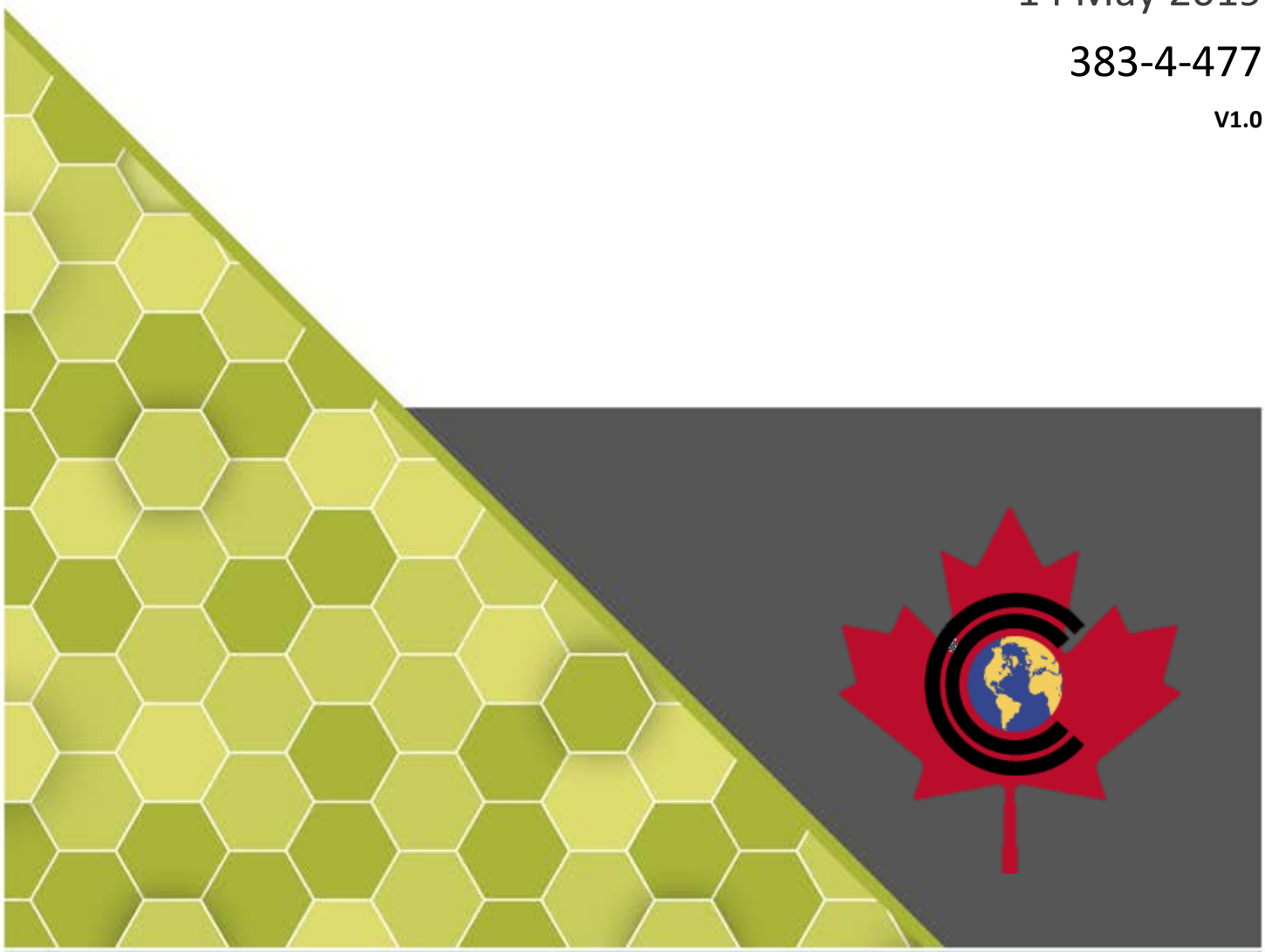
# COMMON CRITERIA CERTIFICATION REPORT

## McAfee Data Loss Prevention 11.1 with ePolicy Orchestrator 5.10

14 May 2019

383-4-477

**V1.0**





Canada

# FOREWORD

This certification report is an UNCLASSIFIED publication, issued under the authority of the Chief, Communications Security Establishment (CSE). Suggestions for amendments should be forwarded through departmental communications security channels to your Client Services Representative at CSE.

