**3GPP TSG-RAN WG3 Meeting #119 *R3-230819***

**Athens, Greece, 27 February – 3 March, 2023**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.423** | **CR** | **x** | **rev** | **-** | **Current version:** | **17.3.0** |  |
|  | | | | | | | | |
| *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:*** | Tabular correction of MDT Activation | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia, Nokia Shanghai Bell, ZTE | | | | | | | | | |
| ***Source to TSG:*** | R3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_SON\_MDT-Core, TEI17 | | | | |  | ***Date:*** | | | 2023-03-02 |
|  |  | | | |  | |  | | |  |
| ***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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
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| ***Reason for change:*** | | Tabular for MDT Activation in the *MDT Configuration-NR* IE and the *MDT Configuration-EUTRA* IE is not aligned on ASN.1. | | | | | | | | |
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| ***Summary of change:*** | | Align tabular on the ASN.1.  Impact assessment towards the previous version of the specification (same release):  This CR has no impact on the protocol. The CR has no functionality impact. | | | | | | | | |
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| ***Consequences if not approved:*** | | Unclear specification. | | | | | | | | |
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| ***Clauses affected:*** | | 9.2.3.126, 9.2.3.127 | | | | | | | | |
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|  | | **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 ... | | |
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| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

#### 9.2.3.126 MDT Configuration-NR

The IE defines the MDT configuration parameters of NR.

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| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| MDT Activation | M |  | ENUMERATED  (Immediate MDT only, Immediate MDT and Trace, Logged MDT only, ...) |  |
| CHOICE *Area Scope of MDT-NR* | O |  |  |  |
| >*Cell based* |  |  |  |  |
| >>**Cell ID List for MDT-NR** |  | *1 .. <maxnoofCellIDforMDT>* |  |  |
| >>>NR CGI | M |  | 9.2.2.7 |  |
| >*TA based* |  |  |  |  |
| >>**TA List for MDT** |  | *1 .. <maxnoofTAforMDT>* |  |  |
| >>>TAC | M |  | OCTET STRING (SIZE (3)) | The TAI is derived using the current serving PLMN. |
| >*TAI based* |  |  |  |  |
| >>**TAI List for MDT** |  | *1 .. <maxnoofTAforMDT>* |  |  |
| >>>TAI | M |  | 9.2.3.20 |  |
| CHOICE *MDT Mode* | M |  |  |  |
| >*Immediate MDT-NR* |  |  |  |  |
| >>Measurements to Activate | M |  | BITSTRING  (SIZE(8)) | Each position in the bitmap indicates a MDT measurement, as defined in TS 37.320 [43].  First Bit = M1,  Second Bit= M2,  Fourth Bit = M4,  Fifth Bit = M5,  Sixth Bit = logging of M1 from event triggered measurement reports according to existing RRM configuration,  Seventh Bit = M6,  Eighth Bit = M7.  Value "1" indicates "activate" and value "0" indicates "do not activate".  This version of the specification does not use bits 3. |
| >>M1 Configuration | C-ifM1 |  | 9.2.3.128 |  |
| >>M4 Configuration | C-ifM4 |  | 9.2.3.129 |  |
| >>M5 Configuration | C-ifM5 |  | 9.2.3.130 |  |
| >>MDT Location Information | O |  | BITSTRING(SIZE(8)) | Each position in the bitmap represents requested location information as defined in TS 37.320 [43].  First Bit = GNSS  Other bits are reserved for future use and are ignored if received.  Value "1" indicates "activate" and value "0" indicates "do not activate".  The eNB shall ignore the first bit unless the *Measurements to Activate* IE has the first bit or the sixth bit set to "1". |
| >>M6 Configuration | C-ifM6 |  | 9.2.3.131 |  |
| >>M7 Configuration | C-ifM7 |  | 9.2.3.132 |  |
| >>Bluetooth Measurement Configuration | O |  | 9.2.3.11 |  |
| >>WLAN Measurement Configuration | O |  | 9.2.3.12 |  |
| >>Sensor Measurement Configuration | O |  | 9.2.3.136 |  |
| >*Logged MDT-NR* |  |  |  |  |
| >>Logging interval | M |  | ENUMERATED (ms320, ms640, ms1280, ms2560, ms5120, ms10240, ms20480, ms30720, ms40960 and ms61440, infinity) | This IE is defined in TS 38.331 [10]. The value "infinity" represents one shot logging, i.e., only one log per event in the logged MDT report. |
| >>Logging duration | M |  | ENUMERATED (10, 20, 40, 60, 90, 120) | This IE is defined in TS 38.331 [10]. Unit: [minute]. |
| >>CHOICE *Report Type* | M |  |  |  |
| >>>*Periodical* |  |  |  |  |
| >>>*Event Triggered* |  |  |  |  |
| >>>>Logged Event Trigger Config | M |  | 9.2.3.137 |  |
| >>Bluetooth Measurement Configuration | O |  | 9.2.3.134 |  |
| >>WLAN Measurement Configuration | O |  | 9.2.3.135 |  |
| >>Sensor Measurement Configuration | O |  | 9.2.3.136 |  |
| >>Area Scope of Neighbour Cells | O |  | 9.2.3.140 |  |
| >>Early Measurement | O |  | ENUMERATED  (true, ...) | This IE indicates whether the UE is allowed to log measurements on early measurement related frequencies in logged MDT as specified in TS 38.331 [10]. |
| Signalling based MDT PLMN List | O |  | MDT PLMN List  9.2.3.133 |  |

