**SA WG2 Meeting #170 rev S2-2507498**

**Goteborg, Sweden, 25 – 29 August 2025**

**Title: [DRAFT]** **LS on UE data collection and data transfer**

**Response to: -**

**Release: Rel-20**

**Work Item: FS\_AIML\_CN\_Ph2**

**Source:** **Nokia [will be SA2]**

**To:** **RAN2,**

**CC: RAN, RAN1, RAN3, SA5, SA3**

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**Attachments: None**

# 1 Overall description

As part of FS\_AIML\_CN\_Ph2 study, SA2 continues investigating potential solutions for UE data collection to address requirements from RAN. Candidate solutions so far are captured in 3GPP TR 23.700-04, but no decision has been made on which solution, or which principles should apply.

Many candidate solutions rely on a UE model training server (OTT server) providing a request for data collection to some 5G Core Network function responsible for data collection, such a request from the server including data collection reporting information including, the target for data collection (e.g. individual UEs, set of UEs), a possible geographical area for data collection, a time window for data collection, and some indication of the data to be collected or the use case for which data needs to be collected. The 5G Core Network function responsible for data collection would then relay the data collection request and the data reporting configuration to either RAN or the UE in order to configure UE data reporting, together with information on the user plane endpoint where the collected data should be sent to. It is within RAN scope how data collection configuration is supported between UE and NG-RAN in order to measure and collect the required data.

In order to fully scope SA2 work and to finalize solutions selection from an SA2 and system architecture perspective, SA2 would need some further clarifications and guidance from RAN2.

**1 – UE data collection and UE states**

Question 1.1

Some solutions in SA2 TR propose to page UEs in IDLE mode to provide them with data reporting configuration or to trigger data collection procedure .

SA2 would like to ask RAN2 whether paging UEs in IDLE mode, either to configure them for data collection reporting or to trigger the data collection procedure, is required.

Question 1.2

Many solutions assume that UE data collection will be needed for some specific geographical area.

* Does RAN2 confirm this assumption?
* In that case what is the expected granularity (cell level, cells of a given frequency band within a geographical area, tracking area level….)?
* Can RAN2 confirm that data collection continuation is required upon UE connected mode mobility, as long as the UE stays within the initial geographical area?

Question 1.3

If answer to question 1.2 is positive, does RAN2 identify any impact from data collection configuration perspective, e.g. is the data collection configuration going to be different depending on RAN nodes?

Question 1.4

When the UE, collecting data to be sent to the UE model training server (OTT server), does not have any other traffic, should the UE move to Idle mode or should the UE continue to collect and report data for as long as data collection is configured or does it rely on UE implementation?

**2 – Triggers for UE data collection**

Question 2.1

The different end-to-end solutions in the SA2 TR consider different entities capable of triggering UE data collection procedure: some solutions assume that the UE side model training server (OTT server) triggers the overall data collection procedure (including data collection configuration and data transfer) via the core network, while other solutions consider that the UE triggers data collection procedure.

SA2 would like to ask RAN2 whether the trigger for UE data collection should be from UE side model training server (OTT server), from the UE, or from both.

In addition, SA2 would like to clarify whether there are any dependencies between a data collection request sent from the UE-side server and a data collection configuration procedure (measurement configuration) between a UE and NG-RAN.

**3 – Selection of the UEs for UE data collection**

Question 3.1

In order to decide how to select UEs for UE data collection, SA2 would like to know if the UE data collection will be triggered by the UE model training server on individual UEs or if it will be triggered on a set of UEs, for example on UEs for a specific chipset.

Question 3.2

To better understand where the UE selection should be performed for the case where data collection needs to happen on a set of UEs, SA2 would like to understand if RAN would need to be active in UEs selection, e.g. if the selection of UEs would eventually depend on e.g. radio conditions.

# 2 Actions

**To RAN2**

**ACTION:** SA2 requests RAN2 to answer SA2 questions above and provide any additional feedback that would guide SA2 on finalizing the solution for UE data collection.

# 3 Dates of next TSG SA WG 2 meetings

SA2#171 October 13-17, 2025 Wuhan, China

SA2#172 November 17-21, 2025 Dallas, US