Communications Security Establishment | Centre de la sécurité des télécommunications

CANADIAN CENTRE FOR CYBER SECURITY

COMMON CRITERIA CERTIFICATION REPORT

NETSCOUT Sightline and Threat Mitigation System v9.7

14 May 2024

619-LSS

V1.0

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 testing laboratory established under the Canadian Centre for Cyber Security (a branch of CSE). 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 Common Criteria Program, and the conclusions of the testing laboratory 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 Program provides a third-party evaluation service for determining the trustworthiness of Information Technology (IT) security products. Evaluations are performed by a commercial Common Criteria Testing Laboratory (CCTL) under the oversight of the Certification Body, which is managed by the Canadian Centre for Cyber Security.

A CCTL 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, 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 CCTL.

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).

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EXECUTIVE SUMMARY

NETSCOUT Sightline and Threat Mitigation System v9.7 (hereafter referred to as the Target of Evaluation, or TOE), from **NETSCOUT Systems Inc.** , 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.

Lightship Security is the CCTL that conducted the evaluation. This evaluation was completed on **14 May 2024** and was carried out in accordance with the rules of the Canadian Common Criteria Program.

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 Common Criteria Program 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	NETSCOUT Sightline and Threat Mitigation System v9.7
Developer	NETSCOUT Systems Inc.

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:

collaborative Protection Profile for Network Devices, Version 2.2e, 23-March-2020

1.2 TOE DESCRIPTION

The TOE is a distributed network device that provides network visibility and threat mitigation.

1.3 TOE ARCHITECTURE

A diagram of the TOE architecture is as follows:

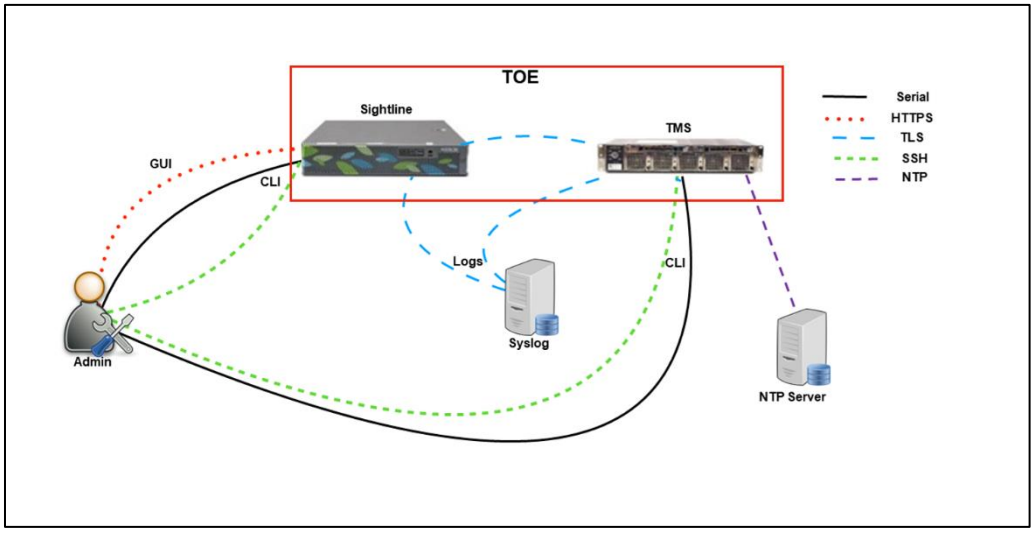


Figure 1: TOE Architecture

2 SECURITY POLICY

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

- Protected Communications
- Secure Administration
- Trusted Update
- System Monitoring
- Self-Test
- Cryptographic Operations

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 implementation is used by the TOE and have been evaluated by the CAVP:

Table 2: Cryptographic Implementation

Cryptographic Module/Algorithm	Certificate Number
NETSCOUT FIPS Object Module	C2144, A1882

3 ASSUMPTIONS AND CLARIFICATION OF SCOPE

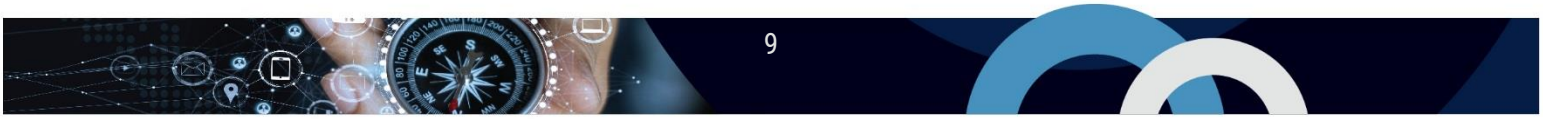
Consumers of the TOE should consider assumptions about usage and environmental settings as requirements for the product's installation and its operating environment. This will ensure the proper and secure operation of the TOE.