The Information Technology (IT) product identified in this certification report, and its associated certificate, has been evaluated at an approved evaluation facility – established under the Canadian Common Criteria Scheme – using the Common Methodology for Information Technology Security Evaluation, Version 3.1 Revision 5, for conformance to the Common Criteria for Information Technology Security Evaluation, Version 3.1 Revision 5. This certification report, and its associated certificate, applies only to the identified version and release of the product in its evaluated configuration. The evaluation has been conducted in accordance with the provisions of the Canadian CC Scheme, and the conclusions of the evaluation facility in the evaluation report are consistent with the evidence adduced. This report, and its associated certificate, are not an endorsement of the IT product by the Communications Security Establishment, or any other organization that recognizes or gives effect to this report, and its associated certificate, and no warranty for the IT product by the Communications Security Establishment, or any other organization that recognizes or gives effect to this report, and its associated certificate, is either expressed or implied.

If your department has identified a requirement for this certification report based on business needs and would like more detailed information, please contact:

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# OVERVIEW

The Canadian Common Criteria Scheme provides a third-party evaluation service for determining the trustworthiness of Information Technology (IT) security products. Evaluations are performed by a commercial Common Criteria Evaluation Facility (CCEF) under the oversight of the Certification Body, which is managed by the Communications Security Establishment.

A CCEF is a commercial facility that has been approved by the Certification Body to perform Common Criteria evaluations; a significant requirement for such approval is accreditation to the requirements of ISO/IEC 17025:2005, the General Requirements for the Competence of Testing and Calibration Laboratories.

By awarding a Common Criteria certificate, the Certification Body asserts that the product complies with the security requirements specified in the associated security target. A security target is a requirements specification document that defines the scope of the evaluation activities. The consumer of certified IT products should review the security target, in addition to this certification report, in order to gain an understanding of any assumptions made during the evaluation, the IT product's intended environment, the evaluated security functionality, and the testing and analysis conducted by the CCEF.

The certification report, certificate of product evaluation and security target are posted to the Certified Products list (CPL) for the Canadian CC Scheme and to the Common Criteria portal (the official website of the International Common Criteria Project).

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# EXECUTIVE SUMMARY

McAfee Data Loss Prevention 11.1 with ePolicy Orchestrator 5.10 (hereafter referred to as the Target of Evaluation, or TOE), from McAfee, LLC, was the subject of this Common Criteria evaluation. A description of the TOE can be found in Section 1.2. The results of this evaluation demonstrate that TOE meets the requirements of the conformance claim listed in Table 1 for the evaluated security functionality.

EWA-Canada is the CCEF that conducted the evaluation. This evaluation was completed 14 May 2019 and was carried out in accordance with the rules of the Canadian Common Criteria Scheme.

The scope of the evaluation is defined by the security target, which identifies assumptions made during the evaluation, the intended environment for TOE, and the security functional/assurance requirements. Consumers are advised to verify that their operating environment is consistent with that specified in the security target, and to give due consideration to the comments, observations and recommendations in this certification report.

Communications Security Establishment, as the Certification Body, declares that the TOE evaluation meets all the conditions of the Arrangement on the Recognition of Common Criteria Certificates and that the product will be listed on the Canadian Certified Products list (CPL) and the Common Criteria portal (the official website of the International Common Criteria Project).

