

Platform Test Summary for Greene Software Systems, Inc.

SecNet 5.0

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Test Summary

Testing Overview:

Greene Software Systems hired ThreeBears (Test Leads John Bee and Benji Goldwinner; Test Engineers Quincy Chalmers, Vincent Smith and Roy Wilkins) to perform a platform compatibility testing of SecNet 5.0 (build 13716).

Configuration requirements were outlined in the proposal and included the following elements, some of which changed as the project progressed, as the bottom portion of the chart shows:

[illegible]

With these changes, the final distribution of the configuration elements tested was as follows (which matches the distribution requirements set by Rob Sabourin in 2004_02_26_SOW_COMPATIBILITY.doc):

Operating Systems

Millenium	8	21%
Windows 2000	8	21%
XP Home	8	21%
XP Pro	4	11%
XP Pro sp1	4	11%
W98SE	4	11%
XP Pro sp2		
beta	2	5%
		100%

Modems

DSL	22	58%
Dial-up Modem	10	26%
Cable Modem	6	16%
		100%

Browsers

IE 6	8	21%
MSN8	7	18%
AOL9	6	16%
NS Cm 4.74	5	13%
IE 5.5	3	8%
MSN9	2	5%
NS 6	2	5%
NS 7	2	5%
IE5 sp2	1	3%
AOL8	1	3%
IE5 sp3	1	3%
		100%

Email

NS 7	8	21%
Eudora 5.21	8	21%
OE 6	7	18%
Outlook 2003	7	18%
Eudora 6	3	8%
Outlook 97	3	8%
OE 5	2	5%

Web Mail **100%**

AOL9	11	29%
Yahoo	10	26%
Hotmail	8	21%
OWA	7	18%
AOL7	1	3%
AOL8	1	3%

100%**Application**

Office	5	13%
FS2004	4	11%
Windows		
Media	4	11%
RealOne	4	11%
Kazaa	3	8%
MS Money	3	8%
Quicken	2	5%
MS Works	2	5%
Adobe		
Photoshop	2	5%
MM Jukebox	2	5%
Adobe Acrobat	2	5%
QuickBooks	2	5%
QuickTime	1	3%
ShockWave	1	3%
Goldmine	1	3%

		100%	
Share			
	optional (~)	12	32%
	uploading	9	24%
	server	9	24%
	downloading	8	21%
		100%	
Chat			
	AOL IM	12	32%
	Yahoo	8	21%
	ICQ	8	21%
	MSN	7	18%
	NetMeeting	3	8%
		100%	
Online Action			
	optional (~)	12	32%
	Windows		
	Update	9	24%
	PokerStars	9	24%
	TestTrackPro	8	21%
		100%	
Security			
	Norton	5	13%
	ZoneAlarm	4	11%
	Adware		
	removal	1	3%
	Spamfilter	1	3%
		29%	
Locale			
	English	27	71%
	French		
	Canadian	11	29%
		100%	

Testing Hardware Platforms:

The testing hardware platforms covered throughout the project included:

ID	Brand	Model	CPU	Speed	RAM
QL0008	Dell	OptiPlex GMT 5166	Pentium	166	64
QL0011	Seagate	HDNW	AMD Duron	700	512
QL0014	Seagate	HDNW	Pentium III	700	256
QL0018	Seagate	HDNW	AMD Duron	700	512
QL0029	Dell	Dimension XPS R400	Pentium II	400	256
QL0034	Seagate	HDNW	AMD K6	500	256
QL0037	Seagate	HDNW	AMD K6	900	256
QL0055	Custom	HDNW	Pentium 4	1.8G	512
QL0057	Custom	HDNW	Pentium 4	1.8G	512

Final Compatibility Matrix:

The matrix below is the product of a test tool called ALLPAIRS. ALLPAIRS takes a matrix of data (columns) and pairs items from each column with each of the other columns. It then checks the pairings, eliminates redundancies and delivers a much smaller set of tests than if all possible combinations were calculated. This is a way to maximize the chances of finding a bug when two variables (a “pairing”) conflict and delivers a reasonable set of combinations – in this case, 48 -- instead all possible combinations (over 45 million).

The tool does not verify whether the combinations are supported for each operating system, so some changes and substitutions were needed in order to construct a valid configuration. Rob Sabourin and John Bee have discussed this and agreed that this matrix was a sufficient starting point for compatibility and interoperability testing.

The 48 combinations were reduced to 39 and prioritized by risk to ensure that testing could occur within the time and budget allowed.

