

# PP-Module for Voice and Video over IP (VVoIP)



Version: 1.0  
2015-08-14

**National Information Assurance Partnership**

## Revision History

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Version	Date	Comment
Round 1	2015-04-23	First draft of version 1.0 for comment
1.0	2015-08-14	Release - first version released

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# 1 Overview

The scope of this Protection Profile (PP) is to describe the security functionality of QQQQ products in terms of [CC] and to define functional and assurance requirements for such products. An operating system is software that manages computer hardware and software resources, and provides common services for application programs. The hardware it manages may be physical, virtual or imaginary.

Something

This is going to show some tests:

- Terms with abbrs like ASLR, or API, should be found a linked automatically.
- And components can be referred to by their name: FQQ\_QQQ.1
- And so can requirements: FQQ\_QQQ.1.1 or by their unique identifier: FQQ\_QQQ.1.1
- Or you can stop them ASLR
- This is how you do a picture:



**Figure 1: Niap's Logo**

- And this is how you reference it: [Figure 1](#)
- This is how you do an equation with an arbitrary counter:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \quad (1)$$

- And this is how you reference it: [1](#)
- The following content should be included if:
  - "this" is selected from FQQ\_QQQ.1.1

*Some text*

- The following content should be included if:
  - the TOE implements "Widget Thing"

*Someting dependent on a feature*

- And here's the audit event table for mandatory requirements.
- Test for an xref to section

And this is another sentence (or fragment). I added this sentence and deleted the next one. This uses the plural acronym OSes.

## 1.1 Terms

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The following sections list Common Criteria and technology terms used in this document.

### 1.1.1 Common Criteria Terms

Assurance	Grounds for confidence that a TOE meets the SFRs [CC].
Base Protection Profile (Base-PP)	Protection Profile used as a basis to build a PP-Configuration.
Common Criteria (CC)	Common Criteria for Information Technology Security Evaluation (International Standard ISO/IEC 15408).
Common Criteria Testing Laboratory	Within the context of the Common Criteria Evaluation and Validation Scheme (CCEVS), an IT security evaluation facility, accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) and approved by the NIAP Validation Body to conduct Common Criteria-based evaluations.
Common Evaluation	Common Evaluation Methodology for Information Technology Security Evaluation.

Methodology (CEM)	
Distributed TOE	A TOE composed of multiple components operating as a logical whole.
Operational Environment (OE)	Hardware and software that are outside the TOE boundary that support the TOE functionality and security policy.
Protection Profile (PP)	An implementation-independent set of security requirements for a category of products.
Protection Profile Configuration (PP-Configuration)	A comprehensive set of security requirements for a product type that consists of at least one Base-PP and at least one PP-Module.
Protection Profile Module (PP-Module)	An implementation-independent statement of security needs for a TOE type complementary to one or more Base Protection Profiles.
Security Assurance Requirement (SAR)	A requirement to assure the security of the TOE.
Security Functional Requirement (SFR)	A requirement for security enforcement by the TOE.
Security Target (ST)	A set of implementation-dependent security requirements for a specific product.
TOE Security Functionality (TSF)	The security functionality of the product under evaluation.
TOE Summary Specification (TSS)	A description of how a TOE satisfies the SFRs in an ST.
Target of Evaluation (TOE)	The product under evaluation.

### 1.1.2 Technical Terms

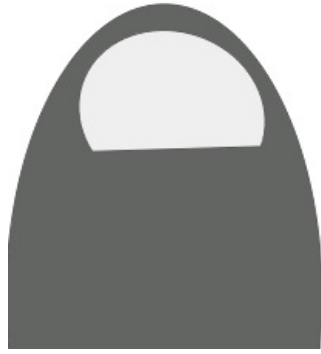
Address Space Layout Randomization (ASLR)	An anti-exploitation feature which loads memory mappings into unpredictable locations. ASLR makes it more difficult for an attacker to redirect control to code that they have introduced into the address space of a process.
Administrator	An administrator is responsible for management activities, including setting policies that are applied by the enterprise on the operating system. This administrator could be acting remotely through a management server, from which the system receives configuration policies. An administrator can enforce settings on the system which cannot be overridden by non-administrator users.
Application (app)	Software that runs on a platform and performs tasks on behalf of the user or owner of the platform, as well as its supporting documentation.
Application Programming Interface (API)	A specification of routines, data structures, object classes, and variables that allows an application to make use of services provided by another software component, such as a library. APIs are often provided for a set of libraries included with the platform.
Credential	Data that establishes the identity of a user, e.g. a cryptographic key or password.
Critical Security Parameters (CSP)	Information that is either user or system defined and is used to operate a cryptographic module in processing encryption functions including cryptographic keys and authentication data, such as passwords, the disclosure or modification of which can compromise the security of a cryptographic module or the security of the information protected by the module.

