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**5G;
Security Assurance Specification (SCAS)
for Non-3GPP InterWorking Function (N3IWF)
(3GPP TS 33.520 version 18.0.0 Release 18)**



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Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
 - 1 presented to TSG for information;
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- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
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1 Scope

The present document contains objectives, requirements and test cases that are specific to the Non-3GPP InterWorking Function (N3IWF) network product class. It refers to the Catalogue of General Security Assurance Requirements and formulates specific adaptations of the requirements and test cases given there, as well as specifying requirements and test cases unique to the N3IWF network product class.

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 TS 33.501: "Security architecture and procedures for 5G System".
- [3] 3GPP TR 33.926: "Security Assurance Specification (SCAS) threats and critical assets in 3GPP network product classes".
- [4] 3GPP TS 33.117: "Catalogue of general security assurance requirements".

3 Definitions of terms and abbreviations

3.1 Terms

For the purposes of the present document, the terms given in TR 21.905 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in TR 21.905 [1].

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in TR 21.905 [1].

4 N3IWF-specific security requirements and related test cases

4.1 Introduction

N3IWF specific security requirements include both requirements derived from N3IWF-specific security functional requirements in relevant specifications as well as security requirements introduced in the present document derived from the threats specific to N3IWF network product classes as described in TR 33.926 [3].

4.2 N3IWF-specific security functional adaptations of requirements and related test cases

4.2.1 Introduction

Present clause contains N3IWF-specific security functional adaptations of requirements and related test cases.

4.2.2 Security functional requirements on the N3IWF deriving from 3GPP specifications and related test cases

4.2.2.1 Security functional requirements on the N3IWF deriving from 3GPP specifications – TS 33.501 [2]

4.2.2.1.1 Handling of EAP-Identity Request message

Requirement Name: Handling of EAP-Identity Request message

Requirement Reference: TS 33.501 [2], clause 7.2.1

Requirement Description: "The N3IWF shall refrain from sending an EAP-Identity request. The UE may ignore an EAP Identity request or respond with the SUCI it sent in the Registration Request." as specified in TS 33.501 [2], clause 7.2.1.

Threat Reference: TBD

Test Name: TC_N3IWF_REFRAIN_SEND_IDENTITY_REQUEST

Purpose:

Verify that the N3IWF will not send an EAP-Identity request message, and if the N3IWF sends EAP-Identity Request message, whether the N3IWF will continue to proceed the EAP-5G procedure.

Pre-Conditions:

- The AMF network product shall be connected in emulated/real network environments. UE may be simulated.
- A document describes whether the N3IWF will send an EAP-Identity Request message.

Execution Steps

1. The UE initiates IKE_SA_INIT procedure without UE identity.
2. The N3IWF responds an EAP message

Expected Results:

If the EAP message is EAP-5G start, then it is ok.

If the EAP message is EAP-Identity Request message, then check whether the N3IWF sends a N2 msg to the AMF, and whether the procedure in 7.2 of TS 33.501[2] runs successfully.

Expected format of evidence:

Save the logs and the communication flow in a .pcap file.

4.2.3 Technical Baseline

4.2.3.1 Introduction

The present clause provides baseline technical requirements.

4.2.3.2 Protecting data and information

4.2.3.2.1 Protecting data and information – general

There are no N3IWF-specific additions to clause 4.2.3.2.1 of TS 33.117 [4].

4.2.3.2.2 Protecting data and information – unauthorized viewing

There are no N3IWF-specific additions to clause 4.2.3.2.2 of TS 33.117 [4].

4.2.3.2.3 Protecting data and information in storage

There are no N3IWF-specific additions to clause 4.2.3.2.3 of TS 33.117 [4].

4.2.3.2.4 Protecting data and information in transfer

There are no N3IWF-specific additions to clause 4.2.3.2.4 of TS 33.117 [4].

4.2.3.2.5 Logging access to personal data

There are no N3IWF-specific additions to clause 4.2.3.2.5 of TS 33.117 [4].

4.2.3.3 Protecting availability and integrity

There are no N3IWF-specific additions to clause 4.2.3.3 of TS 33.117 [4].

4.2.3.4 Authentication and authorization

There are no N3IWF-specific additions to clause 4.2.3.4 of TS 33.117 [4].

4.2.3.5 Protecting sessions

There are no N3IWF-specific additions to clause 4.2.3.5 of TS 33.117 [4].

4.2.3.6 Logging

There are no N3IWF-specific additions to clause 4.2.3.6 of TS 33.117 [4].

4.2.4 Operating Systems

There are no N3IWF-specific additions to clause 4.2.4 of TS 33.117 [4].

4.2.5 Web Servers

There are no N3IWF-specific additions to clause 4.2.5 of TS 33.117 [4].

4.2.6 Network Devices

There are no N3IWF-specific additions to clause 4.2.6 of TS 33.117 [4].

4.3 N3IWF-specific adaptations of hardening requirements and related test cases.

4.3.1 Introduction

The present clause contains N3IWF-specific adaptations of hardening requirements and related test cases.

4.3.2 Technical Baseline

There are no N3IWF-specific additions to clause 4.3.2 of TS 33.117 [4].

4.3.3 Operating Systems

There are no N3IWF-specific additions to clause 4.3.3 of TS 33.117 [4].

4.3.4 Web Servers

There are no N3IWF-specific additions to clause 4.3.4 of TS 33.117 [4].

4.3.5 Network Devices

There are no N3IWF-specific additions to clause 4.3.5 of TS 33.117 [4].

4.4 N3IWF-specific adaptations of basic vulnerability testing requirements and related test cases

There are no N3IWF-specific additions to clause 4.4 of TS 33.117 [4].

Annex A (informative): Change history

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
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2024-03	SA#103					Upgrade to change control version	18.0.0

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