Federal Office
for Information Security

Certification Report

BSI-CC-PP-0104-2019

for

Cryptographic Service Provider (CSP)
Version 0.9.8

developed by

Bundesamt für Sicherheit in der Informationstechnik

Federal Office for Information Security (BSI), Postfach 20 03 63, 53133 Bonn, Germany
Phone +49 (0)228 99 9582-0, Fax +49 (0)228 9582-5477, Infoline +49 (0)228 99 9582-111

Bundesamt
für Sicherheit in der
Informationstechnik

Deutsches IT-Sicherheitszertifikat

erteilt vom Bundesamt für Sicherheit in der Informationstechnik

BSI-CC-PP-0104-2019

Common Criteria Protection Profile

Cryptographic Service Provider (CSP) Version 0.9.8

developed by Bundesamt für Sicherheit in der Informationstechnik
("Fachreferat D15 - Chip-Sicherheitsanalyse")

Assurance Package claimed in the Protection Profile:
Common Criteria Part 3 conformant
EAL 4 augmented by
AVA_VAN.5 and ALC_DVS.2

Valid until 27 February 2029

SOGIS Recognition Agreement

Common Criteria

The Protection Profile identified in this certificate has been evaluated at an approved evaluation facility using the Common Methodology for IT Security Evaluation (CEM), Version 3.1 for conformance to the Common Criteria for IT Security Evaluation (CC), Version 3.1. CC and CEM are also published as ISO/IEC 15408 and ISO/IEC 18045.

This certificate applies only to the specific version and release of the Protection Profile and in conjunction with the complete Certification Report.

The evaluation has been conducted in accordance with the provisions of the certification scheme of the German Federal Office for Information Security (BSI) and the conclusions of the evaluation facility in the evaluation technical report are consistent with the evidence adduced.

This certificate is not an endorsement of the Protection Profile by the Federal Office for Information Security or any other organisation that recognises or gives effect to this certificate, and no warranty of the Protection Profile by the Federal Office for Information Security or any other organisation that recognises or gives effect to this certificate, is either expressed or implied.

Common Criteria Recognition Arrangement

Bonn, 28 February 2019
For the Federal Office for Information Security

Bernd Kowalski
Head of Division

Bundesamt für Sicherheit in der Informationstechnik
Godesberger Allee 185-189 - D-53175 Bonn - Postfach 20 03 63 - D-53133 Bonn
Phone +49 (0)228 99 9582-0 - Fax +49 (0)228 9582-5477 - Infoline +49 (0)228 99 9582-111

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Contents

A Certification

1 Preliminary Remarks

Under the Act on the Federal Office for Information Security (BSIG), the Federal Office for Information Security (BSI) has the task of issuing certificates for information technology products as well as for Protection Profiles (PP).

A PP defines an implementation-independent set of IT security requirements for a category of products which are intended to meet common consumer needs for IT security. A PP claimed by a user, consumer or stakeholder for IT gives them the possibility to express their IT security needs without referring to a special product. Product certifications can be based on Protection Profiles. For products which have been certified based on a Protection Profile an individual certificate will be issued but the results from a PP certification can be re-used for the Security Target evaluation within a product evaluation when conformance to the PP has been claimed.

Certification of the Protection Profile is carried out on the instigation of the BSI or a sponsor. A part of the procedure is the technical examination (evaluation) of the Protection Profile according to Common Criteria [1]. The evaluation is normally carried out by an evaluation facility recognised by the BSI or by BSI itself. The result of the certification procedure is the present Certification Report. This report contains among others the certificate (summarised assessment) and the detailed Certification Results.

2 Specifications of the Certification Procedure

The certification body conducts the procedure according to the criteria laid down in the following:

- Act on the Federal Office for Information Security (BSIG)[1]
- BSI Certification and Approval Ordinance[2]
- BSI Schedule of Costs[3]
- Special decrees issued by the Bundesministerium des Innern (Federal Ministry of the Interior)
- DIN EN ISO/IEC 17065 standard
- BSI certification: Scheme documentation describing the certification process (CC-Produkte) [3], including PP Certification
- BSI certification: Scheme documentation on requirements for the Evaluation Facility, its approval and licencing process (CC-Stellen) [3]

1 Act on the Federal Office for Information Security (BSI-Gesetz - BSIG) of 14 August 2009, Bundesgesetzblatt I p. 2821

2 Ordinance on the Procedure for Issuance of Security Certificates and approval by the Federal Office for Information Security (BSI-Zertifizierungs- und -Anerkennungsverordnung - BSIZertV) of 17 December 2014, Bundesgesetzblatt 2014, part I, no. 61, p. 2231

