3GPP TSG-RAN WG3 Meeting #125-bis R3-245789

**Hefei , CN, 14 - 18 Oct, 2024**

Title: (TP for BLCR for SON for 38.473) MRO enhancement for R18 mobility mechanisms

Agenda Item: 10.2

Source: Huawei, Nokia, CATT, Lenovo

Document for: other

# 1 Introduction

This is a TP for 38.473

# Annex TP for LTM for 38.473

### 8.11.1 Access and Mobility Indication

#### 8.11.1.1 General

This procedure is initiated by gNB-CU to send the Access and Mobility related Information to gNB-DU.

The procedure uses non-UE-associated signalling.

#### 8.11.1.2 Successful Operation



Figure 8.11.1.2-1: Access and Mobility Indication procedure. Successful operation

The Access and Mobility Indication procedure is initiated by ACCESS AND MOBILITY INDICATION message sent from gNB-CU to gNB-DU.

If the ACCESS AND MOBILITY INDICATION message contains the *RA Report List* IE the gNB-DU shall take it into account for optimisation of RACH access procedures.

If the ACCESS AND MOBILITY INDICATION message contains the *RLF Report Information List* IE the gNB-DU shall take it into account for optimisation of mobility parameters.

If the ACCESS AND MOBILITY INDICATION message contains the *Successful HO Report Information List* IE the gNB-DU may take it into account for optimisation of mobility parameters.

If the ACCESS AND MOBILITY INDICATION message contains the *Successful PSCell Change Report Information List* IE, the gNB-DU may take it into account for optimisation of PSCell change/addition related parameters.

#### 8.11.1.3 Abnormal Conditions

Not applicable.

[snip]

9.2.10 Self Optimisation Support Messages

9.2.10.1 ACCESS AND MOBILITY INDICATION

This message is sent by gNB-CU to gNB-DU to provide access and mobility information to the gNB-DU.

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 | ignore |
| Transaction ID | M |  | 9.3.1.23 |  | YES | reject |
| **RA Report List** |  | *0..1* |  |  | YES | ignore |
| **>RA Report Item** |  | *1 .. <maxnoofRAReports>* |  |  | - |  |
| >>RA Report Container | M |  | OCTET STRING | Includes the *RA-ReportList-r16* IE as defined in subclause 6.2.2 in TS 38.331 [8]. | - |  |
| >>UE Assistant Identifier  | O |  | gNB-DU UE F1AP ID9.3.1.5 |  | - |  |
| **RLF Report Information List** |  | *0..1* |  |  | YES | ignore |
| **>RLF Report Information Item** |  | *1 .. <**maxnoofRLFReports>* |  |  | - |  |
| >>NR UE RLF Report Container | M |  | OCTET STRING | Includes the *nr-RLF-Report-r16* IE contained in the *UEInformationResponse* message defined in TS 38.331 [8]. | - |  |
| >>UE Assistant Identifier | O |  | gNB-DU UE F1AP ID9.3.1.5 |  | - |  |
| >>C-RNTI | O |  | 9.3.1.32 | C-RNTI allocated at the source gNB-DU | YES | ignore |
| >>RLF Report Failure Type | O |  | ENUMERATED (too late LTM, too early LTM, LTM to wrong cell,...) |  | YES | ignore |
| **Successful HO Report Information List** |  | *0..1* |  |  | YES | ignore |
| **>Successful HO Report Information Item** |  | *1 .. <maxnoofSuccessfulHOReports>* |  |  | - |  |
| >>Successful HO Report Container | M |  | OCTET STRING | Includes the *SuccessHO-Report* IE as defined in subclause 6.2.2 in TS 38.331 [8]. | - |  |
| **Successful PSCell Change Report Information List** |  | *0..1* |  |  | YES | ignore |
| **>Successful PSCell Change Report information Item** |  | *1..<maxnoofSuccessfulPSCellChangeReports>* |  |  | - |  |
| >>Successful PSCell Change Report Container | M |  | OCTET STRING | Includes the *SuccessPSCell-Report* IE as defined in TS 38.331 [8]. | - |  |

| **Range bound** | **Explanation** |
| --- | --- |
| maxnoofRAReports | Maximum no. of RA Reports, the maximum value is 64. |
| maxnoofRLFReports | Maximum no. of RLF Reports, the maximum value is 64. |
| maxnoofSuccessfulHOReports | Maximum no. of Successful HO Reports, the maximum value is 64. |
| maxnoofSuccessfulPSCellChangeReports | Maximum no. of Successful PSCell Change Reports. Value is 64. |

[snip]

### 9.4.5 Information Element Definitions

-- ASN1START

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-- Information Element Definitions

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

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 ::=

[snip]

 id-Transmission-Bandwidth-asymmetric,

 id-TagIDPointer,

 id-rLFReportFailureType

[snip]

RLFReportInformationList ::= SEQUENCE (SIZE(1.. maxnoofRLFReports)) OF RLFReportInformationItem

RLFReportInformationItem ::= SEQUENCE {

 nRUERLFReportContainer NRUERLFReportContainer,

 uEAssitantIdentifier GNB-DU-UE-F1AP-ID OPTIONAL,

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

 ...

}

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

 {ID id-C-RNTI CRITICALITY ignore EXTENSION C-RNTI PRESENCE optional },

 {ID id-rLFReportFailureType CRITICALITY ignore EXTENSION RLFReportFailureType PRESENCE optional },

 ...

}

RLFReportFailureType ::= ENUMERATED{ toolateLTM, tooearlyLTM, lTMtowrongcell,...}

[snip]

### 9.4.7 Constant Definitions

-- ASN1START

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

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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

[snip]

id-ReportingIntervalIMs ProtocolIE-ID ::= 851

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

id-TagIDPointer ProtocolIE-ID ::= 853

id-rLFReportFailureType ProtocolIE-ID ::= 999 --to be assigned by MCC

[snip]