National Information Assurance Partnership

Common Criteria Evaluation and Validation Scheme



Validation Report

For

Cisco 5915 and 5940 Embedded Services Router

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1. Executive Summary

The evaluation of Cisco 5915 and 5940 Embedded Services Router (ESR) was performed by Leidos, in the United States and was completed in November 2014. The evaluation was carried out in accordance with the Common Criteria Evaluation and Validation Scheme (CCEVS) policies and practices as described on their web site (www.niap-ccevs.org). The evaluation was conducted in accordance with the requirements of the Common Criteria and Common Methodology for IT Security Evaluation (CEM), version 3.1, revision 4 and assurance activities specified in Protection Profile for Network Devices, Version 1.1, 8 June 2012 and ERRATA #2 (January 2014) and Network Device Protection Profile (NDPP) Extended Package VPN Gateway, Version 1.1, 12 April 2013. The evaluation was consistent with NIAP Common Criteria Evaluation and Validation Scheme (CCEVS) policies and practices as described on their web site (www.niap-ccevs.org).

Leidos Common Criteria Testing Laboratory determined that the product satisfies the requirements as defined within the Common Criteria (CC) and the NDPPv1.1 with Errata #2 and with the VPNEPv1.1 The product, when configured as specified in the installation guides and user guides, satisfies all of the security functional requirements stated in the Cisco 5915 and 5940 Embedded Services Router Security Target, version 1.0.

This Validation Report applies only to the specific version of the TOE as evaluated. The TOE is a hardware and software solution that makes up the router models as follows: Cisco 5915 and 5940 Embedded Security Router (conduction-cooled or air-cooled models). The network, on which they reside, is considered part of the environment. The software is comprised of the Universal Cisco IOS software image Release IOS 15.2(4) GC (FIPS validated, Certificate #2241).

The TOE hardware includes the appliances defined in Table 1.

Hardware **Picture Interoperability** Size Power **Interfaces** Cisco 5915 3.775 Standard (1) Serial N/A ESR-Air-Cooled x 4 in PCI slot Console Port Model (5) 10/100 Port LED signals Cisco 5915 N/A 3.775 Standard (1) Serial ESR-Console Port x 4 in PCI slot Conduction-Cooled Model 10/100/1000 Port LED signals

Table 1: Router Model in the Evaluated Configuration

Hardware	Picture	Interoperability	Size	Power	Interfaces
Cisco 5940 ESR		N/A	4 x 6	Standard	(1) Serial
Air-Cooled Model			in	PCI slot	Console Port
with Rear					(4)
Transition Module					10/100/1000
					Port
					LED signals
Cisco 5940 ESR-		N/A	4 x 6	Standard	(1) Serial
Conduction-			in	PCI slot	Console Port
Cooled Model	100				(4)
					10/100/1000
					Port
					LED signals

The validation team monitored the activities of the evaluation team, examined evaluation evidence, provided guidance on technical issues and evaluation processes, and reviewed the individual work units and verdicts of the ETR. The validation team found that the evaluation showed that the product satisfies all of the security functional and assurance requirements stated in the Security Target (ST). The evaluation also showed that the product met all the security requirements and Assurance Activities contain in a Protection Profile. Therefore the validation team concludes that the testing laboratory's findings are accurate, the conclusions justified, and the conformance results are correct. The conclusions of the testing laboratory in the evaluation technical report are consistent with the evidence produced. This Validation Report is not an endorsement of the X-ES Xpedite5205 Embedded Services Router by any agency of the US Government and no warranty of the product is either expressed or implied.

The information in this VR is largely derived from the Assurance Activities Report (AAR) and the associated test report produced by Leidos.

Table 2: Evaluation Details

Item	Identifier	
Evaluated Product	Cisco 5915 and 5940 Embedded Services Router (ESR)	
Sponsor & Developer	Cisco Systems, Inc. 170 West Tasman Drive San Jose, CA 95134	
CCTL	Leidos Common Criteria Testing Laboratory 6841 Benjamin Franklin Drive Columbia, MD 21046	
Completion Date	November 2014	
CC	Common Criteria for Information Technology Security Evaluation, Version 3.1, Revision 4, September 2012	
Interpretations	There were no applicable interpretations used for this evaluation.	
CEM	Common Methodology for Information Technology Security Evaluation: Version 3.1, Revision 4, September 2012	