DAR Protection	Countermeasures that prevent attackers, even those with physical access, from extracting data from non-volatile storage. Common techniques include data encryption and wiping.
Data Execution Prevention (DEP)	An anti-exploitation feature of modern operating systems executing on modern computer hardware, which enforces a non-execute permission on pages of memory. DEP prevents pages of memory from containing both data and instructions, which makes it more difficult for an attacker to introduce and execute code.
Developer	An entity that writes OS software. For the purposes of this document, vendors and developers are the same.
General Purpose Operating System	A class of OSES designed to support a wide-variety of workloads consisting of many concurrent applications or services. Typical characteristics for OSES in this class include support for third-party applications, support for multiple users, and security separation between users and their respective resources. General Purpose Operating Systems also lack the real-time constraint that defines Real Time Operating Systems (RTOS). RTOSes typically power routers, switches, and embedded devices.
Host-based Firewall	A software-based firewall implementation running on the OS for filtering inbound and outbound network traffic to and from processes running on the OS.
Operating System (OS)	Software that manages physical and logical resources and provides services for applications. The terms <i>TOE</i> and <i>OS</i> are interchangeable in this document.
Personally Identifiable Information (PII)	Any information about an individual maintained by an agency, including, but not limited to, education, financial transactions, medical history, and criminal or employment history and information which can be used to distinguish or trace an individual's identity, such as their name, social security number, date and place of birth, mother's maiden name, biometric records, etc., including any other personal information which is linked or linkable to an individual. <a href="#">[OMB]</a>
Sensitive Data	Sensitive data may include all user or enterprise data or may be specific application data such as PII, emails, messaging, documents, calendar items, and contacts. Sensitive data must minimally include credentials and keys. Sensitive data shall be identified in the OS's TSS by the ST author.
User	A user is subject to configuration policies applied to the operating system by administrators. On some systems under certain configurations, a normal user can temporarily elevate privileges to that of an administrator. At that time, such a user should be considered an administrator.
Virtual Machine (VM)	Blah Blah Blah

# 2 Compliant Targets of Evaluation

## 2.1 TOE Boundary

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Replace this image with a diagram of the Target of Evaluation.

**Figure 2: General TOE**

## 2.2 TOE Platform

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# 3 Use Cases

Requirements in this Protection Profile are designed to address the security problems in at least the following use cases. These use cases are intentionally very broad, as many specific use cases exist for an operating system. These use cases may also overlap with one another. An operating system's functionality may even be effectively extended by privileged applications installed onto it. However, these are out of scope of this PP.

## **[USE CASE 1] Elephant-own device**

This is everything we need to describe in words about this use case.

For a the list of appropriate selections and acceptable assignment values for this configuration, see .

This PP-Module inherits exact conformance as required from the specified Base-PPs and as defined in the CC and CEM addenda for Exact Conformance, Selection-Based SFRs, and Optional SFRs (dated May 2017).

The following PPs and PP-Modules are allowed to be specified in a PP-Configuration with this PP-Module:

- PP-Module for MDM Agents, Version 1.0
- PP-Module for File Encryption Enterprise Management, Version 1.0
- PP-Module for File Encryption, Version 2.0

This PP-Module is conformant to Parts 2 (extended) and 3 (extended) of Common Criteria Version 3.1, Revision 5 [CC] when App PP, GPOS PP, or MDF is the Base-PP.

This PP-Module is conformant to Parts 2 (extended) and 3 (conformant) of Common Criteria Version 3.1, Revision 5 [CC] when MDM PP is the Base-PP.

