**3GPP TSG-RAN WG3 Meeting #120 R3-233452**

**Incheon, Korea, 22 May – 26 May, 2023**

**Title:** (TP for MDT BL CR for TS 38.423): Remaining issues for MDT in NPN

**Source:** Huawei

**Agenda item:** 10.2.4

**Document Type:** Discussion

# 1. Introduction

This document contains the TP for XnAP BLCR for SNPN which is a mirror of the NGAP TP.

# Annex – TP of TS 38.423

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** | **Criticality** | **Assigned Criticality** |
| MDT Activation | M |  | ENUMERATED(Immediate MDT only, Logged MDT only, Immediate MDT and Trace,…) |  | - |  |
| CHOICE *Area Scope of MDT-NR* | O |  |  |  | - |  |
| >*Cell based* |  |  |  | If *PNI-NPN Area Scope for MDT* IE is present, it covers non-CAG cells only, where non-CAG cells refer to cells that only provide public access. |  |  |
| >>**Cell ID List for MDT-NR** |  | *1 .. <maxnoofCellIDforMDT>* |  |  |  |  |
| >>>NR CGI | M |  | 9.2.2.7 |  | - |  |
| >*TA based* |  |  |  | If *PNI-NPN Area Scope for MDT* IE is present, it covers non-CAG cells only, where non-CAG cells refer to cells that only provide public access. |  |  |
| >>**TA List for MDT** |  | *1 .. <maxnoofTAforMDT>* |  |  |  |  |
| >>>TAC | M |  | OCTET STRING (SIZE (3)) | The TAI is derived using the current serving PLMN. | - |  |
| >*TAI based* |  |  |  | If *PNI-NPN Area Scope for MDT* IE is present, it covers non-CAG cells only, where non-CAG cells refer to cells that only provide public access. |  |  |
| >>**TAI List for MDT** |  | *1 .. <maxnoofTAforMDT>* |  |  |  |  |
| >>>TAI | M |  | 9.2.3.20 |  | - |  |
| *>PNI-NPN based* |  |  |  |  | YES | Ignore |
| >>CAG List for MDT |  | *1..<maxnoofCAGforMDT>* |  |  |  |  |
| >>>PLMN ID | M |  | 9.2.2.4 |  |  |  |
| >>>CAG ID | M |  | 9.2.2.66 |  |  |  |
| *>SNPN Cell Based MDT* |  |  |  |  | YES | ignore |
| >>SNPN Cell ID List for MDT |  | *1..<maxnoofCellIDforMDT>* |  |  |  |  |
| >>>NR CGI | M |  | 9.2.2.7 |  | - | - |
| >>>NID | M |  | 9.2.2.65 | Identifies an SNPN together with the PLMN Identity in the *NR CGI* IE. | - | - |
| *> SNPN TAI Based MDT* |  |  |  |  | YES | ignore |
| **>>SNPN TAI List** |  | *1..<maxnoofTAforMDT>* |  |  | - | - |
| >>>TAI | M |  | 9.2.2.7 |  | - | - |
| >>>NID | M |  | 9.2.2.65 | Identifies an SNPN together with the PLMN Identity in the *TAI* IE. | - | - |
| *> SNPN Based MDT* |  |  |  |  | - | - |
| **>>MDT SNPN List** |  | *1..<maxnoofMDTSNPNs>* |  |  | - | - |
| >>>PLMN Identity | M |  | 9.2.2.4 |  | - | - |
| >>>NID | M |  | 9.2.2.65 | Identifies an SNPN together with the *PLMN Identity* IE. | - | - |
| 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 = GNSSOther 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 List9.2.3.133 |  |  |  |
| PNI-NPN Area Scope of MDT | O |  | 9.2.3.x |  | YES | Ignore |

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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. |
| maxnoofCAGforMDT | Maximum no. of CAG IDs for MDT scope. Value is 256. |
| maxnoofMDTSNPNs | Maximum no. of SNPNs in the MDT SNPN list. Value is FFS. |

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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". |

9.2.3.x PNI-NPN Area Scope of MDT

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| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** |
| >CAG List for MDT |  | *1..< maxnoofCAGforMDT >* |  |  |
| >>PLMN Identity | M |  | 9.2.2.4 |  |
| >>CAG ID | M |  | 9.2.2.66 |  |

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| **Range bound** | **Explanation** |
| maxnoofCAGforMDT | Maximum no. of CAG IDs for MDT area scope. Value is 256. |

**End of Changes**