

*A Comparison of Proprietary and Open Source Software as a Way to Maintain
Availability in an Open Access Environment*

A Technology Integration Project

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In Technology Project Management with a specialization in Information Systems
Security

By

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A Comparison of Proprietary and Open Source Software as a Way to Maintain Availability in an Open Access Environment

OVERVIEW

This project will compare proprietary and open source software in an open access environment. To this end, the concept of the LiveCD versus a standard Microsoft Windows architecture as a desktop platform for general-purpose computing needs within a public access computer lab will be explored.

Personal computers (PCs) face threats when connected to the Internet from hackers, viruses, worms, and other malicious code. Complex hardware & software configurations, coupled with aging hardware, contribute to increased IT-related support costs for a PC environment. These factors, along with the similarities and differences between open and proprietary systems will be examined.

The project will include a review of the relevant literature and experimentation in a public access computer lab. After experimentation, data will be analyzed and presented

with conclusions about open source and proprietary software and the availability of systems within an open access environment.

CHAPTER 1 – INTRODUCTION

The project purpose is to compare both open source and proprietary software as a way to maintain availability. To this end, open source software will be examined side by side with proprietary software for general-purpose computing needs within a public access computer lab. During the experiment users will perform a series of tasks (via a printed script that I provide). Each user's progress will be monitored. User feedback will be collected and network traffic, along with system configuration, will be monitored before, during, and after the experiments. The computers themselves as well as the computing activities of the public access computer lab located within the Mission Milby Community Technology Center in Houston, Texas, will be baselined.

Background

“A lot of people think they want applications, but what they really want is accessibility.”

(Schwartz 2005)

Open Systems are computer systems that provide interoperability and portability as alternatives to proprietary standards. Open Standards are publicly available specifications for achieving a specific task. By allowing public access to specific technical information regarding a standard, compatibility is increased between hardware

and software components. Anyone with the necessary technical know-how and resources can build products that work together with those of the other vendors that base their designs on the standard (although patent holders may impose "*reasonable and non-discriminatory*" royalty fees and other licensing terms on implementers of the standard) (Wiki 2005).

Over time, open standards have worked their way up the Open Systems Interconnection (OSI) Reference model. The XML standard for data is at the application layer and is an open standard. Ethernet, TCP/IP, and SQL are examples of open standards that have moved their way up the OSI stack. All of these examples are important technologies that have allowed the Internet to grow to what it is today.

Many technical specifications that are sometimes considered standards are proprietary rather than being open and are only available under restrictive contract terms from the organization that owns the copyright for the specification.

An open standard does not necessarily imply that licenses to patent rights are not needed to use the standard or that such licenses are available for free. For example, the standards published by the major internationally recognized standards bodies such as the International Telecommunications Union (ITU) and the International Standards Organization (ISO) are ordinarily considered open, but may require patent licensing fees for implementation (Wiki 2005).

Open standards that can be implemented by anyone, without royalties or other restrictions, are sometimes referred to as open formats. An open format is a published specification for storing digital data, usually maintained by a non-proprietary standards organization, and free of legal restrictions on use. For example, an open format must be capable of being implemented by both proprietary and open source software, using the typical licenses used by each. In contrast to open formats, proprietary formats are controlled and defined by private interests. Open formats are a subset of open standards (Wiki 2005).

The relationship between open formats and open source software is frequently misunderstood. Many proprietary software products readily use open formats, and open source software can often use proprietary formats. For example, HTML, the familiar open format markup language of the World Wide Web, creates the foundation for proprietary web browsers like Microsoft's Internet Explorer as well as open source software browsers like Mozilla Firefox. Meanwhile, OpenOffice.org, the open source desktop office application, can manipulate proprietary .DOC formats from Microsoft, as well as open formats like OpenDocument. Finally, some companies have published specifications of their formats, making it possible to implement readers or writers for different platforms by different vendors, like Adobe's PDF (portable document format), or Microsoft's RTF (rich text format). However, some proprietary formats are covered by some form of restrictive requirements that may forbid open source software

implementations (at least under certain licenses common for them, such as the GNU General Public License). According to some critics, such formats inhibit competition.

The primary goal of open formats is to guarantee long-term access to data without current or future uncertainty with regard to legal rights or technical specification. A common secondary goal of open formats is to enable competition, instead of allowing a vendor's control over a proprietary format to inhibit use of competing products (Wiki 2005).

The OpenDocument standard, which uses XML data-tagging to format and store documents, was ratified in May 2005 (OASIS 2005). The format, known in full as the OASIS Open Document Format for Office Applications, covers applications such as word processors, spreadsheets and charts. As a standard, OpenDocument is an "*open*" format that can be used in any software, whether closed source or open source (LaMonica 2004).

An e-mail company, for example, could configure support for the format into its software and allow a user to embed a fully formatted document within a message without having to launch a separate application. Another possibility is for a wiki server to use XML to programmatically extract data from OpenDocument-formatted documents (LaMonica 2004).

In 2004, the British Government studied the viability of open source software for use within the public sector. What did they learn? Consider the following regarding open source (particularly when it comes to the desktop platform):

- Investment in planning.
- Training of users.
- Development of skills for implementation & support.
- Detailed consideration of migration and interoperability issues (UK 2004).

Each factor should be considered when calculating the total cost of ownership for any piece of technology, whether it is proprietary or open source.

Academics

This project will use a laboratory experiment based upon computer forensics to compare and contrast open source and proprietary software and its use for general computing purposes in a public access computer lab.

The benefit of the project is to offer formal academic research regarding open source and proprietary operating software in regards to availability.

There are two primary beneficiaries of the project and its research – the general public and those organizations that operate public access computer labs. If these two entities gain a benefit from my project and the research, society as a whole will also benefit because it will have more technically-savvy citizens.

With regard to what this project will contribute to my education & training, I have never had an opportunity like this one. I have worked on numerous technology-based projects as part of my professional career. But Project White Hat is an ambitious opportunity for me to combine my passion for all things computer related with the need to further my project management and information systems security skills to the benefit of others. This will be my first chance to work on such a large and important technology-based project with a focus on security information systems. I plan to take much professional knowledge away from this project. I will gain valuable expertise while others can benefit from the fruits of my labors.

I have established a portal for my project work, www.ProjectWhiteHat.org, as a means of communication for those interested in this topic. Using this portal, I will publish my project plan along with results from my experimentation.

CHAPTER 2 – LITERATURE REVIEW

This section of the paper will examine the current literature available regarding proprietary software and open source software.

Computer Forensics and Incident Response

Computer forensics is the science of conducting an investigation into an internet or computer related crime. An example of computer forensics would be an investigation by the Federal Bureau of Investigations (FBI) into internet-based child pornography. *Incident response* is conducted in a similar way, but has a different goal. An incident response determines what happens to a system (or network), contains and assesses the damage, and restores the system (or network) to normal operations (Miller and Gregory 2003).

Two aspects of computer forensics and incident response are *containment* and *eradication*. Containment is the process of preventing a compromised system from accessing other systems and resources on the network. It involves making a backup of the affected system (to protect the original configuration of the system). Eradication involves removal of files and programs that resulted from the compromise. Specifically, checking user accounts and services, checking .DLL files and the registry (this would apply to Windows based systems), and reviewing files created during the compromise to ensure they are legitimate (Holden 2003). Containment and eradication are used to

baseline (determine the original configuration) a computer. Baselineing a computer will be discussed further in the Chapter 3 – Methodology.

Common Threats and Vulnerabilities

Personal computers (PCs) face threats when connected to the Internet from hackers, viruses, worms, and other malicious code. This section will look at some of those common threats and vulnerabilities.

A September 2005 security research report from InfoWorld magazine noted the following about the dominant desktop operating system, “...*two of Microsoft’s three critical vulnerabilities in August 2005 resulted in worms within days. Within a week, Microsoft saw its first publicly announced zero-day exploit.*” Even if you have every one of your client systems configured with the most up-to-date patches, a zero-day exploit still makes your systems vulnerable (Grimes, September 26, 2005).

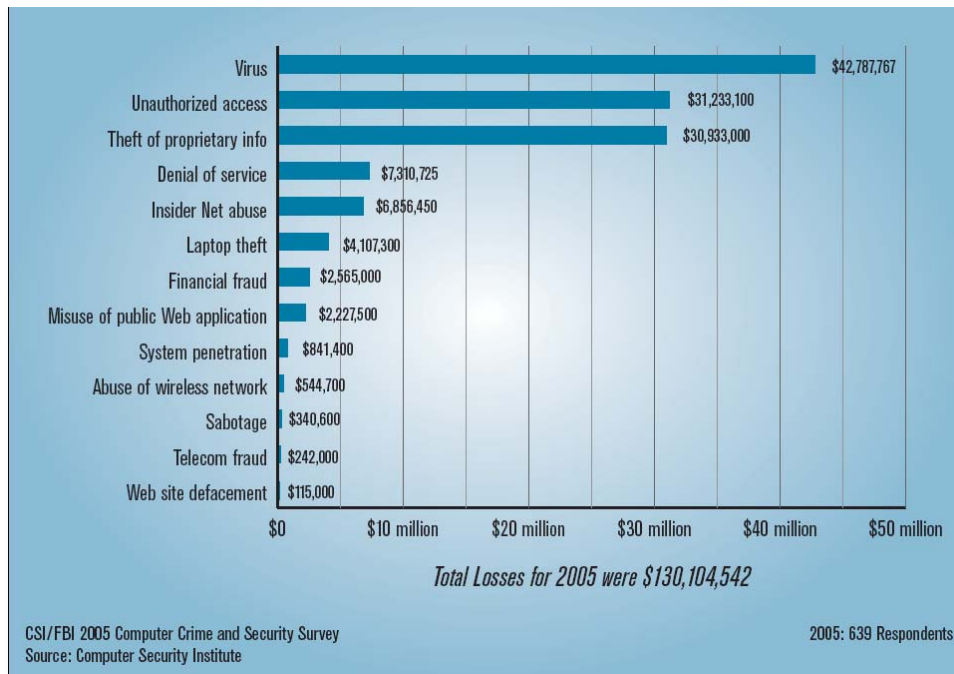


Figure 2.1: US Dollar Amount Losses by Threat Type

Figure 2.1 charts dollar amount losses by the various threats and vulnerabilities that are out there. This information is derived from 639 respondents with total losses of more than \$130 million dollars (FBI 2005).

Grimes (2005), a security advisor, configured a fully patched Windows XP Professional system and set it out on the Internet unprotected (this is known as a honey pot). After observing what users did with the system, he stated that, “*Even your fully patched computers can be compromised if end-users are allowed to install untrusted software or visit untrusted internet locations*” (Grimes 2005).

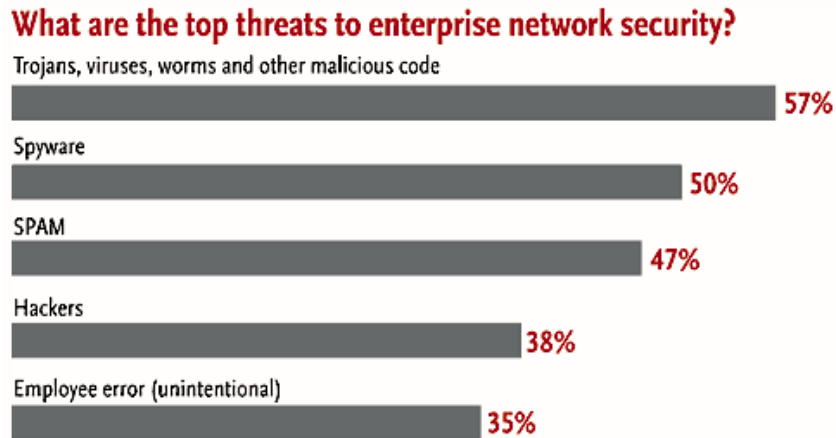


Figure 2.2: Top Threats to the Enterprise for 2006

Grimes (2005) described the number one fear for the future based on a survey of IT Security Professionals as malicious code – i.e. Trojans, viruses, and worms. Spyware, also known as adware (think unwanted pop-ups) is close behind. It is the job of the people surveyed to think about these threats and vulnerabilities.

The kind of administrative overhead & controls needed to lock down client systems and internet traffic requires specific technical skills. Large entities generally have staff & personnel dedicated to running the organization's systems while smaller organizations often do not.

What are the top challenges to your enterprise security (next 12 months)?



Figure 2.3: Top Challenges to the Enterprise for 2006

Figure 2.3 is another chart from the September 2005 InfoWorld security research report and depicts the challenges facing security professionals. They are worried about the increasing sophistication of attacks.

Public Access Computers

Madden (2004) lists the following six steps that a public library offering open access to the internet can take to secure public access computers.

- 1) Keep Windows up-to-date
- 2) Install anti-virus software and keep it up-to-date
- 3) Get a firewall
- 4) Limit user rights on the local machine
- 5) Keep your applications up-to-date and change default passwords on hardware
- 6) Keep spyware off of the computers (Madden 2004).

This is sound advice for any organization. However, many of the recommendations require technical expertise and administrative overhead – resources that might not be available to some organizations.

Community Technology Centers face unique technical issues relative to maintaining their public access computer labs. Patrons of these facilities have a wide variety of technical skills and use the computers for a variety of reasons. Some users might inadvertently delete important configuration files. Other more technically perceptive users might change system settings for their own personal preference. Controlling what users can do and what they can access on the computers is a challenge (Gundrey 2000).

Support Costs for PCs

Several factors contribute to higher total cost of ownership for desktop computers such as a variety of older computers from different manufacturers, lack of standard hardware configurations, and an improvised deployment process. These factors add complexity and create an environment with higher IT support costs in the form of more calls to the help desk and onsite support calls (Dell 2004).

Figure 2.4 addresses the complexity costs of the desktop PC infrastructure for a typical organization by comparing support costs by the number of hardware configurations.

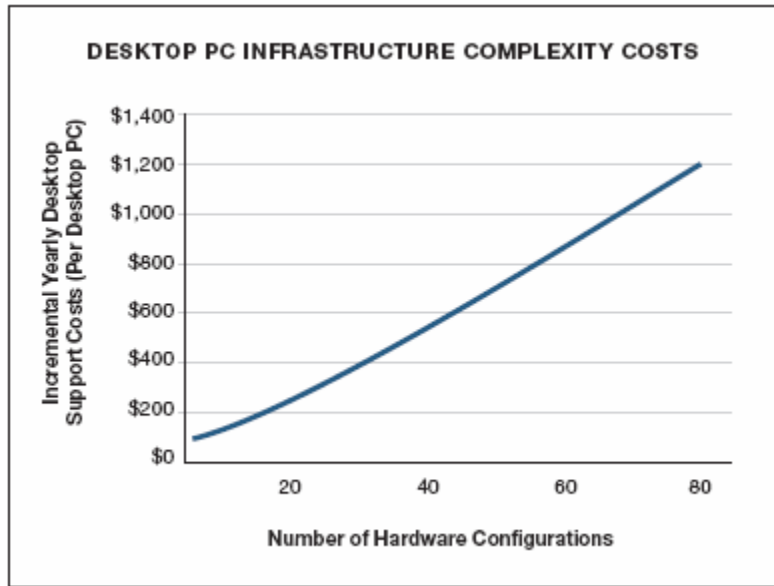


FIGURE 2.4: The complexity of desktop PC infrastructure as it relates to the number of hardware configurations in the installed PC base directly affects support costs (Forbath 2004).

PCs less than three years old cost less to support than older computers. Because of this occurrence, the overall support costs for each PC increases as the number of older computers in an environment increases. Figure 2.5 reflects these costs based upon a single desktop hardware configuration (Forbath 2004). Public access computer labs typically receive donated equipment and rarely manage a single desktop hardware configuration environment.

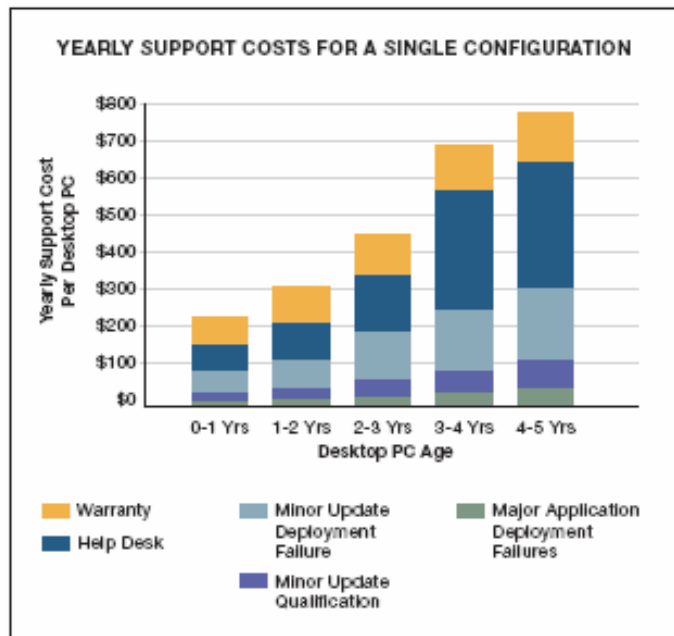


FIGURE 2.5: As individual PC configurations age, the cost rises for every aspect of support (Forbath 2004).

So far we have examined costs associated with supporting a PC. Hardware and software are the two main components of these support costs. The previous section dealt with hardware so now we will look at the cost of software.

The General Public License

The General Public License, also known as the GPL, grants the recipients of a computer program the following rights:

- Freedom to run the program, for any purpose.
- Freedom to study how the program works, and modify it. (Access to the source code is a precondition for this)
- Freedom to redistribute copies.
- Freedom to improve the program, and release the improvements to the public. (Access to the source code is a precondition for this) (Wiki 2005).

The primary difference between the GPL and “free” software licenses such as the Berkley Software Development (also known as BSD) License is that the GPL seeks to ensure that the above freedoms are preserved in copies and in derivative works. It does this using a legal mechanism known as copyleft, invented by John Stallman, which requires derivative works of GPL-licensed programs to also be licensed under the GPL. In contrast, BSD-style licenses allow derivative works to be redistributed as proprietary software.

The GPL is the single most popular license for free and open source software. As of April 2004, the GPL accounted for nearly 75% of the 23,479 free-software projects listed on

Freshmeat, and about 68% of the projects listed on SourceForge (Wiki 2005). Similarly, a 2001 survey of Red Hat Linux 7.1 found that 50% of the source code was licensed under the GPL. A 1997 survey of Metalab, then the largest free-software archive, showed that the GPL accounted for approximately half of the licenses used. Prominent free software programs licensed under the GPL include the Linux kernel and the GNU Compiler Collection (GCC). Some other prominent free software programs are licensed under multiple licenses, one of which is the GPL; Perl is a well-known example.

