**3GPP TSG-SA3 Meeting #103-e *S3-211842***

**e-meeting, 17 - 28 May 2021, Online**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **33.926** | **CR** |  | **rev** | **-** | **Current version:** | **17.0.0** |  |
|  |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **x** |

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| ***Title:***  | Adding asset, description and threats to TR 33.926 for NWDAF SCAS |
|  |  |
| ***Source to WG:*** | China Mobile |
| ***Source to TSG:*** | SA3 |
|  |  |
| ***Work item code:*** | SCAS\_5G\_NWDAF |  | ***Date:*** | 2021-05-10 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | Rel-17 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)…Rel-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
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| ***Reason for change:*** | Introducing NWDAF related assets, description and threats in TR33.926, based on approved living document in SA3#102e |
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| ***Summary of change:*** | Introducing NWDAF related assets, description and threats in TR33.926 |
|  |  |
| ***Consequences if not approved:*** | Lack of NWDAF Introducing NWDAF related assets, description and threats |
|  |  |
| ***Clauses affected:*** | Annex Y |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **x** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **x** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **x** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

\*\*\* BEGINNING OF 1st CHANGES \*\*\*

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".

[2] 3GPP TR 33.916: "Security Assurance Methodology for 3GPP network products classes".

[3] 3GPP TS 23.401: "General Packet Radio Service (GPRS) enhancements for Evolved Universal Terrestrial Radio Access Network (E-UTRAN) access".

[4] 3GPP TR 33.821: "Rationale and track of security decisions in Long Term Evolution (LTE) RAN/3GPP System Architecture Evolution (SAE)".

[5] 3GPP TS 33.116: "Security Assurance Specification for MME network product class".

[6] 3GPP TS 33.511: "5G Security Assurance Specification (SCAS); NR Node B (gNB)"

[7] 3GPP TS 38.300 v15: "NR; NR and NR-RAN Overall Description; Stage 2".

[8] 3GPP TS 23.501 v15: "System Architecture for 5G System; Stage 2".

[9] 3GPP TS 38.323 v15: "NR; Packet Data Convergence Protocol (PDCP) specification".

[10] 3GPP TS 38.322 v15: "NR; Radio Link Control (RLC) protocol specification".

[11] 3GPP TS 33.250: "Security assurance specification for the PGW network product class".

[12] 3GPP TS 33.516: "5G Security Assurance Specification (SCAS) for the AUSF network product class".

[13] 3GPP TS 33.517: "5G Security Assurance Specification (SCAS) for the Security Edge Protection Proxy (SEPP) network product class".

[14] 3GPP TS 33.501 Release 15: "Security architecture and procedures for 5G system".

[15] 3GPP TS 33.518: "5G Security Assurance Specification (SCAS) for the Network Repository Function (NRF) network product class".

[16] 3GPP TS 33.519: "5G Security Assurance Specification (SCAS) for the Network Exposure Function (NEF) network product class".

[17] 3GPP TS 33.117: "Catalogue of general security assurance requirements".

[18] 3GPP TS 33.513: "5G Security Assurance Specification (SCAS); User Plane Function (UPF)".

[19] 3GPP TS 36.300: "Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Universal Terrestrial Radio Access Network (E-UTRAN);Overall description;Stage 2."

[20] 3GPP TS 33.216: "Security Assurance Specification (SCAS) for the evolved Node B (eNB) network product class."

[21] 3GPP TS 33.514: "5G Security Assurance Specification (SCAS) for the Unified Data Management (UDM) network product class".

[22] 3GPP TS 33.512: "5G Security Assurance Specification (SCAS); Access and Mobility management Function (AMF)".

 [zz] 3GPP TS 33.521: “Security Assurance Specification (SCAS) for the Network Data Analytics Function (NWDAF) network product class”.

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

\*\*\*END OF 1st CHANGES\*\*\*

\*\*\* BEGINNING OF 2nd CHANGE \*\*\*

Annex X (normative):
Aspects specific to the network product class NWDAF

X.1 Network product class description for the NWDAF

X.1.1 Introduction

This Annex covers the aspects specific to the NWDAF network product class.

X.1.2 Minimum set of functions defining the NWDAF network product class

As part of the NWDAF network product, it is expected that the NWDAF to contain NWDAF application (for data analysis), a set of running processes (typically more than one) executing the software package for the NWDAF functions and OAM functions that is specific to the NWDAF network product model. Functionalities specific to the NWDAF network product introduce additional threats and/or critical assets as described below. Related security requirements and test cases have been captured in TS 33.521 [zz].

NOTE: For the purposes of the present document, this common set is defined to be the list of NWDAF functions contained in clause 6.2.18 of 3GPP TS 23.501 [8].

X.2 Assets and threats specific to the NWDAF

X.2.1 Critical assets

In addition to the critical assets of a GNP described in clause 5.2 of the present document, the critical assets specific to the NWDAF to be protected are:

- NWDAF Application;

- Collected Data from NFs: e.g. part of mobility management data as depicted in clause K.2.1 collected from AMF, part of Session related data, user plane data as depicted in clause J.2.1 collected from SMF, part of user subscription data as depicted in clause E.2.1 collected from UDM, part of NF and User Data as depicted in clause I.2.1 collected from NEF, data collectd from NRF, PCF, AF and OAM, etc.

- The interfaces of NWDAF to be protected and which are within SECAM scope:

- Service based interface, Nnwdaf, for providing services to AMF, SMF, NEF, PCF, NSSF, OAM and AF.

- Service based interface for consuming services from AMF, SMF, UDM, PCF, NRF, NEF and AF.

- Console interface, for local access: local interface on NWDAF

- OAM interface, for remote access and data collection: interface between NWDAF and OAM system

NOTE 1: The detailed interfaces of the NWDAF class are described in clause 4, Network Product Class Description of the present document.

- NWDAF Software: binary code or executable code

NOTE 2: NWDAF files may be any file owned by a user (root user as well as non-root uses), including User account data and credentials, Log data, configuration data, OS files, NWDAF application, Collected Data from NFs or NWDAF Software.

X.2.2 Threat analysis on finding the right NF instances are serving this UE

*- Threat name:* Finding the right NF insances are serving this UE

*- Threat Category*: Tampering.

*- Threat Description*: As defined in TS 23.288 [xx], the NWDAF shall shall first determine which NF instances are serving this UE based on a table, unless the NWDAF has already obtained this information due to recent operations related to this UE. If the NWDAF always uses the information obtainted due to an operation related to the UE, the NWDAF may get old information from the UE. This will lead to the NWDAF provides a wrong instruction to NFs.

*- Threatened Asset*: Configuration data.

\*\*\*END OF 2nd CHANGES\*\*\*