**3GPP TSG- Meeting#R3-24xxxx**

**Fukuoka City, Fukuoka, Japan, 20th - 24th May. 2024**

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **38.423** | **CR** | **1298** | **rev** | 1 | **Current version:** | **18.1.0** |  |
|  |
| *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:***  | Corrections on MDT for PNI-NPN  |
|  |  |
| ***Source to WG:*** | Ericsson |
| ***Source to TSG:*** | R3 |
|  |  |
| ***Work item code:*** | NR\_ENDC\_SON\_MDT\_enh2-Core |  | ***Date:*** | 2024-05-09 |
|  |  |  |  |  |
| ***Category:*** | F |  | ***Release:*** | Rel-18 |
|  | *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 canbe 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-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
|  |  |
| ***Reason for change:*** | RAN2 sent an LS in R3-243011on the maximum number of PNI NPNs in the Area Scope for MDT, stating that RAN2 supports a maximum of 12 (PLMN) X 12 (CAG) values for UE configuration whereas RAN3 alllows for 256 values of PLMN+CAG. |
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| ***Summary of change:*** | Changes to the semantics description for PNI-NPN based MDT area scope indicating that, for logged MDT, the area scope information should be configurable within the maximum of 12 CAGs per PLMN ID, with a maximum of 12 PLMN IDs, available for UE configuration, where, in such UE configuration, a PLMN ID may be repeated more than once. |
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| ***Consequences if not approved:*** | Mismatch between the RAN3 specifications and the RAN2 specifications for PNI-NPN Area Scope for MDT use in logged MDT |
|  |  |
| ***Clauses affected:*** | 9.2.3.126 |
|  |  |
|  | **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 ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

Start of Changes

9.2.3.126 MDT Configuration-NR

The IE defines the MDT configuration parameters of NR.

| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** | **Criticality** | **Assigned Criticality** |
| --- | --- | --- | --- | --- | --- | --- |
| MDT Activation | M |  | ENUMERATED(Immediate MDT only, Immediate MDT and Trace, Logged MDT only, ...) |  | – |  |
| CHOICE *Area Scope of MDT-NR* | O |  |  |  | – |  |
| >*Cell based* |  |  |  | If *PNI-NPN Area Scope of MDT* IE is present, this IE 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 of MDT* IE is present, this IE 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 |  | 9.2.2.5 | The TAI is derived using the current serving PLMN. | – |  |
| >*TAI based* |  |  |  | If *PNI-NPN Area Scope of 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* |  |  | – |  |
| >>>**TAI List for MDT Item** |  | *1 .. <maxnoofTAforMDT>* |  |  | – |  |
| >>>>PLMN Identity | M |  | 9.2.2.4 |  | – |  |
| >>>>TAC | M |  | 9.2.2.5 |  | – |  |
| *>PNI-NPN Based MDT* |  |  |  |  | YES | ignore |
| >>CAG List for MDT |  |  | 9.2.3.191 | The PLMN IDs and CAGs listed in this IE have to be configurable within the maximum of 12 CAGs per PLMN ID, with a maximum of 12 PLMN IDs, available for UE configuration, where, in such UE configuration, a PLMN ID may be repeated more than once. | – |  |
| *>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 for MDT** |  | *1..<maxnoofTAforMDT>* |  |  | – | - |
| >>>PLMN Identity | M |  | 9.2.2.4 |  | – | - |
| >>>TAC | M |  | 9.2.2.5 |  | – | - |
| >>>NID | M |  | 9.2.2.65 | Identifies an SNPN together with the *PLMN Identity* IE. | – | - |
| *>SNPN Based MDT* |  |  |  |  | YES | ignore |
| **>>SNPNList for MDT** |  | *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 |  | 9.2.3.134 |  | – |  |
| >>WLAN Measurement Configuration | O |  | 9.2.3.135 |  | – |  |
| >>Sensor Measurement Configuration | O |  | 9.2.3.136 |  | – |  |
| >*Logged MDT-NR* |  |  |  |  |  |  |
| >>Logging interval | M |  | ENUMERATED (ms320, ms640, ms1280, ms2560, ms5120, ms10240, ms20480, ms30720, ms40960 , ms61440, infinity, ...) | Corresponds to information provided in the *LoggingInterval* IE as 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) | Corresponds to information provided in the *LoggingDuration* IE as 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** |  | *0..1* |  |  | YES | Ignore |
| >CAG List for MDT | M |  | 9.2.3.191 | The PLMN IDs and CAGs listed in this IE have to be configurable within the maximum of 12 CAGs per PLMN ID, with a maximum of 12 PLMN IDs, available for UE configuration, where, in such UE configuration, a PLMN ID may be repeated more than once. | – |  |

| **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. |
| maxnoofMDTSNPNs | Maximum no. of SNPNs in the MDT SNPN list. Value is 16. |

| **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". |

End of Changes