3.1 USAGE AND ENVIRONMENTAL ASSUMPTIONS

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

- The Network Device is assumed to be physically protected in its operational environment and not subject to physical attacks that compromise the security or interfere with the device's physical interconnections and correct operation. This protection is assumed to be sufficient to protect the device and the data it contains. As a result, the cPP does not include any requirements on physical tamper protection or other physical attack mitigations. The cPP does not expect the product to defend against physical access to the device that allows unauthorized entities to extract data, bypass other controls, or otherwise manipulate the device. For vNDs, this assumption applies to the physical platform on which the VM runs.
- The device is assumed to provide networking functionality as its core function and not provide functionality/services that could be deemed as general-purpose computing. For example, the device should not provide a computing platform for general purpose applications (unrelated to networking functionality). In the case of vNDs, the VS is considered part of the TOE with only one vND instance for each physical hardware platform. The exception being where components of the distributed TOE run inside more than one virtual machine (VM) on a single VS. There are no other guest VMs on the physical platform providing non-Network Device.
- A standard/generic Network Device does not provide any assurance regarding the protection of traffic that traverses it.

  The intent is for the Network Device to protect data that originates on or is destined to the device itself, to include administrative data and audit data. Traffic that is traversing the Network Device, destined for another network entity, is not covered by the NDcPP. It is assumed that this protection will be covered by cPPs and PP-Modules for types of Network Devices (e.g., firewall).
- The Security Administrator(s) for the Network Device are assumed to be trusted and to act in the best interest of security for the organization. This includes appropriately trained, following policy, and adhering to guidance documentation. Administrators are trusted to ensure passwords/credentials have sufficient strength and entropy and to lack malicious intent when administering the device. The Network Device is not expected to be capable of defending against a malicious Administrator that actively works to bypass or compromise the security of the device. For TOEs supporting X.509v3 certificate-based authentication, the Security Administrator(s) are expected to fully validate (e.g. offline verification) any CA certificate (root CA certificate or intermediate CA certificate) loaded into the TOE's trust store (aka 'root store', 'trusted CA Key Store', or similar) as a trust anchor prior to use (e.g. offline verification).
- The Network Device firmware and software is assumed to be updated by an Administrator on a regular basis in response to the release of product updates due to known vulnerabilities.
- The Administrator's credentials (private key) used to access the Network Device are protected by the platform on which they reside.



- For distributed TOEs it is assumed that the availability of all TOE components is checked as appropriate to reduce the risk of an undetected attack on (or failure of) one or more TOE components. It is also assumed that in addition to the availability of all components it is also checked as appropriate that the audit functionality is running properly on all TOE components.
- The Administrator must ensure that there is no unauthorized access possible for sensitive residual information (e.g., cryptographic keys, keying material, PINs, passwords etc.) on networking equipment when the equipment is discarded or removed from its operational environment.

3.2 CLARIFICATION OF SCOPE

Only the functionality detailed in the “collaborative Protection Profile for Network Devices, Version 2.2e, 23-March-2020 was evaluated.

The REST API is disabled when no API tokens are generated, rendering the endpoints unusable. By default, the TOE contains no API tokens, and no action is required by the administrator.

4 EVALUATED CONFIGURATION

The evaluated configuration for the TOE comprises:

TOE Software/Firmware	NETSCOUT Sightline and Threat Mitigation System v9.7 Build 9.7.0.1
TOE Hardware	• SP-7000 • SP-7500 • TMS-2600 • TMS-2800 • TMS-8100
Environmental Support	Syslog Server, NTP Server, OCSP Responder

4.1 DOCUMENTATION

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

a) NETSCOUT Sightline and TMS v9.7.0.1 Common Criteria Guide, Version 1.5
b) NETSCOUT Sightline and Threat Mitigation System User Guide Version 9.7.0.0
c) Software Threat Mitigation System Installation on Hardware Guide Version 9.6.0.0
d) Sightline Virtual Machine Installation Guide Version 9.7.0.0

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 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 tests, and performing a vulnerability analysis.