# 1 IDENTIFICATION OF TARGET OF EVALUATION

The Target of Evaluation (TOE) is identified as follows:

**Table 1 TOE Identification**

| | |
|---|---|
| **TOE Name and Version** | McAfee Data Loss Prevention 11.1 with ePolicy Orchestrator 5.10 |
| **Developer** | McAfee, LLC |
| **Conformance Claim** | EAL 2+ (ALC_FLR.2) |

## 1.1 COMMON CRITERIA CONFORMANCE

The evaluation was conducted using the Common Methodology for Information Technology Security Evaluation, Version 3.1 Revision 5, for conformance to the Common Criteria for Information Technology Security Evaluation, Version 3.1 Revision 5.

## 1.2 TOE DESCRIPTION

The TOE is a Data Loss Prevention (DLP) solution containing a suite of products that identify and protect data within the network. It provides an understanding of the types of data on a network, how the data is accessed and transmitted, and if the data contains sensitive or confidential information. Management functions are provided through a physically separate web-based management console. The TOE is a software TOE and includes:

- McAfee Data Loss Prevention Endpoint – inspects and controls content and user actions on endpoints,
- McAfee Device Control – controls the use of removable media on endpoints,
- McAfee Data Loss Prevention Discover – scans file, registered document and repositories to identify and protect sensitive data,
- McAfee Data Loss Prevention Prevent – works with a web proxy or Message Transfer Agent server to protect web and email traffic,
- McAfee Data Loss Prevention Monitor – passively scans unencrypted network traffic for potential data loss incidents,
- McAfee DLP Capture – a function within DLP Monitor and DLP Prevent that allows capture of email, web and network traffic for later analysis,
- McAfee ePolicy Orchestrator (ePO) – provides facilities to manage and monitor DLP,
- McAfee ePO managed extensions related to DLP,
- McAfee Agent on each server and managed system, and
- McAfee Agent ePO policy and reporting extension.

## 1.3 TOE ARCHITECTURE

A diagram of the TOE architecture is as follows:

