | ignore |
| PDU Set QoS Parameters |  | 0..1 |  |  | YES | ignore |
| >UL PDU Set QoS Information | O |  | PDU Set QoS Information9.3.1.319 |  | - |  |
| >DL PDU Set QoS Information | O |  | PDU Set QoS Information9.3.1.319 |  | - |  |
| MMSID | O |  | OCTET STRING (SIZE (FFS)) | 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 [21]. | YES | ignore |

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9.4.5 Information Element Definitions

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-- Information Element Definitions

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**//omitted text unchanged//**

 id-SCS-SpecificCarrier,

 id-NR-PCI,

 id-E-CID-MeasuredResultsAssociatedInfoList,

 id-XR-Bcast-Information,

 id-MaxDataBurstVolume,

 id-BarringExemptionforEmerCallInfo,

 id-SIB17bis-message,

 id-ReportingIntervalIMs,

 id-Transmission-Bandwidth-asymmetric,

 id-TagIDPointer,

 id-LocalOrigin,

 id-SRSPosPeriodicConfigHyperSFNIndex,

 id-MMSID,

**//omitted text unchanged//**

-- M

**//omitted text unchanged//**

MUSIM-GapConfig ::= OCTET STRING

MobileIAB-Barred ::= ENUMERATED {barred, not-barred, ...}

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

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

**//omitted text unchanged//**

-- Q

**//omitted text unchanged//**

QoSFlowLevelQoSParameters ::= SEQUENCE {

 qoS-Characteristics QoS-Characteristics,

 nGRANallocationRetentionPriority NGRANAllocationAndRetentionPriority,

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

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

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

}

QoSFlowLevelQoSParameters-ExtIEs F1AP-PROTOCOL-EXTENSION ::= {

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

 { ID id-ULPDUSessionAggregateMaximumBitRate CRITICALITY ignore EXTENSION BitRate PRESENCE optional}|

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

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

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

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

 ...

}

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9.4.7 Constant Definitions

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--

-- Constant definitions

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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

**//omitted text unchanged//**

id-ReportingIntervalIMs ProtocolIE-ID ::= 851

id-Transmission-Bandwidth-asymmetric ProtocolIE-ID ::= 852

id-TagIDPointer ProtocolIE-ID ::= 853

id-LocalOrigin ProtocolIE-ID ::= 854

id-LTMResetInformation ProtocolIE-ID ::= 855

id-SRSPosPeriodicConfigHyperSFNIndex ProtocolIE-ID ::= 856

id-PreconfiguredSRSInformation ProtocolIE-ID ::= 857

id-MMSID ProtocolIE-ID ::= xxx

END

-- ASN1STOP

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