3 Schedule of Cost for Official Procedures of the Bundesamt für Sicherheit in der Informationstechnik (BSI-Kostenverordnung, BSI-KostV) of 03 March 2005, Bundesgesetzblatt I p. 519

- Common Criteria for IT Security Evaluation (CC), Version 3.1[4] [1] also published as ISO/IEC 15408
- Common Methodology for IT Security Evaluation, Version 3.1 [2] also published as ISO/IEC 18045
- BSI certification: Application Notes and Interpretation of the Scheme (AIS) [4]
- Internal procedure for the issuance of a PP certificate

3 Recognition Agreements

In order to avoid multiple certification of the same Protection Profile in different countries a mutual recognition of IT security certificates - as far as such certificates are based on CC - under certain conditions was agreed. Therefore, the results of this evaluation and certification procedure can be re-used by the product certificate issuing scheme in the evaluation of a Security Target within a subsequent product evaluation and certification procedure.

3.1 European Recognition of CC – Certificates (SOGIS-MRA)

The SOGIS-Mutual Recognition Agreement (SOGIS-MRA) Version 3 became effective in April 2010. It defines the recognition of certificates for IT-Products at a basic recognition level up to and including Common Criteria (CC) Evaluation Assurance Levels EAL 4, and in addition at higher recognition levels for IT-Products related to certain technical domains only. In addition, certificates issued for Protection Profiles based on Common Criteria are part of the recognition agreement.

The SOGIS-MRA logo printed on the certificate indicates that it is recognised under the terms of this agreement by the related bodies of the signatory nations. A disclaimer beneath the logo indicates the specific scope of recognition.

Details on recognition, the signatory nations, technical domains and the agreement itself can be found at http://www.sogisportal.eu.

3.2 International Recognition of CC – Certificates (CCRA)

The international Common Criteria Recognition Arrangement (CCRA) became effictive in September 2014 in its current version. It defines the recognition of certificates for IT-products based on collaborative Protection Profiles (cPP) (exact use), CC certificates based on assurance components up to and including EAL 2 or the assurance family Flaw Remediation (ALC_FLR) and CC certificates for Protection Profiles and for collaborative Protection Profiles (cPP).

The Common Criteria Recognition Arrangement logo printed on the certificate indicates that this certification is recognised under the terms of this agreement by the related bodies of the signatory nations. A disclaimer beneath the logo indicates the specific scope of recognition.

Details on recognition, the signatory nations and the agreement itself can be found at https://www.commoncriteriaportal.org.

[4] Proclamation of the Bundesministerium des Innern of 12 February 2007 in the Bundesanzeiger dated 23 February 2007

4 Performance of Evaluation and Certification

The certification body monitors each individual evaluation to ensure a uniform procedure, a uniform interpretation of the criteria and uniform ratings.

The PP Cryptographic Service Provider (CSP), Version 0.9.8 has undergone the certification procedure at BSI.

The evaluation of the PP Cryptographic Service Provider (CSP), Version 0.9.8 was conducted by the ITSEF TÜV Informationstechnik GmbH. The evaluation was completed on 26 February 2019. The ITSEF TÜV Informationstechnik GmbH is an evaluation facility (ITSEF)[5] recognised by the certification body of BSI.

For this certification procedure the sponsor and applicant is: Bundesamt für Sicherheit in der Informationstechnik ("Fachreferat D15 - Chip-Sicherheitsanalyse").

The certification is concluded with the comparability check and the production of this Certification Report. This work was completed by the BSI.

5 Validity of the certification result

This Certification Report only applies to the version of the Protection Profile as indicated.

In case of changes to the certified version of the Protection Profile, the validity can be extended to new versions and releases, provided the sponsor applies for assurance continuity (i.e. re-certification or maintenance) of the modified Protection Profile, in accordance with the procedural requirements, and the evaluation does not reveal any security deficiencies.

For the meaning of the CC concepts and terms please refer to CC [1] Part 1 for the concept of PPs, to CC [1] Part 2 for the definition of Security Functional Requirements components (SFR) and to CC [1] Part 3 for the definition of the Security Assurance Components, for the class AVA Vulnerability assessment and for the cross reference of Evaluation Assurance Levels (EALs) and assurance components.

The validity of this certificate ends as outlined on the certificate. The applicant and the sponsor of this certificate are recommended to review the technical content of the Protection Profile certified according to the evolvement of the technology and of the intended operational environment of the type of product concerned as well as according to the evolvement of the evaluation criteria. Such review should result in an update and a re-certification of the Protection Profile accordingly. Typically, technical standards are reviewed on a five years basis.