For the raw data from the ALLPAIRS tool, see Appendix A

Below is the final matrix of configurations covered during our testing:

3/26/2004 7:00 PM												
OS	Browser	email	webmail	App	share	chat	online action	connection	security	locale	machine	
1 XP Home	MSN8	Outlook 2003	Hotmail	Office	downloading	Yahoo	pokerstars	modem	ZoneAlarm	English	QL0011	
2 XP Pro sp1	IE 6	Eudora 5.21	AOL9	WinMedia	downloading	Yahoo	windows update	DSL	Norton AV	English	QL0014	
3 Windows 2000	MSN8	Outlook 2003	Yahoo	FS2004	downloading	Yahoo	TestTrackPro	modem	Norton AV	English	QL0034	
4 Millennium	IE 5.5	NS 7	Hotmail	Adobe Photoshop	downloading	ICQ	pokerstars	modem	Norton AV	English	QL0029	
5 W98 SE	MSN8	OE 6	Yahoo	MS Money	server	ICQ	TestTrackPro	DSL	Norton AV	English	QL0018	
6 XP Pro	MSN8	OE 6	Hotmail	RealOne	uploading	MSN	pokerstars	DSL	adware removal	English	QL0037	
7 XP Home	IE 6	NS 7	AOL9	MS Money	uploading	MSN	windows update	cable modem	<none>	Canada	QL0018	
8 XP Pro sp1	MSN8	Eudora 5.21	Yahoo	MS Works	uploading	ICQ	pokerstars	modem	<none>	Canada	QL0018	
9 Windows 2000	AOL9	NS 7	OWA	WinMedia	uploading	ICQ	pokerstars	modem	<none>	Canada	QL0055	
10 Millennium	IE 6	OE 6	Yahoo	Shockwave	server	Yahoo	windows update	modem	<none>	Canada	QL0037	
11 XP Pro	AOL9	Outlook 2003	AOL9	MM Jukebox	server	Yahoo	windows update	DSL	<none>	Canada	QL0011	
12 XP Home	NS Nav 6	OE 6	OWA	FS2004	downloading	ICQ	windows update	DSL	Norton AV	English	QL0055	
13 Windows 2000	NS Cm 4.74	Eudora 5.21	Hotmail	Kazaa	server	MSN	TestTrackPro	DSL	<none>	English	QL0029	
14 Millennium	NS 7	NS 7	Hotmail	MS Money	uploading	Yahoo	TestTrackPro	DSL	ZoneAlarm	English	QL0037	
15 W98 SE	IE5 sp2	Eudora 5.21	OWA	Office	uploading	Yahoo	TestTrackPro	DSL	<none>	Canada	QL0008	
16 XP Home	MSN9	Eudora 5.21	AOL9	RealOne	server	ICQ	TestTrackPro	DSL	<none>	Canada	QL0029	
17 Windows 2000	IE 6	OE 6	Yahoo	Office	uploading	ICQ	windows update	DSL	ZoneAlarm	Canada	QL0057	
18 Millennium	MSN8	Outlook 97	AOL9	WinMedia	server	MSN	windows update	DSL	<none>	Canada	QL0029	
19 XP Pro	NS Cm 4.74	NS 7	Yahoo	Adobe Acrobat	downloading	NetMeeting	TestTrackPro	modem	<none>	English	QL0014	
20 XP Pro sp1	IE 6	Outlook 2003	OWA	Office	server	MSN	pokerstars	DSL	<none>	English	QL0011	
21 XP Home	AOL9	OE 6	Yahoo	WinMedia	~server	AOL IM	~pokerstars	DSL	<none>	Canada	QL0034	
22 Windows 2000	NS 7	NS 7	Yahoo	RealOne	~downloading	AOL IM	~pokerstars	cable modem	<none>	Canada	QL0014	
23 Millennium	NS Cm 4.74	OE 5	AOL9	Office	~downloading	Yahoo	windows update	DSL	<none>	English	QL0034	
24 XP Pro	IE 6	NS 7	OWA	FS2004	server	MSN	TestTrackPro	DSL	<none>	English	QL0037	
25 XP Pro sp1	NS Cm 4.74	Outlook 2003	Hotmail	QuickBooks	uploading	AOL IM	pokerstars	cable modem	ZoneAlarm	English	QL0055	
26 W98 SE	NS Nav 6	Outlook 97	AOL9	RealOne	server	MSN	pokerstars	modem	<none>	English	QL0008	
27 XP Home	NS Cm 4.74	Eudora 6	AOL9	Adobe Photoshop	~server	AOL IM	~windows update	DSL	<none>	English	QL0057	
28 Windows 2000	IE5 sp3	Outlook 2003	AOL9	QuickTime	~uploading	AOL IM	~TestTrackPro	DSL	<none>	English	QL0057	
29 Millennium	MSN9	Eudora 6	OWA	MM Jukebox	~downloading	NetMeeting	~pokerstars	cable modem	<none>	English	QL0014	
30 XP Home	IE 6	Outlook 2003	AOL7	QuickBooks	~downloading	AOL IM	~TestTrackPro	modem	<none>	English	QL0034	
31 Windows 2000	MSN9	Eudora 6	AOL8	Adobe Acrobat	~downloading	AOL IM	~pokerstars	DSL	<none>	English	QL0057	
32 Millennium	AOL9	Outlook 97	AOL9	FS2004	~server	AOL IM	~TestTrackPro	DSL	<none>	English	QL0018	
33 XP Pro sp2 beta	AOL8	NS 7	Yahoo	Kazaa	uploading	AOL IM	windows update	modem	<none>	English	QL0037	
34 W98 SE	AOL9	OE 5	Hotmail	MS Works	downloading	NetMeeting	windows update	cable modem	Spamfilter	English	QL0008	
35 XP Pro sp2 beta	IE 6	Eudora 5.21	Yahoo	Goldmine	downloading	ICQ	~pokerstars	cable modem	Norton AV	English	QL0014	
36 Millennium	IE 5.5	Eudora 5.21	Hotmail	Quicken	~uploading	NetMeeting	~windows update	DSL	<none>	English	QL0011	
37 Windows 2000	IE 5.5	Eudora 5.21	AOL9	Quicken	~server	AOL IM	~windows update	DSL	<none>	English	QL0034	
38 XP Home	AOL9	OE 6	OWA	Kazaa	~uploading	AOL IM	~TestTrackPro	DSL	<none>	English	QL0055	

