3GPP TSG-RAN WG3 Meeting #114bis-e R3-221228

E-meeting, 17 – 26 January, 2022

**Agenda item: 10.3.2.2**

**Source: Nokia - moderator**

**Title: CB: # SONMDT10\_MRDC - Summary of email discussion**

**Document for: Approval**

# 1 Introduction

This paper provides summary of discussions at RAN#114bis-e on:

**CB: # SONMDT10\_MRDC**

**- Introduce signalling from MN to SN informing about UE eligibility for m-based MDT?**

**- In NR-DC scenario, for signalling based immediate MDT, OAM includes an indicator requesting reports from MN or SN or from both MN and SN?**

**- Capture agreements if any**

(Nok - moderator)

For the first round of discussion, please provide your feedback no later than 23:59 Thursday (20 Jan.), UTC time.

For the second round of discussion, please provide your feedback no later than 13:00 Monday (24 Jan.), UTC time.

# 2 For the Chairman’s Notes

R3-220334 noted

R3-220587 noted

**Details:**

Second round: only 3 companies commenting, no conclusion

First round:

**Proposal: Introduce signalling from MN to SN informing about UE eligibility for m-based MDT.**

**Summary: The situation w.r.t. RAN2 status is not confirmed, a majority of companies believe that configuration of logged MDT from SN in NE-DC, NGEN-DC and NR-DC is not supported. In that case no need to introduce signalling from MN to SN informing about UE eligibility for m-based MDT. May be continued if required by the RAN2 status.**

**Proposal: In NR-DC scenario, for signalling based immediate MDT, OAM includes an indicator requesting reports from MN or SN or from both MN and SN.**

**Scenario support:**

* **MN+SN: already supported**
* **SN only: 1 company**
* **MN only: 3 companies**

**Needs further discussion: 1 company**

**One company is in favour of all three scenarios. Two companies believe there is no scenario where the OAM wants to collect MDT data from SN only. One company commented that trace and MDT should be aligned.**

**Possible second round: Introduce indicator limiting MDT to collection from MN only.**

# 3 Discussion - first round

## 3.1 Issue 1 - SN awareness of UE eligibility for m-based MDT

0334 refers to agreement from RAN2#114-e to introduce assistance information from the UE relative to eligibility for m-based MDT. It is proposed that this information is also made available in the SN via network signalling:

**Proposal: Introduce signalling from MN to SN informing about UE eligibility for m-based MDT.**

Please provide your view on the proposal.

|  |  |
| --- | --- |
| Company | Comment |
| Huawei | No, based on the latest progress in RAN2, we don't see any clue to have such indication from MN to SN for m-based MDT. |
| CATT | Disagree, we can introduce new signalling until RAN2 explicitly proposal that in other MR-DC scenarios, SN may receive m-based MDT configurations. |
| Qualcomm | No need. We think the RAN2 agreement is that SN can’t configure logged MDT in any MR-DC scenario, not just EN-DC scenario. So, there is no need for MN to propagate the UE assistance regarding “whether there is an s-based MDT configured” to SN. |
| ZTE | No until RAN2 provide specific agreement on this aspects. |
| Ericsson | Tend to agree that RAN2 did not take a decision on NE-DC, NGEN-DC and NR-DC. This does not mean that m-based MDT will be signalled from MN to SN in those cases. |

**Summary: The situation w.r.t. RAN2 status is not confirmed, a majority of companies believe that configuration of logged MDT from SN in NE-DC, NGEN-DC and NR-DC is not supported. In that case no need to introduce signalling from MN to SN informing about UE eligibility for m-based MDT. May be continued if required by the RAN2 status.**

## 3.2 Issue 2 - Request s-based immediate MDT reports from MN or SN or from both MN and SN

0587 observes that there is currently no possibility for the OAM indicate to the RAN whether the OAM is interested in gathering reports from both MN and SN or rather interested in gathering information from one of them. Such functionality is proposed introduced.

**Proposal: In NR-DC scenario, for signalling based immediate MDT, OAM includes an indicator requesting reports from MN or SN or from both MN and SN.**

 Please provide your view on the proposal.