PP	U.S. Government Security Requirements for Network Devices (NDPP) version 1.1, 8 June 2012 Network Device Protection Profile Extended Package VPN Gateway (VPNEP), Version 1.1, 12 April 2013 Security Requirements for Network Devices Errata #2, January 2014
Disclaimer	The information contained in this Validation Report is not an endorsement of the Cisco 5915 and 5940 Embedded Services Router (ESR) by any agency of the U.S. Government and no warranty of Cisco Cisco 5915 and 5940 Embedded Services Router (ESR) is either expressed or implied.
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2. Identification

The CCEVS is a joint National Security Agency (NSA) and National Institute of Standards and Technology (NIST) effort to establish commercial facilities to perform trusted product evaluations. Under this program, security evaluations are conducted by commercial testing laboratories called Common Criteria Testing Laboratories (CCTLs) using the Common Evaluation Methodology (CEM). The NIAP Validation Body assigns Validators to monitor the CCTLs to ensure quality and consistency across evaluations. Developers of information technology products desiring a security evaluation contract with a CCTL and pay a fee for their product's evaluation. Upon successful completion of the evaluation, the product is added to NIAP's Validated Products List.

The following table serves to identify the evaluated Security Target and TOE.

Table 3: ST and TOE Identification

Name	Description
ST Title	Cisco 5915 and 5940 Embedded Services Router Security Target
ST Version	1.0
Publication Date	October 13, 2014
Vendor and ST Author	Cisco Systems, Inc.
TOE Reference	Cisco 5915 and 5940 Embedded Services Router
TOE Hardware Models	Cisco 5915 ESR—Air-Cooled Model
	Cisco 5915 ESR—Conduction-Cooled Model
	Cisco 5940 ESR Air-Cooled Model with Rear Transition Module
	Cisco 5940 ESR-Conduction-Cooled Model

Name	Description
TOE Software Version	Internetwork Operating System IOS 15.2(4)GC
Keywords	Router, Data Protection, Authentication, Firewall

3. Architectural Information

The TOE consists of one or more physical devices; Cisco 5915 or 5940 Embedded Services Router with Cisco IOS software. All of the ESRs run the same version of the IOS 15.2(4)GC `software which enforces the security functions being claimed regardless of the model. The ESR has two or more network interfaces and is connected to at least one internal and one external network. The Cisco IOS configuration determines how packets are handled to and from the TOE's network interfaces. The router configuration will determine how traffic flows received on an interface will be handled. Typically, packet flows are passed through the internetworking device and forwarded to their configured destination.

The ESR can optionally connect to an NTP server on its internal network for time services. A syslog server is also used for remote backup of the audit records. If these servers are used, they must be attached to the internal (trusted) network. The internal (trusted) network is meant to be separated effectively from unauthorized individuals and user traffic; one that is in a controlled environment where implementation of security policies can be enforced.

The following figure provides a visual depiction of an example TOE deployment.

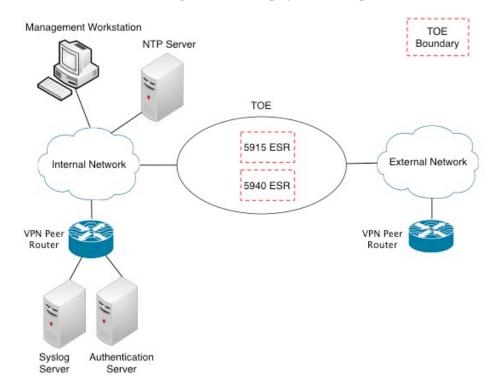


Figure 1: TOE Deployment Example

3.1. Physical Boundaries

The TOE is a hardware and software solution that makes up the router models as follows: Cisco 5915, 5940. The network, on which they reside, is considered part of the environment.

4. Security Policy

4.1.Security audit

The Cisco 5915 and 5940 Embedded Services Router provides extensive auditing capabilities. The TOE can audit events related to cryptographic functionality, identification and authentication, and administrative actions. The Cisco ESR routers generate an audit record for each auditable event. For each event, the TOE records the date and time of each event, the type of event, the subject identity, and the outcome of the event. The administrator configures auditable events, backs-up, and manages audit data storage. The TOE provides the audit trail protection by providing remote backup to a syslog server over an encrypted channel. The audit messages include a timestamp that can be provided by the TOE or an optional NTP server in the operational environment.

