

# National Information Assurance Partnership



## Common Criteria Evaluation and Validation Scheme Validation Report

**Microsoft Corporation, Corporate Headquarters, One  
Microsoft Way, Redmond, WA 98052-6399**

**Windows 7 and Windows Server 2008 R2**

**Report Number: CCEVS-VR-10390-2010**  
**Dated: 24 March 2011**  
**Version: 0.2**

National Institute of Standards and Technology  
Information Technology Laboratory  
100 Bureau Drive  
Gaithersburg, MD 20899

National Security Agency  
Information Assurance Directorate  
9800 Savage Road STE 6740  
Fort George G. Meade, MD 20755-6757

24 March 2011

## **ACKNOWLEDGEMENTS**

### **Validation Team**

***Kenneth Elliott***  
*Aerospace Corporation*  
Columbia, MD

***Shaun Gilmore***  
*National Security Agency*  
Ft. Meade, MD

***Ralph Broom***  
*MITRE Corporation*  
*McLean, VA*

### **Common Criteria Testing Laboratory**

Tony Apted  
Tammy Compton  
Terrie Diaz  
Chris Keenan  
Eve Pierre  
Michelle Ruppel  
*Science Applications International Corporation*  
*Columbia, Maryland*

24 March 2011

## Table of Contents

|       |  |    |
|-------|--|----|
| 1     | Executive Summary .....  | 1  |
| 2     | Identification .....   | 2  |
| 3     | Architectural Information .....  | 4  |
| 3.1   | Hardware Capabilities.....   | 5  |
| 3.2   | Software Capabilities .....  | 5  |
| 3.3   | TOE Logical Boundary .....   | 7  |
| 3.3.1 | Security Audit .....   | 7  |
| 3.3.2 | User Data Protection .....   | 8  |
| 3.3.3 | Identification and Authentication .....                                | 8  |
| 3.3.4 | Security Management .....  | 8  |
| 3.3.5 | Cryptographic Protection .....   | 8  |
| 3.3.6 | Protection of TOE Security Functions .....                             | 9  |
| 3.3.7 | Resource Utilization.....  | 9  |
| 3.3.8 | Session Locking .....  | 9  |
| 4     | Assumptions.....   | 9  |
| 5     | Documentation .....  | 10 |
| 5.1   | Design Documentation.....  | 10 |
| 5.2   | Guidance Documentation.....  | 17 |
| 5.3   | Life Cycle.....  | 17 |
| 5.4   | Testing.....   | 17 |
| 6     | IT Product Testing .....   | 25 |
| 6.1   | Developer Testing .....  | 25 |
| 6.2   | Evaluation Team Independent Testing .....                              | 25 |
| 7     | Evaluated Configuration .....  | 26 |
| 8     | Results of the Evaluation .....  | 27 |
| 8.1   | Evaluation of the Security Target (ASE) .....                          | 27 |
| 8.2   | Evaluation of the Development (ADV) .....                              | 27 |
| 8.3   | Evaluation of the Guidance Documents (AGD) .....                       | 28 |
| 8.4   | Evaluation of the Life Cycle Support Activities (ALC) .....            | 28 |
| 8.5   | Evaluation of the Test Documentation and the Test Activity (ATE) ..... | 28 |
| 8.6   | Vulnerability Assessment Activity (AVA).....                           | 29 |
| 8.7   | Summary of Evaluation Results.....                                     | 29 |
| 9     | Validator Comments/Recommendations .....                               | 29 |
| 10    | Annexes.....   | 30 |
| 11    | Security Target.....   | 30 |
| 12    | Glossary .....   | 31 |
| 13    | Bibliography .....   | 31 |

24 March 2011

## 1 Executive Summary

This report documents the assessment of the National Information Assurance Partnership (NIAP) validation team of the evaluation of the Microsoft Windows 7 and Windows Server 2008 R2. It presents the evaluation results, their justifications, and the conformance results. This Validation Report is not an endorsement of the Target of Evaluation by any agency of the U.S. government, and no warranty is either expressed or implied.

The evaluation was performed by the Science Applications International Corporation (SAIC) Common Criteria Testing Laboratory (CCTL) in Columbia, Maryland, United States of America and was completed in March 2011. The information in this report is largely derived from the Evaluation Technical Report (ETR) and associated test reports, written by SAIC. The evaluation determined that the product is both **Common Criteria Part 2 Extended and Part 3 Conformant**, and meets the assurance requirements of EAL 4 augmented with ALC\_FLR.3.

The Target of Evaluation (TOE) is Windows 7 and Windows Server 2008 R2, configured and operated according to the guidance documents identified later in this report. The Windows 7 and Windows Server 2008 R2 TOE is a general-purpose, distributed, network OS that provides controlled access between subjects and user data objects. Windows 7 and Windows Server 2008 R2 TOE has a broad set of security capabilities including single network logon (using password or smart card); access control and data encryption; extensive security audit collection; host-based firewall and IPSec to control information flow, public key certificate service, built-in standard-based security protocols such as Kerberos, Transport Layer Security (TLS)/Secure Sockets Layer (SSL), Digest, Internet Key Exchange (IKE)/IPSec, FIPS-140 validated cryptography, web service, and Lightweight Directory Access Protocol (LDAP) Directory-based resource management. The Windows 7 and Windows Server 2008 R2 TOE provides the following security services: user data protection (WEBUSER access control, web content provider access control, discretionary access control (DAC), IPSec information flow control, connection firewall information flow control), cryptographic support, audit, Identification and Authentication (I&A) (including trusted path/channel), security management, protection of the TOE Security Functions (TSF), resource quotas, and TOE access/session control. The Windows 7 and Windows Server 2008 R2 TOE security policies provide network-wide controlled access protection (access control for user data, WEBUSER and web content provider, IPSec information flow, connection firewall information flow), encrypted data/key protection, and encrypted file protection. These policies enforce access limitations between individual users and data objects, and on in-coming and out-going traffic channels through a physically separate part of the TOE. The TOE is capable of auditing security relevant events that occur within a Windows 7 and Windows Server 2008 R2 network. All these security controls require users to identify themselves and be authenticated prior to using any node on the network.

The Target of Evaluation (TOE) identified in this Validation Report has been evaluated at a NIAP approved Common Criteria Testing Laboratory using the Common Methodology for

24 March 2011

IT Security Evaluation (Version 3.1 R3) for conformance to the Common Criteria for IT Security Evaluation (Version 3.1 R3). This Validation Report applies only to the specific version of the TOE as evaluated. The evaluation has been conducted in accordance with the provisions of the NIAP Common Criteria Evaluation and Validation Scheme and the conclusions of the testing laboratory in the evaluation technical report are consistent with the evidence provided.

The validation team monitored the activities of the evaluation team, observed evaluation testing activities, provided guidance on technical issues and evaluation processes, and reviewed the individual work units and successive versions of the ETR. The validation team found that the evaluation showed that the product satisfies all of the functional requirements and assurance requirements stated in the Security Target (ST). 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.

Based upon the work of the SAIC evaluation team, the CCEVS concluded that the Common Criteria requirements for Evaluation Assurance Level (EAL 4) augmented with ALC\_FLR.3 have been met.

The technical information included in this report was obtained from the Windows 7 and Windows Server 2008 R2 Security Target and analysis performed by the Validation Team.

## 2 Identification

The CCEVS is a joint National Security Agency (NSA) and National Institute of Standards 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) for Evaluation Assurance Level (EAL) 1 through 4 in accordance with National Voluntary Laboratory Assessment Program (NVLAP) accreditation.

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.

Table 1 provides information needed to completely identify the product, including:

- The Target of Evaluation (TOE): the fully qualified identifier of the product as evaluated.
- The Security Target (ST), describing the security features, claims, and assurances of the product.
- The conformance result of the evaluation.

24 March 2011

- The Protection Profile to which the product is conformant.
- The organizations and individuals participating in the evaluation.

**Table 1: Evaluation Identifiers**

| <b>Item</b>                               | <b>Identifier</b>   |
|---|---|
| <b>Evaluation Scheme</b>                  | United States NIAP Common Criteria Evaluation and Validation Scheme   |
| <b>TOE Software</b>                       | Microsoft Windows 7 Enterprise Edition (32-bit and 64-bit versions)<br>Microsoft Windows 7 Ultimate Edition (32-bit and 64-bit versions)<br>Microsoft Windows Server 2008 R2 Standard Edition<br>Microsoft Windows Server 2008 R2 Enterprise Edition<br>Microsoft Windows Server 2008 R2 Datacenter Edition<br>Microsoft Windows Server 2008 R2 Itanium Edition   |
| <b>TOE Hardware</b>                       | Dell Optiplex 755, 3.0 GHz Intel Core 2 Duo E8400, 64-bit<br>Dell PowerEdge SC1420, 3.6 GHz Intel Xeon Processor (1 CPU), 3264-bit<br>Dell PowerEdge 2970, 1.7 GHz quad core AMD Opteron 2344 Processor (2 CPUs), 64-bit<br>HP Proliant DL385 G5, 2.1 GHz quad core AMD Opteron 2352 Processor (2 CPUs), 64-bit<br>HP Proliant DL385, 2.6 GHz AMD Opteron 252 Processor (2 CPUs), 64-bit<br>HP Integrity rx1620, 1.3 Ghz Intel Itanium Processor (1 CPU), 64-bit (Itanium)<br>Microsoft Hyper-V<br>Microelectronics Trusted Platform Module [SMO1200]<br>GemPlus GemPC Twin USB smart card reader |
| <b>Protection Profile</b>                 | US Government Protection Profile for General-Purpose Operating Systems in a Networked environment (GPOSPP), version 1.0, 30 August 2010   |
| <b>ST:</b>                                | Microsoft Windows 7 and Windows Server 2008 R2 Security Target, Version 1.0, March 23rd, 2011.  |
| <b>Evaluation Technical Report</b>        | Evaluation Technical Report For Windows 7 and Windows Server 2008 R2 (Proprietary), Version 1.0, December 3, 2010   |
| <b>CC Version</b>                         | Common Criteria for Information Technology Security Evaluation, Version 3.1 R3  |
| <b>Conformance Result</b>                 | CC Part 2 extended, CC Part 3 conformant  |
| <b>Sponsor</b>                            | Microsoft Corporation   |
| <b>Developer</b>                          | Microsoft Corporation   |
| <b>Common Criteria Testing Lab (CCTL)</b> | SAIC, Columbia, MD  |

24 March 2011

| Item             | Identifier   |
|------------------|--|
| CCEVS Validators | Kenneth Elliott, Aerospace Corporation, Columbia, MD   |
|                  | Shaun Gilmore, National Security Agency, Ft. Meade, MD |
|                  | Ralph Broom, MITRE Corporation, McLean, VA             |

### 3 Architectural Information

Note: The following architectural description is based on the description presented in the Security Target.