This PP-Module does not claim conformance to any Protection Profile.

This PP-Module does not claim conformance to any packages.

The security problem is described in terms of the threats that the OS is expected to address, assumptions about the operational environment, and any organizational security policies that the OS is expected to enforce.

# 4 Threats

## **T.NETWORK\_ATTACK**

An attacker is positioned on a communications channel or elsewhere on the network infrastructure. Attackers may engage in communications with applications and services running on or part of the OS with the intent of compromise. Engagement may consist of altering existing legitimate communications.

## **T.NETWORK\_EAVESDROP**

An attacker is positioned on a communications channel or elsewhere on the network infrastructure. Attackers may monitor and gain access to data exchanged between applications and services that are running on or part of the OS.

## **T.LOCAL\_ATTACK**

An attacker may compromise applications running on the OS. The compromised application may provide maliciously formatted input to the OS through a variety of channels including unprivileged system calls and messaging via the file system.

## **T.LIMITED\_PHYSICAL\_ACCESS**

An attacker may attempt to access data on the OS while having a limited amount of time with the physical device.



# 5 Assumptions

These assumptions are made on the Operational Environment in order to be able to ensure that the security functionality specified in the PP-Module can be provided by the TOE. If the TOE is placed in an Operational Environment that does not meet these assumptions, the TOE may no longer be able to provide all of its security functionality.

## **A.PLATFORM**

The OS relies upon a trustworthy computing platform for its execution. This underlying platform is out of scope of this PP.

## **A.PROPER\_USER**

The user of the OS is not willfully negligent or hostile, and uses the software in compliance with the applied enterprise security policy. At the same time, malicious software could act *as* the user, so requirements which confine malicious subjects are still in scope.

## **A.PROPER\_ADMIN**

The administrator of the OS is not careless, willfully negligent or hostile, and administers the OS within compliance of the applied enterprise security policy.

# 6 Security Objectives for the TOE

## **O.ACCOUNTABILITY**

Conformant OSES ensure that information exists that allows administrators to discover unintentional issues with the configuration and operation of the operating system and discover its cause. Gathering event information and immediately transmitting it to another system can also enable incident response in the event of system compromise.

## **O.INTEGRITY**

Conformant OSES ensure the integrity of their update packages. OSES are seldom if ever shipped without errors, and the ability to deploy patches and updates with integrity is critical to enterprise network security. Conformant OSES provide execution environment-based mitigations that increase the cost to attackers by adding complexity to the task of compromising systems.

## **O.MANAGEMENT**

To facilitate management by users and the enterprise, conformant OSES provide consistent and supported interfaces for their security-relevant configuration and maintenance. This includes the deployment of applications and application updates through the use of platform-supported deployment mechanisms and formats, as well as providing mechanisms for configuration and application execution control.

## **O.PROTECTED\_STORAGE**

To address the issue of loss of confidentiality of credentials in the event of loss of physical control of the storage medium, conformant OSES provide data-at-rest protection for credentials. Conformant OSES also provide access controls which allow users to keep their files private from other users of the same system.

## **O.PROTECTED\_COMMS**

To address both passive (eavesdropping) and active (packet modification) network attack threats, conformant OSES provide mechanisms to create trusted channels for CSP and sensitive data. Both CSP and sensitive data should not be exposed outside of the platform.

# 7 Security Objectives for the Operational Environment

The Operational Environment of the TOE implements technical and procedural measures to assist the TOE in correctly providing its security functionality (which is defined by the security objectives for the TOE). The security objectives for the Operational Environment consist of a set of statements describing the goals that the Operational Environment should achieve. This section defines the security objectives that are to be addressed by the IT domain or by non-technical or procedural means. The assumptions identified in Section 3 are incorporated as security objectives for the environment. The following security objectives for the operational environment assist the OS in correctly providing its security functionality. These track with the assumptions about the environment.

## OE.PLATFORM

The OS relies on being installed on trusted hardware.

## OE.PROPER\_USER

The user of the OS is not willfully negligent or hostile, and uses the software within compliance of the applied enterprise security policy. Standard user accounts are provisioned in accordance with the least privilege model. Users requiring higher levels of access should have a separate account dedicated for that use.