Windows Server vs. Linux Server

Virtually all of the research that Microsoft has commissioned states that the total cost of ownership is lower for businesses running Windows server instead of Linux server in the enterprise. Dawson & Johnson (2005) compare and contrast both the visible and hidden costs associated with administering Windows and Linux servers. They do not specifically mention the desktop platform.

Although organizations tend to be more cognizant of acquisition costs because they are tangible, they often do not consider the largest cost component of total cost of ownership (TCO) – the “people costs” (i.e., the costs of IT staff members who provide ongoing maintenance and support). The key to lowering overall TCO is to decrease these IT staffing costs by making administrators more efficient (Dawson & Johnson 2005).

A case study from Microsoft focused on Aurora First Assembly church in Aurora, Colorado. This is a good example of another non-profit entity, such as a Church, that may offer insight into the Windows versus Linux debate. This study focused on the server platform and only mentioned desktops in reference to the overall network. The Microsoft report does not identify the operating system platform used on the 35 desktops used by the Church staff & School staff; only that they are grouped into a single domain within Active Directory. Additionally, the Church's School operates a single-server site with 20 desktop computers in the School's computer lab. This represents 55 desktop computers that must be administered, kept up to date on operating system and application patches, and configured and maintained for proper user access (Aurora 2004). The Church must employ a Windows administrator for these tasks and that adds to the TCO for operating those 55 computers.

The Windows versus Linux argument has many facets, such as the Windows server versus Linux server enterprise facet, as well as the Windows versus Linux as a desktop platform aspect. There is also the hard drive based operating system versus a LiveCD aspect. Finally there is the differing views that lie at the root of it all, open source versus proprietary software. What are the current and possible future threats and vulnerabilities to both desktop platforms?

CHAPTER 3 – PROJECT METHODOLOGY

This section of the paper will explain the fundamental approach that I will take in completing this project.

Because this project is experimental in nature, I will base a portion of my methodology on the fields of Computer Forensics and Incident Response. The rest of the methodology will be driven by environmental constraints.

For the purposes of this experiment, a customized version of the Linux-based LiveCD will be created. Beside the operating system, this re-mastered LiveCD will include all the necessary applications (office productivity suite, web browser, etc.) found on a modern desktop computer. Due consideration will be given to creating a “*kiosk*” version of the LiveCD. A kiosk allows a user to perform a limited number of activities (such as browse the web or create a word processing document). Think of the typical LiveCD as a full-blown version of a desktop operating system while a kiosk LiveCD is a stripped-down edition. An ISO image of the custom LiveCD will be made available for download.

Experimentation Process

The experiment will be broken down into two parts – *Phase I* and *Phase II*. *Phase I* will take place in a closed lab. *Phase II* will take place in the public access computer lab at the Mission Milby Community Technology Center.

A user will perform a scripted series of tasks. Before, during, and after the performance of the tasks, the test computer(s) and network will be monitored and data collected. Ethereal (a protocol analyzer, also known as a packet sniffer), Snort (a network based intrusion detection system), and Nessus (a comprehensive vulnerability scanning program) will be the tools used to monitor the activity.

The tasks are:

1. Open a web browser and visit the PhotoGizmo website (www.photogizmo.com); download and install the digital photo organizer software.
2. Open a web browser and visit the Active Shopper website (www.activeshopper.com); download and install the Active Shopper comparative shopping toolbar.
3. Open a web browser and visit the Alexa website (www.alexa.com); download and install the Alexa toolbar.
4. Create a document using the computer's word processing application and save it to the default location.
5. Open a web browser and visit the Hotmail web-based email website. Utilizing an account created for this test, log-in, create a message, and send the message to a non-Hotmail account created for this test.

6. Open a web browser and visit the Ebaum's World website. Specifically, go to the online Flash-based Pac Man game (www.ebaumsworld.com/pacman.html). Play the game once.
7. Within the same web browser, go to the online Flash-based Pool game (www.ebaumsworld.com/games/blastbilliards.html). Play the game once.
8. Within the same web browser, go to the online Flash-based Putt Putt game (www.ebaumsworld.com/minigolf.shtml). Play the game once.
9. The test user is now finished with the tasks.

Please note that the above list is a prototype of the tasks to be performed. More tasks may be added while other tasks may be removed from the list. The estimated time it should take a user to complete all ten tasks is between 60 and 90 minutes.

I will baseline the computing activities of a Community Technology Center lab (Mission Milby) to see how the PCs are used and what issues they have in a typical period (example – 10 working days, 20 working days, etc.). I will then roll out the LiveCD to those same desktops and baseline the computing activities to see how they are used and what issues they have in a typical period (example – 10 working days, 20 working days, etc.). I will then compare the two baselines to see if there are new issues because of the LiveCD or do the same old issues occur.

The issues monitored during the experiment include:

- Network problems
- Hardware problems
- Software problems
- User configuration problems
- Operating system problems
- Printing problems
- Internet access related problems
- Anything else having to do with a computer and the many ways a person uses it

The observations and baselines at the lab will define what are these problems and their severity.

What does “baselining” the computing activities of the Windows-based systems mean? First, the Windows-based systems themselves will have their hard drives formatted, a fresh installation of the operating system and applications will be performed, and the systems will be configured to the standards of the local network (rejoin the Windows domain with user rights on the local machine set). An image of the hard drive will be taken for each system. These activities will ensure that the experiment will always start with a “clean” systems. I will then observe & document the activities (to see how the systems are used and what problems they encounter) within the lab for a given time

period. After the observation period is over, I will document the system state of each computer and compare it to the initial system state of that same computer.

What does “baselining” the computing activities of the LiveCD-based systems mean? A LiveCD will be selected and configured for use in this experiment. Enough copies of the LiveCD will be created to ensure that each test system will have a LiveCD from which to operate. The hard drive for each computer will be formatted prior to utilizing the LiveCD. I will observe & document the activities (to see how the systems are used and what problems they encounter) within the lab for a given time period.

Windows vs. Linux on the desktop

Microsoft Windows XP Professional with service pack 2 retails for approximately \$300 per copy for just the desktop operating system. This is Microsoft’s flagship desktop platform and includes Internet Explorer, the dominant web browser with approximately 90 percent of the install base for personal computers. The system requirements for this operating system are a minimum of 1.5 gigabytes (GB) free hard drive space, 64 megabytes of Random Access Memory (RAM), a Pentium-class processor with a speed of at least 233 megahertz (MHz), and a CD-ROM (Microsoft 2005).

Microsoft Office 2003 Professional (which includes Word, Excel, Power Point, Access, Publisher, and Outlook) retails for approximately \$440 per copy. This is Microsoft’s

flagship office productivity suite. The system requirements for this application are a minimum of 400 megabytes (MB) free hard drive space, 128 MB of Random Access Memory (RAM), a Pentium-class processor with a speed of at least 233 MHz, and a CD-ROM (Microsoft 2005).

To run Windows XP Pro w/SP2 and Office 2003 Professional, a client system must have a minimum of 1.9 GB of free hard drive space, 128 MB of RAM, a Pentium-class processor of 233 MHz speed or faster, and a CD-ROM. The total price tag is \$740.

Any x86 computer manufactured after the year 2000 with a CD-ROM can run version 3.4 or higher of the Knoppix LiveCD (Knoppix 2004). This version of Knoppix is based upon the 2.4 Linux kernel and features the KDE desktop, the K Office productivity suite, the Konqueror web browser, the OpenOffice productivity, and the Mozilla web browser suite. The cost of the Knoppix LiveCD is a blank CD-R and the time it takes to download the ISO image to a CD-R disc.

A typical community technology center receives donated computer equipment, usually from the business community.

LiveCD for the Desktop

A LiveCD is an operating system stored on a bootable compact disc that can be run from the CD-ROM drive itself without installation of any files on the computer's hard drive. It

does this by placing the files into the random access memory, otherwise known as RAM. The system can be returned to its original state when the LiveCD is ejected and the computer rebooted (Knoppix 2004).

The concept of using a LiveCD as a desktop platform is new. Stokes (2005) describes the LiveCD concept as “...*free, zero-maintenance, bulletproof, Internet-connected computers; the shelter lab LiveCD build.*” Stokes documented the efforts of information technology volunteers to build and maintain computers labs for victims of Hurricane Katrina in two Red Cross shelters in southwest Louisiana.

An interesting feature of the LiveCD desktop platform is that it runs in the computer’s RAM, which gets wiped after a reboot. If a user thinks he or she has downloaded something bad, reboot and it is gone.

Stokes’ shelter lab LiveCD was a platform that assisted IT volunteers to bring a functional, stable, low-maintenance public computing lab online using a wide range of donated hardware with a minimum of preparation (Stokes 2005). This situation as described is essentially the same as that faced by Community Technology Centers in their bid to operate public access computer labs.

Stokes (2005) says that it is important that the computers boot directly from a CD, because it makes the resultant machine stable, virus- and malware-free, easy to install,

and low maintenance. He also states that CD booting is a requirement because donated hardware may have to be returned to the donor relatively untouched. He further states that a LiveCD gives you the freedom to completely take charge of a donated machine's OS and application environment without touching the hard drive (Stokes 2005).

LiveCD Distributions

There are virtually hundreds of different Linux distributions (also known as “distros”) of the LiveCD. The best known general purpose LiveCD distros that I have reviewed are –

- Linspire 5
- Damn Small Linux
- Knoppix 4.0.2
- Slax Live CD
 - *Standard edition version 5.0.6*
 - *Popcorn edition version 5.0.6*
 - *Kill Bill edition version 5.0.6*

Project Sponsorship

I have been fortunate to partner with Technology for All (TFA) in pursuit of my project's goals. TFA was founded in 1999 and is a 501 (c) (3) non-profit organization whose mission is to empower under-resourced communities through the tools of technology. It does this through partnering with local Community Technology Center (CTC). These CTCs are operated by numerous community-based organizations with the purpose being to offer access to computing resources that members of the public generally would not have in their homes. These CTCs will provide a proving ground for my project. My project's sponsor is Jim Forrest. He is the Business Development Officer for TFA and a veteran of the technology field – he spent 20 years with SBC Communications.

Project Charter

Project Statement:

“A comparison of proprietary and open source software as a way to maintain availability in an open access environment”

Background:

My purpose is to compare both open source and proprietary software as a way to maintain availability. To this end, open source software will be examined side by side with proprietary software for general-purpose computing needs within a public access computer lab. During the experiment, users will perform a series of tasks (via a printed script that I provide). Each user’s progress will be monitored. User feedback will be collected and network traffic, along with system configuration, will be monitored before, during, and after the experiments. The computers themselves as well as the computing activities of the public access computer lab located within the Mission Mibly Community Technology Center in Houston, Texas, will be baselined.

Project Scope:

This project will cover two semesters and is broken into two distinct phase – *Phase I* will run the experiment in a closed lab and *Phase II* will run the experiment in the open access computer lab within the Mission Milby Community Technology Center.

During the Fall 2005 semester, I will deliver –

- Chapter 1 (Introduction and the project proposal)
- Chapter 2 (A review of the relevant literature)
- Chapter 3 (Methodology used for the project)
- Online documentation of the project's progress (in the form of a web portal; www.ProjectWhiteHat.org)

During the Spring 2006 semester, I will deliver –

- Chapter 4 (Project execution and analysis of findings)
- Chapter 5 (Project summary and conclusion)
- Full paper
- Online documentation of the project's results (available from the project's web portal)

Roles and Responsibilities

The following are the Project Committee Members -

- Rob Hiltbrand – Project Manager
- Mr. Ed Crowley – Head Committee Member (University of Houston)
- Dr. Michael Gibson – Committee Member (University of Houston)
- Dr. Carl Scott – Committee Member (University of Houston)
- Dr. Cheryl Willis – Committee Member (University of Houston)
- Mr. Jim Forrest – Project Sponsor (Technology for All)

Cost Estimate

For *Phase I*, the required computer hardware is available in the form of three Dell OptiPlex desktop computers. Proprietary operating systems and other software are available from the University of Houston and the College of Technology. Any software not available from the University will be obtained from a Vendor. For *Phase II*, the required hardware and software are available at the open access computer labs operated at the Mission Milby Community Technology Center. The open source operating systems and software required for this project are available for free on the Internet.

This chart represents resources needed for the project -

Item	#	Source	Cost Per Item	Total
Dell OptiPlex desktop PC (hardware)	3	Personal donation	\$0	\$0
Knoppix LiveCD (open source OS)	1	Open source available from www.knoppix.net	\$0	\$0
Blank CD-R disc	50	Fry's	\$10	\$10
Microsoft Windows 2000 Professional (proprietary OS)	1	University of Houston	\$0	\$0
Snort network intrusion detection system	1	Open source available from www.Snort.org	\$0	\$0
Norton Ghost 2003 / Drive Works CD (disc cloning)	1	Personal donation	\$0	\$0
FileAlyzer (Windows based file analyzer)	1	Freeware available from www.snapfiles.com	\$0	\$0
Nessus network auditing scanner	1	Personal donation	\$0	\$0
Trend Micro anti-virus scanner (for Windows)	1	Personal donation	\$0	\$0
Ad-aware anti-spyware scanner (for Windows)	1	Freeware available from www.snapfiles.com	\$0	\$0
Ethereal (Packet sniffer)	1	Freeware available from www.snapfiles.com	\$0	\$0
AVG (Linux anti-virus scanner)	1	Open source available from http://www.sourceforge.net	\$0	\$0

Work Breakdown Structure (WBS) for the Experiment:

1. Windows-based systems will have their hard drives formatted, a fresh installation of the operating system and applications will be performed, and the systems will be configured to the standards of the local network (joined back to the Windows domain and user rights on the local machine will be set). An image of the hard drive will be taken of each system.
2. A LiveCD will be selected and configured for use in this experiment. Enough copies of the LiveCD will be created to ensure that each test system will have a LiveCD from which to operate. The hard drive for each computer will be formatted prior to utilizing the LiveCD.
3. Ethereal, Snort, and Nessus will be used to monitor network traffic. During the observation periods, Ethereal, Snort, and Nessus will be running in the background monitoring network traffic between the client computers and the Internet. That data will be captured and saved to a file for analysis.
4. A user will perform a scripted series of tasks. Before, during, and after the performance of the tasks, the test computer(s) and network will be monitored and data collected. The tasks are:
 - Open a web browser and visit the PhotoGizmo website (www.photogizmo.com); download and install the digital photo organizer software.

- Open a web browser and visit the Active Shopper website (www.activeshopper.com); download and install the Active Shopper comparative shopping toolbar.
- Open a web browser and visit the Alexa website (www.alexa.com); download and install the Alexa toolbar.
- Create a document using the computer's word processing application and save it to the default location.
- Open a web browser and visit the Hotmail web-based email website. Utilizing an account created for this test, log-in, create a message, and send the message to a non-Hotmail account created for this test.
- Open a web browser and visit the Ebaum's World website. Specifically, go to the online Flash-based Pac Man game (www.ebaumsworld.com/pacman.html). Play the game once.
- Within the same web browser, go to the online Flash-based Pool game (www.ebaumsworld.com/games/blastbilliards.html). Play the game once.
- Within the same web browser, go to the online Flash-based Putt Putt game (www.ebaumsworld.com/minigolf.shtml). Play the game once.
- The test user is now finished with the tasks.

[Please note that the above list is a prototype of the tasks to be performed. More tasks may be added while other tasks may be removed from the list. The estimated time it should take a user to complete all ten tasks is between 60 and 90 minutes.]

5. A baseline of normal (current) computing activities for the computer lab will be established. To do this, I will observe & document the activities (to see how the systems are used and what problems they encounter) within the lab for a given time period (determined at a later date). This data will be documented and save for analysis.
6. A baseline of computing activities for the computer lab while the systems are using the LiveCD will be established. To do this, I will observe & document the activities (to see how the systems are used and what problems they encounter) within the lab for a given time period (determined at a later date). This data will be documented and save for analysis.
7. Using data collected during the observation periods, I will create three matrices documenting the experiment. The first matrix will detail issues found during normal (current) computing activities within the lab. The second matrix will detail issues found during computing activities while the systems were running the LiveCD. The third matrix will be an aggregate of the other two matrices showing common issues for the two platforms. The issues referred to above can be defined as:
 - Network
 - Hardware
 - Software
 - User configuration
 - Operating system
 - Internet access
 - Web site

- Anything else having to do with a computer and the many ways a person uses it

Communication Plan

The project's web portal, www.ProjectWhiteHat.org, will be the central communications hub for the project. All contact information and data related to the project will be available on the portal. Email communications among the committee members and the project sponsor will also be utilized.

Timeline

Fall 2005

- August thru December 2005 – Create and test project methodology
- December 2005 – Present final project proposal to Committee Members

Spring 2006

- January thru May 2005 – Collect and analyze project data
- May 2005 – Present findings to Committee Members

Risk Matrix

Area	Assessment	Impact	Mitigation
Leadership	Low	I am the project manager	If I don't do well, I won't get a good grade
Staffing	Low	The experiment will initially be a one person operating	Only one person required to run the experiment
Cost	Low	Available resources for the project	Virtually all of the required software is available for free
Schedule	Medium	Methodology must be tested and all project data, collected, analyzed, and presented by May 2005	I will not be working during the Spring 2006 semester, so I can dedicate my efforts to seeing the project completed
Scope	Medium	Designed to test proprietary and open source software – utilize Microsoft Windows 2000 Pro and Knoppix LiveCD only	Focus only on proprietary and open source operating systems
Quality	High	<i>Phase I</i> test environment can be controlled – <i>Phase II</i> test environment computer hardware & software can not be controlled at the CTCs	Stay as close as possible to the generally concept of the project.

Assumptions

1. Through my partnership with Technology for All, I will have access to the public access computer labs at the Community Technology Centers.
2. Computer hardware at the public access computer labs within the Community Technology Centers will support both the Windows 2000 Professional and LiveCD operating systems.
3. Internet connectivity at each of the public access computer labs within the Community Technology Centers that I visit.
4. Willing participants (users) at the public access computer labs within the Community Technology Centers.

Project Controls

Rob Hiltbrand, the project manager, will be responsible for all project controls. Any deviation from the original project plan will be communicated to all Project Committee Members via the project's web portal and email.

CHAPTER 4 – PROJECT EXECUTION and ANALYSIS of FINDINGS

Experiment Software

GFI LANguard System Integrity Monitor 3 (version 3.0 | build 20030305) was used to monitor file integrity on the host computer. Ad-Aware SE Build 1.06r1 was also used to monitor file integrity on the host computer. Ad-Aware is known as an anti-spyware application, but during its use in this experiment, it was used beyond the traditional methods intended by its developers. Steel Inventory version 1.1 is a network inventory-auditing program that allows tracking of software and hardware changes to a computer and was used to monitor host integrity. All three applications were available for free – no license fees. The Ethereal network protocol analyzer (version 0.10.13) was used to monitor network traffic – it also was available for free as a download.