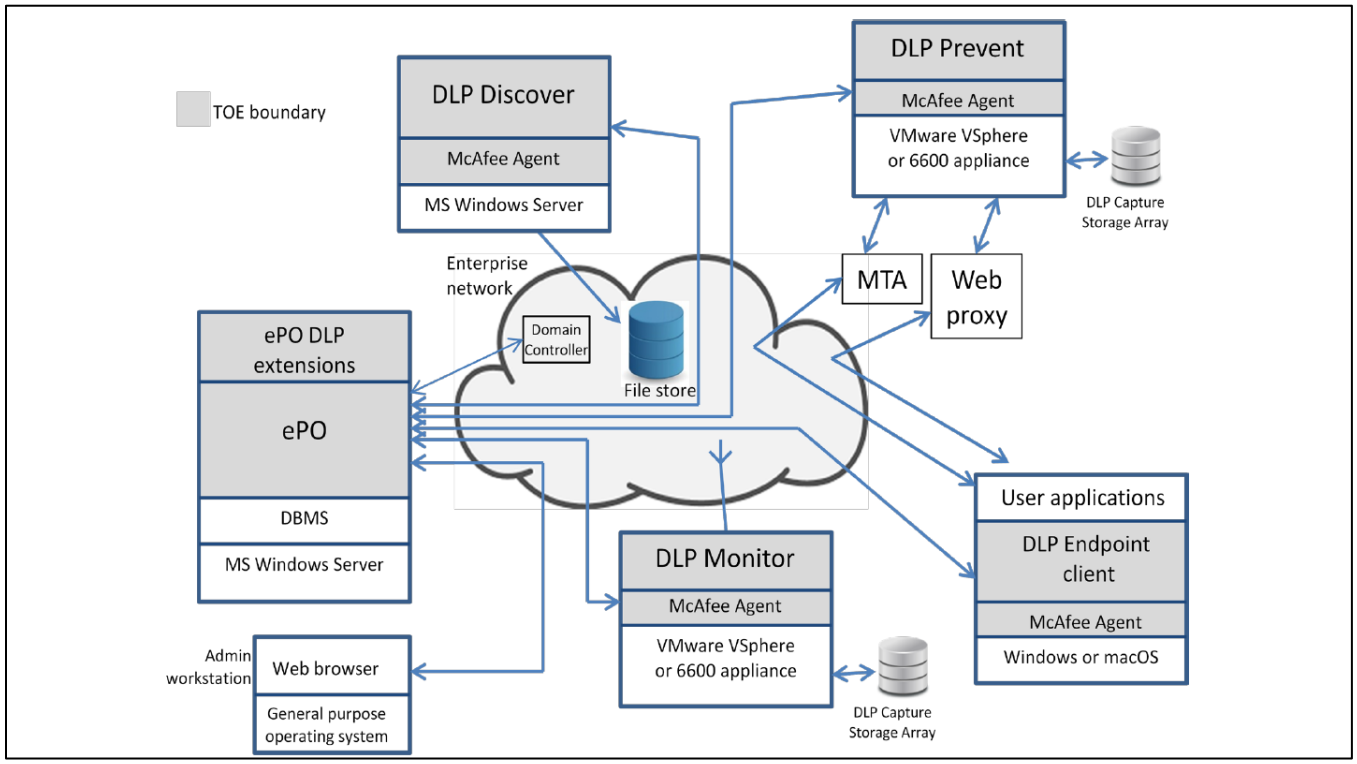


**Figure 1 TOE Architecture**

# 2 SECURITY POLICY

The TOE implements policies pertaining to the following security functional classes:

- Security Audit
- User Data Protection
- Identification and Authentication
- Security Management
- Cryptographic Support
- Protection of the TSF

Complete details of the security functional requirements (SFRs) can be found in the Security Target (ST) referenced in section 8.2.

## 2.1 CRYPTOGRAPHIC FUNCTIONALITY

The following cryptographic modules were evaluated by the CMVP and used by the TOE:

**Table 2 Cryptographic Module(s)**

| Cryptographic Module | Certificate Number |
|---|---|
| RSA BSAFE Crypto-C Micro Edition v4.0.1 | 2097 |
| OpenSSL v1.0.2p with FIPS module v2.0.16 | 2398 |

# 3 ASSUMPTIONS AND CLARIFICATIONS OF SCOPE

Consumers of the TOE should consider assumptions about usage and environmental settings as requirements for the product's installation and its operating environment. This will ensure the proper and secure operation of the TOE.

## 3.1 USAGE AND ENVIRONMENTAL ASSUMPTIONS

The following assumptions are made regarding the use and deployment of the TOE:

- The TOE has appropriate access to the systems it is intended to manage.
- The MTA is configured to route email traffic via DLP Prevent, and to act on the header strings that DLP Prevent adds to the email messages.
- Access to the database used by the TOE via mechanisms outside the TOE boundary is restricted to authorized users.
- The authorized administrators are not careless, willfully negligent, or hostile, and will follow and abide by the instructions provided by the TOE documentation.
- The hardware on which the TOE and the IT environment software are installed will be protected from unauthorized physical modification.
- The hardware, operating system, and other software on which the TOE depends, operate correctly.

## 3.2 CLARIFICATION OF SCOPE

The ePO, server and Prevent must be installed in FIPS mode (as detailed in McAfee Data Loss Prevention 11.1 with ePolicy Orchestrator 5.10.0 Common Criteria Evaluated Configuration Guide and McAfee ePolicy Orchestrator 5.10.0 Product Guide) to ensure that cryptographic services used by the TOE are FIPS validated.

# 4 EVALUATED CONFIGURATION

The evaluated configuration for the TOE comprises:

- McAfee ePolicy Orchestrator 5.10.0.2428 running on Windows Server 2016
- McAfee Agent 5.5.1.388 for Windows Server 2016 and Windows 10
- McAfee Agent 5.5.1.342 for Mac OS 10.14
- McAfee DLP Monitor ISO Image 11.1.0-3525.100 installed on 6600 appliance
- McAfee DLP Prevent ISO Image 11.1.0-3525.100 installed on 6600 appliance
- McAfee DLP Monitor OVA 11.1.0-3525.100 installed on VMware ESXi 6.7
- McAfee DLP Prevent OVA 11.1.0-3525.100 installed on VMware ESXi 6.7
- DLP Endpoint 11.1.100.232 for Windows Server 2016 and Windows 10
- DLP Endpoint 11.1.100.8 for Mac OS 10.14
- DLP Discover/DLP Server 11.1.100.12 running on Windows Server 2016