4.2. Cryptographic support

The TOE provides cryptography in support of other Cisco ESR security functionality. This cryptography has been validated for conformance to the requirements of FIPS 140-2 Level 2 (Certificate #2241). The TOE provides cryptography in support of VPN connections and remote administrative management via SSHv2.

4.3. Full residual information protection

The TOE ensures that all information flows from the TOE do not contain residual information from previous traffic. Packets are padded with zeros. Residual data is never transmitted from the TOE.

4.4.Identification and authentication

The TOE performs two types of authentication: device-level authentication of the remote device (VPN peers) and user authentication for the Authorized Administrator of the TOE. Device-level authentication allows the TOE to establish a secure channel with a trusted peer. The secure channel is established only after each device authenticates the other. Device-level authentication is performed via IKE/IPsec mutual authentication. The IKE phase authentication for the IPsec communication channel between the TOE and authentication server and between the TOE and syslog server is considered part of the Identification and Authentication security functionality of the TOE.

The TOE provides authentication services for administrative users to connect to the TOEs secure CLI administrator interface. The TOE requires Authorized Administrators to authenticate prior to being granted access to any of the management functionality. The TOE can be configured to require a minimum password length of 15 characters as well as mandatory password complexity rules that includes special characters. The TOE provides administrator authentication against a local user database. Password-based authentication can be performed on the serial console or SSH interfaces. The SSHv2 interface also supports authentication using SSH keys. The TOE optionally supports use of a RADIUS or TACACS+ AAA server (part of the IT Environment) to facilitate authentication (including single-use authentication, or password-based authentication) for administrative users attempting to connect to the TOE's CLI.

The TOE uses X.509v3 certificates as defined by RFC 5280 to support authentication for IPsec and SSH connections.

4.5. Security management

The TOE provides secure administrative services for management of general TOE configuration and the security functionality provided by the TOE. All TOE administration occurs either through a secure SSHv2 session or via a local console connection. The TOE provides the ability to securely manage:

- All TOE administrative users:
- All identification and authentication;
- All audit functionality of the TOE
- All TOE cryptographic functionality;
- The timestamps maintained by the TOE;
- Update to the TOE; and
- TOE configuration file storage and retrieval.

The TOE supports two separate administrative roles: non-privileged Administrator and privileged Administrator. Only the privileged administrator can perform all of the above security relevant management functions. The privileged Administrator is also considered to be the Authorized Administrator and Security Administrator.

Administrators can create configurable login banners to be displayed at time of login, and can also define an inactivity timeout for each admin interface to terminate sessions after a set period of inactivity.

4.6.Packet Filtering

The TOE provides packet filtering and secure IPsec tunneling. The tunnels can be established between two trusted VPN peers as well as between remote VPN clients and the TOE. More accurately, these tunnels are sets of security associations (SAs). The SAs define the protocols and algorithms to be applied to sensitive packets and specify the keying material to be used. SAs are unidirectional and are established per the ESP security protocol. An authorized administrator can define the traffic that needs to be protected via IPsec by configuring access lists (permit, deny, log) and applying these access lists to interfaces using crypto map sets.

4.7. Protection of the TSF

The TOE protects against interference and tampering by untrusted subjects by implementing identification, authentication, and access controls to limit configuration to Authorized Administrators. The TOE prevents reading of cryptographic keys and passwords. Additionally Cisco IOS is not a general-purpose operating system and access to Cisco IOS memory space is restricted to only Cisco IOS functions.

Use of separate VLANs is used to ensure routing protocol communications between the TOE and neighbor routers including routing table updates and neighbor router authentication will be logically isolated from traffic on other VLANs.

The TOE internally maintains the date and time. This date and time is used as the timestamp that is applied to audit records generated by the TOE. Administrators can update the TOE's clock manually, or can configure the TOE to use NTP to synchronize the TOE's clock with an external time source. Finally,

the TOE performs testing to verify correct operation of the router itself and that of the cryptographic module. Whenever any system failures occur within the TOE the TOE will cease operation.

The TOE is able to verify any software updates prior to the software updates being installed on the TOE to avoid the installation of malicious software.

4.8. TOE Access

The TOE can terminate inactive sessions after an Authorized Administrator configurable time-period. Once a session has been terminated, the TOE requires the user to re-authenticate to establish a new session.

The TOE can also display an Authorized Administrator specified banner on the CLI management interface prior to allowing any administrative access to the TOE.

