Certification Report

SolarWinds Hybrid Cloud Observability for Federal Government V2022.4.1

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Foreword

The Netherlands Scheme for Certification in the Area of IT Security (NSCIB) provides a third-party evaluation and certification service for determining the trustworthiness of Information Technology (IT) security products. Under this NSCIB, TrustCB B.V. has the task of issuing certificates for IT security products, as well as for protection profiles and sites.

Part of the procedure is the technical examination (evaluation) of the product, protection profile or site according to the Common Criteria assessment guidelines published by the NSCIB. Evaluations are performed by an IT Security Evaluation Facility (ITSEF) under the oversight of the NSCIB Certification Body, which is operated by TrustCB B.V. in cooperation with the Ministry of the Interior and Kingdom Relations.

An ITSEF in the Netherlands is a commercial facility that has been licensed by TrustCB B.V. to perform Common Criteria evaluations; a significant requirement for such a licence is accreditation to the requirements of ISO Standard 17025 “General requirements for the accreditation of calibration and testing laboratories”.

By awarding a Common Criteria certificate, TrustCB B.V. asserts that the product or site complies with the security requirements specified in the associated (site) security target, or that the protection profile (PP) complies with the requirements for PP evaluation specified in the Common Criteria for Information Security Evaluation. A (site) security target is a requirements specification document that defines the scope of the evaluation activities.

The consumer should review the (site) security target or protection profile, in addition to this certification report, to gain an understanding of any assumptions made during the evaluation, the IT product's intended environment, its security requirements, and the level of confidence (i.e., the evaluation assurance level) that the product or site satisfies the security requirements stated in the (site) security target.

Recognition of the Certificate

Presence of the Common Criteria Recognition Arrangement (CCRA) and the SOG-IS logos on the certificate indicates that this certificate is issued in accordance with the provisions of the CCRA and the SOG-IS Mutual Recognition Agreement (SOG-IS MRA) and will be recognised by the participating nations.

International recognition

The CCRA was signed by the Netherlands in May 2000 and provides mutual recognition of certificates based on the Common Criteria (CC). Since September 2014 the CCRA has been updated to provide mutual recognition of certificates based on cPPs (exact use) or STs with evaluation assurance components up to and including EAL2+ALC_FLR.

For details of the current list of signatory nations and approved certification schemes, see http://www.commoncriteriaportal.org.

European recognition

The SOG-IS MRA Version 3, effective since April 2010, provides mutual recognition in Europe of Common Criteria and ITSEC certificates at a basic evaluation level for all products. A higher recognition level for evaluation levels beyond EAL4 (respectively E3-basic) is provided for products related to specific technical domains. This agreement was signed initially by Finland, France, Germany, The Netherlands, Norway, Spain, Sweden and the United Kingdom. Italy joined the SOG-IS MRA in December 2010.

For details of the current list of signatory nations, approved certification schemes and the list of technical domains for which the higher recognition applies, see https://www.sogis.eu.

1 Executive Summary

This Certification Report states the outcome of the Common Criteria security evaluation of the SolarWinds Hybrid Cloud Observability for Federal Government V2022.4.1. The developer of the SolarWinds Hybrid Cloud Observability for Federal Government V2022.4.1 is SolarWinds Worldwide, LLC located in Austin, Texas, USA and they also act as the sponsor of the evaluation and certification. A Certification Report is intended to assist prospective consumers when judging the suitability of the IT security properties of the product for their particular requirements.

The TOE is a set of software applications and services executing on one or more Windows servers. The applications monitor a configured set of network-attached devices and applications for status, performance, and configuration settings. Depending on the size of the network, multiple instances of the applications may be deployed on different servers to provide adequate performance. For enhanced availability and robustness, a failover configuration may be deployed. The TOE provides a variety of capabilities to network managers for identifying, configuring, monitoring, analysing, and reporting, for network devices and applications.

The TOE was previously evaluated by UL located in Leiden, The Netherlands and was certified under the accreditation of TÜV Rheinland Nederland on 02 August 2021 (CC-21-0036280). The current evaluation of the TOE has also been conducted by UL and was completed on 18 April 2024 with the approval of the ETR. The certification procedure has been conducted in accordance with the provisions of the Netherlands Scheme for Certification in the Area of IT Security *[NSCIB]*.