The computer's hard drive was wiped clean and reformatted. A fresh installation of the Microsoft Windows 2000 Professional operating system and Microsoft Office XP office suite was performed (in addition, all available OS and application patches were applied – 45 total patches). Microsoft Internet Explorer 6 with service pack 1 was installed and configured as the default web browser. A test account (username *test* | password *test1234*) with default user permissions was created. This means no elevated privileges, the test account was only a member of the local default users group and had no Power User or Administrative rights on the local machine (it was not a member of any domain). An image of the hard drive was taken using Norton Ghost software, tested for integrity,

and stored on a 160-gigabyte external USB hard drive from Iomega. I chose Microsoft Windows 2000 Professional as the operating system and Microsoft Office XP as the office productivity suite because they required fewer hardware resources such as a slower CPU and less memory in addition to less hard drive space required to install both items. The test computer was a Dell OptiPlex GX110 that was originally manufactured in 2000. It's only enhancements from its original configuration were that the operating system was upgraded from Windows 98 to Windows 2000 and the memory was increased from 128 MB of RAM to 512 MB of RAM.

Baselining activities were made possible with the use of several applications. The GFI LANguard network scanner (version 2.0) was used to scan the test computer for vulnerabilities and worked on both the Windows and Linux based platforms. The Microsoft Baseline Security Analyzer (version 2.0) was used to scan the test PC for vulnerabilities when it was running Windows. I used a Windows compatible version of the NESSUS network auditing tool, known as NeWT (NESSUS Windows Technology – version 2.2) as another vulnerability scanner. NeWT also worked on both the Windows and Linux based platforms. The Helix version 1.7 incident response & computer forensics Debian-based Linux LiveCD's Security Report utility was used. And the final tool that I used was the Securepoint Network Test Tool (version 1.5.0) as a third vulnerability scanner and it also allowed me to scan both the Windows and Linux platforms.

Experiment Equipment

The computer used for testing was a Dell OptiPlex GX110 desktop computer with an 866 MHz Intel Pentium III processor, 512 megabyte of PC100 memory, and a 10-gigabyte hard drive. The host name of the computer was PWHTESTBOX and was a member of a workgroup. The experiment was set up using both equipment from the CTC and items purchased. A Compaq 1720 seventeen-inch flat panel monitor was connected to the Dell OptiPlex test computer along with a two-button scroll mouse manufactured by Logitech and a standard 105 key keyboard from Belkin. A CAT-5 Ethernet cable ran from a network drop (aka a “data jack”) in the wall to a Linksys EtherFast 10/100 5-Port workgroup switch (model no. EZXS55W, version 2.0). Both a Dell Latitude C600 laptop (early stages) and an Acer Aspire 3623 laptop (later stages) were utilized to monitor the testing environment. Both the desktop and the laptop were plugged into the Linksys switch. All items needing power were plugged into a Belkin SurgeMaster power strip.

End User Tasks & Activities

There were four general activities for which people visiting a Community Technology Center used the systems in the public access computer lab: 1) internet resources, 2) online gaming, 3) online communications, and 4) office productivity software. The experimental tasks were designed to simulate these four areas and the activities a typical user might perform. Appendix A contains the End User Tasks for the Windows 2000

Professional test configuration. Appendix B contains the End User Tasks for the Knoppix 4.0.2 Linux LiveCD test configuration.

Open Access Environment

The experiments were carried out within the public access computer lab at the Mission Milby Community Technology Center. The lab was on its own network segment with private IP addresses (192.168.1.x). Cisco networking equipment, Dell PowerEdge servers running Microsoft Windows Server 2003, and a Microsoft internet proxy application controlled this open access environment. Pictures of the lab can be viewed in Appendix G. This facility also has an Acceptable Use policy that can be viewed in Appendix H.

The Process

A total of 60 test users (30 for Windows and 30 for Knoppix) performed the tasks. I had each test user sit down at the test computer and handed them the written instructions. For the Windows test, the user logged on; for the LiveCD test, the computer was already at the desktop. In both instances, Ethereal was running in the background as the user went through the activities and was stopped when the tasks were completed. The IP address of the test computer was noted for later use in examining the network traffic recorded by Ethereal. The user then followed the written instructions and proceeded through each of the activities. Sometimes the user asked a question (example: Is this enough information that I've typed in the word processing document?). After the user completed all of the

activities, I stopped all monitoring tools. I asked if they would complete an end user survey. A copy of this survey is available in Appendix C. On the user survey, I noted any & all observations with regards to what the user did. When finished, I brought out a bag of candy and told the user they could have any two pieces of candy.

The Test PC in the Field

I configured the PC for the LiveCD test by using a newly imaged hard drive with the Windows operating system installed on it. The LiveCD was inserted into the test computer's CD-ROM optical drive and booted. Then the user went through the activities. After the user leaves, the host PC is checked for file integrity (manually). Modifications are noted and the PC is then rebooted. After the reboot, the modifications are searched for again (to determine if they survived the reboot process). Those observations were noted and later put into the Issues Matrix.

To configure the PC for the Windows test, the IDE cable and power supply were connected to the hard drive and the PC booted. I first logged on as the administrator to the local computer, launched the GFI LANguard SIM application, and selected SCAN NOW. This enabled the application to scan the local PC's file integrity (establish a baseline). I then logged off and had the user log on using the test account. The user then went through the activities. As with the LiveCD test, the user was asked to complete a survey and take some candy. I then logged the test user off and logged in as the local administrator. I launched the Event Viewer application and saved the SIM log file and the Security log file to a USB thumb drive. I closed the Event Viewer and launched the

Ad Aware application. I performed a full system scan and enable both the “search for negligible risk entries” and “search for low-risk threats” features of the program. The scan results were saved to a text file and stored on the USB thumb drive. I closed Ad-Aware and launched the Steel Inventory application to check file integrity. I used the Control Panel applet to check for any newly installed programs. I also manually searched the Temporary Internet Files and Program Files folders and noted any suspicious items in the Issue Matrix.

Findings

A total of 60 test users (30 for Windows and 30 for Knoppix) performed a series of tasks involving downloading & installing suspicious software, creating a word processing document, sending a message with an attachment using a web-based email system, and playing several Flash based online games. Here are my findings.

I used the GFI LANguard network scanner, the NeWT security scanner, and the Securepoint Network Test tool to scan the test computer for vulnerabilities. The tools were run from the laptop computers noted earlier. Both the laptop and the test computer were plugged into the Linksys workgroup switch and were on the same subnet.

GFI LANguard Network Scanner for the LiveCD

Identified the operating system as “probably Unix” and identified two (2) ports as being open – Port 25 (TCP/Sntp) and Port 110 (TCP/Pop3).

NeWT Network Auditing Tool for the LiveCD

Identified four (4) open ports and found one (1) hole. The open ports were Port 25 (TCP/Smtplib), Port 68 (TCP/bootpc), Port 110 (TCP/Pop3), and Port 6000 (TCP). NeWT also noted the following:

- NOTE #1: The remote host answers to an ICMP timestamp request. This allows an attacker to know the date which is set on your machine. This may help him to defeat all your time based authentication protocols. Solution : filter out the ICMP timestamp requests (13), and the outgoing ICMP timestamp replies (14). Risk factor : Low | CVE : CAN-1999-0524 | Plugin ID : 10114
- NOTE #2: Nessus was not able to reliably identify the remote operating system. It might be: Clark Connect Firewall. The fingerprint differs from these known signatures on 2 points. Plugin ID : 11936
- NOTE #3: Unknown (6000/tcp). This X server does *not* allow any client to connect to it however it is recommended that you filter incoming connections to this port as attacker may send garbage data and slow down your X session or even kill the server. Here is the server version : 11.0. Here is the message we received : No protocol specified. Solution : filter incoming connections to ports 6000-6009. Risk factor : Low | Plugin ID : 10407.

Securepoint Network Test Tool for the LiveCD

According to the Securepoint Network Test Tool, the service FTP wasn't found and the service TELNET wasn't found. It found Port 25 (TCP) open, Port 68 (TCP) open, and Port 110 (TCP) open.

Microsoft Baseline Security Analyzer 2.0 for Windows

The Analyzer's security assessment was Severe Risk (One or more critical checks failed). The Security Update Scan Results detail that there are no Windows Security Updates or Office Security Updates missing. Under the Windows Scan Results Administrative Vulnerabilities section, two items call for an explanation.

- Item #1 - Under Restrict Anonymous, the Analyzer found the computer running with RestrictAnonymous = 0. This is a setting within the Windows Registry that controls the computer's ability to accept anonymous remote connections. The Analyzer recommends changing the setting to RestrictAnonymous = 2 for maximum security. If an improper change is made to the Windows Registry, it could affect the entire operating system. Modifying the Windows Registry requires technical knowledge skill.

- Item #2 – Windows Firewall. The Analyzer notes that Windows Firewall is not installed or configured properly, or is not available on this version of Windows. Microsoft does not make a built-in firewall for Windows 2000 Professional. If a firewall is needed, then a third party firewall application must be installed. Installing and configuring a firewall requires technical knowledge and skill.

Under the Desktop Application Scan Results section, the Analyzer lists an issue with Internet Explorer (IE) Zones. The result is the IE zones do not have secure settings for some users. Appendix E contains the complete Microsoft Baseline Security Analyzer (MBSA) report for the test computer when configured with Windows.

GFI LANguard Network Security Scanner 7.0 for Windows

Identified the test computer's operating system as Windows 2000. Identified the following TCP ports as open –

- 25[Description: SMTP => Simple Mail transfer Protocol / Service: Unknown]
- 110[Description: Pop3 => Post Office Protocol 3 / Service: Unknown]
- 135[Description: epmap => DCE endpoint resolution / Service: Unknown]
- 139[Description: Netbios-ssn => NETBIOS Session Service / Service: Unknown]
- 445[Description: Microsoft-Ds / Service: Unknown]

Found the following NetBIOS names –

- PWHTESTBOX - File Server Service
- PWHTESTBOX - Workstation Service
- WORKGROUP - Domain Name
- WORKGROUP - Browser Service Elections
- PWHTESTBOX - Messenger Service
- TEST - Messenger Service

Identified the following details about the test computer –

- MAC address : 00-B0-D0-B4-C1-7F (Dell Computer Corp.)
- Time to live : 128(128)
- Domain : WORKGROUP
- LAN manager : Windows 2000 LAN Manager

NeWT 2.2 Network Auditing Tool for Windows

Identified seven (7) open ports, found one (1) hole, and offered nine (9) warnings and 22 notes regarding the computer's configuration. The open ports were Port 25 (TCP/SmtP), Port 110 (TCP/Pop3), Port 135 (TCP/epmap), Port 139 (TCP/netbios-ssn), Port 445 (TCP/microsoft-ds), Port 1025 (TCP/blackjack), and Port 137 (UDP/netbios-ns). Of particular interest are open TCP ports 445 and 1025. Both refer to Microsoft-DS (directory services). The SMB (Server Message Block) protocol is used for file sharing in Windows NT and 2000. With these two ports open, Microsoft allows SMB to run directly over TCP/IP. This also means the remote version of Windows contains a flaw that may allow an attacker to cause it to disclose information over the use of a named pipe through a NULL session. An attacker may exploit this flaw to gain more knowledge about the remote host. A full version of the NeWT report is in Appendix F.

Helix Incident Response & Computer Forensics tool for Windows

This tool is similar to the NeWT auditing tool but designed for incident response & computer forensics. It found five (5) open TCP ports and four (4) open UDP ports. The following table provides the specific entries of the report.

Port	Protocol	PID	Program short name	Program long name
135	TCP	404	svchost	C:\WINNT\system32\svchost.exe
139	TCP	8	System	
445	TCP	8	System	
1025	TCP	544	MSTask	C:\WINNT\system32\MSTask.exe
1026	TCP	8	System	
137	UDP	8	System	
138	UDP	8	System	
445	UDP	8	System	
500	UDP	228	lsass	C:\WINNT\system32\lsass.exe

A full version of the report generated by the Helix LiveCD's security report is in Appendix I.

Securepoint Network Test Tool for Windows

According to the Securepoint Network Test Tool, the FTP service was not found nor was the TELNET service. It found Port 25 (TCP) open, Port 110 (TCP) open, Port 139 (TCP) open, Port 445 (TCP) open, and Port 1025 (TCP) open.

Windows 2000 Issues Matrix

Issue	Description	Comments	Resolution
Open Port	SMTP (25/TCP)	This port is open and is associated with the Simple Mail Transfer Protocol (SMTP) email function.	None
Open Port	POP3 (110/TCP)	This port is open and is associated with POP3 email function.	None
Open Port	EPMAP (135/TCP)	Distributed Computing Environment (DCE) services running on the remote host can be enumerated by connecting on port 135 and doing the appropriate queries. An attacker may use this fact to gain more knowledge about the remote host.	None
Open Port	NETBIOS-SSN (139/TCP)	This is the NetBIOS session service.	None
Open Port	MICROSOFT-DS (445/TCP)	The remote version of Windows contains a flaw which may allow an attacker to cause it to disclose information over the use of a named pipe through a NULL session. An attacker may exploit this flaw to gain more knowledge about the remote host.	None
Open Port	BLACKJACK (1025/TCP)	Distributed Computing Environment (DCE) services running on the remote host can be enumerated by connecting on port 135 and doing the appropriate queries. An attacker may use this fact to gain more knowledge about the remote host.	None
Open Port	NETBIOS-NS (137/UDP)	NETBIOS Name Service	None
Internet Download	The ActiveShopper toolbar was only partially installed.	On the desktop is an icon with a <i>Target</i> of http://www.activeshopper.com and a <i>Start in</i> pointing towards C:\Program Files\ActiveShopper . Setup file (setupactiv[1].exe) resided in the Temporary Internet Files folder under the TEST account.	A check of the Test PC revealed there was, in fact, no program installed – but there was a shortcut on the desktop to the ActiveShopper website.
Internet Download	PhotoGizmo image organization software.	The application did not install itself on the hard drive, but the setup file (PhotoGizmo12Setup[1].exe) resided in the Temporary Internet Files folder under the TEST account.	A reboot of the computer did not remove this file from the test account's Temporary Internet Files folder. These files must be removed manually.
Internet Download	Alexa search toolbar software.	The application did not install itself on the hard drive, but the setup file (AlexaInstaller[1].exe) resided in the Temporary Internet Files folder under the TEST account.	A reboot of the computer did not remove this file from the test account's Temporary Internet Files folder. These files must be removed manually.
Internet Download	HTTP Cookie	A "cookie" is a parcel of textual information sent by a server to a web browser and then sent back unchanged by the browser each time it accesses that server. HTTP cookies are used for authenticating, tracking, and maintaining specific information about users.	Cookies were from websites that the test user DID visit and also from third parties. These have the potential for misuse.

Knoppix Linux LiveCD Issues Matrix

Issue	Description	Comments	Resolution
Open Port	SMTP (25/TCP)	This port is open and is associated with the Simple Mail Transfer Protocol (SMTP) email function.	None
Open Port	POP3 (110/TCP)	This port is open and is associated with POP3 email function.	None
Open Port	BootPC (68/TCP)	This port is open and is associated with the Bootstrap Protocol Client (BOOTP) function.	Before a device on a TCP/IP network can communicate, it needs to know its IP address. While a conventional network host can read this information from its internal disk, some devices have no storage. They need help from another device on the network to provide them with an IP address and other information and/or software they need to become active IP hosts. This problem of getting a new machine up and running is commonly called bootstrapping, and to provide this capability to IP hosts, the TCP/IP Bootstrap Protocol (BOOTP) was created.
Web browser plug-in	Only a 24% success rate for users to install the Flash player plug-in for Mozilla Firefox 1.0.6	This plug-in was required for the user to play online games (one of the end user tasks)	Many online resources require this plug-in. Newer versions of the Mozilla Firefox web browser will already have the plug-in pre-installed.
Internet Download	Via the WINE utility, PhotoGizmo can be installed with the addition of an ActiveX control for the Mozilla Firefox 1.0.6 web browser	After the installation is complete, the user is asked to install a needed ActiveX control. If the user selected YES, then the app installs. If the user selected NO, nothing further happens.	WINE is an Open Source implementation of the Windows API on top of X and Linux/Unix. A reboot of the PC returned it to its original configuration.
Internet Download	PhotoGizmo created a <i>My Pictures</i> folder within the <i>Home</i> directory	The <i>Home</i> directory in Linux is comparable to the <i>My Documents</i> folder in Windows	A reboot of the PC returned it to its original configuration.
PC Hardware	Performance of the test computer	Average 17.05 seconds for Mozilla Firefox to launch and 59.42 seconds for OpenOffice Writer to launch. This lag made the PC running the LiveCD appear to be "sluggish."	None - since the test PC has 512 MB of RAM, it exceeds the minimum requirement listed on the Knoppix LiveCD website of 128 MB of RAM. Plus, Knoppix does create a "swap" file on the local hard drive to help with the computer's performance.
Internet Download	ActiveShopper placed a shortcut on the desktop	Even though a shortcut was placed on the desktop, it did not work nor were there any other indications	A reboot of the PC returned it to its original configuration.
Internet Download	Listed within the KMenu, under WINE, is Preclick Silver Photo Organizer	This is the PhotoGizmo application. Whether it ran or not depended upon the user installing an ActiveX control.	A reboot of the PC returned it to its original configuration.
Internet Download	HTTP Cookie	A "cookie" is a parcel of	Cookies were from websites

textual information sent by a server to a web browser and then sent back unchanged by the browser each time it accesses that server. HTTP cookies are used for authenticating, tracking, and maintaining specific information about users.

that the test user DID visit and also from third parties. These have the potential for misuse.

Issues Common to both Windows & Linux Matrix

Issue	Description	Comments	Resolution
Open Port	SMTP (25/TCP)	This port is open and is associated with the Simple Mail Transfer Protocol (SMTP) email function.	None
Open Port	POP3 (110/TCP)	This port is open and is associated with POP3 email function.	None
Internet Download	Malicious code	Setup files for PhotoGizmo, ActiveShopper, and Alexa toolbar resided within the Internet Cache	For the LiveCD, a reboot deleted these files. For Windows, these files had to be manually deleted.
Internet Download	HTTP cookies (from websites that the test user DID visit and also from third parties)	A "cookie" is a parcel of textual information sent by a server to a web browser and then sent back unchanged by the browser each time it accesses that server. HTTP cookies are used for authenticating, tracking, and maintaining specific information about users. These have the potential for misuse.	For the LiveCD, a reboot deleted these items. For Windows, these items had to be manually deleted.

What does it all mean?

