Communications Security Establishment
Centre de la sécurité des télécommunications

CANADIAN CENTRE FOR CYBER SECURITY

COMMON CRITERIA CERTIFICATION REPORT

McAfee Change Control and Application Control 8.3.0 with ePolicy Orchestrator 5.10.0

16 October 2020

513 EWA 2020

Canada

FOREWORD

This certification report is an UNCLASSIFIED publication, issued under the authority of the Chief, Communications Security Establishment (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 Centre for Cyber Security (CCCS). 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 Canadian Centre for Cyber Security, 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 Canadian Centre for Cyber Security, or any other organization that recognizes or gives effect to this report, and its associated certificate, is either expressed or implied.

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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 Canadian Centre for Cyber Security.

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, 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 Common Criteria portal (the official website of the International Common Criteria Program).

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

EXECUTIVE SUMMARY

The McAfee Change Control and Application Control 8.3.0 with ePolicy Orchestrator 5.10.0 (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 the TOE meets the requirements of the conformance claim listed in Section 1.1 for the evaluated security functionality.

EWA-Canada is the CCEF that conducted the evaluation. This evaluation was completed on 16 October 2020 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 the 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.

The Canadian Centre for Cyber Security, as the Certification Body, declares that this evaluation meets all the conditions of the Arrangement on the Recognition of Common Criteria Certificates and that the product is listed on the Certified Products list (CPL) for the Canadian CC Scheme and the Common Criteria portal (the official website of the International Common Criteria Program).

1 IDENTIFICATION OF TARGET OF EVALUATION

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

Table 1: TOE Identification

TOE Name and Version	McAfee Change Control and Application Control 8.3.0 with ePolicy Orchestrator 5.10.0
Developer	McAfee, LLC.

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.

The TOE claims the following conformance:

EAL 2 + ALC_FLR.2

1.2 TOE DESCRIPTION

The TOE provides change control and monitoring on servers and desktops. It also ensures that only authorized code can run on those managed systems. This functionality is managed through the ePolicy Orchestrator (ePO) management software.

1.3 TOE ARCHITECTURE

A diagram of the TOE architecture is as follows:

