**3GPP TSG-SA3 Meeting #102Bis-e *S3-211135-r2***

**e-meeting, 1 – 5 March 2021**

**Source: Samsung**

**Title: Solution on integrity protection of data transferred between AF and NWDAF**

**Document for: Approval**

**Agenda Item: 2.16**

# 1 Decision/action requested

***It is proposed to approve this pCR to add a solution on integrity protection of data transferred between AF and NWDAF to eNA study TR 33.866.***

# 2 References

[1] 3GPP TR 23.700-91: “Study on enablers for network automation for the 5G System (5GS); Phase 2”

[2] 3GPP TR 33.866: “Study on security aspects of enablers for Network Automation (eNA) for the 5G system (5GS) Phase 2”

# 3 Rationale

This contribution proposes a solution for analytics for Integrity protection of data transferred between AF and NWDAF, addressing key issue#1.1.

In line with the 5G security requirements, it is proposed to re-use the current NAS and SBA based security mechanisms as proposed in the following as solution.

# 4 Detailed proposal

***\*\*\*\*\*\*Start of Change\*\*\*\*\****

## 6.0 Mapping of solutions to key issues

Table 6.0-1: Mapping of solutions to key issues

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Solutions | Key Issues | | | | | | | | |
| 1 Key issue related to securing the data provided to any type of analytics function | | | 2 Key issues related to detection of cyber-attacks and anomaly events by analytics function | | | 3 Key issues related to data transfer protection | | |
|  | 1.1 | 1.2 | 1.X | 2.1 | 2.2 | 2.Y | 3.1 | 3.Z |  |
| #Y: Integrity protection of data transferred between AF and NWDAF | X |  | - |  |  |  |  |  |  |
| #X: <Solution name> |  |  |  |  |  |  |  |  |  |

## 6.Y Solution #Y: Integrity protection of data transferred between AF and NWDAF

### 6.Y.1 Introduction

This solution addresses KI#1.1 on integrity protection of data transferred between AF and NWDAF.

### 6.Y.2 Solution details

To enhance the 5GS to support collection and utilisation of UE related data for providing the inputs to generate analytics information (to be consumed by other NFs), the communication between UE and AF/NWDAF needs to be secured.

The NWDAF interacts with the 5GC NFs and the AF using Service-based Interfaces. When the AF is located in the operator’s network, the NWDAF uses Service-Based Interface to communicate with the AF directly. When the AF is located outside the operator’s network, the NEF is used to exchange the messages between the AF and the NWDAF as defined in Rel-16.

The existing 5G security mechanism can be re-used for the transfer of UE data over the SBA interface between AF and NWDAF. For the UE data collection by AF and NWDAF, the current NAS and SBA based security mechanisms for authentication, confidentiality, integrity and replay protection as described in 3GPP TS 33.501 are used.

### 6.Y.3 Evaluation

TBD

***\*\*\*\*\*\*End of Change\*\*\*\*\****