For Windows, seven (7) ports were open by default. Unless these ports are closed, the services that run on them are available to be exploited by nefarious users. Using the TEST account to log in, the end users were unable to install any malicious applications downloaded from the Internet. The ActiveShopper application did create a shortcut on the TEST account's desktop (if you click on the link, it takes the user to the ActiveShopper website) so there was partial penetration by this piece of malware. In

addition, the setup files for PhotoGizmo, ActiveShopper, and the Alexa Tool bar resided in the Temporary Internet Files folders of the TEST account (see Appendix J). The freeware Ad-Aware malware scanner did a nice job of identifying suspicious code. Appendix K has a typical report. These files can be manually removed by the user or a system configuration can be made to force the files to be deleted. Users completing the End User activities were able to complete each task without the need to install additional software or plug-in for the Internet Explorer web browser. Both the test user account and the Macromedia Flash plug-in for Internet Explorer were configured before the test user logged on the first time. The test computer operated at an acceptable pace with little or no delay when executing a command, opening a program, or any other function.

For the Knoppix Linux LiveCD, three (3) ports were open by default. Unless these ports are closed, the services that run on them are available to be exploited by nefarious users. When completing the portion of the End User tasks concerning online gaming, the Mozilla Firefox web browser had consistent problems loading the Flash (a proprietary piece of software) plug-in required to play a Flash-based game. In twenty-two (22) instances (out of a total of thirty), the users' attempts to install the plug-in failed. The error message stated that the installation failed (no further details were provided by the system). That meant that in only eight (8) instances did the plug-in actually install. Figure 4.1 is a pie chart with a breakdown of the installation attempts (failures and successes) –

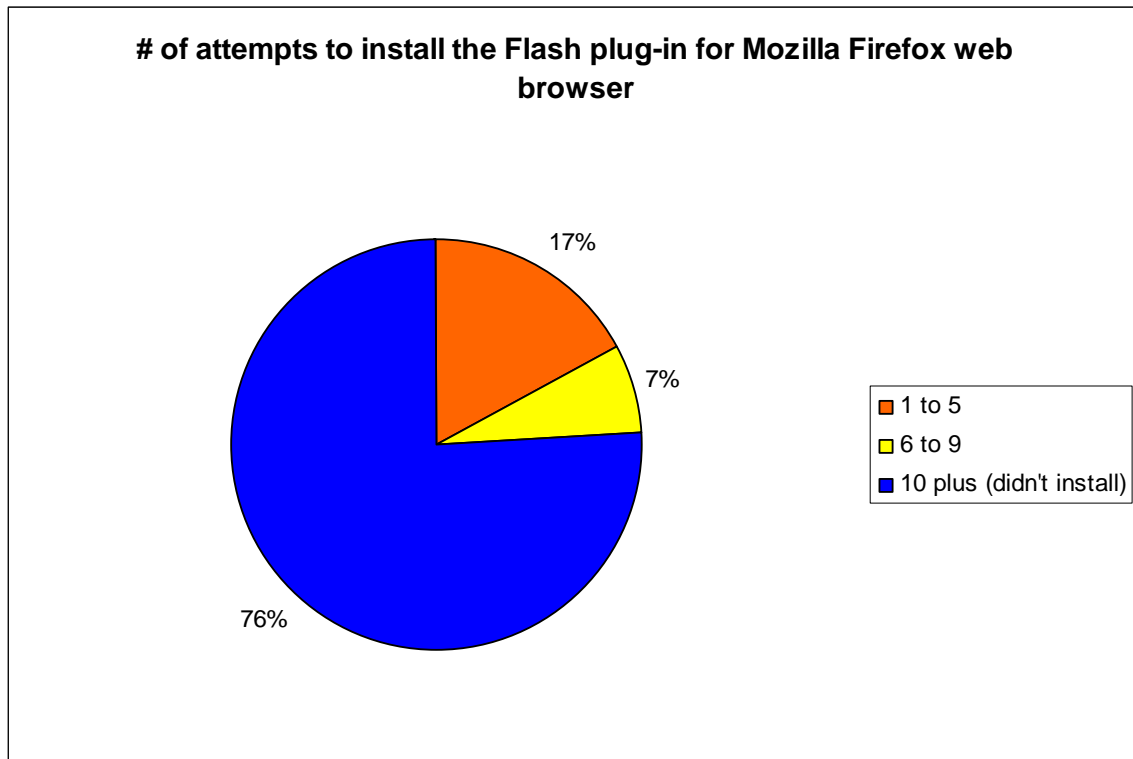


Figure 4.1 # of attempts to install the Flash plug-in for the Mozilla Firefox web browser

The PhotoGizmo image application installed through the use of the WINE utility. WINE is an Open Source implementation of the Windows API on top of X and Linux/Unix. This application created a My Pictures folder within the default user's Home directory (in Linux, the Home directory is comparable to the My Documents folder within Windows). After the initial installation was finished, the user was asked to install a needed ActiveX control. If the user selected YES, then the PhotoGizmo application installed. If the user selected NO, nothing further happens. If, after the initial installation, the user simply closed out of the application, it did not re-launch itself. However, on one occasion, the program did pop up a message box asking if it could check for updates for itself. A

reboot of the PC permanently removed the application. Just as it did on the Windows test PC, ActiveShopper placed an icon on the desktop but for the Knoppix LiveCD, it did not function. Users completing the End User activities were able to complete each task but had to use a plug-in for the Mozilla Firefox web browser that proved troublesome. The test computer was sluggish (for lack of a better term) when launching the Mozilla Firefox web browser (average of 17.05 seconds) and Open Office Writer (average of 59.42 seconds) word processing application. The minimum requirement for RAM for the Knoppix 4.0.2 Linux LiveCD is 128 megabytes, but as with all things computers, the more memory the better. The test computer has 512 MB of RAM so this factor should be taken into consideration when considering the LiveCD as a platform. The Alexa toolbar was not supported on the Mozilla Firefox web browser for Linux.

For both platforms, there were the ever-present “cookies” collected while visiting the designated websites. A cookie is a packet of information sent by a server to the web browser and then sent back by the browser each time that user accesses that server. Cookies are used for user authentication, user tracking, and maintaining user-specific information. For the Windows test configuration, these file must be manually removed or a configuration must be made to the system to do this for the user (preferably each time they log off and/or reboot the computer). For the LiveCD test configuration, since the cookies reside in the RAMDISK, they are permanently removed with a reboot. There was no further system configuration needed. This also applied for any applications that were installed by the end user (such as spyware, viruses, or Trojans).

Appendix C contains the End User Survey. This Survey reveals that the primary reason people utilize the public access computer lab is for free, high-speed access to the Internet. McCracken (2006) states that, “...,*the Internet is effectively becoming the planet’s biggest PC – a colossal, colossally rich environment that holds the promise of putting unprecedented processing cycles, information, and storage at our fingertips, wherever and whenever we need them.*” McCracken (2006) states that, “*Our computing lives, in other words, are starting to slip-slide out of our stand-alone PCs and onto the Net.*” The people that frequent a Public Access Computer lab have more in common with corporate road warriors than those same warriors have in common with their fellow employees that sit at a desk all day long – a need to access information and systems wherever and whenever they need them.

Summary of the Windows 2000 Professional Architecture

The Windows test configuration provided availability. Because the test user account created for the experiment did not have administrative rights on the local computer, users were unable to install malicious code. The users were able to complete all the required tasks in a timely fashion with little to no assistance from the experiment monitor. On average, it took one second for Microsoft’s Internet Explorer to launch and one second for Microsoft’s Word XP to launch (in comparison, it took 17.05 seconds for the Mozilla Firefox web browser to launch and 59.42 seconds for the OpenOffice.org Writer

application to launch). There were a number of potentially harmful files, including executables, in the test user's Temporary Internet Files directory. Cookies were also present – obtained from each website visited. Unless specifically configured to do so, Microsoft's Internet Explorer does not flush the Internet Cache when it closes or the computer is rebooted. Flushing these files would permanently delete the cookies, the potentially harmful executables, and their associated files. Appendix M features details about the Temporary Internet Files directory for Windows.

Ethereal was utilized to monitor network traffic and it found a much greater amount of “chatter” coming from Windows – usually in the form of proprietary services letting the rest of the network know that this particular Windows PC was on the network. Appendix L features screen shots of Ethereal packet captures for both Windows and LiveCD.

Summary of the Knoppix 4.0.2 Debian-based Linux LiveCD Architecture

The LiveCD test configuration proved availability. Overall, test users were able to complete the required tasks. Consistently, test users experienced problems installing a needed Flash plug-in for the Mozilla Firefox web browser. Also, on occasion, test users complained that the applications took too long to open up and that playing the online games was “sluggish.” On average, it took 17.05 seconds for the Mozilla Firefox web browser to launch and 59.42 seconds for the OpenOffice.org Writer application to launch (in comparison, it took approximately one second for Microsoft Internet Explorer and

Microsoft Word XP each to launch). Depending upon the test user's actions, the PhotoGizmo photo organization application could install. After the initial installation, a WINE window pops up informing the user that an ActiveX control is missing and can WINE install it. If the user choose Yes, the control was installed and the application launched as Preclick Silver Photo Organizer. If the user goes through the KStart menu and checked under WINE, listed there was the Preclick Silver Photo Organizer. If the user launched the application, he/she was again be asked by WINE to install the ActiveX control for Firefox. If they selected Yes, the application launched. With the assistance of WINE, a known piece of malware was installed by a user. The ActiveShopper application did partially install an icon on the user's desktop – yet the icon did not work. On the Windows platform, this same icon managed to place itself on the user's desktop and when clicked, launched Internet Explorer and took the user to the ActiveShopper website. And as with Windows, there were a significant number of potentially harmful files, including executables, in the test user's Internet Cache directory. Cookies were also present – obtained from each website visited. A reboot of the computer permanently deleted these items and returned the computer back to its original state. A scan of the PC's hard drive found no “extra” files due to it being used as a temporary “swap” file by the LiveCD. The temporary swap file is also permanently deleted after a reboot. Appendix N features a typical Internet Cache file for the Knoppix LiveCD platform.

In comparison to Windows, Ethereal found much less network “chatter” coming from the Linux based LiveCD. Screen shots of the Ethereal packet captures for the LiveCD and Windows platforms are in Appendix L.

CHAPTER 5 – SUMMARY and CONCLUSION

As Web 2.0 evolves from isolated information silos to a source of content and functionality, the Internet is becoming a computing platform. It used to be, “*it’s the computer, stupid.*” Then it was, “*it’s the network, stupid.*” Now, the saying should be, “*it’s the web, stupid.*” As more and more software is developed specifically for the Internet with the web browser acting as the front end, the web itself becomes the computing platform. So instead of installing Microsoft Office on your computer’s hard drive, use a web browser to access an online word processing application (example: Writely.com, which is part of Google). The Internet is the delivery platform. If the Internet is the platform, then what does that mean for the operating system of the desktop computer? If all it takes to access an application is internet access and a web browser, does it really matter if your home or work computer is running Windows, Linux, or some other operating system? What about accessing the Internet with your mobile phone? How about surfing the web using your TV? What happens when the TV & PC are one-in-the-same device?

“Maybe that’s the biggest financial advantage: It costs what it costs to get started, but the ongoing costs are lower as there are no licensing or new version costs.”

“For example, we have a particular (proprietary) product that we have used for a couple of years. It's a fine product, but the manufacturer told us a year ago that there is a required upgrade that will cost us \$15,000. I put that in the budget for 2006, but the city council says we can't afford it. The manufacturer does its best to provide support, but I'm literally running an obsolete product because I couldn't afford an upgrade.”

“But what we find in practice is that, in terms of the system and its reliability, you are no safer spending money for proprietary products than you are spending the time and money to learn open source.”

All of the above quotes are from Kent Morrison, IS Manager for Steamboat Springs, Colorado (Morrison 2006).

Consider the concept of a corporate IT department handing workers that telecommute a LiveCD or some other bootable external device (such as a USB thumb drive) and telling them this is the way they will connect back to their office from their home computers. The corporate IT department has configured the LiveCD or external device with the proper applications and remote access software for working from home.

Free as in Freedom

Open source software is often referred to as free – generally, because there are no licensing fees associated with the *initial* deployment of it. However, the term free is a bit misleading. ‘*Free software*’ is a matter of liberty, not price. To understand the concept, you should think of ‘*free*’ as in *free speech*, not as in *free beer* (Mandriva 2006).

“But the real genius of Gbrowser was to make the operating system irrelevant. Few people know or care today whether their computers run on Windows, Linux, or the Mac OS. It’s simply part of the plumbing.” (Google 2006) The Internet is the delivery platform, not the PC or the operating system running it. Therefore, the question an organization must ask itself is, *“Would I rather pay no licensing fees or spend several hundred dollars (or more) for the right to put an operating system on each computer?”*

My Thoughts

My testing found that Microsoft Windows 2000 Professional was robust in its ability to keep malicious code from installing, but left potentially harmful files in the web browsers Internet cache directory. The LiveCD also demonstrated the ability to keep malicious code from fully installing itself. The WINE cross-platform utility built into the version of Linux used for this experiment (Knoppix 4.0.2 based upon the Debian distro) has the potential to allow questionable applications to install. However, a reboot of the system running the LiveCD permanently deleted any files in the web browsers Internet cache directory. Both platforms provided availability.

100% of the test users I surveyed listed Internet access as the primary reason for frequenting the Mission Milby's public access computer lab. High-speed access to the web is what every visitor to the lab wanted. From there, it broke down into entertainment, communications, and online gaming in equal parts. But in order to get to these items, they needed access to the Internet. Entertainment involved watching videos and listening to music. Communications involved Instant Messaging & email (both as web-based applications). Online gaming involved multi-player games played with the Internet and a small web-based client serving as the platform.

This experiment's test users represented the typical demographics of the Mission Milby public access computer lab – young people between fifteen and twenty-five years old. Their exposure to information technology comes from two sources – school and the public access computer lab. At school, the primary focus of computers is as a learning tool. At the public access computer lab, these individuals are free to explore the Internet as they see fit (and within the lab's acceptable use policy). During testing, users were not afraid when going through a test while using the Linux LiveCD desktop platform. Beside the question, "*What is this, it looks different?*", they completed their tasks with little regard for the "*newness*" of the computer's operating system. They were not afraid to break it. With an attitude like that, a public access computer lab offers the possibility for a full conversion to the Linux operating system – hard drive based, LiveCD, or some other set up. A LiveCD as the desktop platform offers the additional benefits of security and reduced administration. With a LiveCD, the computers in a public access computer

lab can be converted into Internet kiosks, then later returned to their original configuration after ejecting the LiveCD and a reboot of the system.

Memory, or more specifically, Random Access Memory (RAM), is the most important piece of hardware when it comes to the LiveCD – the more memory, the better the LiveCD performs. As the cost of RAM goes down, perhaps an organization could spend a small amount of money on additional memory for the computers that run the LiveCD. The cost of the additional memory could be offset by the savings in not paying licensing fees for proprietary software and fewer service calls. Older computers could have additional memory installed and used as a platform for the LiveCD. I believe this to be an important point for Community Technology Centers. Second or third generation computers (i.e. donated or recycled) could be configured as Internet kiosks using the LiveCD platform.

Further experimentation could take place at the same public access computer lab where I conducted my research or any open access environment willing to host such an activity. A follow on project might cover some of the same issues, Windows versus the LiveCD, but with customization and hardware that is much more capable. The test computers could have 1 gigabyte of memory. This would allow the LiveCD to be loaded into the RAM, thus freeing up the CD-ROM drive for another use. Also, a customized LiveCD could be created for the test – one that has all the necessary applications, web browser plug-ins, and drivers to allow a test user to use the computer without having to install

anything. This more robust hardware would also allow for the newest version of the Windows operating system to be installed without degrading the system's performance. In addition, with some customization of the Windows operating system, common task such as automatically clearing the Temp and Temporary Internet Files directories could be configured – a kiosk mode.

I proved (but not clearly) that the LiveCD is a viable desktop platform. With a few changes to the test environment (i.e., upgrade the RAM in the client PCs and customize the LiveCD with all the required web browser plug-ins), the LiveCD could perform on par with Windows. Then it becomes a cost issue - both for support (service calls) and in licensing fees. The LiveCD compares favorably against Microsoft Windows on both issues. Also, a follow on research project could cover the concept of the LiveCD and N-tier applications in a corporate environment – a Call Center might be a fertile proving ground. What are the implications of the LiveCD with N-tier applications where the corporate network and Internet combined are the platform with the web browser as the front end for accessing applications?

A public library might be prove an idea environment for further research. Currently, most public libraries offer free Internet access through computers set up to allow patrons to search for books and other materials via an online public access catalogue (known as OPAC). A customized LiveCD with the web browser launching after boot up and defaulting to the Library's online catalogue is possible. Because of the nature of PCs

running this platform, there is neither centralized administration nor additional configuration needed (such as applying vendor patches to the operating system or applications). A librarian simply boot up the computer, show the patron how to perform a search, and if there is a problem, they reboot the PC. This set up has the potential to cut down on service calls.

What are the implications for public access computer labs and organizations that operate open environments in regards to open source software? I would like to see an organization willing to take a chance on a full deployment of open source software. That means the desktop PCs in the open access environment running a LiveCD, the servers running a hard drive based installation of an open source operating system, and all the typical network services (such as DHCP, DNS, web-hosting, and file & print) implemented via open source software. Internet content filtering and firewall services also could be taken care of by open source software. In other parts of the World, open source has proved a viable platform. I would like to see public access facilities in the United States follow that path and embrace open source. All that is required is for an organization to take the first step.

I can help with that first step. I have set up a portal in support of my research that lists open source resources. The website is [**www.ProjectWhiteHat.org**](http://www.ProjectWhiteHat.org) and I can be contacted via email at [**info@projectwhitehat.org**](mailto:info@projectwhitehat.org) to answer any questions or offer advice.

Lessons Learned

So what lessons have I learned while conceiving and executing my project? First and foremost, I should have customized the LiveCD. In a sense, I had already customized the Windows configuration by creating the test user account, installing the Flash plug-in for Internet Explorer, and setting up the test user's desktop. I should have done the same with a customized version of the Knoppix LiveCD. This is my one regret.

When I began my research in July 2005, I was absolutely convinced that Linux would blow Windows away. I just knew that if I rolled out Linux, my sponsoring organization would bow down in reverence and call for an immediate redeployment of Linux on their network. I looked forward to seeing the organization's IT staff telling Microsoft to not let the doorknob hit them on the way out. But time spent with users who didn't really care what the operating system was and data obtained from hundreds of hours in the public access computer lab changed my mind. During the literature review phase of my project, I came across facts & figures that presented both Linux and Windows in their full light. Linux is not the end all answer to every organization's technology needed. Windows is a stable, mature operating system that is used in all parts of the World. The primary lesson that I take away from this research is that Linux and Windows can coexist. Open source and proprietary software both have a place in today's complex information technology world. It is up to each organization to determine how the two are mixed into a heterogeneous solution.