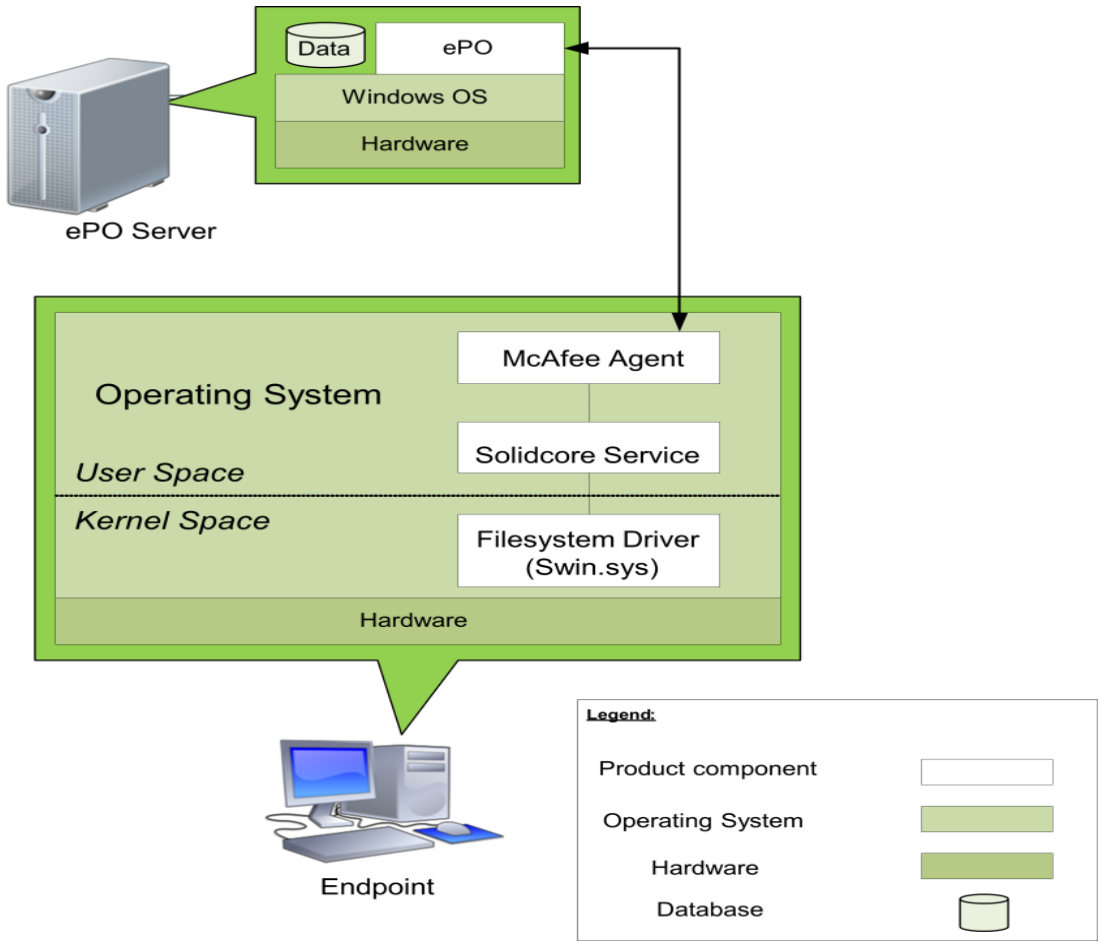

Figure1: TOE Architecture

2 SECURITY POLICY

The TOE implements and enforces policies pertaining to the following security functionality:

- Security Audit
- Cryptographic Support
- Identification and Authentication
- Security Management
- Protection of the TOE Security Functionality
- Application and Change Control

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 implementations have been evaluated by the CAVP/CMVP and are used by the TOE:

Table 2: Cryptographic Implementation(s)

Cryptographic Module/Algorithm	Certificate Number
OpenSSL FIPS Object Module SE 2.0.16	2398

3 ASSUMPTIONS AND CLARIFICATION 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 access to all the IT System data it needs to perform its functions.
- The IT Environment will provide reliable timestamps for the TOE to use.
- The processing resources of the TOE will be located within controlled access facilities, which will prevent unauthorized physical access.
- The TOE software critical to security policy enforcement, and the hardware on which it runs, will be protected from unauthorized physical modification.
- There will be one or more competent individuals assigned to manage the TOE and the security of the Information it contains.

  The authorized administrators are not careless, willfully negligible, or hostile, and will follow and abide by the instructions provided by the TOE documentation.
- The TOE will be managed in a manner that allows it to appropriately address changes in the IT System the TOE monitors.

3.2 CLARIFICATION OF SCOPE

The following features are excluded from the scope of the evaluation:

- CLI Utility
- Reputation based execution using McAfee TIE and GTI
- Product Integrity
- Package Control
- Observation throttling
- AntiDos
- Heartbeat Timeout
- Message Exchange Interval
- Secure Signed Update Utility
- Distributed Repositories
- SNMP
- SuperAgents
- Windows and certificate authentication
- Remote Agent Handlers
- Ticketing functionality
- Rogue System Detection
- Open API to Third-party products

4 EVALUATED CONFIGURATION

The evaluated configuration for the TOE comprises the following software components:

- McAfee Solidcore ePO Server Extension 8.3.0-225,
- Solidcore client 8.3.0-3033,
- ePO Server 5.10.0,
- ePO Server 5.10.0 Update 6,
- McAfee Agent 5.6.4.151,
- McAfee Agent Extension 5.6.4.179.

The Change Control and Application Control run on the following platforms:

- Windows 10 version 1909
- Windows Server 2012 R2
- Windows Server 2016
- Windows Server 2019

The ePO runs on Windows Server 2019.

