**3GPP TSG-SA5 Meeting #156 *S5-244907***

Maastricht, NL, 19 – 23 August 2024

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **32.422** | **CR** | **0466** | **rev** | **1** | **Current version:** | **18.3.0** |  |
|  | | | | | | | | |
| *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 | **X** |

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| ***Title:*** | Rel-18 CR 32.422 Correction on MDT configuration in MR-DC | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GMDT\_Ph2 | | | | |  | ***Date:*** | | | 2024-08-05 |
|  |  | | | |  | |  | | |  |
| ***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 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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | As indicated in the incoming LS (**R3-243937**), the *MN only MDT collection* IE is introduced, which is aimed to facilate flexible control of the NR MDT data collection by enabling selection of MN only MDT congiruations on top of the default MN and SN MDT configurations. This requires a new indication from OAM at signalling based NR MDT.  Therefore, when the OAM triggers a signalling based NR MDT to the RAN, it should also include an indication that this NR MDT process is for the MN only.  Alignment with TS38.413 and TS38.423 is needed. | | | | | | | | |
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| ***Summary of change:*** | | Adding a MN only indicator in signalling based NR MDT | | | | | | | | |
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| ***Consequences if not approved:*** | | Misaligned specification with RAN3 | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 3.2, 4.1.2.17.2, 4.1.2.17.3, 5.10.x (new) | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 | | | | TS28.622 CR0416 | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | TS32.422 CR0466, TS28.622 CR0416, TS28.623 CR0378 | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\*\*\* START OF CHANGE \*\*\*

## 3.2 Abbreviations

For the purposes of the present document, the abbreviations given in TR 21.905 [4], TS 32.101 [1] , TS 23.501 [40], TS 38.300 [42] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in TR 21.905 [4].

AS Application Server

BGCF Breakout Gateway Control Function

CAG Closed Access Group

CSCF Call Session Control Function

I-CSCF Interrogating-CSCF

IM CN SS IP Multimedia Core Network Subsystem

IMEI-TAC IMEI Type Allocation Code

MN Main Node

NID Network ID

P-CSCF Proxy – CSCF

PNI-NPN Public Network Integrated Non-Public Network

RCEF RRC Connection Establishment Failure

RLF Radio Link Failure

S-CSCF Serving-CSCF

SN Secondary Node

SNPN Stand-alone Non-Public Network

TAU Tracking Area Update

TRSR Trace Recording Session Reference

TR Trace Reference

\*\*\* START OF CHANGE \*\*\*

##### 4.1.2.17.2 Activation of MDT task before UE attaches to the network in 5GC and NG-RAN

As shown in figure 4.1.2.17.2.1, by adding configurations of MDT management system activate the Trace Session for MDT job.



Figure 4.1.2.17.2.1: Example of MDT activation procedure in 5GC and NG-RAN

The MDT activation procedure before UE attachment in 5GC is the same as in EPC, When UDM activates the trace, for MDT job, to the AMF the following configuration parameters shall be included in the message:

- Job Type

- Trace Target: IMSI or IMEISV or IMEI-TAC or SUPI

- Area Scope (e.g. TA, Cell)

- Trace Reference

- List of Measurements

- Reporting Trigger

- Report Interval

- Report Amount

- Event Threshold

- Logging Interval

- Logging Duration

- Collection Period for RRM Measurements NR (present only if any of M4 or M5 measurements are requested).

- Collection Period M6 in NR (present only if any of M6 measurements (DL or UL) is requested).

- Collection Period M7 in NR (present only if any of M7 measurements (DL or UL)is requested).

- Positioning Method

- MDT PLMN List

- Trace Collection Entity IP Address

- Excess packet delay thresholds (present only if M6 UL measurements are requested)

- MN only

Note that at the same time not all the parameters can be present. The conditions are described in clause 5.10 of the present document.

The Specified geographical area field is available when IMSI/IMEI(SV)/IMEI-TAC/SUPI combined with geographical area are needed for UE selection.

When AMF activate MDT activation to gNB, the MDT configuration parameters can be included in the message in the Initial Context Setup:

- Area Scope (TA, Cell).

- Trace Reference.

- Trace Recording Session Reference.

- List of Measurements.

- Reporting Trigger.

- Report Amount.

- Report Interval.

- Event Threshold.

- Logging Interval.

- Logging Duration.

- Trace Collection Entity IP Address.

- Collection Period for RRM Measurements NR (present only if any of M4 or M5 measurements are requested).

- Collection Period M6 in NR (present only if any of M6 measurements (DL or UL) is requested).

- Collection Period M7 in NR (present only if any of M7 measurements (DL or UL)is requested).

- Positioning Method.

- MDT PLMN List.

- Report Type for Logged MDT (periodical logged or event-triggered measurement) for logged MDT only.

- Events List for Event-Triggered Measurement for logged MDT only.

- Event Threshold, Hysteresis and Time to trigger (present only if L1 event is configured for logged MDT).

- Area Configuration for Neighbouring Cells for logged MDT only.

- Sensor Information for logged MDT and immediate MDT.

- Excess packet delay thresholds (present only if M6 UL measurements are requested)

- MN only

\*\*\* START OF CHANGE \*\*\*

##### 4.1.2.17.3 Activation of MDT task after UE attachment in 5GC and NG-RAN



Figure 4.1.2.17.3.1: Example of MDT activation in 5GC and NG-RAN after UE attachment

The MDT activation procedure after UE attachment in 5GC is the same as in EPC, When UDM activates the trace, for MDT job, to the AMF the following configuration parameters shall be included in the message:

- Area Scope (TA, Cell).

- Trace Reference.

- Trace Recording Session Reference.

- List of Measurements.

- Reporting Trigger.

- Report Amount.

- Report Interval.

- Event Threshold.

- Logging Interval.

- Logging Duration.

- Trace Collection Entity IP Address.

- Positioning Method.

- Collection Period for RRM Measurements NR (present only if any of M4 or M5 measurements are requested).

- Collection Period M6 in NR (present only if any of M6 measurements (DL or UL) is requested).

- Collection Period M7 in NR (present only if any of M7 measurements (DL or UL)is requested).

- MDT PLMN List.

- Report Type for Logged MDT (periodical logged or event-triggered measurement) for logged MDT only.

- Events List for Event-Triggered Measurement for logged MDT only.

- Event Threshold, Hysteresis and Time to Trigger (present only if L1 event is configured for logged MDT)..

- Area Configuration for Neighbouring Cells for logged MDT only.

- Sensor Information for logged MDT and immediate MDT.

- Excess packet delay thresholds (present only if M6 UL measurements are requested)

- MN only

In case of logged MDT and the UE is currently being in idle or inactive mode, the AMF is not required to initiate paging of the UE in order to send the configuration.

\*\*\* START OF CHANGE \*\*\*

### 5.10.x MN only

An MDT configuration could be triggered for both MN and SNwhich is the default scenario. The optional MN-only parameter is used to facilate flexible control of the MDT data collection by enabling selection of MN-only MDT configurations on top of the default MN and SN MDT configurations. When it is set, it indicates that the provided MDT Configuration is only applicable to MN.

This parameter only applicable on signalling-based MDT procedure in NR.

\*\*\* END OF CHANGE \*\*\*