Three elements contributed to my TEPM 6391 and TEPM 6395 course work, 1) a realistic project, 2) a useable methodology, and 3) a project sponsor and organization.

What is a realistic project? Simply put, it something that the student can accomplish over a two-semester period. I completed TEPM 6391 during the Fall semester (along with two other courses) while also working full time. My original project was a grand scheme but with the assistance of my project committee, especially Ed Crowley and Dr. Michael Gibson, I narrowed the focus to something that was reasonable and thus, realistic. Instead of trying to solve all the World's IT problems, narrow the scope down to one that is interesting and realistic.

The next element is a usable methodology. There is a saying within the security field (and for that matter, in life) – simplicity is the friend of security, complexity its enemy. A student must find a methodology that is both understandable and realistic for the project. A methodology is the engine that will drive your project to a successful conclusion. This is the single most important element within the project.

The final element is a sponsoring organization with a person who will champion your efforts. A project is just a theory of how you believe something should be done. It is in the execution of that project where the rubber meets the road. A live environment is needed to test the theory. That is where the sponsoring organization emerges as an important aspect of completing the project. If the student has a strong advocate within

the organization, he or she can accomplish anything. I would recommend to any student that they find and establish a relationship with an organization as soon as possible.

Completing this type of research project took patience and planning. Because it was an experiment, I had to make sure that each & every instance after a test user had performed their tasks that I interrogate the test PC using a checklist. It was not fun nor was it quick, but it got to the point where I could do it in my sleep. I had to learn to be patience to get the results required for this project. No matter how well thought out my original idea might have been, more and more planning was needed. Detail after detail after detail was required to be put down on paper. I asked myself several times, “Do I need to note that?” and the answer was always, “Yes.” - better safe than sorry. By putting more details into the planning and documentation, the more those reading my research will be able to know not only the “how” of what I did, but also the “why.”

APPENDIX A

PROJECT WHITE HAT dot ORG End User Tasks – Windows 2000 Professional

At the logon screen, please use the following account to log in –

User Name: **test** Password: **test1234**

FIRST TASK – EXPLORING THE INTERNET

PhotoGizmo is a free software application for organizing, printing, and sharing digital photos. First, open up Microsoft Internet Explorer (the computer's web browser) and in the Address bar, erase whatever is in there, type in **www.photogizmo.com/step1.htm** and hit the Enter key on the keyboard. This will enable you to visit the PhotoGizmo website. If any online advertisements or other windows pop up, click on them and then minimize the windows to return back to the PhotoGizmo website. On the right-hand side of the page is a box labeled *Click here to Download PhotoGizmo* – click on the box. If prompted, hit the *Open* button to begin the installation process. Follow the onscreen instructions for installing the application. When finished, return to the home page by clicking on the Home icon within the web browser. This will return you back to the default home page.

Next, you will visit the ActiveShopper comparative shopping website. As before, in the Address bar type **www.activeshopper.com** and hit the Enter key on the keyboard. If any online advertisements or other windows pop up, click on them and then minimize the windows to return to the ActiveShopper website. Along the menu at the top of the website will be a link for *Toolbar Download* – click on this link. After clicking on the *Toolbar Download* link, in the middle of the page will be a *Download Now* button – click on it. If prompted, hit the *OK* button to begin the installation process. Follow the onscreen instructions for installing the application. When finished, return to the home

page by clicking on the Home icon within the web browser. This will return you back to the default home page.

The final website that you will visit is the Alexa web search portal. In the Address bar of Internet Explorer, type in **www.alexa.com** and hit the Enter key on the keyboard. If any online advertisements or other windows pop up, click on them and then minimize the windows to return back to the Alexa website. On the left-hand side of the Alexa website under the *Alexa Toolbar* section is a link for *Download* – click on this link. On the right-hand side of the Alexa Toolbar Download page is a button for *Install Toolbar* – click on this link. If prompted, hit the *Open* button to begin the installation process. Follow the onscreen instructions for installing the toolbar. If at any time during the installation a window pops up with a report of a problem with the installation, hit the *Ignore* button to continue. When finished with the installation, close Internet Explorer by hitting the X in the upper right hand corner of the web browser.

CONGRATULATIONS, YOU HAVE COMPLETED THE FIRST SECTION

SECOND TASK – OFFICE PRODUCTIVITY SUITE

For this task, the user will create a word processing document and save it. The contents of the document will be a quick description of the websites that you visited in the previous section. It doesn't have to be long, just write a few sentences about what you saw.

To access the word processor, go to *Start | Programs | Microsoft Word* (click on it). The word processing application will open. Go ahead and start typing your summary of the websites you visited in the previous section. When finished, go to File and select Save. Give it the File name **story** and click on the Save button. You have just saved the document. Go to File and select Exit in order to close out of the word processor.

CONGRATULATIONS, YOU HAVE COMPLETED THE SECOND SECTION

THIRD TASK – COMMUNICATIONS

For this task, the user will email the document created in the previous section to an account associated with Project White Hat dot Org.

Open up Microsoft Internet Explorer, in the Address bar type **www.hotmail.com** and hit the Enter key on your keyboard. This will take the user to the MSN Hotmail portal. In the field next to *E-mail address*, type **projectwhitehat@hotmail.com** and in the *Password* field, type **Password123**. You will be taken to the main Hotmail window. In the upper left-hand portion of the screen will be a link for *New Message* – click on it. This will take you to screen for creating a new email message.

In the *To* field, type **survey@projectwhitehat.org**. In the *Subject* field, type **test user document**. In the main box, please type your first name and also a brief description of what the document that you are going to email contains (example – My name is Adan and I read a story about a Panda bear and that is what the attached document is about). Now you will attach the document to your email message. Just above the *To* field is a link called *Attach* – click on this and select *File*. Click on *Browse* and the Choose file window will open up. Select your document (remember, it is named “story”) by clicking on it and then hit the *Open* button. Now hit the *OK* link (upper left-hand side of the screen just under the MSN Hotmail title). When you are done composing the email and attaching the document, in the upper left-hand side of the screen is **Send** – click on this link to send the email. You should get a confirmation screen that tells you that your message was sent to survey@projectwhitehat.org.

At the top of the screen is a square button with the phrase Sign Out on it – click this link to exit out of Hotmail. Close Internet Explorer by hitting the X in the upper right hand corner of the web browser.

CONGRATULATIONS, YOU HAVE COMPLETED THE THIRD SECTION

TASK FOUR – ONLINE GAMING

This section will have the user play three different games online. First, the user will play Pacman, next they will play Pool, and finally they will play Putt-Putt golf. All games are played online at the **www.ebaumsworld.com** website.

Pacman - Open up Microsoft Internet Explorer, in the Address bar type **www.ebaumsworld.com/pacman.html** and hit the Enter key on your keyboard. This is the site you will use to play Pacman. If any online advertisements or other windows pop up, please click on them and then minimize them to return back to the website with Pacman. Play the game three (3) times. To play, click on the link for ***Start Game*** and use the Arrow keys on the keyboard to control the game.

Blast Billiards - Open up Microsoft Internet Explorer, in the Address bar type **www.ebaumsworld.com/games/blastbilliards.html** and hit the Enter key on your keyboard. This is the site you will use to play Blast Billiards. If any online advertisements or other windows pop up, please click on them and then minimize them to return back to the website with Blast Billiards. Play the game three (3) times. To start, hit the ***Play*** link. Point the pool cue at the ball and use the mouse to control how hard to hit the pool ball.

Mini Golf (aka Putt-Putt) - Open up Microsoft Internet Explorer, in the Address bar type **www.ebaumsworld.com/minigolf.shtml** and hit the Enter key on your keyboard. This is the site you will use to play Mini Golf. If any online advertisements or other windows pop up, please click on them and then minimize them to return back to the website with Mini Golf. Play one round (18 holes). To start, hit the **Start** link (or if you prefer, click on *Instructions* to get some quick tips on how to play). Use the mouse to control your putting. The object of this game is to putt the ball into the hole in as few strokes as possible.

CONGRATULATIONS, YOU HAVE COMPLETED THE FORTH SECTION

APPENDIX B

PROJECT WHITE HAT dot ORG End User Tasks – Knoppix 4.0.2

FIRST TASK – EXPLORING THE INTERNET

PhotoGizmo is a free software application for organizing, printing, and sharing digital photos. First, open up the web browser. In this case, you will use *Mozilla Firefox*. In the Menu Bar that runs along the bottom of the screen will be a picture of a globe – this is the icon for the *Mozilla Firefox* web browser. Click on the icon once for this application to launch. In the Address Bar, type **www.photogizmo.com/step1.htm** and hit the Go button to visit the PhotoGizmo website. Within the Yahoo! Website, there is a News link – click on it and find a story of interest. This will enable you to visit the PhotoGizmo website. If any online advertisements or other windows pop up, click on them and then minimize the windows to return back to the PhotoGizmo website. On the right-hand side of the page is a box labeled *Click here to Download PhotoGizmo* – click on the box. If prompted, hit the *OK* button to begin the installation process. Follow the onscreen instructions for installing the application. When finished, return to the home page by clicking on the Home icon within the web browser. This will return you back to the default home page.

Next, you will visit the ActiveShopper comparative shopping website. As before, in the Address bar type **www.activeshopper.com** and hit the Enter key on the keyboard. If any online advertisements or other windows pop up, click on them and then minimize the windows to return to the ActiveShopper website. Along the menu at the top of the website will be a link for *Toolbar Download* – click on this link. After clicking on the *Toolbar Download* link, in the middle of the page will be a *Download Now* button – click on it. If prompted, hit the *OK* button to begin the installation process. Follow the onscreen instructions for installing the application. When finished, return to the home

page by clicking on the Home icon within the web browser. This will return you back to the default home page.

The final website that you will visit is the Alexa web search portal. In the Address bar of Mozilla Firefox, type in **www.alexa.com** and hit the Enter key on the keyboard. If any online advertisements or other windows pop up, click on them and then minimize the windows to return back to the Alexa website. On the left-hand side of the Alexa website under the *Alexa Toolbar* section is a link for *Download* – click on this link. When finished with the installation, close Mozilla Firefox by hitting the X in the upper right hand corner of the web browser.

CONGRATULATIONS, YOU HAVE COMPLETED THE FIRST SECTION

SECOND TASK – OFFICE PRODUCTIVITY SUITE

For this task, the user will create a word processing document and save it. The contents of the document will be whatever the news stories that you read about in the previous section. It doesn't have to be long, just write a few sentences about what you read.

To access the word processor, in the Menu Bar that runs along the bottom of the screen will be a picture of a square with a blue background and two black birds – this is the icon for the *OpenOffice.org Writer* word processing application. Click on the icon once for this application to launch.

Go ahead and start typing your summary of the news stories that you reviewed in the previous section. When finished, go to *File* and select *Save*. Give the document the file

name story and click on the Save button. You have just saved the document. Go to *File* and select *Exit* to close out of this word processing application.

CONGRATULATIONS, YOU HAVE COMPLETED THE SECOND SECTION

THIRD TASK – COMMUNICATIONS

For this task, the user will email the document created in the previous section to an account associated with Project White Hat dot Org.

Open up the Mozilla Firefox web browser and in the Address Bar type **www.hotmail.com** and hit the Go button to visit the Hotmail website.

In the field next to *E-mail address*, type **projectwhitehat@hotmail.com** and in the *Password* field, type **Password123**. You will be taken to the main Hotmail site. In the upper left-hand portion of the screen will be a link for *New Message* – click on it. This will take you to the screen for creating a new email message.

In the *To* field, type **survey@projectwhitehat.org**. In the *Subject* field, type test user document. In the main box, please type your first name and also a brief description of what the document that you are going to email contains (example – I read a story about a Panda bear and that is what the attached document is about). Now you will attached the document to your email message. Just above the *To* field is a link called *Attach* – click on this and select *File*. Click on *Browse* and the Choose file window will open up. Select your document (remember, it is named “story”) by clicking on it and then hit the *Open* button. Now hit the *OK* link (upper left-hand side of the screen just under the MSN Hotmail title). When you are done composing the email and attaching the document, in the upper left-hand side of the screen is **Send** – click on this link to send the email. You should get a confirmation screen that tells you that your message has been sent to survey@projectwhitehat.org

At the top of the screen is a square button with the phrase Sign Out on it – click this link to exit out of Hotmail. Once finished, click on the X in the upper right hand corner to close out of the Mozilla Firefox web browser.

CONGRATULATIONS, YOU HAVE COMPLETED THE THIRD SECTION

TASK FOUR – ONLINE GAMING

This section will have the user visit a website and play several games online. First, the user will play Pacman, next they will play Pool, and finally they will play Putt-Putt golf. All games are played online at the **www.ebaumsworld.com** website.

Pacman – Launch the Mozilla Firefox web browser, enter **www.ebaumsworld.com/pacman.html** in the Address Bar and hit the Go button to visit this site. This is the site you will use to play Pacman. If a plug-in is required in order to play the game, go ahead with the installation. If any online advertisements or other windows pop up, please click on them and then minimize them to return back to the website with Pacman. Play the Pacman game three (3) times. To play, click on the link for ***Start Game*** and use the Arrow keys on the keyboard to control the game.

Blast Billiards – In the Address Bar of the Mozilla Firefox web browser, type **www.ebaumsworld.com/games/blastbilliards.html** and hit the Go button to visit this site. This is the site you will use to play Blast Billiards. If any online advertisements or other windows pop up, please click on them and then minimize them to return back to the website with Blast Billiards. Play the game three (3) times. To start, hit the ***Play*** link. Point the pool cue at the ball and use the mouse to control how hard to hit the pool ball.

Mini Golf (aka Putt-Putt) – In the Address Bar of the Mozilla Firefox web browser, type **www.ebaumsworld.com/minigolf.shtml** and hit the Go button to visit this site. This is the site you will use to play Mini Golf. If any online advertisements or other windows

pop up, please click on them and then minimize them to return back to the website with Mini Golf. Play one round (18 holes). To start, hit the *Start* link (or if you prefer, click on *Instructions* to get some quick tips on how to play). Use the mouse to control your putting. The object of this game is to putt the ball into the hole in as few strokes as possible.

CONGRATULATIONS, YOU HAVE COMPLETED THE FORTH SECTION

APPENDIX C

PROJECT WHITE HAT dot ORG TEST USER SURVEY

Please fill out this form as completely as possible

What is your first name and last initial?

At what location did you participate in the test?

What is the operating system of the computer used to complete the test?

If you are taking this test at a Community Technology Center (CTC), what do you use the computer at the CTC for?

Did you have any issues/problems completing the tasks?

What was the easiest task(s) to complete?

What was the most difficult task to complete?

When visiting a CTC, which of the following activities do you engage in?

Internet Research (example: reading a news story on the Houston Chronicle website) Yes | No

Email / Instant Messaging (example: using Hotmail to email or Yahoo Instant Messenger to IM) Yes | No

Gaming (Online | PC-based | Both) Yes | No

Office Productivity Software (example: write a paper for school using) Yes | No

Other (Please describe the activity)

Thank you for participating.


Date:


User Number:


APPENDIX D


GFI LANguard network scanner 2.0 for the LiveCD report (screen shot)



192.168.2.94 [] (probably Unix)

 IP Address : **192.168.2.94**


 Operating System : **probably Unix**

 Time to live (TTL) : **64 (64) - Same network segment**

 **Open Ports (2)**



-  **25 [Smtip => Simple Mail Transfer Protocol]**
-  **110 [Pop3 => Post Office Protocol 3]**

GFI LANguard network security scanner 7.0 for Windows (screen shot)




 SECURITY & MESSA

Filter: Full Report
Source: Current scan

Scan target : 192.168.2.94 [1 computers meet filter conditions]
Computer profiles : On

IP Address	Details	Hostname	Operating System
192.168.2.94		PWHTESTBOX	 Windows 2000

- 192.168.2.94 [PWHTESTBOX] Windows 2000

-  **TCP ports - 5 open ports**
 - 25[Description: SMTP => Simple Mail transfer Protocol / Service: Unknown]
 - 110[Description: Pop3 => Post Office Protocol 3 / Service: Unknown]
 - 135[Description: epmap => DCE endpoint resolution / Service: Unknown]
 - 139[Description: Netbios-ssn => NETBIOS Session Service / Service: Unknown]
 - 445[Description: Microsoft-Ds / Service: Unknown]
-  **Netbios Names - 6**
 - PWHTESTBOX - File Server Service
 - PWHTESTBOX - Workstation Service
 - WORKGROUP - Domain Name
 - WORKGROUP - Browser Service Elections
 - PWHTESTBOX - Messenger Service
 - TEST - Messenger Service
-  **Computer**
 - MAC address : 00-B0-D0-B4-C1-7F (Dell Computer Corp.)
 - Time to live : 128(128)
 - Domain : WORKGROUP
 - LAN manager : Windows 2000 LAN Manager

APPENDIX E

Microsoft Baseline Security Analyzer 2.0 for Windows

Computer name: WORKGROUP\PWHTTESTBOX
IP address: 192.168.2.94
Security report name: WORKGROUP - PWHTTESTBOX (2-12-2006 1-09 PM)
Scan date: 2/12/2006 1:09 PM
Scanned with MBSA version: 2.0.5029.2
Security update catalog: Microsoft Update
Catalog synchronization date:
Security assessment: Severe Risk

Security Updates Scan Results

Issue: Office Security Updates
Score: Check passed
Result: No security updates are missing.

Current Update Compliance

| MS05-006 | Installed | Security Update for SharePoint Team Services
(KB890829) | Critical |
| MS04-027 | Installed | Security Update for Office XP: WordPerfect 5.x
Converter (KB873379) | Important |
| 832671 | Installed | Office XP Service Pack 3 | |
| MS05-035 | Installed | Security Update for Word 2002 (KB895589) | Important
|
| MS05-005 | Installed | Security Update for Office XP (KB873352) | Critical |
| MS06-003 | Installed | Security Update for Outlook 2002 (KB892841) | Critical
|

Issue: Windows Security Updates
Score: Check passed
Result: No security updates are missing.