Windows 7 and Windows Server 2008 R2 are operating systems that supports both workstation and server installations. The TOE includes six product variants of Windows 7 and Windows Server 2008 R2:

- Windows 7 Enterprise
- Windows 7 Ultimate
- Windows Server 2008 R2 Standard
- Windows Server 2008 R2 Enterprise
- Windows Server 2008 R2 Datacenter
- Windows Server 2008 R2 Itanium

Windows 7 is suited for business desktops and notebook computers; it is the workstation product and while it can be used by itself it is designed to serve as a client within Windows domains. Designed for departmental and standard workloads, Windows Server 2008 R2 Standard delivers intelligent file and printer sharing; secure connectivity based on Internet technologies, and centralized desktop policy management. Windows Server 2008 R2 Enterprise differs from Windows Server 2008 R2 Standard primarily in its support for high-performance server hardware for greater load handling. These capabilities provide reliability that helps ensure systems remain available. Windows Server 2008 R2 Datacenter provides the necessary scalable and reliable foundation to support mission-critical solutions for databases, enterprise resource planning software, high-volume, real-time transaction processing, and server consolidation. Windows Server 2008 R2 Itanium provides support for the alternate Intel Itanium CPU, but otherwise can serve where Standard or Enterprise edition products might be used.

In terms of security, Windows 7 and Server 2008 R2 share the same security characteristics. The primary difference is that the Server 2008 Server R2 products include services and capabilities that are not part of Windows 7 (for example the DNS Server, DHCP Server) or are not installed by default on Server 2008 R2 (for example the Windows Media Player, Windows Aero and desktop themes). The additional services have a bearing on the security properties of the distributed operating system (e.g., by extending the set of available interfaces and proffered services) and as such are included within the scope of the evaluation.

24 March 2011

### 3.1 Hardware Capabilities

One differentiator between Windows Server editions is support for additional scalability and hardware capabilities. The following table states which hardware capabilities are supported by each edition of Windows Server 2008 R2.

**Table 2: Hardware Capabilities for Windows Server 2008 R2**

| Capability   | Windows Server 2008 R2 Edition |            |            |          |
|--|--------------------------------|------------|------------|----------|
|  | Standard                       | Enterprise | Datacenter | Itanium  |
| Maximum Memory (RAM)                               | 32 GB                          | 2 TB       | 2 TB       | 2 TB     |
| Maximum # of Processors                            | 4 x 64                         | 8 x64      | 64 x64     | 64 IA 64 |
| Clustering   | No                             | 16-node    | 16-node    | 8-node   |
| Hot Add/Replace Memory and Processors <sup>1</sup> | No                             | Yes        | Yes        | Yes      |
| Fault-tolerant Memory Synchronization              | No                             | Yes        | Yes        | Yes      |

### 3.2 Software Capabilities

Starting with Windows Server 2008, the server operating system was split into multiple server roles, with each server role providing different services and capabilities. This componentization simplifies administration and also reduces the attack surface of Windows Server by enabling the administrator to install only the specific binaries needed onto a machine to fulfill its role.

The following table indicates which roles are included in each edition of Windows Server:

Table 3: Server Roles in Windows Server 2008 R2

| Server Role                                     | Windows Server 2008 R2 Edition |            |            |         |
|---|--------------------------------|------------|------------|---------|
|   | Standard                       | Enterprise | Datacenter | Itanium |
| Active Directory Certificate Services           | Yes <sup>2</sup>               | Yes        | Yes        |         |
| Active Directory Domain Services                | Yes                            | Yes        | Yes        |         |
| Active Directory Federation Services            |                                | Yes        | Yes        |         |
| Active Directory Lightweight Directory Services | Yes                            | Yes        | Yes        |         |
| Active Directory Rights Management Services     | Yes                            | Yes        | Yes        |         |
| Application Server                              | Yes                            | Yes        | Yes        | Yes     |
| DHCP Server                                     | Yes                            | Yes        | Yes        |         |
| DNS Server                                      | Yes                            | Yes        | Yes        |         |
| Fax Server                                      | Yes                            | Yes        | Yes        |         |

<sup>1</sup> Requires supporting hardware.

<sup>2</sup> Limited to creating non-Enterprise Certificate Authorities. Also, does not support role separation.



24 March 2011

|                                       |                  |     |     |     |
|---------------------------------------|------------------|-----|-----|-----|
| File Services                         | Yes <sup>3</sup> | Yes | Yes |     |
| Hyper-V <sup>4</sup>                  | Yes              | Yes | Yes |     |
| Network Policy and Access Services    | Yes <sup>5</sup> | Yes | Yes |     |
| Print and Document Services           | Yes              | Yes | Yes |     |
| Remote Desktop Services               | Yes <sup>6</sup> | Yes | Yes |     |
| Web Services (IIS 7.5)                | Yes              | Yes | Yes | Yes |
| Windows Deployment Services           | Yes              | Yes | Yes |     |
| Windows Server Update Services (WSUS) | Yes              | Yes | Yes |     |

Additionally all editions of Windows server include the Server Manager application which administrators use to add/remove roles and features from Windows Server as well as the Server Core, which a minimal server installation option for computers running on the Windows Server 2008 R2 operating system. Server Core provides a low-maintenance server environment with reduced attack surface by presenting a command-line interface to the administrator instead of the GUI-based Explorer interface.

The security features addressed by this security target are those provided by Windows 7 and Windows Server 2008 R2 as operating systems. Microsoft provides several Windows 7 and Windows Server 2008 R2 software applications that are considered outside the scope of the defined TOE and thus not part of the evaluated configuration. Services outside this evaluation include: e-mail service (SMTP), Remote Desktop, Rights Management Service, Windows SharePoint Service, Microsoft Message Queuing, and ReadyBoost. These services are particularly complex or not recommended and in some cases essentially represent products in their own right. They have been excluded because they are not enabled or installed by default and are not necessary for the operation of the core security services. Also they have significant impact on the claims made in this Security Target and the ability of the TOE to conform to the intended Protection Profile.

While the Windows CC evaluation includes the IIS web server, the evaluated configuration does not allow for arbitrary server-side execution of web content (via the configuration guidance) since user subject binding would be uncertain. Similarly, the Network Access Protection (NAP) features related to 802.1X and NAP-NAC (see below) are excluded from the evaluated configuration since wireless technology and Cisco products are not included in the scope of the Microsoft Windows CC evaluation.

---

<sup>3</sup> Limited to 1 standalone DFS root.

<sup>4</sup> Server 2008 Hyper-V was part of a separate Common Criteria evaluation.

<sup>5</sup> Limited to 250 Routing and Remote Access (RRAS) connections, 50 (Internet Authentication Service) IAS connections and 2 IAS Server Groups.

<sup>6</sup> Limited to 250 Remote Desktop Services connections.

24 March 2011

The following table summarizes the Windows configurations included in the evaluation.

|                            | Windows<br>7<br>Enterprise | Windows<br>7 Ultimate | Windows<br>Server<br>2008 R2<br>Standard | Windows<br>Server<br>2008 R2<br>Enterprise | Windows<br>Server<br>2008 R2<br>Datacenter | Windows<br>Server<br>2008 R2<br>Itanium |
|----------------------------|----------------------------|-----------------------|--|--|--|---|
| 32-bit/64-bit              | 32 & 64                    | 32 & 64               | 64                                       | 64   | 64   | 64                                      |
| Single<br>Core/Processor   | X                          | X                     | X  | X  | X  | X                                       |
| Multiple<br>Core/Processor | X                          | X                     | X  | X  | X  | X                                       |
| Domain<br>Member           | X                          | X                     | X  | X  | X  | X                                       |
| Domain<br>Controller       | N/A                        | N/A                   | X  | X  | X  | N/A                                     |

### 3.3 TOE Logical Boundary

This section identifies the security functions that the TSF provides.

- Security Audit
- User Data Protection
- Identification and Authentication
- Security Management
- Cryptographic Protection
- Protection of the TOE Security Functions
- Resource Utilization
- Session Locking

#### 3.3.1 Security Audit

Windows 7 and Windows Server 2008 R2 have the ability to collect audit data, review audit logs, protect audit logs from overflow, and restrict access to audit logs. Audit information generated by the system includes date and time of the event, user who caused the event to be generated, and other event specific data. Authorized administrators can review audit logs including the ability to search and sort audit records. Authorized Administrators can also configure the audit system to include or exclude potentially auditable events to be audited based on a wide range of characteristics.

24 March 2011

### **3.3.2 User Data Protection**

Windows 7 and Windows Server 2008 R2 protect user data by enforcing several access control policies (Discretionary Access Control, Mandatory Integrity Control, Encrypting File System, WEBUSER and web content provider access control) and several information flow policies (IPSec filter information flow control, Connection Firewall); and, object and subject residual information protection. Windows 7 and Windows Server 2008 R2 use access control methods to allow or deny access to objects, such as files, directory entries, printers, and web content. Windows 7 and Windows Server 2008 R2 use information flow control methods to control the flow of IP traffic and packets. It authorizes access to these resource objects through the use of security descriptors (which are sets of information identifying users and their specific access to resource objects), web permissions, IP filters, and port mapping rules. Windows 7 and Windows Server 2008 R2 also protect user data by ensuring that resources exported to user-mode processes do not have any residual information.

### **3.3.3 Identification and Authentication**

Windows 7 and Windows Server 2008 R2 require each user to be identified and authenticated (using password or smart card) prior to performing any functions. An interactive user invokes a trusted path in order to protect his I&A information. Windows 7 and Windows Server 2008 R2 maintain databases of accounts including their identities, authentication information, group associations, and privilege and logon rights associations. Windows 7 and Windows Server 2008 R2 include a set of account policy functions that include the ability to define minimum password length, number of failed logon attempts, duration of lockout, and password age.

### **3.3.4 Security Management**

Windows 7 and Windows Server 2008 R2 include a number of functions to manage policy implementation. Policy management is controlled through a combination of access control, membership in administrator groups, and privileges.