The limitation of validity of this PP certificate does not necessarily impact the validity period of a product certificate referring to this Protection Profile, but the certification body issuing a product certificate based on this Protection Profile should take it into its consideration on validity.

6 Publication

The PP Cryptographic Service Provider (CSP), Version 0.9.8 has been included in the BSI list of the certified Protection Profiles, which is published regularly (see also Internet: https://www.bsi.bund.de and [5]). Further information can be obtained from BSI-Infoline +49 228 9582-111.

[5] Information Technology Security Evaluation Facility

The Certification Report may be obtained in electronic form at the internet address stated above.

B Certification Results

The following results represent a summary of

- the certified Protection Profile,
- the relevant evaluation results from the evaluation facility, and
- complementary notes and stipulations of the certification body.

1 Protection Profile Overview

The Protection Profile Cryptographic Service Provider (CSP), Version 0.9.8 [6] is established by the Bundesamt für Sicherheit in der Informationstechnik (“Fachreferat D15 - Chip-Sicherheitsanalyse”) as a basis for the development of Security Targets in order to perform a certification of an IT-product, the Target of Evaluation (TOE).

The CSP is dedicated to provide cryptographic services for the protection of the confidentiality and the integrity of user data, and for entity authentication. The TOE is intended to be used with different applications. Its security services are logically separated and provided through well-defined external interfaces.

The assets to be protected by a TOE claiming conformance to this PP are defined in the Protection Profile [6], chapter 3.1. Based on these assets the security problem definition is defined in terms of assumptions, threats and organisational security policies. This is outlined in the Protection Profile [6], chapter 3.4, 3.2 and 3.3 (respectively).

These assumptions, threats and organisational security policies are split into security objectives to be fulfilled by a TOE claiming conformance to this PP and security objectives to be fulfilled by the operational environment of a TOE claiming conformance to this PP. These objectives are outlined in the PP [6], chapter 4.

The Protection Profile [6] requires a Security Target based on this PP or another PP claiming this PP to fulfil the CC requirements for strict conformance.

To support proper and consistant usage of the PP, it is supplemented by the Supporting BSI Documents [8] and [9].

2 Security Functional Requirements

Based on the security objectives to be fulfilled by a TOE claiming conformance to this PP the security policy is expressed by the chosen set of security functional requirements (SFR) to be implemented by a TOE. The policies cover the following topics:

- Cryptographic Support,
- User Data Protection,
- Identification and Authentication,
- Security Management,
- Protection of the TSF,
- Resource Utilisation,
- Trusted Path/Channels.

These TOE security functional requirements are outlined in the PP [6], chapter 6. They are selected from Common Criteria Part 2 and some of them are newly defined. Thus the SFR claim is called:

Common Criteria part 2 extended.

3 Assurance Requirements

The TOE security assurance package claimed in the Protection Profile is based entirely on the assurance components defined in part 3 of the Common Criteria. Thus, this assurance package is called:

Common Criteria Part 3 conformant,
EAL 4 augmented by
AVA_VAN.5 and ALC_DVS.2.

(for the definition and scope of assurance packages according to CC see [1], part 3 for details).

4 Results of the PP-Evaluation

The Evaluation Technical Report (ETR) [7] was provided by the ITSEF according to the Common Criteria [1], the Methodology [2], the requirements of the Scheme [3] and all Application Notes and Interpretations of the Scheme (AIS) [4] as relevant for the TOE.

As a result of the evaluation the verdict PASS is confirmed for the assurance components of the class APE (Protection Profile evaluation).

The following assurance components were used:

APE_INT.1 PP introduction
APE_CCL.1 Conformance claims
APE_SPD.1 Security problem definition
APE_OBJ.2 Security objectives
APE_ECD.1 Extended components definition
APE_REQ.2 Derived security requirements

The results of the evaluation are only applicable to the Protection Profile as defined in chapter 1.

5 Obligations and notes for the usage

The following general aspects need to be fulfilled when using the Protection Profile:

none.

Besides the CSP Protection Profile itself (which can be used as-is), the CSP certification concept (which is not in scope of the certification report) states a couple of specific necessities. Therefore, for support of proper and consistent usage of the subsequent CSP concept related Security Targets, and the CSP certification concept as a whole, the PP is supplemented by the Supporting BSI document [8]:

- The Evaluation Methodology [8] provides terms, definitions and conditions of the overall CSP certification concept.

Regarding [8], one has a variety of conclusions and necessities for a CSP component (i.e.for a “TOE”, as referenced within the PP) and CSP applications on top of it. All of which have to be considered if the CSP certification concept (also named “coordinated PP evaluation concept”) is to be applied in subsequent certifications.