4.9. Trusted Path/Channels

The TOE allows trusted paths to be established to itself from remote administrators over SSHv2, and initiates outbound IPsec tunnels to transmit audit messages to remote syslog servers. In addition, IPsec is used to secure the session between the TOE and the authentication servers. The TOE can also establish trusted paths of peer-to-peer VPN tunnels. The peer-to-peer VPN tunnels can be used for securing the session between the TOE and authentication server/syslog server. In addition, the TOE can establish secure VPN tunnels with IPsec VPN clients. Remote VPN clients are able to securely connect into the ESR over an encrypted session in order to connect to an authorized internal private network.

The TOE also supports direct connections from VPN clients, and protects against threats related to those client connections. The TOE disconnects sessions that have been idle too long, can be configured to deny sessions based on IP, time, and day, and can be configured to NAT external IPs of connecting VPN clients to internal network addresses.

5. Assumptions, Threats, and OSPs

5.1. Assumptions

The ST identifies the following assumptions about the use of the product:

- It is assumed that there are no general-purpose computing capabilities (e.g., compilers or user applications) available on the TOE, other than those services necessary for the operation, administration and support of the TOE.
- Physical security, commensurate with the value of the TOE and the data it contains, is assumed to be provided by the environment.
- TOE Administrators are trusted to follow and apply all administrator guidance in a trusted manner.
- It is assumed that the TOE is connected to distinct networks in a manner that ensures that the TOE security policies will be enforced on all applicable network traffic flowing among the attached networks.

5.2.Threats

The ST identifies the following threats that the TOE and its operational environment are intended to counter:

- An administrator may unintentionally install or configure the TOE incorrectly, resulting in ineffective security mechanisms.
- Security mechanisms of the TOE may fail, leading to a compromise of the TSF.
- A user may gain unauthorized access to the TOE data and TOE executable code. A malicious user, process, or external IT entity may masquerade as an authorized entity in order to gain unauthorized access to data or TOE resources. A malicious user, process, or external IT entity may misrepresent itself as the TOE to obtain identification and authentication data.
- A malicious party attempts to supply the end user with an update to the product that may compromise the security features of the TOE.
- Malicious remote users or external IT entities may take actions that adversely affect the security
 of the TOE. These actions may remain undetected and thus their effects cannot be effectively
 mitigated.
- User data may be inadvertently sent to a destination not intended by the original sender.
- Sensitive information on a protected network might be disclosed resulting from ingress- or egress-based actions
- Unauthorized access may be achieved to services on a protected network from outside that network, or alternately services outside a protected network from inside the protected network
- Access to services made available by a protected network might be used counter to Operational Environment policies
- Security mechanisms of the TOE mail fail, leading to a compromise of the TSF
- If malicious or external IT entities are able to gain access to the network, they may have the ability to capture information traversing throughout the network and send them on to the intended receiver
- A malicious party attempts to change the data being sent resulting in loss of integrity

5.3. Organizational Security Policies

The ST identifies the following organizational security policy that the TOE and its operational environment are intended to fulfill:

The TOE shall display an initial banner describing restrictions of use, legal agreements, or any other appropriate information to which users consent by accessing the TOE.

6. Documentation

Cisco offers a number of guidance documents along with a CC-specific supplemental document describing the installation process for the TOE as well as guidance for subsequent use and administration of the applicable security features.

Table 4: Documentation

#	Title	Link
[1]	Cisco IOS 15.2(4)GC Command	http://www.cisco.com/en/US/products/ps11746/prod_command_refere
	Reference	nce list.html