### **3.3.5 Cryptographic Protection**

Windows 7 and Windows Server 2008 R2 provide FIPS 140-2 validated cryptographic functions that support encryption/decryption, cryptographic signatures, cryptographic hashing, cryptographic key agreement, and random number generation. The TOE additionally provides support for public keys, credential management and certificate validation functions and provides support for the National Security Agency's Suite B cryptographic algorithms. The TOE also provides extensive auditing support in support of cryptographic requirements, support for replaceable random number generators, and a key isolation service designed to limit the potential exposure of secret and private keys. In

24 March 2011

In addition to supporting its own security functions with cryptographic support, the TOE offers access to the cryptographic support functions for user application programs.

### **3.3.6 Protection of TOE Security Functions**

Windows 7 and Windows Server 2008 R2 provide a number of features to ensure the protection of TOE security functions. Windows 7 and Windows Server 2008 R2 protects against unauthorized data disclosure and modification by using a suite of Internet standard protocols including IPsec and ISAKMP. Windows 7 and Windows Server 2008 R2 ensure process isolation security for all processes through private virtual address spaces, execution context and security context. The Windows 7 and Windows Server 2008 R2 data structures defining process address space, execution context, memory protection, and security context are stored in protected kernel-mode memory. The Windows 7 and Windows Server 2008 R2 BitLocker features can be used to protect fixed and removable USB storage volumes. The Windows 7 and Windows Server 2008 R2 Network Access Protection feature can be used to limit access to network resources depending on the measured “health” of clients based on attributes such as security settings and installed applications. Windows 7 and Windows Server 2008 R2 also include some self-testing features that ensure the integrity of executable TSF images and its cryptographic functions.

### **3.3.7 Resource Utilization**

Windows 7 and Windows Server 2008 R2 can limit the amount of disk space that can be used by an identified user or group on a specific disk volume. Each volume has a set of properties that can be changed only by a member of the administrator group. These properties allow an authorized administrator to enable quota management, specify quota thresholds, and select actions when quotas are exceeded.

### **3.3.8 Session Locking**

Windows 7 and Windows Server 2008 R2 provides the ability for a user to lock their session immediately or after a defined interval. It constantly monitors the mouse and keyboard for activity and locks the workstation after a set period of inactivity. Windows 7 and Windows Server 2008 R2 allow an authorized administrator to configure the system to display a logon banner before the logon dialogue.

## **4 Assumptions**

The following assumption was made during the evaluation of Windows 7 and Windows Server 2008 R2:

- It is assumed that the IT environment provides the TOE with appropriate physical security, commensurate with the value of the IT assets protected by the TOE.

24 March 2011

## 5 Documentation

The following documentation was used as evidence for the evaluation of the Windows 7 and Windows Server 2008 R2:

### 5.1 Design Documentation

1. Microsoft Windows Common Criteria Evaluation Security Architecture, September 13, 2010
2. **Admin Tools**
3. Certreq.exe Command-Line Utility (August 13 2010).docx
4. Certutil.exe Command-Line Utility (August 13 2010).docx
5. Active Directory Delegation of Control Wizard (June 24 2010).docx
6. Active Directory Domains and Trusts Snap-in (June 26 2010).docx
7. Active Directory Sites and Services (June 28 2010).docx
8. Audit Policy Command Line Interface (Mar 30 2010).docx
9. Authorization Manager (June 3 2010).docx
10. BitLocker Drive Encryption Control Panel (May 6 2010).docx
11. Certificates Snap-in (Mar 30 2010).docx
12. Component Services Snap-in (June 10 2010).docx
13. Computer Management Snap-in (April 9 2010).docx
14. Control Panel (June 6 2010).docx
15. Create A Shared Folder Wizard (April 06 2010).docx
16. Date and Time Control Panel (Mar 9 2010).docx
17. Default Group Policy Object Restore Command Line Utility (Mar 18 2010).docx
18. Device and Printers Control Panel (May 13 2010).docx
19. Device Manager Snap-in (April 27 2010).docx
20. DHCP Snap-in (June 9 2010).docx
21. Disk Management Snap-In (May 4 2010).docx
22. DNS Snap-in (June 8 2010).docx
23. Driver Verifier Manager (May 3 2010).docx
24. Encrypting File System Dialog Boxes (Mar 25 2010).docx
25. Event Viewer Snap-in (July 12 2010).docx
26. Explorer (September 10 2010).docx
27. Explorer Quota Property Tab (April 30 2010).docx
28. File Encryption Command Line Utility (April 22 2010).docx
29. Group Policy Editor Snap-in (June 14 2010).docx
30. Group Policy Update Command Line Utility (April 16 2010).docx
31. Hyper-V Manager (August 11 2010).docx
32. Internet Information Service (IIS) Manager (September 14 2010).docx
33. IP Security Monitor Snap-in (May 29 2010).docx
34. IP Security Policies Snap-in (May 24 2010).docx
35. NAP Client Configuration Snap-in (June 7 2010).docx
36. Network and Sharing Control Panel (May 13 2010).docx
37. Performance Monitoring Snap-in
38. Registry Editor (April 16 2010).docx
39. Resultant Set of Policy Snap-in (May 17 2010).docx
40. Routing and Remote Access Snap-in (July 13 2010).docx
41. SAM Lock Tool (May 7 2010).docx
42. Schedule Service Command Line Utility (July 8 2010).docx
43. Scheduled Tasks Command-Line Utility (April 16 2010).docx
44. Security Configuration Wizard (July 27 2010).docx

24 March 2011

45. Security Configuration Wizard Command Line Utility (April 26 2010).docx
46. Security Policy Snap-in (September 14 2010).docx
47. Security Templates Snap-in (May 13 2010).docx
48. Security Configuration and Analysis Snap-in (Aug 31 2010).docx
49. Server Manager (April 19 2010).docx
50. Services Snap-in (May 19 2010).docx
51. Signature Verification Command Line Utility (May 7 2010).docx
52. System Control Panel, Computer Name Tab (May 20 2010).docx
53. System Integrity Check and Repair Command Line Utility (June 28 2010).docx
54. Task Scheduler Snap-in (July 2 2010).docx
55. TPM Management (July 6 2010).docx
56. User Account Control Settings (April 23 2010).docx
57. Users and Groups Snap-in (June 28 2010).docx
58. Volume Shadow Copy Service Command Line Utility (May 10 2010).docx
59. Windows Authentication User Interface (September 10 2010).docx
60. Windows Firewall with Advanced Local Security Snap-in (June 21 2010).docx
61. WMI Control Snap-in (June 1 2010).docx
- 62. Certificate Services**
63. (OS) Certificate Service (Oct 11 2010).docx
64. OS) Certificate Service Default Exit Module (May 26 2010).docx
65. OS) Certificate Service Default Policy Module (June 1 2010).docx
66. Online Responder Service (June 30 2010).docx
- 67. Cryptographic Support**
68. BitLocker Drive Encryption Service (Dec 02 2009).docx
69. FVE Crash Dump Driver (Jan 22 2010).docx
70. FVE Driver (Apr 05 2010).docx
71. TPM Base Services (Jan 22 2010).docx
72. TPM Driver (Dec 02 2009).docx
- 73. Executive**
74. 64 bit Kernel Debug Support (October 23 2009).docx
75. Application Compatibility Support (December 10 2009).docx
76. Cache Manager (October 26 2009).docx
77. Configuration Manager (August 24, 2010).docx
78. Event Tracing for Windows (December 17, 2009).docx
79. Executive Object Services (August 30, 2010).docx
80. Graphics Device Interface (September 16, 2010).docx
81. Hardware Abstraction Layer (HAL) (December 16, 2009).docx
82. Kernel Debug Manager (December 15, 2009).docx
83. Kernel Mode Windows Management Instrumentation (December 10 2009).docx
84. Kernel Runtime (October 23 2009).docx
85. Kernel Transaction Manager (February 2, 2009).docx
86. Advanced Local Procedure Call (ALPC) (August 27, 2010).docx
87. Memory Manager (December 18, 2009).docx
88. Microkernel (December 15, 2009).docx
89. Object Manager (August 9, 2010).docx
90. Plug and Play Manager (December 16, 2009).docx
91. Power Manager (December 16, 2009).docx
92. Process Manager\Process Manager (August 27, 2010).docx
93. Process Manager\Process Manager (August 5, 2010).docx
94. Process Manager\Process Manager (May 8, 2010).docx
95. Raw File System Library (October 23 2009).docx
96. Security Reference Monitor (March 3, 2010).docx
97. Virtual DOS Machine (December 14, 2009).docx
98. Window Manager (User) (August 25, 2010).docx

24 March 2011

**99. Hardware**

- 100. AMD Hardware (7 May 2010).docx
- 101. Intel Hardware (7 May 2010).docx
- 102. Intel IA64 Hardware (7 May 2010).docx

**103. IIS**

- 104. Background Intelligent Transfer Service (BITS) ISAPI (Apr 01 2010).docx
- 105. IIS CoAdmin DLL (May 19 2010).docx
- 106. IIS ISAPI Handler (Mar 10 2010).docx
- 107. IIS Metadata DLL (Mar 10 2010).docx
- 108. IIS Reset Control (Mar 11 2010).docx
- 109. IIS RPC Proxy (Apr 01 2010).docx
- 110. IIS Web Admin Service (May 04 2010).docx
- 111. IIS Web Server Core (May 04 2010).docx
- 112. IIS Worker Process (Apr 01 2010).docx
- 113. Internet Information Services (Apr 01 2010).docx
- 114. ISAPI DLL for Web Printing (Mar 19 2010).docx
- 115. Metadata and Admin Service (Apr 05 2010).docx
- 116. WAM Registration DLL (Mar 19 2010).docx
- 117. WinHTTP Web Proxy Auto Discovery Service (Mar 19 2010).docx

**118. IO Core**

- 119. CNG Kernel Cryptography (September 13 2010).docx
- 120. File System Recognizer Driver (Jan 07 2010).docx
- 121. Generic Pass-through Driver (Aug 03 2010).docx
- 122. IO Manager (May 06 2010).docx
- 123. Kernel Mode Driver Framework (Jan 22 2010).docx
- 124. Kernel Security Device Driver (Apr 17 2010).docx
- 125. Kernel Security Support Provider Interface Packages (Aug 3, 2010).docx
- 126. Mount Manager (Apr 17 2010).docx
- 127. User-mode Driver Framework Reflector (Apr 17 2010).docx