## 4.1 DOCUMENTATION

The following documents are provided to the consumer to assist in the configuration and installation of the TOE:

a) McAfee Data Loss Prevention 11.1.x Product Guide, 2018

b) McAfee Data Loss Prevention Monitor 11.1.x Installation Guide, 2018

c) McAfee Data Loss Prevention Monitor 11.1.x Hardware Guide, 2018

d) McAfee Data Loss Prevention Prevent 11.1.x Installation Guide, 2018

e) McAfee Data Loss Prevention Prevent 11.1.x Hardware Guide, 2018

f) McAfee Data Loss Prevention Discover 11.1.x Installation Guide, 2018

g) McAfee Data Loss Prevention Endpoint 11.1.x Installation Guide, 2018

h) McAfee Data Loss Prevention 11.1.x Interface Reference Guide, 2018

i) McAfee ePolicy Orchestrator 5.10.0 Product Guide, 2018

j) McAfee ePolicy Orchestrator 5.10.0 Installation Guide, 2018

k) McAfee Agent 5.5.1 Product Guide, 2018

l) McAfee Data Loss Prevention 11.1 with ePolicy Orchestrator 5.10 Common Criteria Evaluated Configuration Guide, Revision A, 2019

# 5 EVALUATION ANALYSIS ACTIVITIES

The evaluation analysis activities involved a structured evaluation of the TOE. Documentation and process dealing with Development, Guidance Documents, and Life-Cycle Support were evaluated.

## 5.1 DEVELOPMENT

The evaluators analyzed the documentation provided by the vendor; they determined that the design completely and accurately describes the TOE security functionality (TSF) interfaces and how the TSF implements the security functional requirements (SFRs). The evaluators determined that the initialization process is secure, that the security functions are protected against tamper and bypass, and that security domains are maintained.

## 5.2 GUIDANCE DOCUMENTS

The evaluators examined the TOE preparative user guidance and operational user guidance and determined that it sufficiently and unambiguously describes how to securely transform the TOE into its evaluated configuration and how to use and administer the product. The evaluators examined and tested the preparative and operational guidance, and determined that they are complete and sufficiently detailed to result in a secure configuration.

Section 4.1 provides details on the guidance documents.

## 5.3 LIFE-CYCLE SUPPORT

An analysis of the TOE configuration management system and associated documentation was performed. The evaluators found that the TOE configuration items were clearly marked.

The evaluators examined the delivery documentation and determined that it described all of the procedures required to maintain the integrity of the TOE during distribution to the consumer.

# 6 TESTING ACTIVITIES

Testing consists of the following three steps: assessing developer tests, performing independent functional tests, and performing penetration tests.

## 6.1 ASSESSMENT OF DEVELOPER TESTS

The evaluators verified that the developer has met their testing responsibilities by examining their test evidence, and reviewing their test results, as documented in the ETR. The correspondence between the tests identified in the developer's test documentation and the functional specification was complete.

## 6.2 CONDUCT OF TESTING

The TOE was subjected to a comprehensive suite of formally documented, independent functional and penetration tests. The detailed testing activities, including configurations, procedures, test cases, expected results and observed results are documented in a separate Test Results document.

## 6.3 INDEPENDENT FUNCTIONAL TESTING

During this evaluation, the evaluator developed independent functional tests by examining design and guidance documentation.

All testing was planned and documented to a sufficient level of detail to allow repeatability of the testing procedures and results. The following testing activities were performed:

a. Repeat of Developer's Tests: The evaluator repeated a subset of the developers tests;

b. Security Management: The objective of this test is to confirm that a deleted user cannot access any of the management functions, even if logged in while the account is being deleted;

c. Cryptographic Operations: The objective of this test is to confirm that communication between the ePO and the TOE components is encrypted;

d. USB Block Rule: The objective of this test is to confirm that the TOE blocks access to USB devices on the managed endpoints;

e. Email Protection Rules: The objective of this test is to confirm that files can be blocked based on their file name via the enforcement of email protection rules; and

f. Classification of Excel Files, Headers, Discover Scan: The objective of this test is to confirm that files can be classified based on different file types and conditions.