Current Update Compliance

| MS02-009 | Installed | Security Update, February 14, 2002 (Internet Explorer
5.5) | |
| MS02-009 | Installed | Security Update, February 14, 2002 (Internet Explorer
6) | |
| MS03-008 | Installed | 814078: Security Update (Microsoft Jscript version 5.5,
Windows 2000) | |
| MS03-008 | Installed | 814078: Security Update (Microsoft Jscript version 5.6,
Windows 2000, Windows XP) | |
| MS02-050 | Installed | Q329115: Security Update (Windows 2000) | |
| MS03-011 | Installed | 816093: Security Update Microsoft Virtual Machine
(Microsoft VM) | Critical |
| 867460 | Installed | Microsoft .NET Framework 1.1 Service Pack 1 | |
| MS04-028 | Installed | Security Update for Internet Explorer 6 Service Pack 1
(KB833989) | Moderate |

SP2 (KB823353) Moderate	MS04-018 Installed Cumulative Security Update for Outlook Express 5.5
(KB823353) Moderate	MS04-018 Installed Cumulative Security Update for Outlook Express 6 SP1
Critical	MS04-036 Installed Security Update for Windows 2000 (KB883935)
(KB832483) Important	MS04-003 Installed Security Update for Microsoft Data Access Components
Critical	MS05-036 Installed Security Update for Windows 2000 (KB901214)
(KB897715) Important	MS05-030 Installed Security Update for Outlook Express 5.5 Service Pack 2
Important	MS05-040 Installed Security Update for Windows 2000 (KB893756)
Moderate	MS05-041 Installed Security Update for Windows 2000 (KB899591)
Moderate	MS05-042 Installed Security Update for Windows 2000 (KB899587)
Critical	MS05-043 Installed Security Update for Windows 2000 (KB896423)
Version 1.1 Service Pack 1 (KB886903) Important	MS05-004 Installed Security Update for Microsoft .NET Framework,
(KB891861)	891861 Installed Update Rollup 1 for Windows 2000 Service Pack 4
Moderate	MS05-045 Installed Security Update for Windows 2000 (KB905414)
Important	MS05-046 Installed Security Update for Windows 2000 (KB899589)
Important	MS05-048 Installed Security Update for Windows 2000 (KB901017)
Important	MS05-027 Installed Security Update for Windows 2000 (KB896422)
Important	MS05-032 Installed Security Update for Windows 2000 (KB890046)
Important	MS05-026 Installed Security Update for Windows 2000 (KB896358)
Important	MS05-049 Installed Security Update for Windows 2000 (KB900725)
Important	MS05-047 Installed Security Update for Windows 2000 (KB905749)
for Windows 2000 (KB905495) Moderate	MS05-044 Installed Security Update for Internet Explorer 6 Service Pack 1
Critical	MS05-051 Installed Security Update for Windows 2000 (KB902400)
Critical	MS05-053 Installed Security Update for Windows 2000 (KB896424)
(KB885492) Critical	MS05-009 Installed Security Update for Windows Media Player 9 Series
(KB897715) Important	MS05-030 Installed Security Update for Outlook Express 6 Service Pack 1
Important	MS05-055 Installed Security Update for Windows 2000 (KB908523)

Critical | MS05-050 | Installed | Security Update for Windows 2000 (KB904706) |
Critical | MS05-054 | Installed | Cumulative Security Update for Internet Explorer 6
Service Pack 1 (KB905915) | Critical |
Critical | MS06-001 | Installed | Security Update for Windows 2000 (KB912919) |
Critical | 890830 | Installed | Windows Malicious Software Removal Tool - January
2006 (KB890830) | |
Critical | MS06-002 | Installed | Security Update for Windows 2000 (KB908519) |

Operating System Scan Results

Administrative Vulnerabilities

Issue: Local Account Password Test

Score: Check passed

Result: Some user accounts (1 of 4) have blank or simple passwords, or could not be analyzed.

Detail:

User	Weak Password	Locked Out	Disabled
Guest	Weak	-	Disabled
ASPNET	-	-	-
Administrator	-	-	-
test	-	-	-

Issue: File System

Score: Check passed

Result: All hard drives (1) are using the NTFS file system.

Detail:

| Drive Letter | File System |
| C: | NTFS |

Issue: Password Expiration

Score: Check failed (non-critical)

Result: Some user accounts (3 of 4) have non-expiring passwords.

Detail:

| User |
| Administrator |
| Guest |
| test |
| ASPNET |

Issue: Guest Account

Score: Check passed

Result: The Guest account is disabled on this computer.

Issue: Autologon

Score: Check passed

Result: Autologon is not configured on this computer.

Issue: Restrict Anonymous

Score: Check failed (critical)

Result: Computer is running with RestrictAnonymous = 0. This level allows basic enumeration of user accounts, account policies, and system information. Set RestrictAnonymous = 2 to ensure maximum security.

Issue: Administrators

Score: Check passed

Result: No more than 2 Administrators were found on this computer.

Detail:

| User |

| Administrator |

Issue: Windows Firewall

Score: Best practice

Result: Windows Firewall is not installed or configured properly, or is not available on this version of Windows.

Issue: Automatic Updates

Score: Check failed (non-critical)

Result: Updates are not automatically downloaded or installed on this computer.

Issue: Incomplete Updates

Score: Best practice

Result: No incomplete software update installations were found.

Additional System Information

Issue: Windows Version

Score: Best practice

Result: Computer is running Windows 2000 or greater.

Issue: Auditing

Score: Best practice

Result: Enable auditing for specific events like logon/logoff. Be sure to monitor your event log to watch for unauthorized access.

Issue: Shares

Score: Best practice

Result: 2 share(s) are present on your computer.

Detail:

| Share | Directory | Share ACL | Directory ACL |

| ADMIN\$ | C:\WINNT | Admin Share | BUILTIN\Users - RX,
BUILTIN\Power Users - RWXD, BUILTIN\Administrators - F, NT AUTHORITY\SYSTEM - F,
Everyone - RX |

| C\$ | C:\ | Admin Share | Everyone - F |

Issue: Services

Score: Best practice

Result: Some potentially unnecessary services are installed.

Detail:

| Service | State |

| Telnet | Stopped |

Internet Information Services (IIS) Scan Results

IIS is not running on this computer.

SQL Server Scan Results

SQL Server and/or MSDE is not installed on this computer.

Desktop Application Scan Results

Administrative Vulnerabilities

Issue: IE Zones

Score: Check failed (critical)

Result: Internet Explorer zones do not have secure settings for some users.

Detail:

User	Zone	Level	Recommended Level
PWHTESTBOX\Administrator	Restricted sites	Custom	High

Sub-Detail:

Setting	Current	Recommended
Script ActiveX controls marked safe for scripting	Enable	Disable

Issue: Macro Security

Score: Check passed

Result: 4 Microsoft Office product(s) are installed. No issues were found.

Detail:

Issue	User	Advice
Microsoft Excel 2002	All Users	No security issues were found.
Microsoft Outlook 2002	All Users	No security issues were found.
Microsoft PowerPoint 2002	All Users	No security issues were found.
Microsoft Word 2002	All Users	No security issues were found.

APPENDIX F

NeWT 2.2 Network Auditing Tool for Windows

smtp (25/tcp)

Port is open
Plugin ID : 11219

pop3 (110/tcp)

Port is open
Plugin ID : 11219

epmap (135/tcp)

Distributed Computing Environment (DCE) services running on the remote host can be enumerated by connecting on port 135 and doing the appropriate queries.

An attacker may use this fact to gain more knowledge about the remote host.

Solution : filter incoming traffic to this port.
Risk factor : Low
Plugin ID : 10736

Port is open
Plugin ID : 11219

netbios-ssn (139/tcp)

Port is open
Plugin ID : 11219

An SMB server is running on this port
Plugin ID : 11011

microsoft-ds (445/tcp)

The remote version of Windows contains a flaw which may allow an attacker to cause it to disclose information over the use of a named pipe through a NULL session.

An attacker may exploit this flaw to gain more knowledge about the remote host.

Solution : <http://www.microsoft.com/technet/security/bulletin/MS05-007.msp>
Risk factor : Low
CVE : CAN-2005-0051
BID : 12486
Plugin ID : 16337

Here is the browse list of the remote host :

C85DF9 (os: 5.1)
PWHTESTBOX (os: 5.0)

This is potentially dangerous as this may help the attack of a potential hacker by giving him extra targets to check for

Solution : filter incoming traffic to this port
Risk factor : Low

Plugin ID : 10397

Here is the list of the SMB shares of this host :

IPC\$
ADMIN\$
C\$

This is potentially dangerous as this may help the attack of a potential hacker.

Solution : filter incoming traffic to this port
Risk factor : Medium
Plugin ID : 10395

The following local accounts have passwords which never expire :

Administrator
Guest
test
ASPNET

Password should have a limited lifetime

Solution : disable password non-expiry
Risk factor : Medium
Plugin ID : 10916

The following local accounts have never logged in :

Guest
ASPNET

Unused accounts are very helpful to hacker

Solution : suppress these accounts
Risk factor : Medium
Plugin ID : 10915

The following local accounts have never changed their password :

Administrator
Guest
test
ASPNET

To minimize the risk of break-in, users should
change their password regularly
Plugin ID : 10914

Port is open
Plugin ID : 11219

A CIFS server is running on this port
Plugin ID : 11011

- NULL sessions are enabled on the remote host

CVE : CAN-1999-0504, CAN-1999-0506, CVE-2000-0222, CAN-1999-0505, CAN-2002-1117
BID : 494, 990, 11199
Plugin ID : 10394

It was not possible to connect to PIPE\winreg on the remote host.
If you intend to use Nessus to perform registry-based checks, the registry
checks will not work because the 'Remote Registry Access' service (winreg)
has been disabled on the remote host or can not be connected to with the
supplied credentials.
Plugin ID : 10400

The host Security Identifier (SID) can be obtained remotely. Its value is :

1-5-21-2025429265-839522115-1060284298

An attacker can use it to obtain the list of the local users of this host

Solution : filter the ports 137-139 and 445

Risk factor : Low

CVE : CVE-2000-1200

BID : 959

Plugin ID : 10859

The host SID could be used to enumerate the names of the local users of this host.

(we only enumerated users name whose ID is between 1000 and 1200 for performance reasons)

This gives extra knowledge to an attacker, which is not a good thing :

- Administrator account name : Administrator (id 500)
- Guest account name : Guest (id 501)
- test (id 1000)
- ASPNET (id 1001)

Risk factor : None

Solution : filter incoming connections this port

CVE : CVE-2000-1200

BID : 959

Plugin ID : 10860

The remote native lan manager is : Windows 2000 LAN Manager

The remote Operating System is : Windows 5.0

The remote SMB Domain Name is : WORKGROUP

Plugin ID : 10785

The following password policy is defined on the remote host:

Minimum password len: 0

Password history len: 0

Maximum password age (d): 42

Minimum password age (d): 0

Forced logoff time (s): Not set

Locked account time (s): 1800

Time between failed logon (s): 1800

Number of invalid logon before locked out (s): 0

Plugin ID : 17651

The following local accounts are disabled :

Guest

To minimize the risk of break-in, permanently disabled accounts should be deleted

Risk factor : Low
Plugin ID : 10913

blackjack (1025/tcp)

Port is open
Plugin ID : 11219

Distributed Computing Environment (DCE) services running on the remote host can be enumerated by connecting on port 135 and doing the appropriate queries.

An attacker may use this fact to gain more knowledge about the remote host.

Here is the list of DCE services running on this port:

UUID: 1ff70682-0a51-30e8-076d-740be8cee98b, version 1
Endpoint: ncacn_ip_tcp:192.168.2.94[1025]
Named pipe : atsvc
Win32 service or process : mstask.exe
Description : Scheduler service

UUID: 378e52b0-c0a9-11cf-822d-00aa0051e40f, version 1
Endpoint: ncacn_ip_tcp:192.168.2.94[1025]

Solution : filter incoming traffic to this port.
Risk factor : Low
Plugin ID : 10736

general/tcp

You are running a version of Nessus which is not configured to receive a full plugin feed. As a result, the security audit of the remote host produced incomplete results.

To obtain a complete plugin feed, you need to register your Nessus scanner at <http://www.nessus.org/register/> then run `nessus-update-plugins` to get the full list of Nessus plugins.

Plugin ID : 9999

The remote host does not discard TCP SYN packets which have the FIN flag set.

Depending on the kind of firewall you are using, an attacker may use this flaw to bypass its rules.

See also : <http://archives.neohapsis.com/archives/bugtraq/2002-10/0266.html>
<http://www.kb.cert.org/vuls/id/464113>

Solution : Contact your vendor for a patch
Risk factor : Medium
BID : 7487
Plugin ID : 11618

The remote host answers to an ICMP timestamp request. This allows an attacker to know the date which is set on your machine.

This may help him to defeat all your time based authentication protocols.

Solution : filter out the ICMP timestamp requests (13), and the outgoing ICMP timestamp replies (14).

Risk factor : Low
CVE : CAN-1999-0524
Plugin ID : 10114

192.168.2.94 resolves as PWHTESTBOX.
Plugin ID : 12053

The following users are in the local administrator group :

. Administrator (User)

You should make sure that only the proper users are member of this group

Risk factor : Low
Plugin ID : 10902

The remote host is running Microsoft Windows 2000
Plugin ID : 11936

Information about this scan :

Nessus version : NeWT
Plugin feed version : 200602121415

Type of plugin feed : GPL only
Scanner IP : 192.168.2.99
Port range : default
Thorough tests : no
Experimental tests : no
Paranoia level : 1
Report Verbosity : 1
Safe checks : yes
Max hosts : 10
Max checks : 5
Scan duration : unknown (ping_host.nasl not launched?)

Plugin ID : 19506

general/udp

For your information, here is the traceroute to 192.168.2.94 :
192.168.2.99
192.168.2.94

Plugin ID : 10287

netbios-ns (137/udp)

The following 8 NetBIOS names have been gathered :

PWHTESTBOX = Computer name

PWHTESTBOX = This is the computer name registered for workstation services by a WINS client.

WORKGROUP = Workgroup / Domain name

WORKGROUP = Workgroup / Domain name (part of the Browser elections)

PWHTESTBOX = This is the current logged in user registered for this workstation.

TEST = This is the current logged in user registered for this workstation.

WORKGROUP

__MSBROWSE__

The remote host has the following MAC address on its adapter :

00:b0:d0:b4:c1:7f

If you do not want to allow everyone to find the NetBios name of your computer, you should filter incoming traffic to this port.

Risk factor : Medium

CVE : CAN-1999-0621

Plugin ID : 10150

APPENDIX G

Mission Milby Community Technology Center Public Access Computer Lab and equipment used in the experiment'



Figure G.1 – Test Computer Setup



Figure G.2 – Test Computer Setup

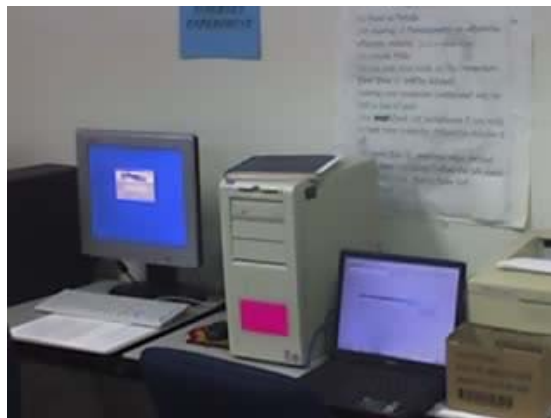


Figure G.3 – Test Computer Setup plus laptop used to monitor the test



Figure G.4 – Mission Milby Community Technology Center’s Public Access Computer Lab



Figure G.5 – Mission Milby Community Technology Center’s Public Access Computer Lab

APPENDIX H

Mission Milby Community Technology Center Public Access Computer Lab's Acceptable Use Policy (also known as *Lab Rulz*)

- No food or drinks.
- No viewing of pornographic or otherwise offensive material (lab monitor defines offensive).
- No outside disks.
- Do not save your work on the Computer's hard drive. It will be deleted.
- Leaving your computer unattended may result in loss of spot.
- You must check out headphones if you wish to hear your computer. Otherwise volume is off.
- No more than 5 approved pages printed.
- If you have a question, bother the lab monitor! That's what they're there for.
- Have fun!

APPENDIX I

Helix 1.7 Debian-based Linux LiveCD Incident Response & Computer Forensics Security Report.

Security Report PWHTESTBOX

Hostname: PWHTESTBOX

Date and time of report: 2006-04-08, 20:14, (GMT-06:00)

Operating System: Microsoft Windows 2000 Professional 5.0.2195

Service Pack: 4.0

Server Domain: WORKGROUP

Server Role: Standalone Workstation

IE Version: 6.0.2800.1106

Media Player Version: 9.0.0.2980

WSH Version: 5.6

Network Configuration

NIC Brand and Model: 3Com EtherLink PCI

IP Address: 192.168.2.94

Subnet Mask: 255.255.255.0

Gateway: 192.168.2.1

DNS Server: 192.168.2.1

WINS Server: 127.0.0.0

WINS Server: 127.0.0.0

MAC Address: 00:B0:D0:B4:C1:7F

Audit Policy

Policy	Security setting
Account Logon	Success and Failure
Account Management	Success and Failure
Directory Service Access	Success and Failure
Logon	Success and Failure
Object Access	Success and Failure
Policy Change	Success and Failure
Privilege Use	Success and Failure
Process Tracking	Success and Failure
System	Success and Failure

Event Log configuration

Log Name	Max Size (KB)	Overwrite Old Events	Overwrite Policy
System	512	7	OutDated
Application	512	7	OutDated
Security	512	7	OutDated

Services

Total number of services: 58; Number of Running services: 29; Number of Automatic services: 24; Number of Manual services: 33

Service	Start Type	Status	Service full name	Account
Alerter	Manual	Stopped	Alerter	LocalSystem
AppMgmt	Manual	Stopped	Application Management	LocalSystem
aspnet_state	Manual	Stopped	ASP.NET State Service	.\ASPNET
BITS	Manual	Stopped	Background Intelligent Transfer Service	LocalSystem
Browser	Automatic	Running	Computer Browser	LocalSystem
cisvc	Manual	Stopped	Indexing Service	LocalSystem
ClipSrv	Manual	Stopped	ClipBook	LocalSystem
Dhcp	Automatic	Running	DHCP Client	LocalSystem
dmadmin	Manual	Stopped	Logical Disk Manager Administrative Service	LocalSystem
dmserver	Automatic	Running	Logical Disk Manager	LocalSystem
Dnscache	Automatic	Running	DNS Client	LocalSystem
Eventlog	Automatic	Running	Event Log	LocalSystem
EventSystem	Manual	Running	COM+ Event System	LocalSystem
Fax	Manual	Stopped	Fax Service	LocalSystem
GFI LANguard System Integrity Monitor 3 agent service	Automatic	Running	GFI LANguard System Integrity Monitor 3 agent service	LocalSystem
lanmanserver	Automatic	Running	Server	LocalSystem
lanmanworkstation	Automatic	Running	Workstation	LocalSystem
LmHosts	Automatic	Running	TCP/IP NetBIOS Helper Service	LocalSystem
Messenger	Automatic	Running	Messenger	LocalSystem
mnmsrvc	Manual	Stopped	NetMeeting Remote	LocalSystem

