3GPP TS 33.528 V19.0.0 (2025-10)

Technical Specification

**3rd Generation Partnership Project;
Technical Specification Group Services and System Aspects;
Security Assurance Specification (SCAS) for the Policy Control
Function (PCF)
(Release 19)**

3GPP

Postal address

3GPP support office address

650 Route des Lucioles - Sophia Antipolis
Valbonne - FRANCE
Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Internet

https://www.3gpp.org

Contents

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;

2   presented to TSG for approval;

3   or greater indicates TSG approved document under change control.

y   the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.

z   the third digit is incremented when editorial only changes have been incorporated in the document.

In the present document, modal verbs have the following meanings:

shall   indicates a mandatory requirement to do something

shall not   indicates an interdiction (prohibition) to do something

The constructions "shall" and "shall not" are confined to the context of normative provisions, and do not appear in Technical Reports.

The constructions "must" and "must not" are not used as substitutes for "shall" and "shall not". Their use is avoided insofar as possible, and they are not used in a normative context except in a direct citation from an external, referenced, non-3GPP document, or so as to maintain continuity of style when extending or modifying the provisions of such a referenced document.

should   indicates a recommendation to do something

should not   indicates a recommendation not to do something

may   indicates permission to do something

need not   indicates permission not to do something

The construction "may not" is ambiguous and is not used in normative elements. The unambiguous constructions "might not" or "shall not" are used instead, depending upon the meaning intended.

can   indicates that something is possible

cannot   indicates that something is impossible

The constructions "can" and "cannot" are not substitutes for "may" and "need not".

will   indicates that something is certain or expected to happen as a result of action taken by an agency the behaviour of which is outside the scope of the present document

will not   indicates that something is certain or expected not to happen as a result of action taken by an agency the behaviour of which is outside the scope of the present document

might   indicates a likelihood that something will happen as a result of action taken by some agency the behaviour of which is outside the scope of the present document

might not	indicates a likelihood that something will not happen as a result of action taken by some agency the behaviour of which is outside the scope of the present document

In addition:

is	(or any other verb in the indicative mood) indicates a statement of fact

is not	(or any other negative verb in the indicative mood) indicates a statement of fact

The constructions "is" and "is not" do not indicate requirements.

1 Scope

The present document contains requirements and test cases that are specific to the PCF network product class. It refers to the Catalogue of General Security Assurance Requirements [2] and formulates specific adaptions of the requirements and test cases given there, as well as specifying requirements and test cases unique to the PCF 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 33.117: "Catalogue of general security assurance requirements".

[3]   3GPP TS 23.501: "System Architecture for 5G System (5GS)".

3 Definitions of terms, symbols and abbreviations

3.1 Terms

For the purposes of the present document, the terms given in 3GPP 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 3GPP TR 21.905 [1].

3.2 Symbols

Void.

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP 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 3GPP TR 21.905 [1].

PCF   Policy Control Function

4 PCF-specific security requirements and related test cases

4.1 Introduction

The present document contains objectives, requirements and test cases that are specific to the PCF network product class. It refers to the Catalogue of General Security Assurance Requirements and formulates specific adaptions of the requirements and test cases given there, as well as specifying requirements and test cases unique to the PCF network product class.

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

There are no PCF-specific additions to clause 4.2 of TS 33.117 [2].

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

There are no PCF-specific additions to clause 4.3 of TS 33.117 [2].

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

4.4.1 Introduction

There are no PCF specific additions to clause 4.4.1 of TS 33.117 [2].

4.4.2 Port Scanning

There are no PCF specific additions to clause 4.4.2 of TS 33.117 [2].

4.4.3 Vulnerability scanning

There are no PCF specific additions to clause 4.4.3 of TS 33.117 [2].

4.4.4 Robustness and fuzz testing

The test cases under clause 4.4.4 of TS 33.117 [2] are applicable to PCF.

According to clause 4.4.4 of TS 33.117 [2], the transport protocols available on the interfaces providing IP-based protocols need to be robustness tested. The interface defined for the PCF in clause 4.2.3 of TS 23.501 [3] is Npcf.

Following TCP/IP layer model and considering all the protocols over transport layer, for PCF, the following interface and protocols are under testing:

- For Npcf: The TCP, HTTP2 and JSON protocols.

    NOTE: There could be other interfaces and/or protocols requiring testing under clause 4.4.4 of TS 33.117 [2].

Annex A (informative): Change history

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2023-04	SA3#110 Adhoc-e	S3-231759				TS skeleton	0.1.0
2023-05	SA3#111 Berlin	S3-233209		r1		draft TS, adding scope, introduction and clause 4 content	0.2.0
2023-05	SA3#111 Berlin	S3-233209		r2		adding clause 4.4 content from Keysight	0.3.0
2023-05	SA3#111 Berlin	S3-233209		r3		editorial changes of 4.4.4 content	0.3.0
2023-05	SA3#111 Berlin	S3-233209		r4		editorial changes of 4.4.4 NOTE	0.3.0
2024-03	SA#103	SP-240220				EditHelp review and presented for information and approval	1.0.0
2024-03	SA#103					Upgrade to change control version	18.0.0
2025-10	-	-	-	-	-	Update to Rel-19 version (MCC)	**19.0.0**