The CSP component developer is especially reminded to consider the following remark (“conclusion”) of [8] during development and evaluation:

The CSP component's TSF shall be implemented independently from application component's TSF. *The CSP component shall provide logically separated and self-contained security services.*

Remark:

In the Protection Profile, references are made to dedicated Protection Profile Modules (see [9] and [10]), which are currently under subject to a different certification. These PP modules thus are not in scope of this certification.

6 Protection Profile Document

The Protection Profile Cryptographic Service Provider (CSP), Version 0.9.8 [6] is being provided within a separate document as Annex A of this report.

7 Definitions

7.1 Acronyms

AIS	Application Notes and Interpretations of the Scheme
BSI	Bundesamt für Sicherheit in der Informationstechnik / Federal Office for Information Security, Bonn, Germany
BSIG	BSI-Gesetz / Act on the Federal Office for Information Security
CCRA	Common Criteria Recognition Arrangement
CC	Common Criteria for IT Security Evaluation
CEM	Common Methodology for Information Technology Security Evaluation
CSP	Cryptographic Service Provider
EAL	Evaluation Assurance Level
ETR	Evaluation Technical Report
IT	Information Technology
ITSEF	Information Technology Security Evaluation Facility
PP	Protection Profile
SAR	Security Assurance Requirement
SF	Security Function
SFP	Security Function Policy
SFR	Security Functional Requirement
ST	Security Target
TOE	Target of Evaluation
TSF	TOE Security Functionality

For further acronym explanations, see also Table 9 of the Protection Profile [6].

7.2 Glossary

Augmentation - The addition of one or more requirement(s) to a package.

Extension - The addition to an ST or PP of functional requirements not contained in part 2 and/or assurance requirements not contained in part 3 of the CC.

Formal - Expressed in a restricted syntax language with defined semantics based on well-established mathematical concepts.

Informal - Expressed in natural language.

Object - A passive entity in the TOE, that contains or receives information, and upon which subjects perform operations.

Protection Profile - An implementation-independent statement of security needs for a TOE type.

Security Target - An implementation-dependent statement of security needs for a specific identified TOE.

Semiformal - Expressed in a restricted syntax language with defined semantics.

Subject - An active entity in the TOE that performs operations on objects.

Target of Evaluation - A set of software, firmware and/or hardware possibly accompanied by guidance.

TOE Security Functionality - Combined functionality of all hardware, software, and firmware of a TOE that must be relied upon for the correct enforcement of the SFRs.

For further glossary explanations, see also Table 8 of the Protection Profile [6].

8 Bibliography

[1] Common Criteria for Information Technology Security Evaluation, Version 3.1,
Part 1: Introduction and general model, Revision 5, April 2017
Part 2: Security functional components, Revision 5, April 2017
Part 3: Security assurance components, Revision 5, April 2017
https://www.commoncriteriaportal.org

[2] Common Methodology for Information Technology Security Evaluation (CEM), Evaluation Methodology, Version 3.1, Revision 5, April 2017 https://www.commoncriteriaportal.org

[3] BSI certification: Scheme documentation describing the certification process (CC-Produkte) and Scheme documentation on requirements for the Evaluation Facility, approval and licencing (CC-Stellen), https://www.bsi.bund.de/zertifizierung

[4] Application Notes and Interpretations of the Scheme (AIS) as relevant for the TOE[6].

[5] German IT Security Certificates (BSI 7148), periodically updated list published also on the BSI Website

[6] Protection Profile “Cryptographic Service Provider (CSP)“, Version 0.9.8, 19.02.2019, Bundesamt für Sicherheit in der Informationstechnologie

[7] Evaluation Technical Report, Version 1, 2019-02-22, “EVALUATION TECHNICAL REPORT SUMMARY (ETR SUMMARY)”, TÜV Informationstechnik GmbH (confidential document)

[6] especially

- AIS 32, Version 7, CC-Interpretationen im deutschen Zertifizierungsschema

[8] “Evaluation Methodology for Protection Profiles Security Elements with Application Separation”, v0.1.3, 21.12.2017, Bundesamt für Sicherheit in der Informationstechnologie (document can be requested from BSI)

[9] optional PP-Module “Cryptographic Service Provider Clustering” (currently under certification)

[10] optional PP-Module “Cryptographic Service Provider Time Stamp and Audit” (currently under certification)

C Annexes

List of annexes of this certification report

Annex A: Protection Profile Cryptographic Service Provider (CSP), Version 0.9.8[6] provided within a separate document.

Note: End of report