**128. IO Devices**

- 129. ACPI Battery Miniclass Driver (May 23 2010).docx
- 130. ACPI Driver (June 17, 2010).docx
- 131. ACPI Power Meter Driver (July 6 2010).docx
- 132. Advanced Host Controller Interface Driver (June 28 2010).docx
- 133. AtaPort Driver Extension (June 28 2010).docx
- 134. Audio Port Class Driver (June 28, 2010).docx
- 135. Beep Driver (May 05 2010).docx
- 136. Broadcom NetXtreme 57xx Gb NIC Miniport Driver (June 15, 2010).docx
- 137. Composite Battery Driver (June 21, 2010).docx
- 138. File System Filter Manager (June 28 2010).docx
- 139. Hardware Error Device Driver (June 28 2010).docx
- 140. HID Class Library (August 6, 2010).docx
- 141. HID Keyboard Filter Driver (July 2, 2010).docx
- 142. HID Mouse Filter Driver (July 2, 2010).docx
- 143. HID Parsing Library (July 2, 2010).docx
- 144. HP ProLiant Smart Array (May 26, 2010).docx
- 145. i8042 Port Driver (May 24, 2010).docx
- 146. IDE ATAPI Port Driver (May 21 2010).docx
- 147. IDE Mini-Port Drivers (May 10 2010).docx
- 148. Intel Pro 1000 E1G60xx MT NIC Miniport Driver (June 15, 2010).docx
- 149. Intelligent Platform Management Interface Driver (May 26 2010).docx
- 150. ISA and EISA Class Driver (Aug 05 2010).docx
- 151. Keyboard Class Driver (May 14, 2010).docx
- 152. LSI Serial Attached SCSI Driver (July 3, 2010).docx

24 March 2011

- 153. Microsoft System Management BIOS Driver (June 1, 2010).docx
- 154. Monitor Class Function Driver (June 10, 2010).docx
- 155. Mouse Class Driver (June 1, 2010).docx
- 156. Multipath Support Bus Driver (May 24 2010).docx
- 157. NULL Driver (May 10 2010).docx
- 158. NVIDIA nForce NIC Miniport Driver (July 22, 2010).docx
- 159. Parallel Port Driver (June 10, 2010).docx
- 160. Partition Manager (May 21 2010).docx
- 161. Plug and Play PCI Enumerator (May 26 2010).docx
- 162. Plug and Play Software Device Enumerator (May 24 2010).docx
- 163. PnP Disk Driver (May 14 2010).docx
- 164. PNP ISA Bus Driver (June 10, 2010).docx
- 165. Processor Device Driver (June 2, 2010).docx
- 166. SCSI CD-ROM Driver (May 14 2010).docx
- 167. SCSI Class System DLL (May 24 2010).docx
- 168. SCSI Port Driver (May 15 2010).docx
- 169. SCSI Tape Class Driver (May 21 2010).docx
- 170. SecureDigital Bus Driver (June 29 2010).docx
- 171. Serial Device Driver (June 10, 2010).docx
- 172. Serial Port Enumerator (June 10, 2010).docx
- 173. Smart Card Driver Library (May 21, 2010).docx
- 174. Smart Card Reader Filter Driver (June 13 2010).docx
- 175. Storage Port Driver (December 14 2009).docx
- 176. USB Common Class Generic Parent Driver (May 24, 2010).docx
- 177. USB Host Controller (June 15, 2010).docx
- 178. USB Host Controller Interface Miniport Drivers (June 14, 2010).docx
- 179. USB Mass Storage Driver (May 24, 2010).docx
- 180. USB Miniport Driver for Input Devices (Aug 12 2010).docx
- 181. USB Root Hub Driver (June 14, 2010).docx
- 182. User-Mode Bus Enumerator (May 26, 2010).docx
- 183. VDM Parallel Driver (Aug 12 2010).docx
- 184. VGA Super VGA Video Driver (Jun 29, 2010).docx
- 185. Video Port Driver (Aug 12 2010).docx
- 186. Volume Shadow Copy Driver (June 14 2010).docx
- 187. Watchdog Driver (May 12, 2010).docx
- 188. WMI for ACPI (August 6, 2010).docx
- 189. IO File**
- 190. CDROM File System (April 30, 2010).docx
- 191. Encrypting File System (July 30, 2010).docx
- 192. Fast FAT File System (July 28, 2010).docx
- 193. File Information FS MiniFilter (7-9-2010).docx
- 194. Mailslot Driver (Sep 10 2010).docx
- 195. NPFS Driver (Sep 10 2010).docx
- 196. NT File System Driver (Sep 10 2010).docx
- 197. UDF File System Driver (May 28, 2010).docx
- 198. Volume Manager Driver and Extension Driver (Jun 29, 2010).docx
- 199. IO Network**
- 200. Ancillary Function Driver for WinSock (May 19 2010).docx
- 201. Client Side Caching Driver (August 17, 2010).docx
- 202. Computer Browser Datagram Receiver (June 28 2010).docx
- 203. Distributed File System Client (April 27, 2010).docx
- 204. Distributed File System Filter Driver (May 18, 2010).docx
- 205. FWP IPsec Kernel-Mode API (May 18, 2010).docx
- 206. HTTP Driver (May 18, 2010).docx



24 March 2011

- 207. IP Filter Driver (May 20 2010).docx
- 208. IP in IP Encapsulation Driver (May 19 2010).docx
- 209. Kernel RPC Provider (May 28 2010).docx
- 210. Loopback Network Driver (June 21, 2010).docx
- 211. Microsoft Tunnel Interface Driver (June 04 2010).docx
- 212. Multiple UNC Provider Driver (May 24, 2010).docx
- 213. NDIS User Mode IO Driver (June 7 2010).docx
- 214. NDIS Wrapper Driver (June 7, 2010).docx
- 215. NetBT Transport Driver (June 7, 2010).docx
- 216. Network Store Interface Proxy Driver (June 7 1010).docx
- 217. QoS Packet Scheduler (June 7 2010).docx
- 218. Redirected Drive Buffering SubSystem Driver (June 7 2010).docx
- 219. Remote NDIS Miniport (Apr 30 2010).docx
- 220. Server Network Driver (June 7 2010).docx
- 221. SMB 1.0 Server Driver (July 20, 2010).docx
- 222. SMB 1.0 Sub-Redirector (April 30, 2010).docx
- 223. SMB 2.0 Server Driver (June 23, 2010).docx
- 224. SMB 2.0 Sub-Redirector (June 23, 2010).docx
- 225. SMB Mini-Redirector (June 25, 2010).docx
- 226. SMB Transport Driver (April 26, 2010).docx
- 227. TCPIP Protocol Driver (June 21, 2010).docx
- 228. TDI Translation Driver (TDX) Driver (June 08 2010).docx
- 229. TDI Wrapper (Apr 30 2010).docx
- 230. WebDAV Mini Redirector (Aug 16 2010).docx
- 231. Winsock 2 IFS Layer Driver (May 6, 2010).docx
- 232. Network Support**
- 233. COM+ Configuration Catalog Server (Apr 16 2010).docx
- 234. COM+ Event System Service (Apr 16 2010).docx
- 235. COM+ Services (Aug 12 2010).docx
- 236. DHCP Service (Aug 03 2010).docx
- 237. Distributed COM Services (Sep 03 2010).docx
- 238. Domain Name Service (Feb 04 2010).docx
- 239. Health Key and Certificate Management Service (Apr 16 2010).docx
- 240. Internet Key Exchange Service (Aug 16 2010).docx
- 241. IP Helper Service (Apr 16 2010).docx
- 242. IPSec SPD Server (Aug 03 2010).docx
- 243. Network Connections Manager (Aug 6 2010).docx
- 244. Network Location Awareness (Aug 9 2010).docx
- 245. Network Policy Server (Sep 17 2010).docx
- 246. Network Store Interface Service (May 28 2010).docx
- 247. NPS Host Support (Sep 07 2010).docx
- 248. Quarantine Agent Proxy and Service Runtime (Aug 11 2010).docx
- 249. Quarantine Client WMI Provider (Dec 11 2009).docx
- 250. RPC Endpoint Mapper (Aug 9 2010).docx
- 251. RPC Locator (Aug 9 2010).docx
- 252. Simple TCPIP Services Service DLL (Jan 27 2010).docx
- 253. TCPIP NetBIOS Transport Service (Jan 27 2010).docx
- 254. Web DAV Service DLL (Apr 16 2010).docx
- 255. OS Support**
- 256. Background Intelligent Transfer Service (Aug 06 2010).docx
- 257. Distributed File System Service (Mar 17 2010).docx
- 258. Print Spooler (Sep 07 2010).docx
- 259. Session Manager (Aug 07 2010).docx
- 260. WMI Performance Reverse Adapter Service (Apr 05 2010).docx

24 March 2011

- 261. \OS Support\WMI Provider Host\WMI Provider Host (Apr 02 2010).docx
- 262. WMI Provider Host (Aug 07 2010).docx
- 263. WMI Service (Aug 07 2010).docx
- 264. Security**
- 265. Active Directory Replication Management (September 11, 2010).docx
- 266. Core Directory Service (September 9, 2010).docx
- 267. Credential Manager (June 3, 2010).docx
- 268. Credential Security Support Provider (Aug 2, 2010).docx
- 269. Data Protection API (May 12, 2010).docx
- 270. Directory Services Role Management (June 4, 2010).docx
- 271. Encrypting File System Service (September 10, 2010).docx
- 272. Inter-Site Messaging (September 10, 2010).docx
- 273. KDC Service (Sep 08 2010).docx
- 274. Kerberos Security Package (Sep 08 2010).docx
- 275. Key Isolation Service (June 7, 2010).docx
- 276. LDAP (September 11, 2010).docx
- 277. LSA Audit (March 17, 2010).docx
- 278. LSA Authentication (August 5, 2010).docx
- 279. LSA Policy (September 10, 2010).docx
- 280. MAPI Based Directory Request (September 9, 2010).docx
- 281. Microsoft Authentication, V1.0 (Sep 08 2010).docx
- 282. Microsoft Base Smart Card Crypto Provider (May 13, 2010).docx
- 283. Microsoft Digest Access (June 2, 2010).docx
- 284. Microsoft Smart Card Key Storage Provider (May 13, 2010).docx
- 285. Microsoft Smart Card Minidriver (July 08 2010).docx
- 286. Net Logon Services DLL (July 02, 2010).docx
- 287. NT Directory Service Backup and Restore (July 23, 2010).docx
- 288. PKI Trust Installation and Setup (May 3, 2010).docx
- 289. Protected Storage Server (May 12, 2010).docx
- 290. SAM Server (Sep 08 2010).docx
- 291. Secondary Logon Service (March 22, 2010).docx
- 292. TLS-SSL Security Provider (June 9, 2010).docx
- 293. Trust Signing APIs (May 21, 2010).docx
- 294. Windows Cryptographic Primitives Library (Sep 09 2010).docx
- 295. Services**
- 296. Application Information Service (June 2, 2010).docx
- 297. Certificate Propagation Service (June 25 2010).docx
- 298. Computer Browser Service (August 24, 2010).docx
- 299. Cryptographic Services (Aug 24, 2010).docx
- 300. Desktop Window Manager (May 07, 2010).docx
- 301. Diagnostic Policy Service (Aug 4, 2010).docx
- 302. File Replication Service (September 9, 2010).docx
- 303. Generic Host Process for Win32 Services (April 5, 2010).docx
- 304. Interactive Service Detection for Session 0 (June 15, 2010).docx
- 305. Non-COM WMI Event Provision APIs (June 18 2010).docx
- 306. Offline Files Service (August 23, 2010).docx
- 307. Power Management Service (June 15 2010).docx
- 308. Program Compatibility Assistant Service (June 30, 2010).docx
- 309. Remote Registry Service (June 17, 2010).docx
- 310. Server Service DLL (August 24, 2010).docx
- 311. Services and Controller App (August 24, 2010).docx
- 312. Smart Card Resource Management Server (July 26, 2010).docx
- 313. SuperFetch Service Host (June 16, 2010).docx
- 314. System Event Notification Service (July 22 2010).docx