			Desktop Sharing	
MSDTC	Manual	Stopped	Distributed Transaction Coordinator	LocalSystem
MSIServer	Manual	Stopped	Windows Installer	LocalSystem
NetDDE	Manual	Stopped	Network DDE	LocalSystem
NetDDEdsdm	Manual	Stopped	Network DDE DSDM	LocalSystem
Netlogon	Manual	Stopped	Net Logon	LocalSystem
Netman	Manual	Running	Network Connections	LocalSystem
NtLmSsp	Manual	Stopped	NT LM Security Support Provider	LocalSystem
NtmsSvc	Automatic	Running	Removable Storage	LocalSystem
PlugPlay	Automatic	Running	Plug and Play	LocalSystem
PolicyAgent	Automatic	Running	IPSEC Policy Agent	LocalSystem
ProtectedStorage	Automatic	Running	Protected Storage	LocalSystem
RasAuto	Manual	Stopped	Remote Access Auto Connection Manager	LocalSystem
RasMan	Manual	Running	Remote Access Connection Manager	LocalSystem
RemoteAccess	Disabled	Stopped	Routing and Remote Access	LocalSystem
RemoteRegistry	Automatic	Running	Remote Registry Service	LocalSystem
RpcLocator	Manual	Stopped	Remote Procedure Call (RPC) Locator	LocalSystem
RpcSs	Automatic	Running	Remote Procedure Call (RPC)	LocalSystem
RSVP	Manual	Stopped	QoS RSVP	LocalSystem
SamSs	Automatic	Running	Security Accounts Manager	LocalSystem
SCardDrv	Manual	Stopped	Smart Card Helper	LocalSystem
SCardSvr	Manual	Stopped	Smart Card	LocalSystem
Schedule	Automatic	Running	Task Scheduler	LocalSystem
seclogon	Automatic	Running	RunAs Service	LocalSystem
SENS	Automatic	Running	System Event Notification	LocalSystem
SharedAccess	Manual	Stopped	Internet Connection Sharing	LocalSystem
Spooler	Automatic	Running	Print Spooler	LocalSystem
SysmonLog	Manual	Stopped	Performance Logs and	LocalSystem

			Alerts	
TapiSrv	Manual	Running	Telephony	LocalSystem
TlntSvr	Manual	Stopped	Telnet	LocalSystem
TrkWks	Automatic	Running	Distributed Link Tracking Client	LocalSystem
UPS	Manual	Stopped	Uninterruptible Power Supply	LocalSystem
UtilMan	Manual	Stopped	Utility Manager	LocalSystem
W32Time	Manual	Stopped	Windows Time	LocalSystem
WinMgmt	Automatic	Running	Windows Management Instrumentation	LocalSystem
WmdmPmSN	Manual	Stopped	Portable Media Serial Number Service	LocalSystem
Wmi	Manual	Running	Windows Management Instrumentation Driver Extensions	LocalSystem
wuauserv	Automatic	Running	Automatic Updates	LocalSystem
WZCSVC	Manual	Stopped	Wireless Configuration	LocalSystem

Applications

Number of applications: 15

Ad-Aware SE Personal 1.06

Adobe Acrobat 5.0 5.0

GFI LANguard System Integrity Monitor 3 3.0.0

MSN Messenger 7.0 7.0.0816

Macromedia Flash Player 8 8

Microsoft .NET Framework 1.1 1.1.4322

Microsoft .NET Framework 1.1

Microsoft Baseline Security Analyzer 2.0 2.0.5029.2

Microsoft Office XP Professional 10.0.6626.0

Steel Inventory 1.1

Update Rollup 1 for Windows 2000 SP4 20050809.32623

WebFldrs 9.00.3907

Windows Genuine Advantage v1.3.0254.0 1.3.0254.0

Windows Installer 3.1 (KB893803) 3.1

Windows Media Player system update (9 Series)

Hotfixes

Number of hotfixes: 3

MS02-066 328970

MS02-068 324929

MS03-004 810847

Ports open

Total number of open ports: 9; Number of open TCP ports: 5; Number of open UDP ports: 4

Port	Protocol	PID	Program short name	Program long name
135	TCP	404	svchost	C:\WINNT\system32\svchost.exe
139	TCP	8	System	
445	TCP	8	System	
1025	TCP	544	MSTask	C:\WINNT\system32\MSTask.exe
1026	TCP	8	System	
137	UDP	8	System	
138	UDP	8	System	
445	UDP	8	System	
500	UDP	228	lsass	C:\WINNT\system32\lsass.exe

Page File settings

Pagefile name	Initial Size, MB	Maximum Size, MB
C:\pagefile.sys	384	768

Hardware

Computer system

Brand: Dell Computer Corporation

Model: OptiPlex GX110

Serial No.: 7V6JB01

Number of processors: 1

BIOS Version: A05

BIOS Date: Phoenix ROM BIOS PLUS Version 1.10 A05

RAM size, MBytes: 512

Processors

CPU ID	Manufacturer Name	Max Speed, MHz	L2 Cache, KB	ExtClock, MHz
CPU0	GenuineIntel	Intel Pentium III processor	863	256

Fixed Disks

Drive Letter	FileSystem	Total Size, MB	Free Space, MB	Serial No.
C	NTFS	9539	7657	-1605388223
D	CDFS			

Mixed checkpoints

Recovery Console installed: False

Norton Antivirus signature date: Unknown

APPENDIX J

Screen shots of the files left in the Test user's Temporary Internet Files directories.

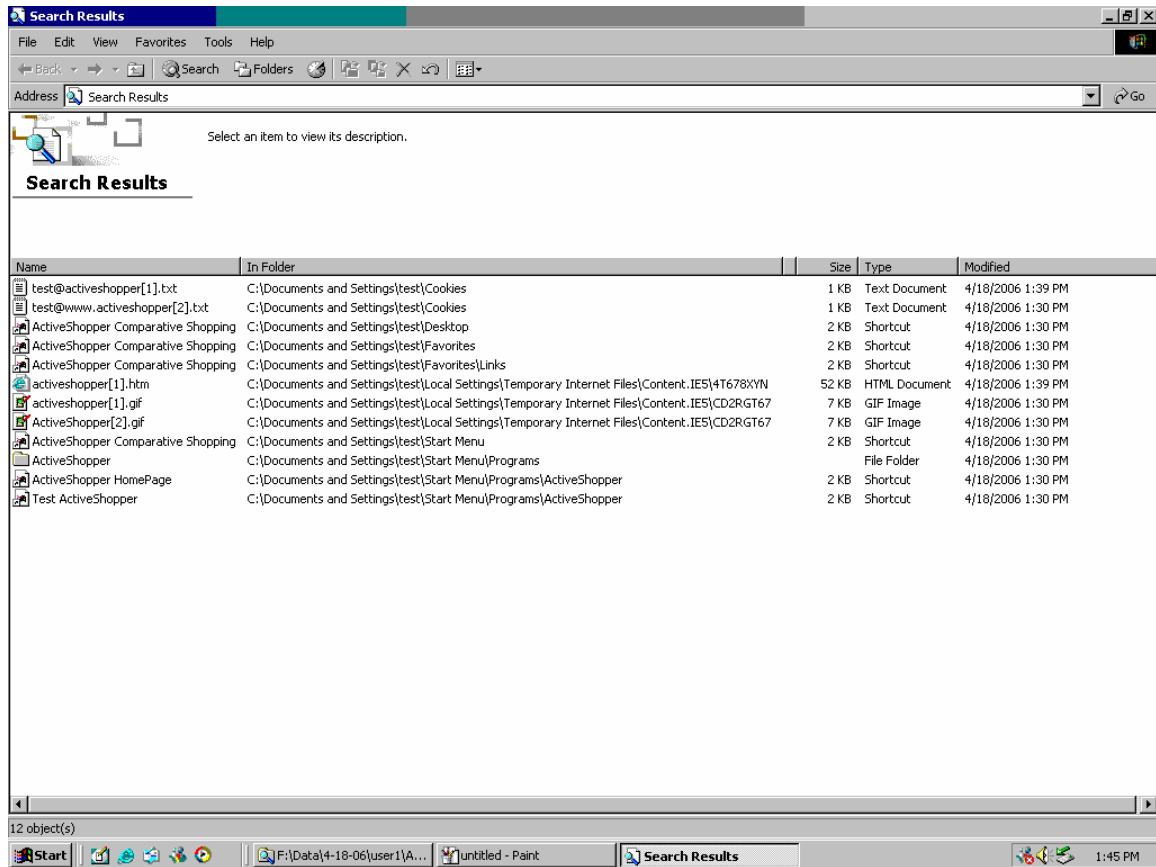


Figure J-1 – Files associated with the Active Shopper malware.

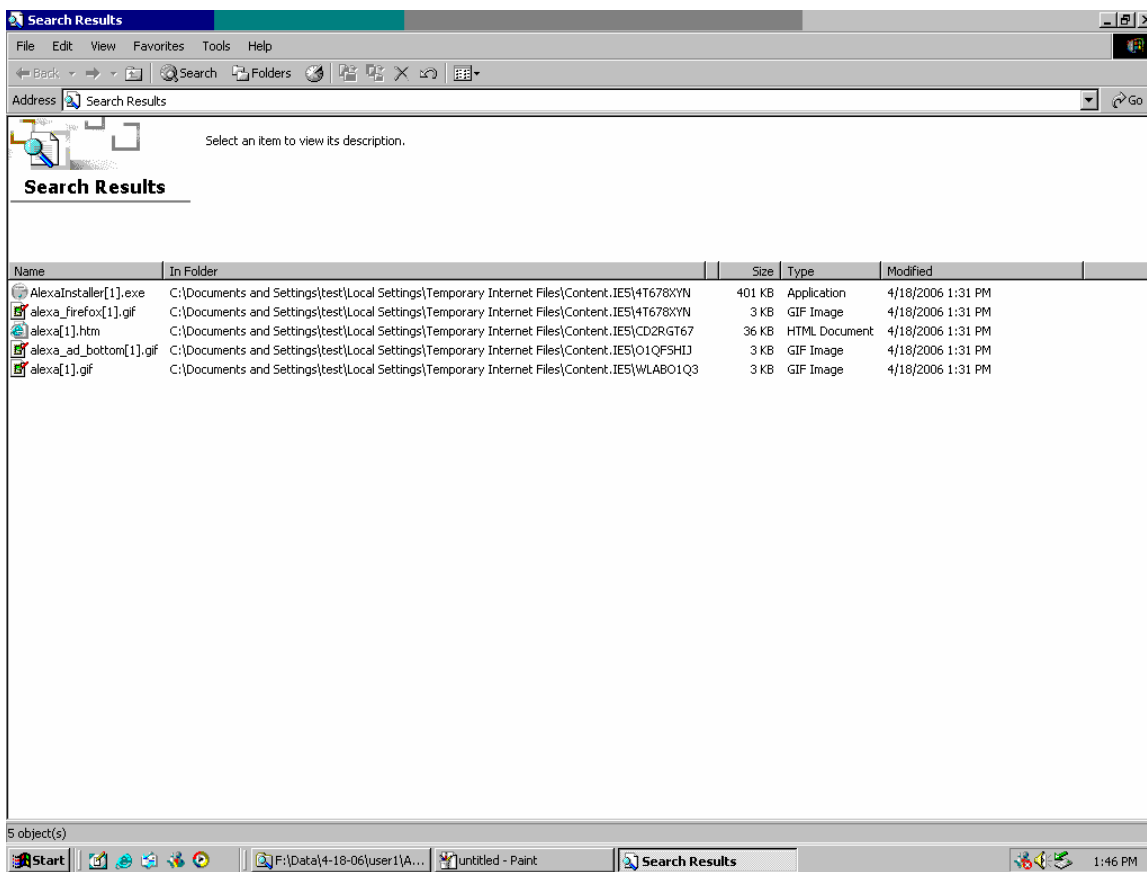


Figure J-2 – Files associated with the Alexa toolbar.

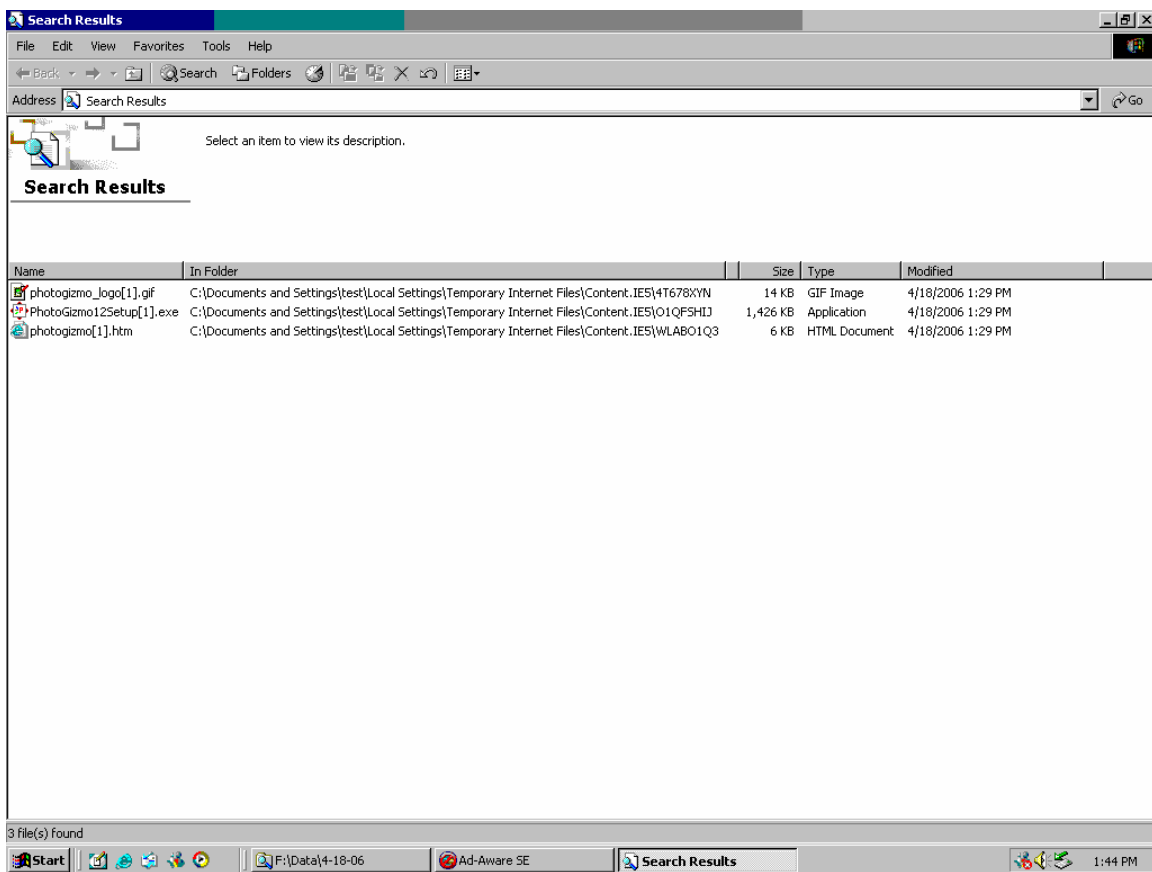


Figure J-3 – Files associated with the Photo Gizmo / Preclick malware application.

4-18-2006 1:32:25 PM - Scan started. (Full System Scan)

MRU List Object Recognized!
Location: : C:\Documents and Settings\Administrator\Application Data\microsoft\office\recent
Description : list of recently opened documents using microsoft office

MRU List Object Recognized!
Location: : C:\Documents and Settings\Administrator\recent
Description : list of recently opened documents

MRU List Object Recognized!
Location: :
software\microsoft\directdraw\mostrecentapplication
Description : most recent application to use microsoft directdraw

MRU List Object Recognized!
Location: : S-1-5-21-2025429265-839522115-1060284298-500\software\microsoft\internet explorer
Description : last download directory used in microsoft internet explorer

MRU List Object Recognized!
Location: : S-1-5-21-2025429265-839522115-1060284298-500\software\microsoft\internet explorer\typedurls
Description : list of recently entered addresses in microsoft internet explorer

MRU List Object Recognized!
Location: : S-1-5-21-2025429265-839522115-1060284298-500\software\microsoft\mediaplayer\preferences
Description : last playlist index loaded in microsoft windows media player

MRU List Object Recognized!
Location: : S-1-5-21-2025429265-839522115-1060284298-500\software\microsoft\mediaplayer\preferences
Description : last playlist loaded in microsoft windows media player

MRU List Object Recognized!
Location: : S-1-5-21-2025429265-839522115-1060284298-500\software\microsoft\microsoft management console\recent file list
Description : list of recent snap-ins used in the microsoft management console


```

FilePath          : \??\C:\WINNT\system32\
ProcessID         : 168
ThreadCreationTime : 4-18-2006 6:17:18 PM
BasePriority      : Normal

#:3 [winlogon.exe]
FilePath          : \??\C:\WINNT\system32\
ProcessID         : 164
ThreadCreationTime : 4-18-2006 6:17:19 PM
BasePriority      : High

#:4 [services.exe]
FilePath          : C:\WINNT\system32\
ProcessID         : 216
ThreadCreationTime : 4-18-2006 6:17:20 PM
BasePriority      : Normal
FileVersion       : 5.00.2195.7035
ProductVersion    : 5.00.2195.7035
ProductName        : Microsoft(R) Windows (R) 2000 Operating System
CompanyName        : Microsoft Corporation
FileDescription    : Services and Controller app
InternalName       : services.exe
LegalCopyright     : Copyright (C) Microsoft Corp. 1981-1999
OriginalFilename   : services.exe

#:5 [lsass.exe]
FilePath          : C:\WINNT\system32\
ProcessID         : 228
ThreadCreationTime : 4-18-2006 6:17:20 PM
BasePriority      : Normal
FileVersion       : 5.00.2195.7011
ProductVersion    : 5.00.2195.7011
ProductName        : Microsoft(R) Windows (R) 2000 Operating System
CompanyName        : Microsoft Corporation
FileDescription    : LSA Executable and Server DLL (Export Version)
InternalName       : lsasrv.dll and lsass.exe
LegalCopyright     : Copyright (C) Microsoft Corp. 1981-1999
OriginalFilename   : lsasrv.dll and lsass.exe

#:6 [svchost.exe]
FilePath          : C:\WINNT\system32\
ProcessID         : 404
ThreadCreationTime : 4-18-2006 6:17:23 PM
BasePriority      : Normal
FileVersion       : 5.00.2134.1
ProductVersion    : 5.00.2134.1
ProductName        : Microsoft(R) Windows (R) 2000 Operating System
CompanyName        : Microsoft Corporation
FileDescription    : Generic Host Process for Win32 Services
InternalName       : svchost.exe
LegalCopyright     : Copyright (C) Microsoft Corp. 1981-1999
OriginalFilename   : svchost.exe