* Drivers are installed on the machine during testing

An additional platform was required, described herein as Config #39, which included the following:

OS	Windows XP Home
Email	Outlook Express XP
Web Mail	Lepton Webmail
Chat	Trillian
Sharing	Morpheus
Sharing	WinMX
Sharing	Imesh
Web Browser	Opera
Web Browser	IE 6
Games	Everquest
Games	Quake
Games	Halflife
Games	Starwars Galaxies
Games	Diablo
Popular	Ad-Aware
Popular	Limewire
Popular	eMule
Popular	WS-FTP
Popular	Freeware Netzero Internet Remote Dialup
Connection	CABLE MODEM

Images

Each of the 39 configurations was set up and the image stored on a separate USB hard drive using Symantec's Ghost. This was a time-saving measure that allowed for quick restoration of a configuration should it yield bugs when SecNet is installed. These images will be kept at ThreeBears until such time as they are deemed obsolete by Greene Software.

This approach allowed for a consistent starting point at the beginning of every test case run as well as provided a reliable restoration of the platform. That way, if a bug was found and needed to be reproduced, we could restore the image of the platform to exactly where it was (bit-for-bit) before the problem occurred.

Connectivity tests

- **Cable modem** – this was done offsite. RCA cable modem drivers were installed and smoke tests and exploratory tests were executed.
- **DSL** -- Verizon DSL drivers were tested on three of the configurations, but the rest were tested with ThreeBears's DSL connection.
- **Modem** -- tests were performed in the lab with US Robotics Sportster models.

Communication tests

- **E-Mail** -- these tests involved using existing email accounts to send and receive mail while SecNet was running. Yahoo, Hotmail, AOL, Outlook 97 and 2003, and Microsoft Outlook Web Access were all used to verify that SecNet did not impede email functions.
- **Chat** – ICQ, AOL, MSN Messenger, and NetMeeting were tested using real-time chat sessions to see if SecNet indicated any network blockages (intentional or unintentional)

Desktop Application tests

- **Media** -- Media applications like RealOne Player, Kazaa, MM Jukebox, and Windows Media Player were used to play streaming audio from the web while SecNet was running.
- **Flight Simulator 2004** -- this was chosen because it has a real-time weather feature that loads weather data every 15 minutes during a simulated flight, which means it actively seeks meteorological data (known to pilots as METAR reports) and loads them into the simulation.
- **Financial Programs** -- Quicken, MS Money, QuickBooks, and Goldmine are popular applications that use internet traffic to download updates and initiate transactions