The major changes from previous evaluations are:

- Orion Platform:
  - renamed to SolarWinds Platform
  - individual accounts must use complex password
  - Guest account not supported
  - user account lockout if number of login failure exceed certain times
- Network Configuration Manager (NCM) running or updating policy report requires the NCM role of WebUploader or higher
- IT environment upgraded to newer version
- Bugs or known vulnerabilities have been fixed
- Performance improvement

The certification took into account that the security evaluation reused the evaluation results of previously performed evaluations. A full, up-to-date vulnerability analysis has been made, as well as renewed testing.

The scope of the evaluation is defined by the security target *[ST]*, which identifies assumptions made during the evaluation, the intended environment for the SolarWinds Hybrid Cloud Observability for Federal Government V2022.4.1, the security requirements, and the level of confidence (evaluation assurance level) at which the product is intended to satisfy the security requirements.

Consumers of the SolarWinds Hybrid Cloud Observability for Federal Government V2022.4.1 are advised to verify that their own environment is consistent with the security target, and to give due consideration to the comments, observations and recommendations in this certification report.

The results documented in the evaluation technical report *[ETR]* [1] for this product provide sufficient evidence that the TOE meets the EAL2: augmented (EAL2+) assurance requirements for the evaluated security functionality. This assurance level is augmented with ALC_FLR.2 (Flaw reporting procedures).

[1] The Evaluation Technical Report contains information proprietary to the developer and/or the evaluator, and is not available for public review.

The evaluation was conducted using the Common Methodology for Information Technology Security Evaluation, Version 3.1 Revision 5 *[CEM]* for conformance to the Common Criteria for Information Technology Security Evaluation, Version 3.1 Revision 5 *[CC]* (Parts I, II and III).

TrustCB B.V., as the NSCIB Certification Body, declares that the evaluation meets all the conditions for international recognition of Common Criteria Certificates and that the product will be listed on the NSCIB Certified Products list. Note that the certification results apply only to the specific version of the product as evaluated.

2 Certification Results

2.1 Identification of Target of Evaluation

The Target of Evaluation (TOE) for this evaluation is the SolarWinds Hybrid Cloud Observability for Federal Government V2022.4.1 from SolarWinds Worldwide, LLC located in Austin, Texas, USA.

The TOE is comprised of the following main components:

Delivery item type	Identifier	Version
Software	1. SolarWinds Platform 2. Enterprise Operations Console (EOC) 3. IP Address Manager (IPAM) 4. Log Analyzer (LA) 5. Network Configuration Manager (NCM) 6. Network Performance Monitor (NPM) 7. NetFlow Traffic Analyzer (NTA) 8. Server & Application Monitor (SAM) 9. Server Configuration Monitor (SCM) 10. Storage Resource Monitor (SRM) 11. User Device Tracker (UDT) 12. Virtualization Manager (VMAN) 13. VoIP & Network Quality Manager (VNQM), and 14. Web Performance Monitor (WPM)	V2022.4.1

Note that the SolarWinds Platform is automatically installed with the first installed component. The SolarWinds Platform is not a separate product and there is no separate download file for it. The SolarWinds Platform V2022.4.1 is associated with the SolarWinds Server.

To ensure secure usage a set of guidance documents is provided, together with the SolarWinds Hybrid Cloud Observability for Federal Government V2022.4.1. For details, see section 2.5 “Documentation” of this report.