## OE.PROPER\_ADMIN

The administrator of the OS is not careless, willfully negligent or hostile, and administers the OS within compliance of the applied enterprise security policy.

## 7.1 Security Objectives Rationale

This section describes how the assumptions, threats, and organization security policies map to the security objectives.

Threat, Assumption, or OSP	Security Objectives	Rationale
T.NETWORK_ATTACK	O.PROTECTED_COMMS	The threat T.NETWORK_ATTACK is countered by O.PROTECTED_COMMS as this provides for integrity of transmitted data.
	O.INTEGRITY	The threat T.NETWORK_ATTACK is countered by O.INTEGRITY as this provides for integrity of software that is installed onto the system from the network.
	O.MANAGEMENT	The threat T.NETWORK_ATTACK is countered by O.MANAGEMENT as this provides for the ability to configure the OS to defend against network attack.
	O.ACCOUNTABILITY	The threat T.NETWORK_ATTACK is countered by O.ACCOUNTABILITY as this provides a mechanism for the OS to report behavior that may indicate a network attack has occurred.
T.NETWORK_EAVESDROP	O.PROTECTED_COMMS	The threat T.NETWORK_EAVESDROP is countered by O.PROTECTED_COMMS as this provides for confidentiality of transmitted data.
	O.MANAGEMENT	The threat T.NETWORK_EAVESDROP is countered by O.MANAGEMENT as this provides for the ability to configure the OS to protect the confidentiality of its transmitted data.
T.LOCAL_ATTACK	O.INTEGRITY	The objective O.INTEGRITY protects against the use of mechanisms that weaken the TOE with regard to attack by other software on the platform.
	O.ACCOUNTABILITY	The objective O.ACCOUNTABILITY protects against local attacks by providing a mechanism to report behavior that may indicate a local attack is occurring or has

occurred.

T.LIMITED_PHYSICAL_ACCESS	O.PROTECTED_STORAGE	The objective O.PROTECTED_STORAGE protects against unauthorized attempts to access physical storage used by the TOE.
A.PLATFORM	OE.PLATFORM	The operational environment objective OE.PLATFORM is realized through A.PLATFORM.
A.PROPER_USER	OE.PROPER_USER	The operational environment objective OE.PROPER_USER is realized through A.PROPER_USER.
A.PROPER_ADMIN	OE.PROPER_ADMIN	The operational environment objective OE.PROPER_ADMIN is realized through A.PROPER_ADMIN.

# 8 Security Requirements

This chapter describes the security requirements which have to be fulfilled by the product under evaluation. Those requirements comprise functional components from Part 2 and assurance components from Part 3 of [CC]. The following conventions are used for the completion of operations:

- **Refinement** operation (denoted by **bold text** or ~~strikethrough text~~): is used to add details to a requirement (including replacing an assignment with a more restrictive selection) or to remove part of the requirement that is made irrelevant through the completion of another operation, and thus further restricts a requirement.
- **Selection** (denoted by *italicized text*): is used to select one or more options provided by the [CC] in stating a requirement.
- **Assignment** operation (denoted by *italicized text*): is used to assign a specific value to an unspecified parameter, such as the length of a password. Showing the value in square brackets indicates assignment.
- **Iteration** operation: is indicated by appending the SFR name with a slash and unique identifier suggesting the purpose of the operation, e.g. "/EXAMPLE1."

## 8.1 TOE Security Functional Requirements

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This PP-Module does not define any mandatory SFRs.

## 8.2 TOE Security Functional Requirements Rationale

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The following rationale provides justification for each security objective for the TOE, showing that the SFRs are suitable to meet and achieve the security objectives:

