**3GPP TSG-SA5 Meeting #154 *S5-242095***

Changsha, China, 15 – 19 April 2024

**Source: Ericsson**

**Title: pCR TR 28.873 Redundant Trace/MDT Subscriptions Use Case**

**Document for: Approval**

**Agenda Item: 6.19.11**

# 1 Decision/action requested

***For agreement and approval***

# 2 References

[1] TR 28.873 " Study on data management, subscriptions and reporting"

[2] SP-231732 "Study on data management regarding subscriptions and reporting"

# 3 Rationale

This contribution proposes to add the Redundant Subscriptions use case for TR 28.873 based on SP-231732 [2].

The number of automation functions are increasing in the 3GPP system. There are domain specific and interdomain entities that are performing automated functionality. All of these require data from the NFs and/or 3GPP management system.

How to avoid that the same data from different consumers does not lead to redundant subscriptions for the same data in the NFs and/or 3GPP management system and that the reporting is not multiplied should be studied.

Example:

Consumer A (e.g. NWDAF) request MDT data “1”, “2”, “5”, and “22” in Cell “a” and want the collected data to be sent to itself.

Consumer B (e.g. a customer care central) request MDT data “1”, “5” and “22” in Cell “a” and want the collected data to be sent to second line support.

These two requests are received within a short time difference.

What is to be studied is whether there can be an entity outside the traffic node that can combine the two requests into one towards the traffic node, in order to minimize the administration and reporting in the traffic node. The new entity should be able to change trace jobs without ending and starting a new job (i.e., keep the same Trace Reference when new measurements are added or removed).

This study is focusing on how the duplicated Trace/MDT/QoE requests on the NFs and/or 3GPP management system can be decreased by extracting some of the required functionality to be deployed outside the NFs implementing management capabilities defined in SA5.

# 4 Detailed proposals

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

## 5.x Use case#<X>: Redundant Subscriptions

## 5.x.1 Description

In the current 3GPP system, the number of automation functions are increasing. There are domain specific entities and interdomain entities. Both entities are performing automated functionality. All of these require collecting measurement data from the NFs and/or 3GPP management system. There are large possibility that the measurement collection requests are redundant. The followings are some examples on how the redundant PM/Trace/MDT/QoE subscriptions are created:

* Multiple Trace/MDT/QoE activation requests from different consumers with different measurements on the same target, e.g. same UE or same area scope
* Multiple Trace/MDT/QoE activation requests from different consumers with overlapped measurements on the same target, e.g. same UE or same area scope
* Multiple Trace/MDT/QoE activation requests from different consumers with different measurements and overlapped target, e.g. overlapped area scope
* Multiple Trace/MDT/QoE activation requests from different consumers with overlapped measurements and overlapped target, e.g. overlapped area scope

When the number of redundant subscriptions increased, there are many potential issues:

* RRC interface may be overloaded due to too many MDT/QoE activations and reporting.
* Inefficient due to duplicated measurements and reports which may require too many resources on the same task.
* Exhausted network signaling in order to support multiple Trace/MDT at mobility.

## 5.x.2 Potential requirements

REQ-PM-Y1: The traffic node shall support a limitation of a maximum number of a specific PM/Trace/MDT/QoE measurement.

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