

3GPP TSG-RAN WG3 Meeting #117bis-e R3-22xxxx

E-Meeting: Oct. 10th – Oct. 18th, 2022

Agenda item: 10.2.6

Source: CATT

Title: Summary of Offline Discussion on CB: # SONMDT6_MDT

Document for: Discussion and Decision

1 Introduction

This contribution is to kick off the following discussion.

CB: # SONMDT6_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? E///

- From the perspective of function, supporting both inter-system and intra-system S-based MDT protection is more reasonable? LS to RAN2? CATT

- Capture agreements if any

(CATT - moderator)

[NWM] Summary of offline disc

For the first round, we focus on the issue for MDT about new indicator and the logged MDT override protection. The deadline is Thursday, October, 13th, 13:00 UTC.

For the second round, we focus on the left issues in the first round and check the CR or LS if needed. The deadline is Monday, October, 17th, 08:00 UTC.

2 For the Chairman's Notes

No consensus on whether enable OAM to requesting reports from the specified node and postpone this decision to next meeting.

WA: RAN3 has the common understanding that according to the WI, only option 1(inter-system inter-RAT) is included.

Proposal 1: Send an LS to RAN2 to clarify our understanding about the WI. If RAN2 defines a generic solution that also applies for intra-system inter-RAT, then the scope can be clarified in stage-2 specifications. The content of LS can be checked in the second round.

Proposal 2: No need to send LS to RAN2 for supporting the reverse use case.

3 Discussion - Second Round

<TBD>

4 Discussion - First Round

4.1 Issue 1: Whether OAM shall be enabled to request report from MN or SN independently

In [1], it is pointed out that according to TS37.320

“For immediate MDT configuration, MN and SN can independently configure and receive measurement from the UE.”

Thus, it is proposed that in NR-DC scenario, for signaling based immediate MDT, OAM includes an indicator requesting reports from either MN or SN or from both MN and SN.

Question 1: What’s your opinion on whether enable OAM to select which node(s) should configure MDT and report the measurement results?

Feedback Form 1:

1 – Ericsson-LG Co.

We believe that allowing the OAM to configure whether MDT measurements should be collected from the MN only, from the SN only, or from both, would greatly improve MDT because it would allow an operator to select the right MDT measurements depending on the observability that wants to be achieved.

For example, if the operator wants to observe the coverage of the SCG layer, then SN only can be selected. While if the operator wants to observe the coverage of the mcg layer, then MN only can be configured. Selecting both MN and SN provides full visibility on both mcg and scg layers

2 – Qualcomm Incorporated OK to allow this flexibility at the OAM
3 – HuaWei Technologies Co. we are fine with the proposal.
4 – CATT we can see there are some advantage to give OAM more flexibility, whether we need to check whether have such demands?
5 – Samsung R&D Institute UK No. Question 1 is specific to signalling based MDT, right? For signalling based MDT, it is used to trace a specific UE. The UE or RAN will report the status for all bearers for the request MDT measurement. In addition, DC status for a UE will be dynamic changed. Even for one bearer, sometimes it is in MN, sometimes it is in SN.
6 – ZTE Corporation. Seems belong to SA5's scope, may send LS to confirm such requirement is needed in SA5.
7 – Nokia France No. Agree with Samsung, s-based MDT is used to trace the UE, so reports are performed as per measurement configuration.

Question 2: If yes, which status should be supposed?

- Option 1: MN+SN,
- Option 2: SN only,
- Option 3: MN only.

Feedback Form 2:

1 – Ericsson-LG Co. We propose to support all options. As mentioned above, this enables an operator full granularity on mcg and scg coverage layer observability. This enables also to check network performance on the mcg and scg layer. This is beneficial because if, for example performance reveals to be poor on the scg layer, the operator may decide not to configure DC in a specific network area, as the cost in terms of scg resources does not provide comparable benefits
2 – Qualcomm Incorporated OK for all options

3 – HuaWei Technologies Co.

Is option 2 a valid use case? maybe a simple indication is sufficient to indicate whether the MDT configuration should forward to SN or not.

4 – CATT

agree with HW ☐ OAM not know whether IE is in DC, case 2 needs further check

5 – Nokia France

in particular option 2 seems not easy to handle, and also assumes gNBs deployed for SN operation only. However the proponent so far considered standards support for gNBs that could support both MN and SN role (no specific standards support for "SN-only gNB").

Moderator's summary:

For Q1:

7 companies participate in the discussion for Q1. 3 companies support to enable OAM to select which node to MDT configuration; 2 companies think no need to enable OAM to select; 2 companies still have concerns and think it need to confirm with SA5.

From the above discussion, companies have no consensus on whether enable OAM to select which node(s) to configure MDT and report the measurement results. To promote the process, the moderator would like to propose:

~~Proposal 1: Send LS to SA5 to check whether they want to enable OAM selecting which node should configure MDT and report the measurements~~

For Q2:

5 companies participate in the discussion for Q2. 2 companies agreed to support all the three options; 3 companies think option 2 is not valid.

From the above discussion, companies still have no consensus on the option 2, so the moderator suggest:

~~Proposal 2: If Q1 is supported, we should consider MN+SN case and MN only case first.~~

As company still have different understandings for the Q1 & Q2 ☐ we suggest to discussed it at Nov. meeting, companies can provide contribution to further clarify whether enable OAM to requesting reports from the specified node.

No consensuses on whether enable OAM to requesting reports from the specified node and postpone this decision to next meeting.

4.2 Issue 2: Scenario of Signaling based logged MDT override protection

RAN3 have no coincided about which scenario is supported, there are mainly two understandings:

Option 1: Only include inter-system inter-RAT scenario, i.e., from eNB to gNB.