OBJECTIVE	ADDRESSED BY	RATIONALE
FAU_GEN.1	'cause FAU_GEN.1 is awesome	
FTP_ITC_EXT.1	Cause FTP reasons	
FPT_SBOP_EXT.1	For reasons	
FPT_ASLR_EXT.1	ASLR For reasons	
FPT_TUD_EXT.1	For reasons	
FPT_TUD_EXT.2	For reasons	
FCS_COP.1/HASH	For reasons	
FCS_COP.1/SIGN	For reasons	
FCS_COP.1/KEYHMAC	For reasons	
FPT_ACF_EXT.1	For reasons	
FPT_SRP_EXT.1	For reasons	
FIA_X509_EXT.1	For reasons	
FPT_TST_EXT.1	For reasons	
FTP_ITC_EXT.1	For reasons	
FPT_W^X_EXT.1	For reasons	
FIA_AFL.1	For reasons	
FIA_UAU.5	For reasons	
FMT_MOF_EXT.1	For reasons	
FMT_SMF_EXT.1	For reasons	
FTA_TAB.1	For reasons	
FTP_TRP.1	For reasons	

FCS\_STO\_EXT.1, FCS\_RBG\_EXT.1, FCS\_COP.1/ENCRYPT, FDP\_ACF\_EXT.1

Rationale for  
a big chunk

FCS\_RBG\_EXT.1, FCS\_CKM.1, FCS\_CKM.2, FCS\_CKM\_EXT.4,  
FCS\_COP.1/ENCRYPT, FCS\_COP.1/HASH, FCS\_COP.1/SIGN,  
FCS\_COP.1/HMAC, FDP\_IFC\_EXT.1, FIA\_X509\_EXT.1, FIA\_X509\_EXT.2,  
FTP\_ITC\_EXT.1

Rationale for  
a big chunk

# 9 Consistency Rationale

# Appendix A - Optional SFRs

## **A.1 Strictly Optional Requirements**

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This PP-Module does not define any Optional SFRs.

## **A.2 Objective Requirements**

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This PP-Module does not define any Objective SFRs.

## **A.3 Objective Requirements**

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This PP-Module does not define any Objective SFRs.



# Appendix B - Selection-based SFRs

This PP-Module does not define any selection-based SFRs.

# Appendix C - Extended Component Definitions

This appendix contains the definitions for the extended requirements that are used in the PP-Module including those used in Appendices A through C.

## C.1 Background and Scope

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This appendix provides a definition for all of the extended components introduced in this PP-Module. These components are identified in the following table:

<b>Functional Class</b>	<b>Functional Components</b>
<hr/>	

## C.2 Extended Component Definitions

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# Appendix D - Inherently Satisfied Requirements

This appendix lists requirements that should be considered satisfied by products successfully evaluated against this Protection Profile. However, these requirements are not featured explicitly as SFRs and should not be included in the ST. They are not included as standalone SFRs because it would increase the time, cost, and complexity of evaluation. This approach is permitted by [CC] Part 1, **8.2 Dependencies between components**.

This information benefits systems engineering activities which call for inclusion of particular security controls. Evaluation against the Protection Profile provides evidence that these controls are present and have been evaluated.

## Requirement Rationale for Satisfaction

FIA_UAU.1 - Timing of authentication	FIA_AFL.1 implicitly requires that the OS perform all necessary actions, including those on behalf of the user who has not been authenticated, in order to authenticate; therefore it is duplicative to include these actions as a separate assignment and test.
FIA_UID.1 - Timing of identification	FIA_AFL.1 implicitly requires that the OS perform all necessary actions, including those on behalf of the user who has not been identified, in order to authenticate; therefore it is duplicative to include these actions as a separate assignment and test.
FMT_SMR.1 - Security roles	FMT_MOF_EXT.1 specifies role-based management functions that implicitly defines user and privileged accounts; therefore, it is duplicative to include separate role requirements.
FPT_STM.1 - Reliable time stamps	FAU_GEN.1.2 explicitly requires that the OS associate timestamps with audit records; therefore it is duplicative to include a separate timestamp requirement.
FTA_SSL.1 - TSF-initiated session locking	FMT_MOF_EXT.1 defines requirements for managing session locking; therefore, it is duplicative to include a separate session locking requirement.
FTA_SSL.2 - User-initiated locking	FMT_MOF_EXT.1 defines requirements for user-initiated session locking; therefore, it is duplicative to include a separate session locking requirement.
FAU_STG.1 - Protected audit trail storage	FPT_ACF_EXT.1 defines a requirement to protect audit logs; therefore, it is duplicative to include a separate protection of audit trail requirements.
FAU_GEN.2 - User identity association	FAU_GEN.1.2 explicitly requires that the OS record any user account associated with each event; therefore, it is duplicative to include a separate requirement to associate a user account with each event.
FAU_SAR.1 - Audit review	FPT_ACF_EXT.1.2 requires that audit logs (and other objects) are protected from reading by unprivileged users; therefore, it is duplicative to include a separate requirement to protect only the audit information.