24 March 2011

- 315. Task Scheduler Engine (June 17, 2010).docx
- 316. User Mode Driver Framework Service (June 10 2010).docx
- 317. User Profile Service (July 12, 2010).docx
- 318. User-Mode Plug-and-Play Service (August 26, 2010).docx
- 319. Virtual Disk Service (June 16 2010).docx
- 320. Volume Shadow Copy Service (July 16 2010).docx
- 321. Windows Eventlog Service (Aug 24, 2010).docx
- 322. Microsoft Windows Installer Service (Aug 26, 2010).docx
- 323. Windows Search (June 23 2010).docx
- 324. Windows Security Center Service (June 16, 2010).docx
- 325. Windows Security Configuration Editor Engine (July 26, 2010).docx
- 326. Windows Shell Services DLL (June 17, 2010).docx
- 327. Windows Time Service (August 24, 2010).docx
- 328. Windows Update AutoUpdate Engine (Aug 04 2010).docx
- 329. Workstation Service (August 26, 2010).docx
- 330. Virtualization**
- 331. Hyper-V Image Management Service (July 19 2010).docx
- 332. Hyper-V Image Management Service (July 20 2010).docx
- 333. Hyper-V Infrastructure Driver (Aug 31 2010).docx
- 334. Hyper-V Virtual Machine Management (Aug 02 2010).docx
- 335. Hyper-V VMBus HID Miniport (September 2, 2010).docx
- 336. Hypervisor Top Level Functional Specification v2.0.docx
- 337. VHD Miniport Driver (Aug 16 2010).docx
- 338. Virtual Machine Bus (Aug 23 2010).docx
- 339. Win32**
- 340. Base Server (August 4 2010).docx
- 341. Client Server Runtime Process (June 1 2010).docx
- 342. Windows Server DLL (June 22 2010).docx
- 343. Windows Firewall**
- 344. Application Layer Gateway Service (Feb 23 2010).docx
- 345. Base Filtering Engine Service (May 22 2010).docx
- 346. Home Networking Configuration Manager (Jan 13 2010).docx
- 347. IP Network Address Translator (Aug 20 2010).docx
- 348. MAC Bridge Driver (Feb 25 2010).docx
- 349. NAT Helper (Feb 01 2010).docx
- 350. Winlogon**
- 351. Auto Enrollment (May 24 2010).docx
- 352. Group Policy (Apr 12 2010).docx
- 353. Group Policy Object Processing (Apr 12 2010).docx
- 354. Local Session Manager (Apr 13 2010).docx
- 355. Secure Desktop with Credential User Interface (Apr 12 2010).docx
- 356. Syskey (May 24 2010).docx
- 357. Trust Verification APIs (Dec 22 2009).docx
- 358. Trusted Installer (Feb 23 2010).docx
- 359. User Environment (Feb 11 2010).docx
- 360. Windows File Protection (Dec 28 2009).docx
- 361. Windows Logon Application (Sep 03 2010).docx
- 362. Windows Logon User Interface Host (Sep 03 2010).docx
- 363. Windows OS Startup - WiniInit (Feb 11 2010).docx
- 364. Windows OS Startup - WinLoad (Apr 15 2010).docx
- 365. Windows OS Startup - WinResume (Jan 08 2010).docx
- 366. Windows Smartcard Credential Provider (Apr 14 2010).docx

24 March 2011

## 5.2 Guidance Documentation

1. Windows 7 - WS08 R2 Common Criteria Supplemental Admin Guidance (January 7 2011)

## 5.3 Life Cycle

1. Microsoft Security Response Center EBC, January 2010
2. Windows 7 – WS08 R2 ALC Addendum, January 2010
3. Office SharePoint Server Document Management, May 2007
4. Office SharePoint Server Security, July 2008
5. Microsoft Hyper-V Server 2008 Single Evaluation Report ETR-Part ALC, v 4.0, June 6, 2009
6. Microsoft Information Security InfoSec #4 Network Standard, May 1, 2009
7. GDR Process Primer, May 1, 2009
8. Microsoft Information Security InfoSec #1.0 General Use Standard, May 1, 2009
9. How To Build Hyper-V Official Builds, May 27, 2008
10. Hyper-V CC – OEM Drivers, v 0.1, April 9, 2009
11. Hypervisor Build Tree, v 0.1, June 9, 2005
12. Hypervisor Technology Build Environment Functional Specification, v 0.1, June 6, 2005
13. Hypervisor Technology Build Environment High Level Design Specification, June 6, 2005
14. IT1525 Information Security Policy, February 21, 2008
15. Managed Source Baseline Review, January 14, 2010
16. Microsoft Security Development Lifecycle, v 3.2.4, May 4, 2007
17. BGIT Source Depot Support Overview, May 1, 2009
18. Server Setup Whitepaper, February 19, 2007
19. Threat Model Report, November 15, 2008
20. Viridian Code Review Process, May 1, 2009
21. Branch Plan for Vista, Vista SP1, and Longhorn Server, August 17, 2006
22. Windows Vista/Server 2008 Process Description, v 1.0, October 31, 2008
23. Windows Vista Server 2008 Tools Catalog, September 3, 2008
24. Windows Servicing End2End Overview, April 2007
25. WinSE Branches, November 14, 2008
26. Windows Servicing: HotfixRequest Procedures, June 2, 2008
27. WinSE Security GDR Overview, May 1, 2008
28. Microsoft Source Depot Quick Start Guide, August 2, 2005
29. Windows Test Technology Quick Start Guide, September 28, 2007

## 5.4 Testing

1. Microsoft Windows Common Criteria Evaluation Test Plan
2. **Test Suite Mappings**
  1. (OS) Certificate Service Default Exit Module Test Mapping.docx
  2. (OS) Certificate Service Default Policy Module Test Mapping.docx
  3. (OS) Certificate Service Test Mapping.docx
  4. 64 bit Kernel Debug Support Test Mapping.docx
  5. ACPI Battery Miniclass Driver Test Mapping.docx
  6. ACPI Driver Test Mapping.docx
  7. ACPI Power Meter Driver Test Mapping.docx
  8. Active Directory Replication Management Test Mapping.docx
  9. Advanced Host Controller Interface Driver Test Mapping.docx
  10. Advanced Local Procedure Communication (ALPC) Test
  11. Advanced Local Process Communication (ALPC) Test Mapping.docx
  12. Ancillary Function Driver for WinSock Test Mapping.docx
  13. Application Compatibility Support Test Mapping.docx

24 March 2011

14. Application Experience Lookup Service Test Mapping.docx
15. Application Information Service Test Mapping.docx
16. Application Layer Gateway Service Test Mapping.docx
17. AtaPort Driver Extension Test Mapping.docx
18. Audio Port Class Driver Test Mapping.docx
19. Auto Enrollment Test Mapping.docx
20. Background Intelligent Transfer Service (BITS) ISAPI Test
21. Background Intelligent Transfer Service Test Mapping.docx
22. Base Filtering Engine Service Test Mapping.docx
23. Base Server Test Mapping.docx
24. Beep Driver Test Mapping.docx
25. Bitlocker Drive Encryption Service Test Mapping.docx
26. Broadcom NetXtreme 57xx Gb NIC Miniport Driver Test
27. Cache Manager Test Mapping.docx
28. CDROM File System Test Mapping.docx
29. Certificate Propagation Service Test Mapping.docx
30. Certificate Service Test Mapping.docx
31. Client Server Runtime Process Test Mapping.docx
32. Client Side Caching Driver Test Mapping.docx
33. CNG Kernel Cryptography Test Mapping.docx
34. COM+ Configuration Catalog Server Test Mapping.docx
35. COM+ Event System Service Test Mapping.docx
36. COM+ Services Test Mapping.docx
37. Composite Battery Driver Test Mapping.docx
38. Computer Browser Datagram Receiver Test Mapping.docx
39. Computer Browser Service Test Mapping.docx
40. Configuration Manager Test Mapping.docx
41. Core Directory Service Test Mapping.docx
42. Credential Manager Test Mapping.docx
43. Credential Security Support Provider Test Mapping.docx
44. Cryptographic Services Test Mapping.docx
45. Data Protection API Test Mapping.docx
46. Desktop Window Manager Test Mapping.docx
47. DHCP Service Test Mapping.docx
48. Diagnostic Policy Service Test Mapping.docx
49. Digest Test Mapping.docx
50. Directory Services Role Management Test Mapping.docx
51. Distributed COM Services Test Mapping.docx
52. Distributed File System Client Test Mapping.docx
53. Distributed File System Filter Driver Test Mapping.docx
54. Distributed File System Service Test Mapping.docx
55. Domain Name Service Test Mapping.docx
56. Encrypting File System Service Test Mapping.docx
57. Encrypting File System Test Mapping.docx
58. Event Tracing for Windows Test Mapping.docx
59. Executive Object Services Test Mapping.docx
60. Fast FAT File System Test Mapping.docx
61. File Information FS MiniFilter Test Mapping.docx
62. File Replication Service Test Mapping.docx
63. File System Filter Manager Test Mapping.docx
64. File System Recognizer Driver Test Mapping.docx
65. FVE Crash Dump Driver Test Mapping.docx
66. FVE Driver Test Mapping.docx
67. FWP IPsec Kernel-Mode API Test Mapping.docx