Option 2: Also include the intra-system inter-RAT scenario, i.e., **both eNB to gNB and ng-eNB to gNB.**

In last meeting, we agreed this issue should be discussed in RAN2. But in RAN2, they only notice the UE is configured in LTE and reselect to NR, not need to identify whether the UE is connected to an ng-eNB or a eNB. So, it seems RAN2 will not touch such issue without requirements from RAN3 since RAN2 does not care about the difference between E-UTRAN and E-UTRA.

In [2], it is proposed to support both inter-system and intra-system case, and send LS to RAN2 to confirm the scenario

Question 3: Which option do you support for the scenario of signaling based logged MDT override protection?

Feedback Form 3:

1 – Ericsson-LG Co. Option 1
2 – Qualcomm Incorporated No strong view (Option 2 seems logical to support). We discussed this last meeting. But companies seemed to be interested only in inter-system scenario (i.e., Option 1) and said that was also the intention of the WID. Regardless, we feel that the RAN2 solution might work for intra-system and inter-system without any extra efforts; so perhaps no clarification/LS is needed
3 – HuaWei Technologies Co. No strong view. but if we want to extend the scope if WID, then probably revising the WID in RAN plenary is needed.
4 – CATT Option 2 is more reasonable, and agree with QC mentioned that RAN2 solution can be used for both inter and intra case, we also shouldn't preclude intra-system case in RAN3. And if this is turly a typo in WI, we should inform other groups as soon sa possible to avoide further potential mis-understanding.
5 – Samsung R&D Institute UK Option 2 seems a reasonable scenario to support. Sharing the same view as Qualcomm, maybe the solution defined to inter-system works also for intra-system.
6 – ZTE Corporation. No strong view, but based on current WID, only focus on option 1.
7 – Nokia France Need to follow the WID, which reflects clear discussion outcome at RAN plenary.

Question 4: Whether an LS should be sent to RAN2 to confirm the scenario of signaling based logged MDT override protection

Feedback Form 4:

1 – Ericsson-LG Co. Teh WID currently describes the case where the UE is configured in E-UTRAN (namely an eNB in EPS) and reselect in NR (namely to a gNB in NG-RAN). We support sending an LS to RAN2 stating that RAN3 believes that the reverse use case should also be supported, namely a UE is configured in NR (NG-RAN) and it reselects in E-UTRAN.
2 – Qualcomm Incorporated Reverse use case is definitely not in the WID, we should not add that now.
3 – HuaWei Technologies Co. LS should be OK. but the conclusion of last meeting is to follow the scope of WID. Or we may also rely on contributions in RAN2 directly.
4 – CATT LS is needed to show our RAN3's understanding about E-UTRA and E-UTRAN. For reverse use case, RAN2 has started the discussion, we can wait for their information.
5 – Samsung R&D Institute UK No strong view. but if RAN2 doesn't identify whether the UE is connected to an ng-eNB or a eNB. LS to RAN2 will not have particular action to RAN2.
6 – ZTE Corporation. No strong view for LS out. Regarding the reverse user case, this user case is not in the WID.
7 – Nokia France It is not clear to us what RAN3 should write in the LS to RAN2. Considering the WID is followed, we can't agree with the draft LS annexed to 5616.

Moderator's summary:

For Q3:

7 companies participate in the discussion for Q3.

2 company support option 1, at the same time, 2 companies have no strong view but support to follow the WI (in RAN3 common understanding, the WI means option 1). 1 company support option 2, at the same time, 2 companies have no strong view but think option 2 is more reasonable.

From the above discussion, we can find that RAN3 is ambiguous with which scenario should be support for s-based logged MDT override protection. Fortunately, we have the same understanding that follow the WI, only option 1 is included.

WA: RAN3 is ambiguous with which scenario should be support for s-based logged MDT override

protection. RAN3 has the common understanding that according to the WI, only option 1(inter-system inter-RAT) is included.

For Q4:

7 companies participate in the discussion for Q4.

2 companies agree to send LS to RAN2 to align the understanding about scenario for signaling based logged MDT override protection; 2 companies have no strong views; 1 company is not clearly about what should write in the LS.

The moderator wants to clarify the intention of the LS is to inform RAN2 that in RAN3 common understanding, only inter-RAT case should be support for s-based logged MDT override protection according to the WI. And check with RAN2 whether we have the same understanding or also want to support intra-RAT case.

As many companies mentioned, RAN2 not identify whether the UE is connected to an ng-eNB or an eNB, so the solution defined to inter-system can also work for intra-system naturally.

If we do not send the LS to inform RAN2, at least there will **exist an unaligned between** stage 2 and stage 3 spec. For example, in stage 2 spec., it only support UE configured in eNB and reselect in gNB(according to the WI), but in stage 3 spec., both eNB and ng-eNB can be supported.

Proposal 1: Send an LS to RAN2 to clarify our understanding about the WI. If RAN2 defines a generic solution that also applies for intra-system inter- RAT, then the scope can be clarified in stage-2 specifications. The content of LS can be checked in the second round.

1 company suggest send an LS for supporting the reverse case, however, 3 companies think reverse case is not in the WI scope.

Proposal 2: No need to send LS to RAN2 for supporting the reverse use case.

4.3 Issue 3: Any other aspect

Question 5: Please add any further aspects that are in scope and were not included in the above:

Feedback Form 5:

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Moderator's summary:

<TBD>

5 Conclusion, Recommendations [if needed]

If needed

6 References

1. R3-225555 Signalling based immediate MDT in NR-DC Ericsson
2. R3-225616 Discussion on the scenario of Signalling based logged MDT override protection CATT