



# COMMON CRITERIA CERTIFICATION REPORT

BlackBerry Smartphones with OS 10.3.3

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# 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 4, for conformance to the Common Criteria for Information Technology Security Evaluation, Version 3.1 Revision 4. 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.

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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. Accreditation is performed under the Program for the Accreditation of Laboratories - Canada (PALCAN), administered by the Standards Council of Canada.

The CCEF that carried out this evaluation is EWA-Canada.

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

BlackBerry Smartphones with OS 10.3.3 (hereafter referred to as the Target of Evaluation, or TOE), from BlackBerry, was the subject of this Common Criteria evaluation. The results of this evaluation demonstrate that TOE meets the requirements of the conformance claim listed in Table 1 for the evaluated security functionality.

The TOE is a mobile device which is composed of a hardware platform and its system software. The TOE provides wireless connectivity and includes software for functions like secure messaging, email, web, VPN connection, and VoIP (Voice over IP), for access to the protected enterprise network, enterprise data and applications, and for communicating to other Mobile Devices. The TOE is an enterprise-owned device with intentionally-limited network connectivity, tightly-controlled configuration, and limited software inventory appropriate for specialized, high-security use cases.

EWA-Canada is the CCEF that conducted the evaluation. This evaluation was completed on 09 January 2017 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 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**

<b>TOE Name and Version</b>	BlackBerry Smartphones with OS 10.3.3
<b>Developer</b>	BlackBerry
<b>Conformance Claim</b>	Protection Profile for Mobile Device Fundamentals Version 2.0 w/ Extended Package for Mobile Device Management Agents Version 2.0

## 1.1 COMMON CRITERIA CONFORMANCE

The evaluation was conducted using the Common Methodology for Information Technology Security Evaluation, Version 3.1 Revision 4, for conformance to the Common Criteria for Information Technology Security Evaluation, Version 3.1 Revision 4.

## 1.2 TOE DESCRIPTION

The TOE is a mobile device which is composed of a hardware platform and its system software. The TOE provides wireless connectivity and includes software for functions like secure messaging, email, web, VPN connection, and VoIP (Voice over IP), for access to the protected enterprise network, enterprise data and applications, and for communicating to other Mobile Devices. The TOE is an enterprise-owned device with intentionally-limited network connectivity, tightly-controlled configuration, and limited software inventory appropriate for specialized, high-security use cases.



## 2 SECURITY POLICY

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

- Security Audit
- Cryptographic Support
- User Data Protection
- Identification and Authentication
- Security Management
- Protection of the TSF
- TOE Access
- Trusted Path/Channel

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 implemented in the TOE:

**Table 2 Cryptographic Module(s)**

Cryptographic Module	Certificate Number
BlackBerry OS Cryptographic Library (Software Versions: 5.6, 5.6.1 or 5.6.2)	#1578

The TOE platforms have Wi-Fi CERTIFIED™ Interoperability Certificates:

**Table 3 Wi-Fi CERTIFIED™ Interoperability Certificates**

Platform	Certificate Number
Passport	WFA57214, WFA55078, WFA60544
Classic	WFA56510, WFA59939, WFA59937, WFA56572, WFA59936, WFA57100
Leap	WFA59167, WFA59168, WFA60172, WFA60171
Z30	WFA59945, WFA59943, WFA59942, WFA59941
Z10	WFA69196, WFA69198, WFA69197



Q10	WFA60143, WFA60161, WFA60162, WFA60163, WFA60164
P'9982 (Porsche Design)	WFA69199, WFA69200
P'9983 (Porsche Design)	WFA60165, WFA60166



## 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:

- It is assumed that the TOE's security functions are configured correctly in a manner to ensure that the TOE security policies will be enforced on all applicable network traffic flowing among the attached networks.
- The TOE relies on network connectivity to carry out its management activities. The TOE will robustly handle instances when connectivity is unavailable or unreliable.
- The MDM Agent relies upon Mobile platform and hardware evaluated against the MDF PP and assured to provide policy enforcement as well as cryptographic services and data protection. The Mobile platform provides trusted updates and software integrity verification of the MDM Agent.
- It is assumed that the mobile user will immediately notify the administrator if the Mobile Device is lost or stolen.
- It is assumed that the mobile user exercises precautions to reduce the risk of loss or theft of the Mobile Device.
- One or more competent, trusted personnel who are not careless, willfully negligent, or hostile, are assigned and authorized as the TOE Administrators, and do so using and abiding by guidance documentation.
- Mobile device users are not willfully negligent or hostile, and use the device within compliance of a reasonable Enterprise security policy.