24 March 2011

68. Generic Host Process for Win32 Services Test Mapping.docx
69. Generic Pass-through Driver Test Mapping.docx
70. Graphics Device Interface (GDI) Test Mapping.docx
71. Group Policy Object Processing Test Mapping.docx
72. Group Policy Test Mapping.docx
73. Hardware Abstraction Layer Test Mapping.docx
74. Hardware Error Device Driver Test Mapping.docx
75. Health Key and Certificate Management Service Test Mapping.docx
76. HID Class Library Test Mapping.docx
77. HID Keyboard Filter Driver Test Mapping.docx
78. HID Mouse Filter Driver Test Mapping.docx
79. HID Parsing Library Test Mapping.docx
80. Home Networking Configuration Manager Test Mapping.docx
81. HP ProLiant Smart Array Test Mapping.docx
82. HTTP Driver Test Mapping.docx
83. HTTPS Test Mapping.docx
84. Hyper-V Image Management Service Test Mapping.docx
85. Hyper-V Infrastructure Driver Library Test Mapping.docx
86. Hyper-V Infrastructure Driver Test Mapping.docx
87. Hyper-V Networking Management Service Test Mapping.docx
88. Hyper-V Virtual Machine Management Test Mapping.docx
89. Hyper-V VMBus HID Miniport Test Mapping.docx
90. i8042 Port Driver Test Mapping.docx
91. IDE ATAPI Port Driver Test Mapping.docx
92. IDE Mini-Port Drivers Test Mapping.docx
93. IIS CoAdmin DLL Test Mapping.docx
94. IIS ISAPI Handler Test Mapping.docx
95. IIS Metadata DLL Test Mapping.docx
96. IIS Reset Control Test Mapping.docx
97. IIS RPC Proxy Test Mapping.docx
98. IIS Web Admin Service Test Mapping.docx
99. IIS Web Server Core Test Mapping.docx
100. IIS Worker Process Test Mapping.docx
101. IKE-IPSEC Test Mapping.docx
102. Intel Pro 1000 E1G60xx MT NIC Miniport Driver Test Mapping.docx
103. Intelligent Platform Management Interface Driver Test
104. Inter-Site Messaging Test Mapping.docx
105. Interactive Service Detection for Session 0 Test Mapping.docx
106. Internet Extensions for Win32 Test Mapping.docx
107. Internet Information Services Test Mapping.docx
108. Internet Key Exchange Service Test Mapping.docx
109. IO Manager Test Mapping.docx
110. IP Filter Driver Test Mapping.docx
111. IP Helper Service Test Mapping.docx
112. IP in IP Encapsulation Driver Test Mapping.docx
113. IP Network Address Translator Test Mapping.docx
114. IPSec SPD Server Test Mapping.docx
115. ISA and EISA Class Driver Test Mapping.docx
116. ISAPI DLL for Web Printing Test Mapping.docx
117. KDC Service Test Mapping.docx
118. Kerberos Security Package Test Mapping.docx
119. Kerberos Test Mapping.docx
120. Kernel Debug Manager Test Mapping.docx
121. Kernel Mode Driver Framework Loader Test Mapping.docx

24 March 2011

122. Kernel Mode Driver Framework Test Mapping.docx  
123. Kernel Mode Windows Management Instrumentation Test  
124. Kernel RPC Provider Test Mapping.docx  
125. Kernel Runtime Test Mapping.docx  
126. Kernel Security Device Driver Test Mapping.docx  
127. Kernel Security Support Provider Interface Packages Test  
128. Kernel Transaction Manager Test Mapping.docx  
129. Key Isolation Service Test Mapping.docx  
130. Keyboard Class Driver Test Mapping.docx  
131. LDAP (Protocol) Test Mapping.docx  
132. LDAP Test Mapping.docx  
133. Local Session Manager Test Mapping.docx  
134. Loopback Network Driver Test Mapping.docx  
135. LSA Audit Test Mapping.docx  
136. LSA Authentication Test Mapping.docx  
137. LSA Policy Test Mapping.docx  
138. LSI Serial Attached SCSI Driver Test Mapping.docx  
139. MAC Bridge Driver Test Mapping.docx  
140. Mailslot Driver Test Mapping.docx  
141. MAPI Based Directory Request Test Mapping.docx  
142. ppings.txt  
143. Memory Manager Test Mapping.docx  
144. Metadata and Admin Service Test Mapping.docx  
145. Microkernel Test Mapping.docx  
146. Microsoft Authentication, V1.0 Test Mapping.docx  
147. Microsoft Base Smart Card Crypto Provider Test Mapping.docx  
148. Microsoft Digest Access Test Mapping.docx  
149. Microsoft Smart Card Key Storage Provider Test Mapping.docx  
150. Microsoft Smart Card Minidriver Test Mapping.docx  
151. Microsoft System Management BIOS Driver Test Mapping.docx  
152. Microsoft Tunnel Interface Driver Test Mapping.docx  
153. Microsoft Windows Installer Service Test Mapping.docx  
154. Monitor Class Function Driver Test Mapping.docx  
155. Mount Manager Test Mapping.docx  
156. Mouse Class Driver Test Mapping.docx  
157. Multipath Support Bus Driver Test Mapping.docx  
158. Multiple UNC Provider Driver Test Mapping.docx  
159. NAT Helper Test Mapping.docx  
160. NDIS User Mode IO Driver Test Mapping.docx  
161. NDIS Wrapper Driver Test Mapping.docx  
162. Net Logon Services DLL Test Mapping.docx  
163. NetBT Transport Driver Test Mapping.docx  
164. Network Connections Manager Test Mapping.docx  
165. Network Location Awareness Test Mapping.docx  
166. Network Policy Server Test mapping.docx  
167. Network Store Interface Proxy Driver Test Mapping.docx  
168. Network Store Interface Service Test Mapping.docx  
169. Non-COM WMI Event Provision APIs Test Mapping.docx  
170. NPFS Driver Test Mapping.docx  
171. NPS Host Support Test Mapping.docx  
172. NT Directory Service Backup and Restore Test Mapping.docx  
173. NT File System Driver Test Mapping.docx  
174. NTLM Test Mapping.docx  
175. NULL Driver Test Mapping.docx

24 March 2011

176.NVIDIA nForce NIC Miniport Driver Test Mapping.docx  
177.Object Manager Test Mapping.docx  
178.Offline Files Service Test Mapping.docx  
179.Online Responder Service Test Mapping.docx  
180.Parallel Port Driver Test Mapping.docx  
181.Partition Manager Test Mapping.docx  
182.PKI Test Mapping.docx  
183.PKI Trust Installation and Setup Test Mapping.docx  
184.Plug and Play Manager Test Mapping.docx  
185.Plug and Play PCI Enumerator Test Mapping.docx  
186.Plug and Play Software Device Enumerator Test Mapping.docx  
187.PnP Disk Driver Test Mapping.docx  
188.PNP ISA Bus Driver Test Mapping.docx  
189.Power Management Service Test Mapping.docx  
190.Power Manager Test Mapping.docx  
191. Print Spooler Test Mapping.docx  
192. Process Manager Test Mapping.docx  
193.Processor Device Driver Test Mapping.docx  
194.Program Compatibility Assistant Service Test Mapping.docx  
195.Protected Storage Server Test Mapping.docx  
196.QoS Packet Scheduler Test Mapping.docx  
197.Quarantine Agent Proxy and Service Runtime Test Mapping.docx  
198.Quarantine Client WMI Provider Test Mapping.docx  
199.Raw File System Library Test Mapping.docx  
200.Redirected Drive Buffering SubSystem Driver Test Mapping.docx  
201.Remote NDIS Miniport Test Mapping.docx  
202.Remote Registry Service Test Mapping.docx  
203.RPC Endpoint Mapper Test Mapping.docx  
204.RPC Locator Test Mapping.docx  
205. SAM Server Test Mapping.docx  
206.SCSI CD-ROM Driver Test Mapping.docx  
207.SCSI Class System DLL Test Mapping.docx  
208.SCSI Port Driver Test Mapping.docx  
209.SCSI Tape Class Driver Test Mapping.docx  
210.Secondary Logon Service Test Mapping.docx  
211.Secure Desktop with Credential User Interface Test Mapping.docx  
212.SecureDigital Bus Driver Test Mapping.docx  
213.Security Reference Monitor Test Mapping.docx  
214.Serial Device Driver Test Mapping.docx  
215.Serial Port Enumerator Test Mapping.docx  
216.Server Network Driver Test Mapping.docx  
217.Server Service DLL Test Mapping.docx  
218.Services and Controller App Test Mapping.docx  
219.Session Manager Test Mapping.docx  
220.Simple TCPIP Services Service DLL Test Mapping.docx  
221.Smart Card Driver Library Test Mapping.docx  
222.Smart Card Reader Filter Driver Test Mapping.docx  
223.Smart Card Resource Management Server Test Mapping.docx  
224.SMB 1.0 Server Driver Test Mapping.docx  
225.SMB 1.0 Sub-Redirector Test Mapping.docx  
226.SMB 2.0 Server Driver Test Mapping.docx  
227.SMB 2.0 Sub-Redirector Test Mapping.docx  
228.SMB Mini-Redirector Test Mapping.docx  
229.SMB Transport Driver Test Mapping.docx