2.2 Security Policy

The TOE provides the following security functionality:

- Audit - Audit records are generated for specific actions performed by users. The audit records are stored in the SolarWinds database and may be viewed via the SolarWinds Web Console by authorized administrators.
- Identification and Authentication – When a connection is established to the EOC Web Console or SolarWinds Web Console, the TOE prompts the user for login credentials. The credentials are validated by the TOE for the SolarWinds Web Console. For the EOC Web Console, the credentials are first passed to Windows for validation.
- Management – There are different TOE security function data for different TOE components, such as specific for NCM, IPAM and SCM etc. The management functionality provides multiple management access mechanisms for users. For each specific TOE security function data, dedicated access table will be established, the security function data privileges for the users vary based upon the definition. Individual user’s access right for each TOE component security function data is determined by the user’s role of each TOE component.
- Network Monitoring – The status and performance of managed elements are monitored. The results are saved and may be viewed by authorized users. Access to data about the managed

elements may be limited by view limitations. Alerts may be generated to notify network managers of configured conditions detected about the managed elements.

- Network Configuration Management – The configurations of network devices may be downloaded from the network device, saved in the TOE database, and compared to a reference configuration. If a configuration change is detected, an upload of a saved configuration for the network device may be triggered.
- Server Configuration Management – The configurations of servers, windows registry, and applications may be collected via SolarWinds Agent, saved in the TOE database, and compared to a reference configuration.

2.3 Assumptions and Clarification of Scope

2.3.1 Assumptions

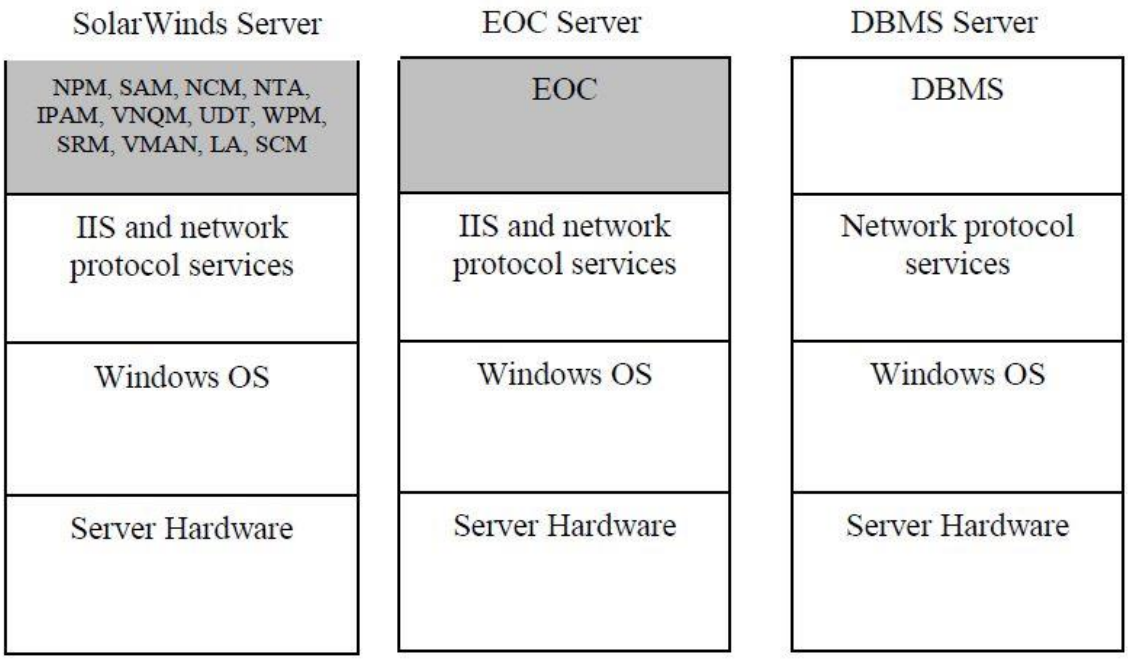
The assumptions defined in the Security Target are not covered by the TOE itself. These aspects lead to specific Security Objectives to be fulfilled by the TOE-Environment. For detailed information on the security objectives that must be fulfilled by the TOE environment, see section 4.2 of the *[ST]*.

2.3.2 Clarification of scope

The evaluation did not reveal any threats to the TOE that are not countered by the evaluated security functions of the product.

2.4 Architectural Information

The TOE consists of the SolarWinds components identified in Section 2.1 executing on multiple dedicated Windows servers. The TOE is depicted in the figure below, with TOE components shaded. The operating systems (including the network protocol stacks and cryptographic functionality), web servers, and DBMS are outside the TOE boundary.