## Appendix E - References

# Appendix F - Bibliography

Identifier	Title
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[CC]	Common Criteria for Information Technology Security Evaluation - <ul style="list-style-type: none"><li>• <a href="#">Part 1: Introduction and General Model</a>, CCMB-2017-04-001, Version 3.1, Revision 5, April 2017.</li><li>• <a href="#">Part 2: Security Functional Components</a>, CCMB-2017-04-002, Version 3.1, Revision 5, April 2017.</li><li>• <a href="#">Part 3: Security Assurance Components</a>, CCMB-2017-04-003, Version 3.1, Revision 5, April 2017.</li></ul>
[CEM]	<a href="#">Common Evaluation Methodology for Information Technology Security - Evaluation Methodology</a> , CCMB-2012-09-004, Version 3.1, Revision 4, September 2012.
[CESG]	<a href="#">CESG - End User Devices Security and Configuration Guidance</a>
[CSA]	<a href="#">Computer Security Act of 1987</a> , H.R. 145, June 11, 1987.
[OMB]	<a href="#">Reporting Incidents Involving Personally Identifiable Information and Incorporating the Cost for Security in Agency Information Technology Investments</a> , OMB M-06-19, July 12, 2006.

# Appendix G - Acronyms

<b>Acronym</b>	<b>Meaning</b>
AES	Advanced Encryption Standard
API	Application Programming Interface
API	Application Programming Interface
ASLR	Address Space Layout Randomization
Base-PP	Base Protection Profile
CC	Common Criteria
CEM	Common Evaluation Methodology
CESG	Communications-Electronics Security Group
CMC	Certificate Management over CMS
CMS	Cryptographic Message Syntax
CN	Common Names
CRL	Certificate Revocation List
CSA	Computer Security Act
CSP	Critical Security Parameters
DAR	Data At Rest
DEP	Data Execution Prevention
DES	Data Encryption Standard
DHE	Diffie-Hellman Ephemeral
DNS	Domain Name System
DRBG	Deterministic Random Bit Generator
DSS	Digital Signature Standard
DSS	Digital Signature Standard
DT	Date/Time Vector
DTLS	Datagram Transport Layer Security
EAP	Extensible Authentication Protocol
ECDHE	Elliptic Curve Diffie-Hellman Ephemeral
ECDSA	Elliptic Curve Digital Signature Algorithm
EST	Enrollment over Secure Transport
FIPS	Federal Information Processing Standards
HMAC	Hash-based Message Authentication Code
HTTP	Hypertext Transfer Protocol
HTTPS	Hypertext Transfer Protocol Secure
IETF	Internet Engineering Task Force
IP	Internet Protocol
ISO	International Organization for Standardization
IT	Information Technology
ITSEF	Information Technology Security Evaluation Facility

NIAP	National Information Assurance Partnership
NIST	National Institute of Standards and Technology
OCSP	Online Certificate Status Protocol
OE	Operational Environment
OID	Object Identifier
OMB	Office of Management and Budget
OS	Operating System
PII	Personally Identifiable Information
PKI	Public Key Infrastructure
PP	Protection Profile
PP	Protection Profile
PP-Configuration	Protection Profile Configuration
PP-Module	Protection Profile Module
RBG	Random Bit Generator
RFC	Request for Comment
RNG	Random Number Generator
RNGVS	Random Number Generator Validation System
S/MIME	Secure/Multi-purpose Internet Mail Extensions
SAN	Subject Alternative Name
SAR	Security Assurance Requirement
SFR	Security Functional Requirement
SHA	Secure Hash Algorithm
SIP	Session Initiation Protocol
ST	Security Target
SWID	Software Identification
TLS	Transport Layer Security
TOE	Target of Evaluation
TSF	TOE Security Functionality
TSFI	TSF Interface
TSS	TOE Summary Specification
URI	Uniform Resource Identifier
URL	Uniform Resource Locator
USB	Universal Serial Bus
VM	Virtual Machine
XCCDF	eXtensible Configuration Checklist Description Format
XOR	Exclusive Or
app	Application