24 March 2011

230.Storage Port Driver Test Mapping.docx  
231.Superfetch Service Host Test Mapping.docx  
232.Syskey Test Mapping.docx  
233.System Event Notification Service Test Mapping.docx  
234.Task Scheduler Engine Test Mapping.docx  
235.TCPIP NetBIOS Transport Service Test Mapping.docx  
236.TCPIP Protocol Driver Test Mapping.docx  
237.Tcpip Services Application Test Mapping.docx  
238.TDI Translation Driver (TDX) Driver Test Suite.docx  
239.TDI Wrapper Test Mapping.docx  
240.TLS Test Mapping.docx  
241.TLS-SSL Security Provider Test Mapping.docx  
242.TPM Base Services Dll Test Mapping.docx  
243.TPM Base Services Test Mapping.docx  
244.TPM Driver Test Mapping.docx  
245.Trust Signing APIs Test Mapping.docx  
246.Trust Verification APIs Test Mapping.docx  
247.Trusted Installer Test Mapping.docx  
248.UDF File System Driver Test Mapping.docx  
249.Universal Plug and Play Device Host Test Mapping.docx  
250.USB Common Class Generic Parent Driver Test Mapping.docx  
251.USB Host Controller Interface Miniport Drivers Test Mapping.docx  
252.USB Host Controller Test Mapping.docx  
253.USB Mass Storage Driver Test Mapping.docx  
254.USB Miniport Driver for Input Devices Test Mapping.docx  
255.USB Root Hub Driver Test Mapping.docx  
256.User Environment Test Mapping.docx  
257.User Mode Driver Framework Reflector Test Mapping.docx  
258.User Mode Driver Framework Service Test Mapping.docx  
259.User Profile Service Test Mapping.docx  
260.User-Mode Bus Enumerator Test Mapping.docx  
261. User-Mode Plug-and-Play Service Test Mapping.docx  
262.VDM Parallel Driver Test Mapping.docx  
263.VGA Super VGA Video Driver Test Mapping.docx  
264.VHD Miniport Driver Test Mapping.docx  
265.Video Port Driver Test Mapping.docx  
266.Virtual Disk Service Test Mapping.docx  
267.Virtual DOS Machine Test Mapping.docx  
268.Virtual Machine Bus Test Mapping.docx  
269.Volume Manager Driver and Extension Driver Test Mapping.docx  
270.Volume Shadow Copy Driver Test Mapping.docx  
271.Volume Shadow Copy Service Test Mapping.docx  
272.WAM Registration DLL Test Mapping.docx  
273.Watchdog Driver Test Mapping.docx  
274.Web DAV Service DLL Test Mapping.docx  
275.WebDAV Mini Redirector Test Mapping.docx  
276. Window Manager (User) Test Mapping.docx  
277.Windows Cryptographic Primitives Library Test Mapping.docx  
278.Windows Eventlog Service Test Mapping.docx  
279.Windows File Protection Test Mapping.docx  
280.Windows Logon Application Test Mapping.docx  
281.Windows Logon User Interface Host Test Mapping.docx  
282.Windows OS Startup - WiniInit Test Mapping.docx  
283.Windows OS Startup - WinLoad Test Mapping.docx

24 March 2011

- 284.Windows OS Startup - WinResume Test Mapping.docx
- 285.Windows Search Test Mapping.docx
- 286.Windows Security Center Service Test Mapping.docx
- 287.Windows Security Configuration Editor Engine Test Mapping.docx
- 288.Windows Server DLL Test Mapping.docx
- 289.Windows Shell Services DLL Test Mapping.docx
- 290.Windows Smartcard Credential Provider Test Mapping.docx
- 291.Windows Time Service Test Mapping.docx
- 292. Windows Update AutoUpdate Engine Test Mapping.docx
- 293.WinHTTP Web Proxy Auto Discovery Service Test Mapping.docx
- 294.Winsock 2 IFS Layer Driver Test Mapping.docx
- 295.WMI for ACPI Test Mapping.docx
- 296.WMI Performance Reverse Adapter Service Test Mapping.docx
- 297.WMI Provider Host Test Mapping.docx
- 298. WMI Service Test Mapping.docx
- 299.Workstation Service Test Mapping.docx
- 300.Legacy Test Suites**
  - 301. AccessControl.docx
  - 302. AdminAccess.docx
  - 303. AuthProvider.docx
  - 304. CertServer.docx
  - 305. ComPlus.docx
  - 306. ComPlusEventSys.docx
  - 307. DCOM.docx
  - 308. Devices.docx
  - 309. DS Replication.docx
  - 310. Gdi.docx
  - 311. HandleEnforcement.docx
  - 312. HTTPClient.docx
  - 313. IA32-Hardware.docx
  - 314. IA64-Hardware.docx
  - 315. Impersonation.docx
  - 316.KDC.docx
  - 317. LDAP.docx
  - 318. MAPI.docx
  - 319.Miscellaneous.docx
  - 320. NetSupport.docx
  - 321. ObjectReuse.docx
  - 322. Privilege.docx
  - 323. RPC Security.docx
  - 324. ServerDriver.docx
  - 325.SpecialAccess.docx
  - 326.SpecialAccessBW.docx
  - 327.Token.docx
  - 328.User.docx
  - 329.Windows Firewall.docx
  - 330. X64-Hardware.docx
- 331.Goby Test Suites:**
  - 332. 64 bit Kernel Debug Support.docx
  - 333. ACPI Driver.docx
  - 334. Advanced Local Process Communication.docx
  - 335. Application Compatibility Support.docx
  - 336. Application Experience Lookup Service.docx
  - 337. Application Information Service.docx

24 March 2011

- 338. Background Intelligent Transfer Service.docx
- 339. Base Filtering Engine Service.docx
- 340. BITS Server Extensions ISAPI.docx
- 341. Client Side Caching Driver.docx
- 342. CNG Kernel Cryptography.docx
- 343. Computer Browser Service.docx
- 344. Configuration Manager.docx
- 345. Credential Manager.docx
- 346. Cryptographic Service Test Suite.docx
- 347. Desktop Window Manager.docx
- 348. Event Log Service.docx
- 349. Event Tracing for Windows.docx
- 350. Executive Object Services.docx
- 351. FileInfo Filter Driver.docx
- 352. Health Key and Certificate Management Service.docx
- 353. HID Class Library.docx
- 354. IIS CoAdmin.docx
- 355. Internet Key Exchange Service.docx
- 356. ISAPI DLL for Web Printing.docx
- 357. Kernel Debug Manager.docx
- 358. Kernel Mode Driver Framework.docx
- 359. Kernel Mode Windows Management Instrumentation.docx
- 360. Kernel Transaction Manager.docx
- 361. Key Isolation Service.docx
- 362. Local Session Manager.docx
- 363. Memory Manager.docx
- 364. Multiple UNC Provider driver.docx
- 365. NDIS 5.1 Wrapper Driver.docx
- 366. Network Location Awareness.docx
- 367. Network Policy Server.docx
- 368. Network Store Interface Proxy Driver.docx
- 369. Object Manager.docx
- 370. Plug and Play Manager.docx
- 371. Power Manager.docx
- 372. RPC Proxy.docx
- 373. Server Network Driver.docx
- 374. SMB 2.0 Server Driver.docx
- 375. SMB Mini-Redirector.docx
- 376. SMB Transport Driver.docx
- 377. SuperFetch Service Host.docx
- 378. TCPIP NetBIOS Transport Service.docx
- 379. TCPIP Protocol Driver.docx
- 380. TDI Translation Driver.docx
- 381. TPM Base Services.docx
- 382. Trusted Installer.docx
- 383. USB 1.1 and 2.0 Port Driver.docx
- 384. USB Mass Storage Driver.docx
- 385. User Profile Services.docx
- 386. User-mode Driver Framework Reflector.docx
- 387. VDM Parallel Driver.docx
- 388. Virtual DOS Machine.docx
- 389. Volume Manager Driver.docx
- 390. Volume Shadow Copy Driver.docx
- 391. Web DAV Service DLL.docx

24 March 2011

- 392. Windows Cryptographic Primitives Library.docx
- 393. Windows OS Startup.docx
- 394. Windows Time Service.docx
- 395. Windows Update AutoUpdate Engine Test.docx
- 396. WMI Provider Host.docx
- 397. Actual Test Results

## **6 IT Product Testing**

This section describes the testing efforts of the developer and the Evaluation Team. It is derived from information contained in the Evaluation Team Test Report for the Windows 7 and Windows Server 2008 R2, Version 2.0, December 3, 2010.

### **6.1 Developer Testing**

The developer tested the interfaces identified in the functional specification and mapped each test to the security function tested. The scope of the developer tests included all TOE Security Functions and the entire TSF Interface (TSFI). Where testing was not possible, code analysis was used to verify the TSFI behavior. The evaluation team determined that the developer's actual test results matched the vendor's expected results.

### **6.2 Evaluation Team Independent Testing**

The evaluation team ensured that the TOE performed as described in the design documentation and demonstrated that the TOE enforces the TOE security functional requirements. Specifically, the evaluation team ensured that the developer test documentation sufficiently addresses the security functions as described in the security target and the TSFI as described in the Functional Specification. It should be noted that the TSFI testing was limited to testing security checks for the interface. The TSFI input parameters were not exercised for erroneous and anomalous inputs.

The evaluation team performed a sample of the developer's test Suite, and devised an independent set of team tests. The evaluation team determined that the vendor's test suite was comprehensive. Thus the independent set of team tests was limited. A total of eighteen team tests were devised and covered the following areas: Residual Information Protection, TSF Security Functions Management, TOE Security Banners, Session Locking, Identification & Authentication, TOE Access Restriction, and Access Control on Encrypted Files.

The evaluation team also conducted thirteen penetration tests. The penetration tests fall in the following areas: cached logon, access to special accounts and resources, registry settings, erroneous IP packets, configuration settings, audit, obsolete TSFI, and invalid TSFI inputs.

24 March 2011

## 7 Evaluated Configuration

The evaluated configuration was tested in the configuration identified in this section. The evaluation results are valid for the various realizable combinations of configurations of hardware and software listed in this section.

**TOE Software Identification** – The following Windows Operating Systems (OS):

- Microsoft Windows 7 Enterprise Edition (32-bit and 64-bit versions)
- Microsoft Windows 7 Ultimate Edition (32-bit and 64-bit versions)
- Microsoft Windows Server 2008 R2 Standard Edition
- Microsoft Windows Server 2008 R2 Enterprise Edition
- Microsoft Windows Server 2008 R2 Datacenter Edition
- Microsoft Windows Server 2008 R2 Itanium Edition

The following security updates and patches must be applied to the above Windows 7 products:

- All security updates as of September 14, 2010 as well as the updates associated with security bulletins MS10-073 and MS10-085, and hotfix [KB2492505](#).

The following security updates must be applied to the above Windows Server 2008 R2 products:

- All security updates as of September 14, 2010 as well as the updates associated with security bulletins MS10-073 and MS10-085, and hotfix [KB2492505](#).