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| Range bound | Explanation |
| maxnoofCellIDforMDT | Maximum no. of Cell ID subject for MDT scope. Value is 32. |
| maxnoofTAforMDT | Maximum no. of TA subject for MDT scope. Value is 8. |

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| Condition | Explanation |
| ifM1 | This IE shall be present if the *Measurements to Activate* IE has the first bit set to "1". |
| ifM4 | This IE shall be present if the *Measurements to Activate* IE has the fourth bit set to "1". |
| ifM5 | This IE shall be present if the *Measurements to Activate* IE has the fifth bit set to "1". |
| ifM6 | This IE shall be present if the Measurements to Activate IE has the seventh bit set to "1". |
| ifM7 | This IE shall be present if the Measurements to Activate IE has the eighth bit set to "1". |

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#### 9.2.3.127 MDT Configuration-EUTRA

The IE defines the MDT configuration parameters of EUTRA.

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| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| MDT Activation | M |  | ENUMERATED(Immediate MDT only, Immediate MDT and Trace, Logged MDT only, ...) |  |
| CHOICE *Area Scope of MDT-E-UTRA* | O |  |  |  |
| >*Cell based* |  |  |  |  |
| >>**Cell ID List for MDT** |  | *1 .. <maxnoofCellIDforMDT>* |  |  |
| >>>NR CGI | M |  | 9.2.2.7 |  |
| >*TA based* |  |  |  |  |
| >>**TA List for MDT** |  | *1 .. <maxnoofTAforMDT>* |  |  |
| >>>TAC | M |  | OCTET STRING (SIZE (3)) | The TAI is derived using the current serving PLMN. |
| >*TAI based* |  |  |  |  |
| >>**TAI List for MDT** |  | *1 .. <maxnoofTAforMDT>* |  |  |
| >>>TAI | M |  | 9.2.3.20 |  |
| MDT Mode E-UTRA | M |  | OCTET STRING | *MDTMode* IE defined in TS 36.413 [31]. |
| Signalling based MDT PLMN List | O |  | MDT PLMN List  9.2.3.133 |  |

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| --- | --- |
| Range bound | Explanation |
| maxnoofCellIDforMDT | Maximum no. of Cell ID subject for MDT scope. Value is 32. |
| maxnoofTAforMDT | Maximum no. of TA subject for MDT scope. Value is 8. |

MDT-Activation ::= ENUMERATED {

immediate-MDT-only,

immediate-MDT-and-Trace,

logged-MDT-only,

...

}

MDT-Configuration ::= SEQUENCE {

mDT-Configuration-NR MDT-Configuration-NR OPTIONAL,

mDT-Configuration-EUTRA MDT-Configuration-EUTRA OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { MDT-Configuration-ExtIEs} } OPTIONAL,

...

}

MDT-Configuration-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

...

}

MDT-Configuration-NR ::= SEQUENCE {

mdt-Activation MDT-Activation,

areaScopeOfMDT-NR AreaScopeOfMDT-NR OPTIONAL,

mDTMode-NR MDTMode-NR,

signallingBasedMDTPLMNList MDTPLMNList,

iE-Extensions ProtocolExtensionContainer { { MDT-Configuration-NR-ExtIEs} } OPTIONAL,

...

}

MDT-Configuration-NR-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

...

}

MDT-Configuration-EUTRA ::= SEQUENCE {

mdt-Activation MDT-Activation,

areaScopeOfMDT-EUTRA AreaScopeOfMDT-EUTRA OPTIONAL,

mDTMode-EUTRA MDTMode-EUTRA,

signallingBasedMDTPLMNList MDTPLMNList,

iE-Extensions ProtocolExtensionContainer { { MDT-Configuration-EUTRA-ExtIEs} } OPTIONAL,

...

}

MDT-Configuration-EUTRA-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

...

}