**3GPP TSG-SA5 Meeting #155 *S5-243321d1***

Jeju, South Korea, 27 - 31 May 2024 was S5-242638

**Source: China Telecom**

**Title: Add solutions for measuring the amount of data for NWDAF data collection**

**Document for: Approval**

**Agenda Item: 6.19.18**

# 1 Decision/action requested

***The group is asked to discuss and agree on the proposal.***

# 2 References

[1] 3GPP TS 28.502-i50: " Procedures for the 5G System (5GS); Stage 2".

[2] 3GPP TS 28.552-i60: "Management and orchestration; 5G performance measurements".

[3] 3GPP TS 23.288-i40: "Architecture enhancements for 5G System (5GS) to support network data analytics services".

[4] 3GPP TS 28.877-000: "Study on Enhancement of the management aspects related to Network Data Analytics Functions (NWDAF) Phase 2".

# 3 Rationale

*(With bullet points, describe the reasons for the proposed action.   
The objectives of the proposal should be clearly stated.   
Rejected alternative solutions should be mentioned if this aids understanding).*

*(For pseudo CR, the reason for change(s) and summary of change(s) must be clearly explained.)*

It is agreed in SA5#154 that the potential solutions with respect to the following requirements needs to be studied [1]:

***REQ-NWDAF-PM-DCVOLUME-01：****the 3GPP management system shall have a capability to provide the total amount of data for NWDAF data collection from all data sources over a period of time.*

***REQ-NWDAF-PM-DCVOLUME-02：****the 3GPP management system shall have a capability to provide the amount of data for NWDAF data collection from a specific data source over a period of time.*

A potential solution considering performance measurement on data volume for NWDAF data collection.

# 4 Detailed proposal

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| **1st Change** |

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[1] 3GPP TS 23.288: "Architecture enhancements for 5G System (5GS) to support network data analytics services".

[2] 3GPP TS 28.541: "5G Network Resource Model (NRM)".

[x] 3GPP TS 28.502: " Procedures for the 5G System (5GS); Stage 2".

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| **Start of 2nd Change** |

4.3.3 Possible solutions

4.3.3.X Possible solution #X: Amount of data for NWDAF data collection performed by NWDAF

4.3.3.X.1 Introduction

This potential solution is proposed to meet the requirements of **REQ-NWDAF-PM-DCVOLUME-01 and REQ-NWDAF-PM-DCVOLUME-02** considering the cases where Data Collection from NFs is performed by NWDAF.

4.3.3.X.2 Description

When NWDAF performs Data Collection from NFs, the NWDAF will subscribe/unsubscribe at any 5GC NF to be notified for data on a set of events [1].

According to the clause 6.2.2.1 in TS 23.288 [1], the Data Collection from NFs is based on the services of AMF, SMF, UDM, PCF, NRF, NSACF, UPF and AF (possibly via NEF):

- Event Exposure Service offered by each NF as defined in clause 4.15 and clause 5.2 of TS 23.502 [x].

- other NF services (e.g. Nnrf\_NFDiscovery and Nnrf\_NFManagement in NRF)

For each of the NF services producers, the data can be provided to a NWDAF by the notification corresponding to the subscription of Event Exposure Service or by the response corresponding to the request to the other service offered by the data source NF. Over a given period of time, NWDAF is able to measure the total amount of data collected from all NFs or from a specific NF instance. This measurement reflects the load of one NWDAF performing Data Collection and can be used to calculate the efficiency related to NWDAF data collection.

More specifically, the measurement can be provided with different granularities:

**Total amount of data collected by NWDAF from all NFs:**

The measurement is provided by accumulating the total amount of data collected by NWDAF from all NFs over a period of time. When the NWDAF receives a notification corresponding to the subscription of event exposure service or a response corresponding to the request from the data source NF, the amount of data is cumulatively added to the counter for all NFs. This measurement reflects the data processing load of the NWDAF performing Data Collection from all NFs.

**Amount of data collected by NWDAF from a specific NF instance:**

The measurement is provided by accumulating the total amount of data collected by NWDAF from one specific NF instance over a period of time. When the NWDAF receives a notification corresponding to the subscription of event exposure service or a response corresponding to the request from a specific NF instance, the amount of data is cumulatively added to the relevant subcounter for the specific NF instance. This measurement reflects the data processing load of the NWDAF performing Data Collection from a specific NF instance.