Online tests

- **PokerStars** -- chosen because it is a website that hosts lots of traffic through real-time poker games between people in different cities all over the world.
- **Windows Update** -- chosen because of large volumes of packets downloaded as updates are loaded and installed
- **TestTrackPro** -- our own bug database provided a good test of uploading and downloading packets as well as searching for existing reports

Security tests

- **Norton Anti-Virus** -- chosen for its virus protection conflict and online update functions
- **ZoneAlarm** -- chosen for its similarity to SecNet's firewall pop-up blocking functions
- **Adware removal** -- chosen to see if any conflict arose with SecNet

Scripted tests

Provided by Greene Software test lead Frank Nott. We converted them into the following spreadsheet:

TEST #	COMPONENT	DESCRIPTION	REQUIREMENTS	PROCEDURE
1	Install	Confirm the installer is creating an icon on the desktop		1. Install SecNet 2. Confirm there is a SecNet icon created on the desktop
2	Install	Confirm that web browsing and mail functions still work correctly after uninstalling SecNet	Install SecNet	1. Uninstall SecNet 2. Observe that Internet browsing still works correctly 3. Observe that email can still be sent and received
3	Startup	Confirm you can start SecNet without an Internet connection	1. Disable your network card in Windows 2. Do not dial an Internet connection if on a modem or DSL	1. Start SecNet 2. Observe you can start SecNet without Internet connection 3. Observe you don't get an Internet Explorer warning in the right pane
4	Main Menu	Confirm that the displayed SecNet version number is accurate	Take note of the SecNet version number being tested	1. On the SecNet Main Menu click "Help" then select "About SecNet" 2. Observe that the "About SecNet" dialog is displayed. 3. On the "About SecNet" dialog confirm the accuracy of the SecNet version number. 4. On the "About SecNet" dialog click "Greene Software Systems Home Page". 5. Observe that the default browser is opened to the Greene Software Systems home
5	Privacy Manager	Cookies are reported in "Manage Cookies"	Delete all cookies via the browsers options	1. Enable "Privacy Manager" 2. Navigate to a web site to get some cookies dropped (e.g. www.msn.com) 3. Go to "Privacy Manager - Manage Cookies" in SecNet 4. Verify that domains for the sites that left cookies appear in the "Web sites that left cookies" list 5. Click on the "Cookie details" link 6. Verify that each of the cookies for a particular domain are listed in the "This list contains all the cookies on your computer" list 7. Select any one of the cookies 8. Verify that the information that appears in "Selected cookie's details" is accurate, by comparing the contents to what you see when examining the cookie to what another cookie reader reports (e.g. Cookie Monster)
6	Browsing	Confirm you can browse normally with SecNet		1. Open SecNet 2. Go on a web site (lots of graphics) and browse 3. Observe you can view all pages without faults
7	Browsing	Confirm you can browse on SSL protected sites		1. With your browser and SecNet open, go to these suggested sites and browse to the section where you can buy something: - http://www.admission.com - http://www.ebay.com - http://www.ticketmaster.com 2. observe you can properly view the pages for each sites 3. observe you can see the padlock or other icon meaning the browser is SSL protected in the browser window
8	Browsing	Confirm that SSL cookies are collected properly and handed back to the server when asked	Find a proper SSL sites that serve SSL cookies and Look for them	1. Go on a SSL protected site that set cookies 2. Observe that cookies are being properly collected in the cookie jar 3. go back to the site and see if you are collecting a new cookie or the same cookie is being updated Note: We need to find a proper SSL cookie site to put in this test and adjust the procedure accordingly.
9	Online Help	Confirm that Online Help is available on the main SecNet menu.	SecNet must be opened to the default home page	1. On the SecNet Main menu click "Help" then select "SecNet Help". 2. Observe that the SecNet help dialog is opened displaying the Welcome information for the current version of SecNet.
10	Diagnostics	Confirm the Diagnostics provides the capability to run all tests		1. On the Diagnostic Welcome page select "Perform all Tests" then click "Next". 2. Observe that all tests are executed. 3. Observe that a Diagnostic dialog is displayed stating that there were no errors.

Test Result Spreadsheet

[illegible]

Conclusions

- (1) Confirm results
- (2) Confirm platforms
- (3) Tests were run
- (4) Test results determined
- (5) All Platforms imaged
- (6) All test cases passed as indicated on test result spreadsheet

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