The following components are required in the operational environment:

- Active Directory (LDAP) Server
- MS SQL Server 2017 database

4.1 DOCUMENTATION

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

a) McAfee ePolicy Orchestrator 5.10.0 Product Guide (Revision B, 2-12-2019)
b) McAfee ePolicy Orchestrator 5.10.0 Installation Guide (8-6-2018)
c) Release Notes McAfee ePolicy Orchestrator 5.10.0 (Revision B, 8-28-2018)
d) Release Notes McAfee ePolicy Orchestrator 5.10.0 Update 6 (1-14-2020)
e) McAfee Agent 5.6.x Product Guide (Revision C, 3-10-2020)
f) McAfee Agent 5.6.x Installation Guide (3-20-2020)
g) McAfee Agent 5.6.x Release Notes (3-10-2020)
h) McAfee Application Control and McAfee Change Control 8.3.x – Windows Product Guide (3-27-2020)
i) McAfee Application Control and McAfee Change Control 8.3.x – Windows Installation Guide (3-27-2020)
j) McAfee Change Control and Application Control 8.3.0 - CC Evaluation and Configuration Guide (5-27-2020)
k) McAfee Application Control and McAfee Change Control 8.3.x - Windows Release Notes (3-27-2020)

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. 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 Evaluation Test Report (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 developer's tests
b. Verification of Cryptographic Implementation: The evaluator verified that the claimed implementation was present and used by the TOE.
c. Identification and Authentication (ePO): This test case demonstrates the Identification and Authentication functionality claimed by the TOE (using local ePO credentials).
d. Identification and Authentication (Windows): This test case demonstrates the Identification and Authentication functionality claimed by the TOE (using Windows authentication).
e. Security Management: This test case demonstrates the Security Management functionality claimed by the TOE (different permissions sets allow different levels of access.
f. Protection of the TSF: This test case demonstrates that the communications between the agent and ePO Server are encrypted.
g. McAfee Change Control: This test case demonstrates the Change Control functionality enforce polices created from the ePO management console.
h. McAfee Application Control: This test case demonstrates the McAfee Application control functionality enforce polices created from the ePO management console.
i. McAfee Change Control Monitoring: This test case demonstrates the Change Control monitoring
j. functionality enforce polices created from the ePO management console.

k. McAfee Application Control (execution control): This test case demonstrates the McAfee Application control functionality enforce attribute-based rules created from the ePO management console.

l. Security Audit: This test case demonstrates the audit log functionality of the ePO server.

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

The penetration testing effort focused on 4 flaw hypotheses.

- Public Vulnerability based (Type 1)
- Technical community sources (Type 2)
- Evaluation team generated (Type 3)
- Tool Generated (Type 4)

The evaluators conducted an independent review of all evaluation evidence, public domain vulnerability databases and technical community sources (Type 1 & 2). Additionally, the evaluators used automated vulnerability scanning tools to discover potential network, platform, and application layer vulnerabilities (Type 4). Based upon this review, the evaluators formulated flaw hypotheses (Type 3), which they used in their penetration testing effort.

6.4.1 PENETRATION TEST RESULTS

Type 1 & 2 searches were conducted on 5/20/2020 and included the following search terms:

- McAfee Change Control 8.3.0
- McAfee Application Control 8.3.0
- McAfee ePolicy Orchestrator 5.10.0
- McAfee ePO 5.10.0
- McAfee Agent 5.6.4.151

Vulnerability searches were conducted using the following sources:

- National Vulnerability Database: https://nvd.nist.gov/vuln/search
- McAfee support: https://support.mcafee.com
- Common Vulnerabilities and Exposures: http://google.ca

The independent penetration testing did not uncover any residual 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.

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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
CCCS	Canadian Centre for Cyber Security
EAL	Evaluation Assurance Level
ETR	Evaluation Technical Report
GC	Government of Canada
IT	Information Technology
ITS	Information Technology Security
PP	Protection Profile
SFR	Security Functional Requirement
SNMP	Simple Network Management Protocol
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 Change Control and Application Control 8.3.0 with ePolicy Orchestrator 5.10.0, Security Target, Version 1.2, 15 October 2020.
Evaluation Technical Report for Common Criteria Evaluation of McAfee LLC, McAfee Change Control and Application Control 8.3.0 with ePolicy Orchestrator 5.10.0, Version 1.4, 16 October 2020.