2.5 Documentation

The following documentation is provided with the product by the developer to the customer:

Identifier	Version
SolarWinds® Hybrid Cloud Observability for Federal Government Version 2022.4.1 Common Criteria Supplement	1.1
SolarWinds® Platform Administrator Guide	2022.4
SolarWinds® Enterprise Operations Console Administrator Guide	2022.3
SolarWinds® Network Performance Monitor Administrator Guide	2022.4
SolarWinds® Server & Application Monitor Administrator Guide	2022.4.1
SolarWinds® Network Configuration Manager Administrator Guide	2022.4
SolarWinds® IP Address Manager Administrator Guide	2022.4
SolarWinds® NetFlow Traffic Analyzer Administrator Guide	2022.4
SolarWinds® User Device Tracker Administrator Guide	2022.4
SolarWinds® VoIP and Network Quality Manager Administrator Guide	2022.4
SolarWinds® Log Analyzer Administrator Guide	2022.4.1
SolarWinds® Web Performance Monitor Administrator Guide	2022.4
SolarWinds Server Configuration Monitor Administrator Guide	2022.3
SolarWinds Storage Resource Monitor Administrator Guide	2022.4
SolarWinds® Virtualization Manager Administrator Guide	2022.4

2.6 IT Product Testing

Testing (depth, coverage, functional tests, independent testing): The evaluators examined the developer's testing activities documentation and verified that the developer has met their testing responsibilities.

2.6.1 Testing approach and depth

The developer tests have been chosen to represent a comprehensive set of essential functionality for the TOE. These tests cover adding, discovery, and management of nodes monitored by different protocols (SNMP, WMI, ICMP, Syslog, NetFlow, SMI-S), NCM configuration management functionalities, application monitoring, restrictions enforced by account permissions and roles, sites data aggregation in EOC.

The main purpose of the TOE is to monitor an IT environment (e.g., network, systems, storage, applications and databases) for issues, identify notable events/metrics/changes of interest based on configured policy, and ultimately alert administrators of problems, the developer test plan covers those kinds of essential functions.

Developer provided these evidence documents representing the developer testing effort, which consisted of 16 developer test procedures. The test procedures are comprehensively testing most of the essential functionality of the TOE components by end-to-end design testing approach. Most of the test outputs are input to another test procedure like a chain of tests, each test is dependent to another test. All developer tests were repeated.

The evaluator concluded that the testing approach is adequate for this assurance level since all the TSFIs are covered extensively, and all the interactions between subsystems are exercised.

The evaluator analysed the coverage of the developer tests and targeted to increase the percentage of TSFI, subsystem and SFR coverage of the developer and increased the coverage for all three dimensions. Especially for TSFIs and SFRs reached %100 percentage. This was achieved by

alternating the developer test procedures by different parameters, targeting missing subsystems, SFRs and TSFIs by adding new test scenarios and by reviewing documents to see if any test case is necessary based on the information gathered from through developer documents.

2.6.2 Independent penetration testing

The evaluator performed a public vulnerability search, including a literature review of conference proceedings, University research, relevant journals and published papers. The evaluator also considered Internet surveys and online vulnerability databases. The search provided to the evaluator the view of the class of vulnerabilities during the time for SolarWinds and recurrent pattern of publicly known vulnerabilities.

In combination with the search for known vulnerabilities (referred to as "public domain vulnerabilities") the evaluator performed an independent vulnerability analysis of the the security architecture of the TOE and the SFRs defined in [ST].

The laboratory has dedicated a total of 25 man/day for the performance of AVA activities. These activities include a total of 14 relevant tests.

2.6.3 Test configuration

The configuration of the sample used for independent evaluator testing and penetration testing was the same as described in the *[ST]*. All of the penetration testing was performed on operational samples containing the final version of the TOE.

2.6.4 Test results

The testing activities, including configurations, procedures, test cases, expected results and observed results are summarised in the *[ETR]*, with references to the documents containing the full details.