#	Title	Link
[2]	Cisco 5915 Embedded Services	http://www.cisco.com/en/US/docs/solutions/GGSG-
	Router Hardware Technical	Engineering/Cisco 5915/Hardware Install Guide/5915hw.html
	Reference Guide, Last Updated:	
	April 2012	
	Cisco 5940 Embedded Services	http://www.cisco.com/en/US/docs/solutions/GGSG-
	Router Hardware Technical	Engineering/Dusty/hardware/guide/Cisco 5940 Embedded Services
	Reference Guide	Router_Hardware_Technical_Reference_Guide.html
	Installing Cisco IOS on the	http://www.cisco.com/en/US/docs/solutions/GGSG-
	XPedite5205	Engineering/15_2_3GC/Install/X-ES_Instructions.pdf
[3]	Configuration Fundamentals	http://www.cisco.com/en/US/docs/ios-
	Configuration Guide Cisco IOS	xml/ios/fundamentals/configuration/15mt/fundamentals-15-mt-
	Release 15MT	<u>book.html</u>
[4]	Network Management	http://www.cisco.com/en/US/docs/ios-
	Configuration Guide Library,	xml/ios/net mgmt/config library/15-mt/netmgmt-15-mt-library.html
	Cisco IOS Release 15M&T	
[5]	Securing User Services	http://www.cisco.com/en/US/docs/ios-
	Configuration Guide Library,	xml/ios/security/config_library/15-mt/secuser-15-mt-library.html
	Cisco IOS Release 15M&T	
[6]	Loading and Managing System	http://www.cisco.com/en/US/docs/ios-xml/ios/sys-image-
	Images Configuration Guide,	mgmt/configuration/15-mt/sysimgmgmt-15-mt-book.html
	Cisco IOS Release 15M&T	
[9]	Software Configuration Guide for	http://www.cisco.com/en/US/products/ps11746/products_installation_a
	Cisco IOS Release 15.2(4)	nd configuration guides list.html
[10]	Secure Connectivity	http://www.cisco.com/en/US/docs/ios-
	Configuration Guide Library,	xml/ios/security/config library/15-mt/secon-15-mt-library.html
	Cisco IOS Release 15M&T	
[11]	Configuring Certificate	http://www.cisco.com/en/US/docs/ios/sec_secure_connectivity/configu
	Enrollment for a PKI	ration/guide/sec_cert_enroll_pki.pdf
[12]	Public Key Infrastructure	http://www.cisco.com/en/US/docs/ios-
	Configuration Guide, Cisco IOS	xml/ios/sec conn pki/configuration/15-mt/sec-pki-15-mt-book.html
	Release 15MT	
[13]	Security Configuration Guide:	http://www.cisco.com/c/en/us/td/docs/ios-
	Zone-Based Policy Firewall,	xml/ios/sec data zbf/configuration/15-mt/sec-data-zbf-15-mt-
	Cisco IOS Release 15M&T	<u>book.html</u>
[14]	Configuring Internet Key	http://www.cisco.com/en/US/docs/ios-
	Exchange Version 2 (IKEv2)	xml/ios/sec_conn_ikevpn/configuration/15-
		1mt/Configuring_Internet_Key_Exchange_Version_2.html

7. Product Testing

This section provides discussion of the testing effort performed against the TOE in this evaluation, as taken from the Cisco ESR 5915/5940 Common Criteria Test Report and Procedures documentation, dated October 28, 2014.

7.1. Evaluated Configuration

The TOE is Cisco ESR installed and configured according to the Cisco 5915 and 5940 Embedded Services Router Common Criteria Operational User Guidance and Preparative Procedures as well as the Installation Guide for the respective Cisco ESR router models included in the TOE. The configuration used during testing is the same as shown before in Figure 1: TOE Deployment Example.

7.2. Independent Testing

This section describes the testing efforts of the evaluation team. It is derived from information contained in the following:

• Cisco ESR 5915/5940 Common Criteria Test Report and Procedures, Version 2.1, October 28 2014.

The purpose of this activity was to confirm the TOE behaves in accordance with the TOE security functional requirements as specified in the ST. The evaluation team devised a Test Plan based on the Testing Assurance Activities specified in NDPPv1.1 with Errata #2 and VPNEPv1.1. The Test Plan described how each test activity was to be instantiated within the TOE test environment. The evaluation team executed the tests specified in the Test Plan and documented the results in the team test report listed above

Independent testing took place at the CCTL location in Columbia, Maryland from April 2014 through November 2014.

The evaluators received the TOE in the form that normal customers would receive it, installed and configured the TOE in accordance with the provided guidance, and exercised the Team Test Plan on equipment configured in the testing laboratory.

Given the complete set of test results from the test procedures exercised by the evaluators, the testing requirements for NDPPv1.1 with Errata #2 and VPNEPv1.1 are fulfilled.

7.3. Results of the Evaluation

The Evaluation Team conducted the evaluation in accordance with the CC, the CEM, NDPPv1.1 with Errata #2, VPNEPv1.1, and the CCEVS.

The results of the assurance requirements are summarized in this section. The details of the evaluation results are recorded in the Evaluation Technical Report (proprietary) and Test Summary Report provided by the CCTL. A verdict for an assurance component is determined by the resulting verdicts assigned to the corresponding evaluator action elements. The evaluation was conducted based upon version 3.1 R4 of the CC and the CEM. Additionally the evaluators performed the assurance activities specified in the Network Devices Protection Profile (NDPP) and VPN Extended Package (VPNEP). The evaluation determined the Cisco ESR TOE to be Part 2 extended, and meets the SARs contained the PP and EP.