### 3.2 CLARIFICATION OF SCOPE

The TOE has been evaluated against the Protection Profile for Mobile Devices Fundamentals v2.0 and is intended to address the security problems associated with the Enterprise-owned device for specialized, high-security use case.



## 4 EVALUATED CONFIGURATION

The evaluated configuration for the TOE comprises:

The BlackBerry 10.3.3.1668 OS running on the following platforms;

- Passport (SQW100-1, SQW100-3, SQW100-4)
- Classic (SQC100-1, SQC100-2, SQC100-3, SQC100-4, SQC100-5)
- Leap (STR100-1, STR100-2)
- Z30 (STA100-2, STA100-3, STA100-5, STA100-6)
- Z10 (STL100-2, STL100-3, STL100-4)
- Q10 (SQN100-1, SQN100-2, SQN100-3, SQN100-4, SQN100-5)
- P'9982 (STK100-1, STK100-2)
- P'9983 (SQK100-1, SQK100-2)

With support from the following environmental components;

- BlackBerry Enterprise Server 12.5 with Policy Pack Version 1.9.3.97.

### 4.1 DOCUMENTATION

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

- a. BlackBerry Classic Smartphone Version: 10.3.3 User Guide, SWD-20160426135955284, 26 April 2016
- b. BlackBerry Leap Smartphone Version: 10.3.3 User Guide, SWD-20160427113258316, 27 April 2016
- c. BlackBerry P'9982 Smartphone User Guide Version: 10.3.3, SWD-20160427133504750, 27 April 2016
- d. BlackBerry P'9983 Smartphone User Guide Version: 10.3.3, SWD-20160427132628821, 27 April 2016
- e. BlackBerry Passport Smartphone Version 10.3.3 User Guide, SWD-20160427115319481, 27 April 2016
- f. BlackBerry Q10 Smartphone Version: 10.3.3 User Guide, SWD-20160427135115364, 27 April 2016
- g. BlackBerry Z10 Smartphone Version: 10.3.3 User Guide, SWD-20160427140021771, 27 April 2016
- h. BlackBerry Z30 Smartphone Version: 10.3.3 User Guide, SWD-20160427134318308, 27 April 2016
- i. BlackBerry Smartphones with OS 10.3.3 Common Criteria Guidance Supplement, Version: 1.0, 12 October 2016



## 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 TOE functional specification and design documentation; they determined that the design completely and accurately describes the TOE security functionality (TSF) interfaces, the TSF subsystems and how the TSF implements the security functional requirements (SFRs). The evaluators analyzed the TOE security architectural description and determined that the initialization process is secure, that the security functions are protected against tamper and bypass, and that security domains are maintained. The evaluators also independently verified that the correspondence mappings between the design documents are correct.

### 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 evaluators analyzed the developer's test coverage analysis and found it to be complete and accurate. 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 activity was performed:

- a. PP Assurance Activities: The evaluator performed the assurance activities listed in the claimed PPs.

#### 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

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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.

### 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 the 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 4, for conformance to the Common Criteria for IT Security Evaluation, Version 3.1 Revision 4. 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 EVALUATOR COMMENTS/RECOMMENDATIONS

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
ETR	Evaluation Technical Report
GC	Government of Canada
IT	Information Technology
ITS	Information Technology Security
ITSET	Information Technology Security Evaluation and Testing
PALCAN	Program for the Accreditation of Laboratories – Canada
PP	Protection Profile
SFR	Security Functional Requirement
ST	Security Target
TOE	Target of Evaluation
TSF	TOE Security Function



## 8.2 REFERENCES

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Reference
Common Criteria for Information Technology Security Evaluation, Version 3.1 Revision 4, September 2012.
Common Methodology for Information Technology Security Evaluation, CEM, Version 3.1 Revision 4, September 2012.
BlackBerry Smartphones with OS 10.3.3 Security Target, Version 1.10, 9 January 2017
Evaluation Technical Report for BlackBerry Smartphones with OS 10.3.3 v1.4, 9 January 2017
Assurance Activity Report for BlackBerry Smartphones with OS 10.3.3, v2.1, 9 January 2017