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 TESTING

During this evaluation, the evaluator developed independent functional & penetration 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. PP Assurance Activities: The evaluator performed the assurance activities listed in the claimed PP; and

b. Cryptographic Implementation Verification: The evaluator verified that the claimed cryptographic implementations are present in the TOE.

6.3.1 INDEPENDENT TESTING RESULTS

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

6.4 VULNERABILITY ANALYSIS

The vulnerability analysis 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 vulnerability analysis.

Type 1 & 2 searches were conducted on **13 May 2024** and included the following search terms:

NETSCOUT	Apache 2.4.56	Intel Xeon Gold 5218T (Cascade Lake)
NETSCOUT FIPS Object Module	Apache 2.4	Intel Xeon Silver 4210T (Cascade Lake)
Sightline	OpenSSH 8.6p1	Apache 2.4.54
Threat Management System Threat Mitigation System	OpenSSH 8.6	OpenSSL (alerts dated after the release of version 1.0.2zd)
SP	Python 2.7.18	OpenSSL 1.0.2zd FIPS
TMS	Python 3.8.8	Fixed in OpenSSL 1.0.2z*
NETSCOUT SP	NTP 4.2.8p15	Curl 7.59.0
NETSCOUT TMS	PHP-Saml 2.19.1	Curl 7
Intel Xeon E5-2648L v3 (Haswell)	Intel Xeon E5-2608L v3 (Haswell)	

Vulnerability searches were conducted using the following sources:

Netscout Security Advisories https://www.netscout.com/securityadvisories	NIST National Vulnerabilities Database (NVD) https://web.nvd.nist.gov/view/vuln/search
Common Vulnerabilities and Exposures https://www.cve.org https://www.cvedetails.com/vulnerability-search.php	CISA - Known Exploited Vulnerabilities Catalog https://www.cisa.gov/known-exploited-vulnerabilities-catalog
Google www.google.ca	CCCS – Alerts and advisories https://cyber.gc.ca/en/alerts-advisories

OpenSSH Security Advisories https://www.openssh.com/security.html	OpenSSL Security Advisories https://www.openssl.org/news/vulnerabilities.html https://www.openssl.org/news/fips-cve.html
Curl Security Advisories https://curl.se/docs/vuln-7.59.0.html	Apache Security Advisories https://httpd.apache.org/security/vulnerabilities_24.html

6.4.1 VULNERABILITY ANALYSIS RESULTS

The vulnerability analysis did not uncover any security relevant residual exploitable vulnerabilities in the intended operating environment.

7 RESULTS OF THE EVALUATION

The Information Technology (IT) product identified in this certification report, and its associated certificate, has been evaluated at an approved testing laboratory established under the Canadian Centre for Cyber Security. This certification report, and its associated certificate, apply only to the specific version and release of the product in its evaluated configuration.

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.

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.

The evaluator recommends that end-users of the product apply software updates diligently, as they are made available from the vendor.

8 SUPPORTING CONTENT

8.1 LIST OF ABBREVIATIONS

Term	Definition
CAVP	Cryptographic Algorithm Validation Program
CCTL	Common Criteria Testing Laboratory
CMVP	Cryptographic Module Validation Program
CSE	Communications Security Establishment
EAL	Evaluation Assurance Level
ETR	Evaluation Technical Report
IT	Information Technology
PP	Protection Profile
SFR	Security Functional Requirement
ST	Security Target
TMS	Threat Mitigation System
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.
NETSCOUT Sightline and Threat Mitigation System v9.7 Security Target, Version 1.9, May 13, 2024.
NETSCOUT Sightline and Threat Mitigation System v9.7 Evaluation Technical Report, Version 1.3, May 14, 2024.
NETSCOUT Sightline and Threat Mitigation System v9.7 Assurance Activity Report, Version 1.3, May 14, 2024.