All assurance activities and work units received a passing verdict. The following components are taken from CC part 3:

- ADV_FSP.1 Basic functional specification
- AGD_OPE.1 Operational user guidance
- AGD_PRE.1 Preparative user guidance
- ALC CMC.1 Labeling of the TOE
- ALC_CMS.1 TOE CM coverage
- ASE CCL.1 Conformance claims
- ASE ECD.1 Extended components definition
- ASE INT.1 ST Introduction
- ASE_OBJ.1 Security objectives for the operational environment
- ASE_REQ.1 Stated security requirements
- ASE TSS.1 TOE summary specification
- ATE_IND.1 Independent testing conformance
- AVA_VAN.1 Vulnerability analysis

8. Validator Comments/Recommendations

The validation team suggests that the consumer pay particular attention to the installation guidance to ensure the devices are placed into the evaluated configuration. In order to remain CC compliant, the device(s) must first be configured for FIPS mode.

As was noted in the Clarification of Scope section of this report, the devices provide more functionality than was covered by the evaluation. Only the functionality claimed in the SFR's in the Security Target was evaluated. All other functionality provided by the devices needs to be assessed separately and no further conclusions should be drawn as to their effectiveness, nor can any claims be made relative to their security based upon this evaluation.

The validators note that the Technical Decisions TD0015, TD0014, and TD0012 were applied to this evaluation. The Technical Decisions are available on the NIAP web site, but their impact on this evaluation is described below:

- TD0015: In the NDPP v1.1, FPF_RUL_EXT.1.7 Tests 4-6 refers to Table 9-1 (Defined Protocolspecific Values), which incorrectly identifies IPv6 Extension Header numbers as transport layer protocols. RFC 2460 lists the following IPv6 Extension Headers: Hop-by-Hop options (0), Destination options (60), Routing (43), Fragment (44), AH (51), and ESP (50)). TD00015 states that the IPv6 extension header numbers do not need to be tested and these tests are not included in the evaluation.
- TD0014: For FCS_IPSEC_EXT.1.13 in the VPNEPv1.1, it is sufficient for the TOE to be configured to adhere to SFR and ensure cryptographic algorithm strength, i.e., configuration is equivalent to "default" cryptographic algorithm strength.
- TD0012: Algorithms not identified in FCS_SSH_EXT.1.4 must not be allowed in the evaluated configuration of the TOE; other cipher suites (such as 3DES-CBC) must be disabled in evaluated configurations. The Assurance Activities associated with this requirement must verify that connection attempts with algorithms not listed in FCS_SSH_EXT.1.4 are denied.

The validation team's assessment of the evidence provided by the evaluation team is that it demonstrates that the evaluation team performed the assurance activities prescribed in the NDPPv1.1 with Errata #2, the VPNEPv1.1, and the Technical Decisions listed above. Also, that the evaluation team correctly verified that the product meets the claims of the associated Security Target.

9. Annexes

Not applicable.

10. Security Target

Cisco 5915 and 5940 Embedded Services Router Security Target, Version 1.0, October 13, 2014

11. Acronym List

CC Common Criteria
CCTL CC Testing Laboratory

CM	Configuration Management
CVE	Common Vulnerabilities and Exposures
FSP	Functional Specification
GUI	Graphical User Interface
	* 1

Configuration Item

GUI Graphical User Interface
ID Identity/Identification
IP Internet Protocol
IT Information Technology

NIAP National Information Assurance Partnership
NIST National Institute of Standards and Technology

NSA National Security Agency

OS Operating System PP Protection Profile

SAR Security Assurance Requirement

SFR Security Functional Requirement

ST Security Target
 TOE Target of Evaluation
 TSF TOE Security Functions
 TSS TOE Summary Specification

12. Bibliography

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The Validation Team used the following documents to produce this Validation Report:

- [1] Common Criteria for Information Technology Security Evaluation Part 1: Introduction, Version 3.1, Revision 4, September 2012.
- [2] Common Criteria for Information Technology Security Evaluation Part 2: Security Functional Requirements, Version 3.1 Revision 4, September 2012
- [3] Common Criteria for Information Technology Security Evaluation Part 3: Security assurance components, Version 3.1 Revision 4, September 2012.
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