|  |  |
| --- | --- |
| Company | Comment |
| Huawei | We think that the proposal is beneficial.Regarding the encoding, probably a single indicator for SN data collection is enough.Is there the case that OAM wants to collect MDT data only from SN rather than MN? The answer should be NO. |
| CATT | Disagree. Add or delete SN will not inform OAM, so the OAM unable provide the indicator. |
| Qualcomm | Seems OK. Perhaps a single indicator as proposed by Huawei is also enough.Regarding CATT’s concern, should this indicator from OAM be mandatory then if OAM is not aware of DC connectivity? |
| Nokia | Similar to other companies we don't see any reasonable scenario for s-based MDT where the OAM wants to collect information from SN only, because s-based MDT targets a given UE so then also MN information is needed. Additionally, we don't really see the scenario either where OAM would prefer not to collect information from the MN only and not from the SN in case of DC. Of course, the default today is that both MN and SN (if any) are traced (including MDT), as per mandate in TS 38.423: "If *Trace Activation* IE has previously been received for this UE, it shall be included in the S-NODE ADDITION REQUEST message."We believe this default behaviour is sufficient, so no indicator is needed. This will also keep trace and MDT aligned. |
| ZTE | Only provide MN or SN’s report seems need further discussion, the MDT measurement in MR-DC includes network part and UE part. For UE part, the preference is also apply? Then whether RAN node to provide the OAM preference to the UE? |
| Ericsson | We have made the proposals in R3-220587 and we think they are needed because an operator may be interested in gathering measurements concerning specific parts of the system. For example, an operator may be interested in SCG related measurements, to check the coverage, radio conditions, performance of the SCG used by a UE. At the same time, an operator may be interested in checking the same parameters, but for the MCG only. Therefore we propose to add an indication of whether MN, SN or both MN and SN MDT measurement collection should be started, to give full freedom to operators to collect measurements from the parts of the system they need to analyse |

**Summary:**

**Scenario support:**

* **MN+SN: already supported**
* **SN only: 1 company**
* **MN only: 3 companies**

**Needs further discussion: 1 company**

**One company is in favour of all three scenarios. Two companies believe there is no scenario where the OAM wants to collect MDT data from SN only. One company commented that trace and MDT should be aligned.**

**Possible second round: Introduce indicator limiting MDT to collection from MN only (exclude SN).**

# 4 Discussion - second round

## 4.1 Scenario for node selection for s-based immediate MDT reports

Following the first round, we would like to further check companies' interest to introduce support enabling the operator to optionally limit MDT to be collected from MN only (i.e., which means, during DC operation, to prevent MDT to be setup in the SN).

Do you support this proposal?

|  |  |  |
| --- | --- | --- |
| Company | Yes/No | Comment |
| Ericsson | Yes, with comments | If we introduce these indication then we wonder why not allowing for the full flexibility of MN or SN collection, so we support inclusion of both MN-only and SN-Only. However, we could also accept this first step proposal |
| Nokia | No | On our side we don't see the need for MN-only activation of immediate s-based MDT measurements. This would correspond to, in a Rel-17 deployment, reverting back to Rel-16 operation where the SN doesn't trigger MDT. But in that case the operator will receive information relative to MCG only but why would the operator want to exclude SCG related info? E.g., suddenly requested information like packet delay or throughput will not be received for the bearers that become SCG bearers (e.g. the average throughput per UE (M5) will become hard to interpret unless for specific scenarios like MN terminated SCG bearer). If the feature is intended to "protect" low-capacity NG-RAN nodes, it should be taken into account that MDT in SN is as an optional feature (like all features in the network), so low capacity NG-RAN nodes are free not to support MDT e.g. when they serve as SN. We also see from the IE name used in R3-220587 that the feature is intended for NR-DC only, and not MR-DC scenarios in general (including NGEN-DC, NE-DC), and wonder whether that is intentional (not reflected in the proposed procedural text). If finally the MN-only scenario is agreed by RAN3 we believe that both TPs (NGAP, XnAP) need to be reworked. E.g. procedural text relative to propagation to the specified NG-RAN nodes is not needed in NGAP as per our understanding. And we believe the propagation aspect is not correctly handled in the proposed procedural text on XnAP. Furthermore, on the tabular part, a bit map doesn't seem beneficial for this functionality. |
| CATT | Still have question | We still concern about the OAM ability to know whether a NG-RAN node is in DC as add SN will not inform the OAM. But we can agree, OAM usually wants to configuration MDT by the NG-RAN node connected to it (that means, in DC, the OAM want MN to configure MDT for UE). So, could you please kindly clarify why OAM want to only configure MDT by SN or both MN and SN? In our opinion, OAM just want MN to configure and MN would not send the configuration to SN according to the load condition of MN. |

**Summary: No conclusion in this short second round of discussion.** **1 company in favour, 1 company against and 1 company still has questions.**

# 5 Conclusion, Recommendations [if needed]

If needed

# 6 References

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| [R3-220334](file:///C%3A%5CUsers%5Cz00274494%5CDownloads%5CDocs%5CR3-220334.zip) | Further discussion on inter-node coordination for MDT in case of MR-DC (Nokia, Nokia Shanghai Bell) |
| [R3-220587](file:///C%3A%5CUsers%5Cz00274494%5CDownloads%5CDocs%5CR3-220587.zip) | (TP for MDT BL CR for TS 38.413, TS 38.423) Signalling based immediate MDT in NR-DC (Ericsson) |