# Appendix H - Bibliography

Identifier	Title
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[CC]	Common Criteria for Information Technology Security Evaluation - <ul style="list-style-type: none"><li>• <a href="#">Part 1: Introduction and General Model</a>, CCMB-2017-04-001, Version 3.1, Revision 5, April 2017.</li><li>• <a href="#">Part 2: Security Functional Components</a>, CCMB-2017-04-002, Version 3.1, Revision 5, April 2017.</li><li>• <a href="#">Part 3: Security Assurance Components</a>, CCMB-2017-04-003, Version 3.1, Revision 5, April 2017.</li></ul>
[CEM]	<a href="#">Common Evaluation Methodology for Information Technology Security - Evaluation Methodology</a> , CCMB-2012-09-004, Version 3.1, Revision 4, September 2012.
[CESG]	<a href="#">CESG - End User Devices Security and Configuration Guidance</a>
[CSA]	<a href="#">Computer Security Act of 1987</a> , H.R. 145, June 11, 1987.
[OMB]	<a href="#">Reporting Incidents Involving Personally Identifiable Information and Incorporating the Cost for Security in Agency Information Technology Investments</a> , OMB M-06-19, July 12, 2006.



# Appendix I - Acronyms

<b>Acronym</b>	<b>Meaning</b>
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API	Application Programming Interface
API	Application Programming Interface
ASLR	Address Space Layout Randomization
Base-PP	Base Protection Profile
CC	Common Criteria
CEM	Common Evaluation Methodology
CESG	Communications-Electronics Security Group
CMC	Certificate Management over CMS
CMS	Cryptographic Message Syntax
CN	Common Names
CRL	Certificate Revocation List
CSA	Computer Security Act
CSP	Critical Security Parameters
DAR	Data At Rest
DEP	Data Execution Prevention
DES	Data Encryption Standard
DHE	Diffie-Hellman Ephemeral
DNS	Domain Name System
DRBG	Deterministic Random Bit Generator
DSS	Digital Signature Standard
DSS	Digital Signature Standard
DT	Date/Time Vector
DTLS	Datagram Transport Layer Security
EAP	Extensible Authentication Protocol
ECDHE	Elliptic Curve Diffie-Hellman Ephemeral
ECDSA	Elliptic Curve Digital Signature Algorithm
EST	Enrollment over Secure Transport
FIPS	Federal Information Processing Standards
HMAC	Hash-based Message Authentication Code
HTTP	Hypertext Transfer Protocol
HTTPS	Hypertext Transfer Protocol Secure
IETF	Internet Engineering Task Force
IP	Internet Protocol
ISO	International Organization for Standardization
IT	Information Technology
ITSEF	Information Technology Security Evaluation Facility

NIAP	National Information Assurance Partnership
NIST	National Institute of Standards and Technology
OCSP	Online Certificate Status Protocol
OE	Operational Environment
OID	Object Identifier
OMB	Office of Management and Budget
OS	Operating System
PII	Personally Identifiable Information
PKI	Public Key Infrastructure
PP	Protection Profile
PP	Protection Profile
PP-Configuration	Protection Profile Configuration
PP-Module	Protection Profile Module
RBG	Random Bit Generator
RFC	Request for Comment
RNG	Random Number Generator
RNGVS	Random Number Generator Validation System
S/MIME	Secure/Multi-purpose Internet Mail Extensions
SAN	Subject Alternative Name
SAR	Security Assurance Requirement
SFR	Security Functional Requirement
SHA	Secure Hash Algorithm
SIP	Session Initiation Protocol
ST	Security Target
SWID	Software Identification
TLS	Transport Layer Security
TOE	Target of Evaluation
TSF	TOE Security Functionality
TSFI	TSF Interface
TSS	TOE Summary Specification
URI	Uniform Resource Identifier
URL	Uniform Resource Locator
USB	Universal Serial Bus
VM	Virtual Machine
XCCDF	eXtensible Configuration Checklist Description Format
XOR	Exclusive Or
app	Application