**TOE Hardware Identification** – The following hardware platforms are included in the evaluated configuration:

- Dell Optiplex 755, 3.0 GHz Intel Core 2 Duo E8400, 64-bit
- Dell PowerEdge SC1420, 3.6 GHz Intel Xeon Processor (1 CPU), 64-bit
- Dell PowerEdge 2970, 1.7 GHz quad core AMD Opteron 2344 Processor (2 CPUs), 64-bit
- HP Proliant DL385 G5, 2.1 GHz quad core AMD Opteron 2352 Processor (2 CPUs), 64-bit
- HP Proliant DL385, 2.6 GHz AMD Opteron 252 Processor (2 CPUs), 64-bit
- HP Integrity rx1620, 1.3 Ghz Intel Itanium Processor (1 CPU), 64-bit (Itanium)
- Microsoft Hyper-V
- Microelectronics Trusted Platform Module [SMO1200]
- GemPlus GemPC Twin USB smart card reader

24 March 2011

To use the product in the evaluated configuration, the product must be configured as specified in the Windows 7 - WS08 R2 Common Criteria Supplemental Admin Guidance (January 7 2011).

## **8 Results of the Evaluation**

The results of the assurance requirements are generally described in this section and are presented in detail in the proprietary ETR. The reader of this document can assume that all EAL4 augmented with ALC\_FLR.3 work units received a passing verdict.

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 CC version 3.1 and CEM version 3.1 [5], [6]. The evaluation determined the Windows 7 and Windows Server 2008 R2 TOE to be Part 2 extended, and to meet the Part 3 Evaluation Assurance Level (EAL 4) augmented with ALC\_FLR.3 requirements.

The following evaluation results are extracted from the non-proprietary Evaluation Technical Report provided by the CCTL and are augmented with the validator's observations thereof.

### **8.1 Evaluation of the Security Target (ASE)**

The evaluation team applied each ASE CEM work unit. The ST evaluation ensured the ST contains a description of the environment in terms of policies and assumptions, a statement of security requirements claimed to be met by the Windows 7 and Windows Server 2008 R2 products that are consistent with the Common Criteria, and product security function descriptions that support the requirements.

The validator reviewed the work of the evaluation team, and found that sufficient evidence and justification was provided by the evaluation team to confirm that the evaluation was conducted in accordance with the requirements of the CEM, and that the conclusion reached by the evaluation team was justified.

### **8.2 Evaluation of the Development (ADV)**

The evaluation team applied each EAL 4 ADV CEM work unit. The evaluation team assessed the design documentation and found it adequate to aid in understanding how the TSF provides the security functions. The design documentation consists of a functional specification and a high-level design document.

The validator reviewed the work of the evaluation team, and found that sufficient evidence and justification was provided by the evaluation team to confirm that the evaluation was conducted in accordance with the requirements of the CEM, and that the conclusion reached by the evaluation team was justified.

24 March 2011

### **8.3 Evaluation of the Guidance Documents (AGD)**

The evaluation team applied each EAL 4 AGD CEM work unit. The evaluation team ensured the adequacy of the user guidance in describing how to use the operational TOE. Additionally, the evaluation team ensured the adequacy of the administrator guidance in describing how to securely administer the TOE. Both of these guides were assessed during the design and testing phases of the evaluation to ensure they were complete.

The validator reviewed the work of the evaluation team, and found that sufficient evidence and justification was provided by the evaluation team to confirm that the evaluation was conducted in accordance with the requirements of the CEM, and that the conclusion reached by the evaluation team was justified.

### **8.4 Evaluation of the Life Cycle Support Activities (ALC)**

The evaluation team applied each EAL 4 ALC CEM work unit. The evaluation team ensured the adequacy of the developer procedures to protect the TOE and the TOE documentation during TOE development and maintenance to reduce the risk of the introduction of TOE exploitable vulnerabilities during TOE development and maintenance. The evaluation team ensured the procedures described the life-cycle model and tools used to develop and maintain the TOE. The ALC evaluation also ensured the TOE is identified such that the consumer is able to identify the evaluated TOE. The evaluation team ensured the adequacy of the procedures used by the developer to accept, control and track changes made to the TOE implementation, design documentation, test documentation, user and administrator guidance, security flaws and the CM documentation. The evaluation team ensured the procedure included automated support to control and track changes to the implementation representation. The procedures reduce the risk that security flaws exist in the TOE implementation or TOE documentation.

In addition to the EAL 4 ALC CEM work units, the evaluation team applied the ALC\_FLR.3 work units from the CEM supplement. The flaw remediation procedures were evaluated to ensure that flaw reporting procedures exist for managing flaws discovered in the TOE.

The validator reviewed the work of the evaluation team, and found that sufficient evidence and justification was provided by the evaluation team to confirm that the evaluation was conducted in accordance with the requirements of the CEM, and that the conclusion reached by the evaluation team was justified.

### **8.5 Evaluation of the Test Documentation and the Test Activity (ATE)**

The evaluation team applied each EAL 4 ATE CEM work unit. The evaluation team ensured that the TOE performed as described in the design documentation and demonstrated that the TOE enforces the TOE security functional requirements. Specifically, the evaluation team ensured that the vendor test documentation sufficiently addresses the security functions as described in the functional specification and high level design specification. The evaluation team performed a sample of the vendor test suite, and

24 March 2011

devised an independent set of team test and penetration tests. The vendor tests, team tests, and penetration tests substantiated the security functional requirements in the ST.

The validator reviewed the work of the evaluation team, and found that sufficient evidence and justification was provided by the evaluation team to confirm that the evaluation was conducted in accordance with the requirements of the CEM, and that the conclusion reached by the evaluation team was justified.

## **8.6 Vulnerability Assessment Activity (AVA)**

The evaluation team applied each EAL 4 AVA CEM work unit. The evaluation team ensured that the TOE does not contain exploitable flaws or weaknesses in the TOE based upon the evaluation team's vulnerability analysis, and the evaluation team's performance of penetration tests.

The validator reviewed the work of the evaluation team, and found that sufficient evidence and justification was provided by the evaluation team to confirm that the evaluation was conducted in accordance with the requirements of the CEM, and that the conclusion reached by the evaluation team was justified.

## **8.7 Summary of Evaluation Results**

The evaluation team's assessment of the evaluation evidence demonstrates that the claims in the ST are met. Additionally, the evaluation team's performance of the entire vendor tests suite, the independent tests, and the penetration test also demonstrated the accuracy of the claims in the ST.

The validation team's assessment of the evidence provided by the evaluation team is that it demonstrates that the evaluation team followed the procedures defined in the CEM, and correctly verified that the product meets the claims in the ST.

## **9 Validator Comments/Recommendations**

- During evaluation team testing, the team discovered that the user account name is not recorded when a standard user attempts to access the security audit log using the Event Viewer tool. Instead of recording the user account name, SYSTEM is recorded in the user field of the audit record.
- Due to the size and complexity of the product, the ST's TOE Summary Specification (TSS) contains references to MSDN and other documentation that can be used by readers to obtain further information on what was evaluated and tested in greater detail. As the underlying documents to which a URL points can change, care should be taken in ensuring that the references (when followed by the reader) actually apply to the evaluated product.
- Most named objects identified in the TSS have special access rights that are unique to each object. These access rights are not identified in the TSS, but were identified in the



24 March 2011

evaluation evidence used by the team and tested during the evaluation. Details for many of these access rights can be found by searching the MSDN library.

## **10 Annexes**

Not applicable.

## **11 Security Target**

The Security Target is identified as Microsoft Windows 7 and Windows Server 2008 R2 Security Target, Version 1.0, March 23rd, 2011.

24 March 2011

## 12 Glossary

The following definitions are used throughout this document:

- **Common Criteria Testing Laboratory (CCTL).** An IT security evaluation facility accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) and approved by the CCEVS Validation Body to conduct Common Criteria-based evaluations.
- **Conformance.** The ability to demonstrate in an unambiguous way that a given implementation is correct with respect to the formal model.
- **Evaluation.** The assessment of an IT product against the Common Criteria using the Common Criteria Evaluation Methodology to determine whether or not the claims made are justified; or the assessment of a protection profile against the Common Criteria using the Common Evaluation Methodology to determine if the Profile is complete, consistent, technically sound and hence suitable for use as a statement of requirements for one or more TOEs that may be evaluated.
- **Evaluation Evidence.** Any tangible resource (information) required from the sponsor or developer by the evaluator to perform one or more evaluation activities.
- **Feature.** Part of a product that is either included with the product or can be ordered separately.
- **Target of Evaluation (TOE).** A group of IT products configured as an IT system, or an IT product, and associated documentation that is the subject of a security evaluation under the CC.
- **Validation.** The process carried out by the CCEVS Validation Body leading to the issue of a Common Criteria certificate.
- **Validation Body.** A governmental organization responsible for carrying out validation and for overseeing the day-to-day operation of the NIAP Common Criteria Evaluation and Validation Scheme.

## 13 Bibliography

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

- [1] Common Criteria Project Sponsoring Organisations. *Common Criteria for Information Technology Security Evaluation: Part 1: Introduction and General Model*, Version 3.1, Revision 3, dated: July 2009.
- [2] Common Criteria Project Sponsoring Organisations. *Common Criteria for Information Technology Security Evaluation: Part 2: Security Functional Requirements*, Version 3.1, Revision 3, dated: July 2009.

24 March 2011

- [3] Common Criteria Project Sponsoring Organisations. *Common Criteria for Information Technology Security Evaluation: Part 3: Security Assurance Requirements*, Version 3.1, Revision 3, dated: July 2009.
  - [4] Common Criteria Project Sponsoring Organisations. *Common Evaluation Methodology for Information Technology Security – Part 2: Evaluation Methodology*, Version 3.1, Revision 3, dated: July 2009.
  - [5] Common Criteria, Evaluation and Validation Scheme for Information Technology Security, *Guidance to Validators of IT Security Evaluations*, Scheme Publication #3, Version 1.0, January 2002.
  - [6] Science Applications International Corporation. *Evaluation Technical Report for the Windows 7 and Windows Server 2008 R2 Part 2 (Proprietary)*, Version 1.0, December 3, 2010.
  - [7] Science Applications International Corporation. *Evaluation Team Test Report for Windows 7 and Windows Server 2008 R2 Part 2 Supplement (SAIC and Microsoft Proprietary)*, Version 1.0, December 3, 2010.
- Note: This document was used only to develop summary information regarding the testing performed by the CCTL.
- [8] *Windows 7 and Windows Server 2008 R2 Security Target*, Version 1.0, March 23rd, 2011.