**3GPP TSG-SA3 Meeting #119 draft\_S3-245275-r1**

Orlando, USA, 11 – 15 November 2024

**revision of S3-244792**

**Source: BSI (Federal Office for Information Security)**

**Title: Add specific UDR SCAS test cases for TS 33.530**

**Document for: Approval**

**Agenda Item: 4.2**

# 1 Decision/action requested

***This contribution proposes UDR-specific SCAS test case.***

# 2 References

[1] 3GPP TS 33.530 Security Assurance Specification (SCAS) for the Unified Data Repository (UDR) v0.1.0

[2] 3GPP TS 33.117: "Catalogue of general security assurance requirements"

# 3 Rationale

This contribution proposes UDR-specific test cases related to security functional requirements of the UDR to draft TS [1] chapter 4.

This test case is derived from the requirements described in Rel-19 TS 33.501, 5.8b Requirements on the UDR and the threat references as part of the Rel-19 TR 33.926 Annex AA. The UDM can use the UDR as a repository function for storing data.

# 4 Detailed proposal

It is proposed that SA3 approve the below changes for inclusion in the TS [1].

\*\*\*\*\*\*\*\*\*\* START OF 1st CHANGE \*\*\*\*\*\*\*\*\*\*

[4] 3GPP TS 33.501: "Security architecture and procedures for 5G system"

[5] 3GPP TR 33.926: "Security Assurance Specification (SCAS) threats and critical assets in 3GPP

network product classes".

[6] 3GPP TS 29.504: “5G; 5G System; Unified Data Repository Services; Stage 3”

\*\*\*\*\*\*\*\*\*\* START OF 2nd CHANGE \*\*\*\*\*\*\*\*\*\*

## 4.2 UDR-specific adaptations of security functional requirements and related test cases

### 4.2.1 Introduction

The present clause describes the security functional requirements and the corresponding test cases for UDR network product class. The proposed security requirements are classified in two groups:

- Security functional requirements derived from TS 33.501 [2] and detailed in clause 4.2.2.

- General security functional requirements which include requirements not already addressed in TS 33.501 [2] but whose support is also important to ensure that UDR conforms to a common security baseline detailed in clause 4.2.2.0.

### 4.2.2 Security functional requirements on the UDR deriving from 3GPP specifications and related test cases

#### 4.2.2.1 General

The general approach in TS 33.117 [3] clause 4.2.2.1 and all the requirements and test cases in TS 33.117 [3] clause 4.2.2.2 related to SBA/SBI aspect apply to the UDR network product class.

#### 4.2.2.2 Specific UE security-related information update in the UDR

*Requirement Name:* Ability of NFs to update UE security-related information in the UDR

*Requirement Reference:* TS 33.501 [4], clause 5.8b Requirements on the UDR

*Threat References:* TR 33.926 [5], clause AA.2 Assets and threats specific to the UDR

*Requirement Description*: Only the UDM is able to update security-related information in the UDR.

Test Case:

Test Name: TC\_ONLY\_UDM\_CAN\_UPDATE\_UDR

Purpose:

- Verify that only the UDM is able to update the security related information in the UDR.

Procedure and execution steps:

Pre-Condition:

- The test case is applicable if UDR and UDM are implemented as separate network functions (non-colocated)

- The network environment, such as the UDM, can be simulated.

- The network environment, such as the non-UDM, can be simulated.

**Execution Steps:**

Test Case 1:

1. The tester correctly calculates an access token with valid audience and scope claims reflecting the UDM network function to access the UDR resources.
2. The tester includes the access token into an update request to the UDR, e.g., update the SQN or the Authentication Status.

Test Case 2:

1. The tester correctly calculates an access token with valid audience and scope claims reflecting reflecting a non-UDM network function to access the UDR resources.
2. The tester includes the access token into an update request to the UDR, e.g., update the SQN or the Authentication Status.

**Expected Results:**

For test case 1: The UDR **accepts** the service request.

For test case 2: The UDR **rejects** the service request.

**Expected format of evidence:**

Evidence suitable for the interface, e.g., pcap file or screenshot containing the operational results.

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