The developer's tests and the independent functional tests produced the expected results, giving assurance that the TOE behaves as specified in its *[ST]* and functional specification.

No exploitable vulnerabilities were found with the independent penetration tests.

2.7 Reused Evaluation Results

This is a re-certification. Documentary evaluation results of the earlier version of the TOE have been reused, but vulnerability analysis and penetration testing has been renewed.

2.8 Evaluated Configuration

The TOE is defined uniquely by its name and version number SolarWinds Hybrid Cloud Observability for Federal Government V2022.4.1. This is further enumerated by the component versions detailed in "Identification of Target of Evaluation", section 2.1 above.

2.9 Evaluation Results

The evaluation lab documented their evaluation results in the *[ETR]*, which references an ASE Intermediate Report and other evaluator documents.

The verdict of each claimed assurance requirement is "**Pass**".

Based on the above evaluation results the evaluation lab concluded the SolarWinds Hybrid Cloud Observability for Federal Government V2022.4.1, to be **CC Part 2 extended, CC Part 3 conformant**,) and to meet the requirements of **EAL 2 augmented with ALC_FLR.2**. This implies that the product satisfies the security requirements specified in Security Target *[ST]*.

2.10 Comments/Recommendations

The user guidance as outlined in section 2.5 "Documentation" contains necessary information about the usage of the TOE. Certain aspects of the TOE's security functionality, in particular the countermeasures against attacks, depend on accurate conformance to the user guidance of both the software and the hardware part of the TOE. There are no particular obligations or recommendations

for the user apart from following the user guidance, especially SolarWinds® Hybrid Cloud Observability for Federal Government Version 2022.4.1 Common Criteria Supplement.

In addition, all aspects of assumptions, threats and policies as outlined in the Security Target not covered by the TOE itself must be fulfilled by the operational environment of the TOE.

The customer or user of the product shall consider the results of the certification within their system risk management process. For the evolution of attack methods and techniques to be covered, the customer should define the period of time until a re-assessment for the TOE is required and thus requested from the sponsor of the certificate.

3 Security Target

The SolarWinds Hybrid Cloud Observability Software Security Target, (no doc ID), v1.6, 17 April 2024 *[ST]* is included here by reference.

4 Definitions

This list of acronyms and definitions contains elements that are not already defined by the CC or CEM:

EOC	SolarWinds Enterprise Operations Console™
IIS	Internet Information Services
IPAM	SolarWinds IP Address Manager™
IT	Information Technology
ITSEF	IT Security Evaluation Facility
JIL	Joint Interpretation Library
LA	SolarWinds Log Analyzer™
NCM	SolarWinds Network Configuration Manager™
NPM	SolarWinds Network Performance Monitor™
NTA	SolarWinds NetFlow Traffic Analyzer™
NSCIB	Netherlands Scheme for Certification in the area of IT Security
PP	Protection Profile
SAM	SolarWinds Server & Application Monitor™
SCM	SolarWinds Server Configuration Monitor™
SNMP	Simple Network Management Protocol
SRM	SolarWinds Storage Resource Monitor™
UDT	SolarWinds User Device Tracker™
VMAN	SolarWinds Virtualization Manager™
VNQM	SolarWinds VoIP & Network Quality Manager™
WPM	SolarWinds Web Performance Monitor™

5 Bibliography

This section lists all referenced documentation used as source material in the compilation of this report.

[CC]	Common Criteria for Information Technology Security Evaluation, Parts I, II and III, Version 3.1 Revision 5, April 2017
[CEM]	Common Methodology for Information Technology Security Evaluation, Version 3.1 Revision 5, April 2017
[ETR]	SolarWinds Hybrid Cloud Observability for Federal Government Evaluation Technical Report, UL14832004_NSCIB-CC-2300095-01_SolarWinds_HCO_ETR_v3.0, v3.0, 18 April 2024
[NSCIB]	Netherlands Scheme for Certification in the Area of IT Security, Version 2.6, 02 August 2022
[ST]	SolarWinds Hybrid Cloud Observability Software Security Target, (no doc ID), v1.6, 17 April 2024

(This is the end of this report.)