### 6.3.1 FUNCTIONAL TEST RESULTS

The developer's tests and the independent functional tests yielded the expected results, providing assurance that the TOE behaves as specified in its ST and functional specification.

## 6.4 INDEPENDENT PENETRATION TESTING

Subsequent to the independent review of public domain vulnerability databases and all evaluation deliverables, limited independent evaluator penetration testing was conducted. The penetration tests focused on:

a. Use of automated vulnerability scanning tools to discover potential network, platform and application layer vulnerabilities such as Heartbleed, Shellshock, FREAK, POODLE, and GHOST;

b. Information Leakage Verification: The objective of this test is to determine if the TOE provides an attacker useful information during start-up, shutdown, login and other scenarios;

c. Concurrent User Login: The objective of this test is to verify that the TOE can handle concurrent user sessions appropriately; and

d. Security Bypass: The objective of this test is to uninstall programs and stop running services in an attempt to bypass the TOE restrictions.

### 6.4.1 PENETRATION TEST RESULTS

The independent penetration testing did not uncover any exploitable vulnerabilities in the intended operating environment.

# 7 RESULTS OF THE EVALUATION

This evaluation has provided the basis for the conformance claim documented in Table 1. The overall verdict for this evaluation is **PASS**. These results are supported by evidence in the ETR.

The IT product identified in this report has been evaluated at an approved evaluation facility established under the Canadian Common Criteria Scheme using the Common Methodology for IT Security Evaluation, Version 3.1 Revision 5, for conformance to the Common Criteria for IT Security Evaluation, Version 3.1 Revision 5. These evaluation results apply only to the specific version and release of the product in its evaluated configuration and in conjunction with the complete certification report.

The evaluation has been conducted in accordance with the provisions of the Canadian Common Criteria Scheme and the conclusions of the evaluation facility in the evaluation report are consistent with the evidence adduced. This is not an endorsement of the IT product by CSE or by any other organization that recognizes or gives effect to this certificate, and no warranty of the IT product by CSE or by any other organization that recognizes or gives effect to this certificate, is expressed or implied.

## 7.1 RECOMMENDATIONS/COMMENTS

It is recommended that all guidance outlined in Section 4.1 be followed to configure the TOE in the evaluated configuration.

# 8 SUPPORTING CONTENT

## 8.1 LIST OF ABBREVIATIONS

| Term | Definition |
|---|---|
| CAVP | Cryptographic Algorithm Validation Program |
| CCEF | Common Criteria Evaluation Facility |
| CM | Configuration Management |
| CMVP | Cryptographic Module Validation Program |
| CSE | Communications Security Establishment |
| EAL | Evaluation Assurance Level |
| ePO | ePolicy Orchestrator |
| ETR | Evaluation Technical Report |
| GC | Government of Canada |
| IT | Information Technology |
| ITS | Information Technology Security |
| MTA | Mail Transfer Agent |
| PP | Protection Profile |
| SFR | Security Functional Requirement |
| ST | Security Target |
| TOE | Target of Evaluation |
| TSF | TOE Security Function |

## 8.2 REFERENCES

| Reference |
|---|
| Common Criteria for Information Technology Security Evaluation, Version 3.1 Revision 5, April 2017. |
| Common Methodology for Information Technology Security Evaluation, CEM, Version 3.1 Revision 5, April 2017. |
| McAfee Data Loss Prevention 11.1 with ePolicy Orchestrator 5.10 Security Target, Version 1.0, May 8, 2019. |
| McAfee Data Loss Prevention 11.1 with ePolicy Orchestrator 5.10 Evaluation Technical Report, Version 1.0, 14 May 2019. |