```

```

#:7 [spoolsv.exe]
  FilePath      : C:\WINNT\system32\
  ProcessID     : 436
  ThreadCreationTime : 4-18-2006 6:17:23 PM
  BasePriority   : Normal
  FileVersion   : 5.00.2195.7059
  ProductVersion : 5.00.2195.7059
  ProductName   : Microsoft(R) Windows (R) 2000 Operating System
  CompanyName   : Microsoft Corporation
  FileDescription : Spooler SubSystem App
  InternalName  : spoolss.exe
  LegalCopyright : Copyright (C) Microsoft Corp. 1981-1999
  OriginalFilename : spoolss.exe

#:8 [svchost.exe]
  FilePath      : C:\WINNT\System32\
  ProcessID     : 468
  ThreadCreationTime : 4-18-2006 6:17:23 PM
  BasePriority   : Normal
  FileVersion   : 5.00.2134.1
  ProductVersion : 5.00.2134.1
  ProductName   : Microsoft(R) Windows (R) 2000 Operating System
  CompanyName   : Microsoft Corporation
  FileDescription : Generic Host Process for Win32 Services
  InternalName  : svchost.exe
  LegalCopyright : Copyright (C) Microsoft Corp. 1981-1999
  OriginalFilename : svchost.exe

#:9 [cfsservice.exe]
  FilePath      : C:\Program Files\GFI\System Integrity Monitor
3\
  ProcessID     : 484
  ThreadCreationTime : 4-18-2006 6:17:23 PM
  BasePriority   : Normal
  FileVersion   : 1, 0, 0, 1
  ProductVersion : 1.1
  ProductName   : GFI LANguard System Integrity Checker
  CompanyName   : GFI Software Ltd.
  FileDescription : GFI LANguard System Integrity Checker agent
service
  InternalName  : CFService1.1
  LegalCopyright : Copyright 2002
  OriginalFilename : CFService.EXE

#:10 [regsvc.exe]
  FilePath      : C:\WINNT\system32\
  ProcessID     : 524
  ThreadCreationTime : 4-18-2006 6:17:25 PM
  BasePriority   : Normal
  FileVersion   : 5.00.2195.6701
  ProductVersion : 5.00.2195.6701
  ProductName   : Microsoft(R) Windows (R) 2000 Operating System
  CompanyName   : Microsoft Corporation

```

FileDescription : Remote Registry Service
InternalName : regsvc
LegalCopyright : Copyright (C) Microsoft Corp. 1981-1999
OriginalFilename : REGSVC.EXE

#:11 [mstask.exe]

FilePath : C:\WINNT\system32\
ProcessID : 540
ThreadCreationTime : 4-18-2006 6:17:25 PM
BasePriority : Normal
FileVersion : 4.71.2195.6972
ProductVersion : 4.71.2195.6972
ProductName : Microsoft® Windows® Task Scheduler
CompanyName : Microsoft Corporation
FileDescription : Task Scheduler Engine
InternalName : TaskScheduler
LegalCopyright : Copyright (C) Microsoft Corp. 1997
OriginalFilename : mstask.exe

#:12 [winmgmt.exe]

FilePath : C:\WINNT\System32\WBEM\
ProcessID : 588
ThreadCreationTime : 4-18-2006 6:17:25 PM
BasePriority : Normal
FileVersion : 1.50.1085.0100
ProductVersion : 1.50.1085.0100
ProductName : Windows Management Instrumentation
CompanyName : Microsoft Corporation
FileDescription : Windows Management Instrumentation
InternalName : WINMGMT
LegalCopyright : Copyright (C) Microsoft Corp. 1995-1999

#:13 [svchost.exe]

FilePath : C:\WINNT\system32\
ProcessID : 612
ThreadCreationTime : 4-18-2006 6:17:26 PM
BasePriority : Normal
FileVersion : 5.00.2134.1
ProductVersion : 5.00.2134.1
ProductName : Microsoft(R) Windows (R) 2000 Operating System
CompanyName : Microsoft Corporation
FileDescription : Generic Host Process for Win32 Services
InternalName : svchost.exe
LegalCopyright : Copyright (C) Microsoft Corp. 1981-1999
OriginalFilename : svchost.exe

#:14 [explorer.exe]

FilePath : C:\WINNT\
ProcessID : 1020
ThreadCreationTime : 4-18-2006 6:30:30 PM
BasePriority : Normal
FileVersion : 5.00.3700.6690
ProductVersion : 5.00.3700.6690
ProductName : Microsoft(R) Windows (R) 2000 Operating System

Object : software\microsoft\internet
explorer\extensions\{c95fe080-8f5d-11d2-a20b-00aa003c157a}

Alexa Object Recognized!

Type : RegValue
Data :
TAC Rating : 5
Category : Data Miner
Comment :
Rootkey : HKEY_LOCAL_MACHINE
Object : software\microsoft\internet
explorer\extensions\{c95fe080-8f5d-11d2-a20b-00aa003c157a}
Value : MenuStatusBar

Alexa Object Recognized!

Type : RegValue
Data :
TAC Rating : 5
Category : Data Miner
Comment :
Rootkey : HKEY_LOCAL_MACHINE
Object : software\microsoft\internet
explorer\extensions\{c95fe080-8f5d-11d2-a20b-00aa003c157a}
Value : Script

Alexa Object Recognized!

Type : RegValue
Data :
TAC Rating : 5
Category : Data Miner
Comment :
Rootkey : HKEY_LOCAL_MACHINE
Object : software\microsoft\internet
explorer\extensions\{c95fe080-8f5d-11d2-a20b-00aa003c157a}
Value : clsid

Alexa Object Recognized!

Type : RegValue
Data :
TAC Rating : 5
Category : Data Miner
Comment :
Rootkey : HKEY_LOCAL_MACHINE
Object : software\microsoft\internet
explorer\extensions\{c95fe080-8f5d-11d2-a20b-00aa003c157a}
Value : Icon

Alexa Object Recognized!

Type : RegValue
Data :
TAC Rating : 5
Category : Data Miner
Comment :
Rootkey : HKEY_LOCAL_MACHINE

Tracking Cookie Object Recognized!
Type : IECache Entry
Data : test@atdmt[2].txt
TAC Rating : 3
Category : Data Miner
Comment :
Value : C:\Documents and
Settings\test\Cookies\test@atdmt[2].txt

Tracking Cookie Object Recognized!
Type : IECache Entry
Data : test@fastclick[2].txt
TAC Rating : 3
Category : Data Miner
Comment :
Value : C:\Documents and
Settings\test\Cookies\test@fastclick[2].txt

Tracking Cookie Object Recognized!
Type : IECache Entry
Data : test@hitbox[2].txt
TAC Rating : 3
Category : Data Miner
Comment :
Value : C:\Documents and
Settings\test\Cookies\test@hitbox[2].txt

Tracking Cookie Object Recognized!
Type : IECache Entry
Data : test@phg.hitbox[1].txt
TAC Rating : 3
Category : Data Miner
Comment :
Value : C:\Documents and
Settings\test\Cookies\test@phg.hitbox[1].txt

Alexa Object Recognized!
Type : File
Data : AlexaInstaller[1].exe
TAC Rating : 5
Category : Data Miner
Comment :
Object : C:\Documents and Settings\test\Local
Settings\Temporary Internet Files\Content.IE5\4T678XYN\

ActivShopper Object Recognized!
Type : File
Data : setupactiv[1].exe
TAC Rating : 1
Category : Misc
Comment :

APPENDIX L

Ethereal network traffic analysis of both the Windows 2000 Professional and Knoppix 4.0.2 LiveCD platforms.

Figure L-1 is a typical packet capture for the Knoppix 4.0.2 LiveCD platform. The amount of packets is significantly less for this platform than it is for Windows.

The screenshot shows the Ethereal interface with a filter set to 'ip.addr==192.168.1.37'. The packet list shows several NBNS and ICMP packets. Packet 111 is selected, and its details are shown below:

```
Frame 111 (92 bytes on wire, 92 bytes captured)
Ethernet II, Src: 192.168.1.36 (00:0a:e4:f1:3d:16), Dst: 192.168.1.37 (00:b0:d0:b4:c1:7f)
Internet Protocol, Src: 192.168.1.36 (192.168.1.36), Dst: 192.168.1.37 (192.168.1.37)
User Datagram Protocol, Src Port: netbios-ns (137), Dst Port: netbios-ns (137)
Source port: netbios-ns (137)
Destination port: netbios-ns (137)
Length: 58
Checksum: 0xbc53 [correct]
NetBIOS Name Service
0000 00 b0 d0 b4 c1 7f 00 0a e4 f1 3d 16 08 00 45 00 ..... ..=...E.
0010 00 4e 01 c0 00 00 80 11 b5 45 c0 a8 01 24 c0 a8 .N.....E...$.
0020 01 25 00 89 00 00 89 00 3a bc 53 80 41 00 00 01 .%.....:S.A....
0030 00 00 00 00 00 00 20 43 4b 41 41 41 41 41 41 41 ..... C KAAAAAAAA
0040 41 41 41 41 41 41 41 41 41 41 41 41 41 41 41 41 AAAAAAAAAA AAAAAAAAAA
0050 41 41 41 41 41 41 41 00 00 21 00 01 AAAAAAA .!..
```

Figure L-1: Knoppix 4.0.2 LiveCD ethereal packet capture

Figure L-2 is a typical packet capture for the Windows 2000 Professional platform. There is a significant amount of network activity in comparison with the LiveCD platform.

The screenshot shows the Ethereal network protocol analyzer interface. The title bar reads "user2-4-28-06-win2k-ethereal - Ethereal". The menu bar includes File, Edit, View, Go, Capture, Analyze, Statistics, and Help. The toolbar contains various icons for file operations and network analysis. A filter is applied: "ip.addr==192.168.1.37".

No.	Time	Source	Destination	Protocol	Info
512	445.954897	192.168.1.36	192.168.1.37	SMB	Logoff Andx Request
514	445.956600	192.168.1.36	192.168.1.37	SMB	Tree Disconnect Request
516	445.957133	192.168.1.36	192.168.1.37	TCP	1055 > netbios-ssn [FIN, ACK] Seq=1360 Ack=11
518	445.957446	192.168.1.36	192.168.1.37	TCP	1055 > netbios-ssn [ACK] Seq=1361 Ack=1188 wi
25	17.863670	192.168.1.37	192.168.1.255	BROWSE	Get Backup List Request
26	17.863905	192.168.1.37	192.168.1.255	NBNS	Name query NB WORKGROUP<1b>
28	18.613417	192.168.1.37	192.168.1.255	NBNS	Name query NB WORKGROUP<1b>
29	19.364516	192.168.1.37	192.168.1.255	NBNS	Name query NB WORKGROUP<1b>
39	28.659101	192.168.1.37	192.168.1.255	BROWSE	Domain/workgroup Announcement WORKGROUP, NT W
325	328.663598	192.168.1.37	192.168.1.255	BROWSE	Domain/workgroup Announcement WORKGROUP, NT W
428	422.816364	192.168.1.37	192.168.1.255	NBNS	Name query NB ROB<00>
432	422.816914	192.168.1.37	192.168.1.36	BROWSE	Get Backup List Response
438	425.064814	192.168.1.37	192.168.1.36	TCP	netbios-ssn > 1052 [SYN, ACK] Seq=0 Ack=1 win
440	425.065225	192.168.1.37	192.168.1.36	NBSS	Positive session response
442	425.070355	192.168.1.37	192.168.1.36	SMB	Negotiate Protocol Response
444	425.078608	192.168.1.37	192.168.1.36	SMB	Session Setup Andx Response, NTLMSSP_CHALLENG

The selected packet (No. 25) is expanded to show the following details:

- Frame 25 (216 bytes on wire, 216 bytes captured)
- Ethernet II, Src: 192.168.1.37 (00:b0:d0:b4:c1:7f), Dst: Broadcast (ff:ff:ff:ff:ff:ff)
- Internet Protocol, Src: 192.168.1.37 (192.168.1.37), Dst: 192.168.1.255 (192.168.1.255)
- User Datagram Protocol, Src Port: netbios-dgm (138), Dst Port: netbios-dgm (138)
 - source port: netbios-dgm (138)
 - Destination port: netbios-dgm (138)
 - Length: 182
 - Checksum: 0x21b9 [correct]
 - NetBIOS Datagram Service
 - SMB (Server Message Block Protocol)

The hex dump and ASCII representation of the packet data are shown at the bottom:

```

0020 01 ff 00 8a 00 8a 00 b6 21 b9 11 0e 80 31 c0 a8  ....!...!...1..
0030 01 25 00 8a 00 a0 00 00 20 46 41 46 48 45 49 46  .%. .... FAFHEIF
0040 45 45 46 46 44 46 45 45 43 45 50 46 49 43 41 43  EEFDFEE CEPFICAC
0050 41 43 41 43 41 43 41 41 41 00 20 46 48 45 50 46  ACACACAA A. FHEPF
0060 43 45 4c 45 48 46 43 45 50 46 46 46 41 43 41 43  CELEHFCE PFFFACAC
0070 41 43 41 43 41 43 41 43 41 42 4e 00 ff 53 4d 42  ACACACAC ABN..SMB
0080 25 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  %. ....
0090 00 00 00 00 00 00 00 00 00 00 00 00 11 00 00 06  .....
00a0 00 00 00 00 00 00 00 00 00 e8 03 00 00 00 00 00  .....
00b0 00 00 00 06 00 56 00 03 00 01 00 01 00 02 00 17  .....V..
00c0 00 5c 4d 41 49 4c 53 4c 4f 54 5c 42 52 4f 57 53  .\MAILSL OT\BROWS

```

Destination Port (udp.dstport), P: 703 D: 67 M: 0

Figure L-2: Windows 2000 Professional ethereal packet capture

Appendix M

Sample screen shots of the contents of the Temporary Internet Files directory for the Windows platform.

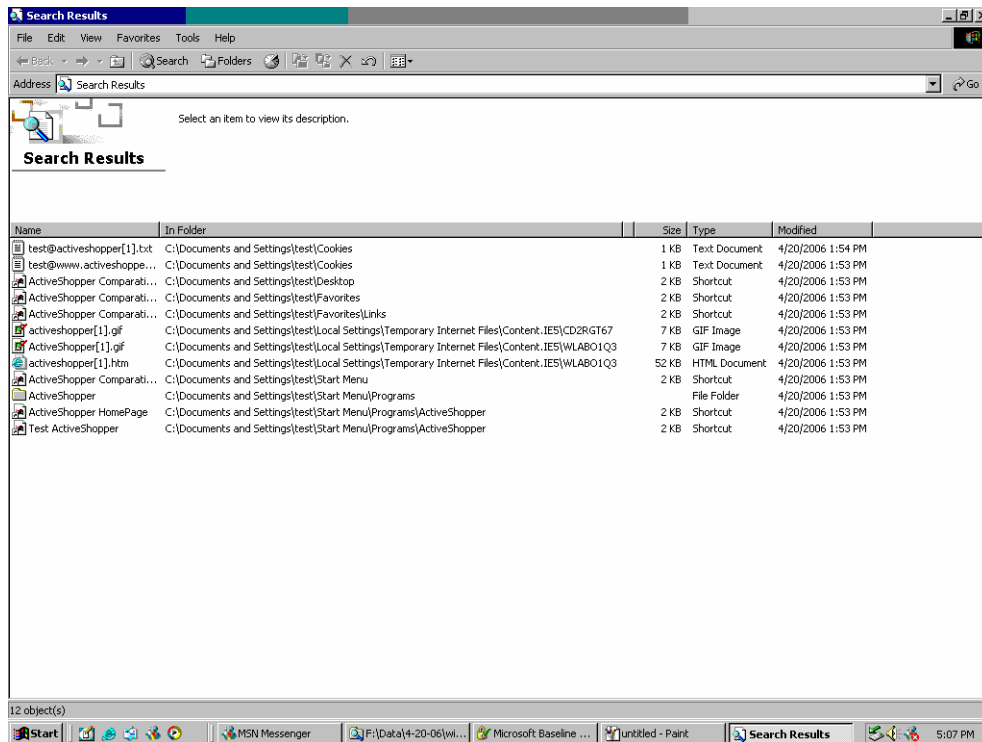


Figure M-1: ActiveShopper

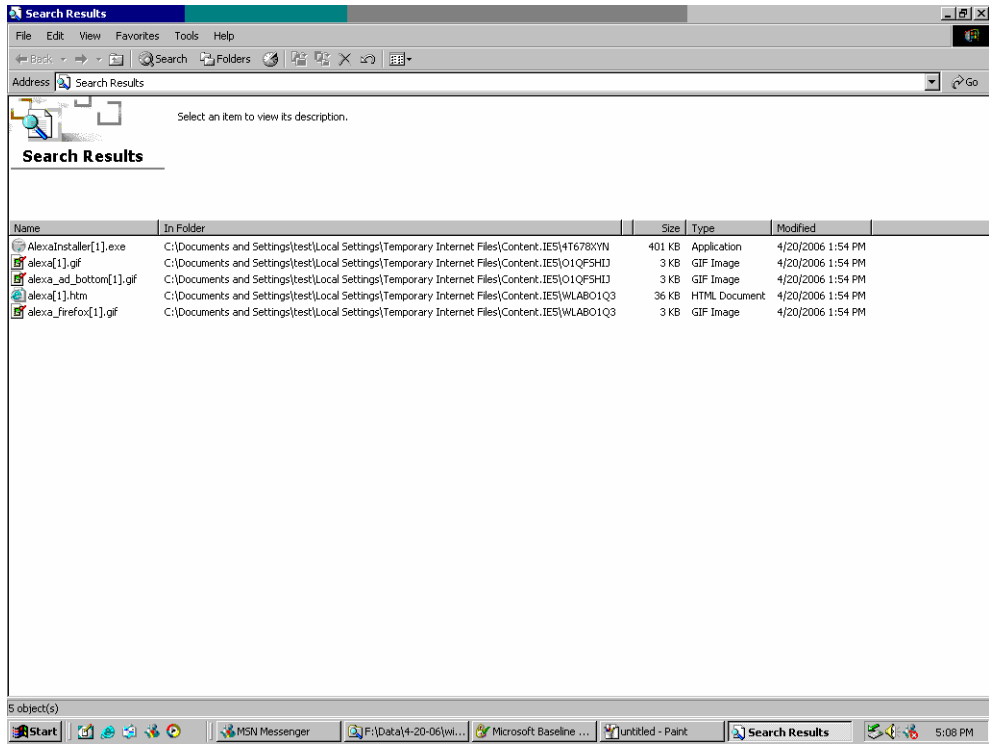


Figure M-2: Alexa toolbar

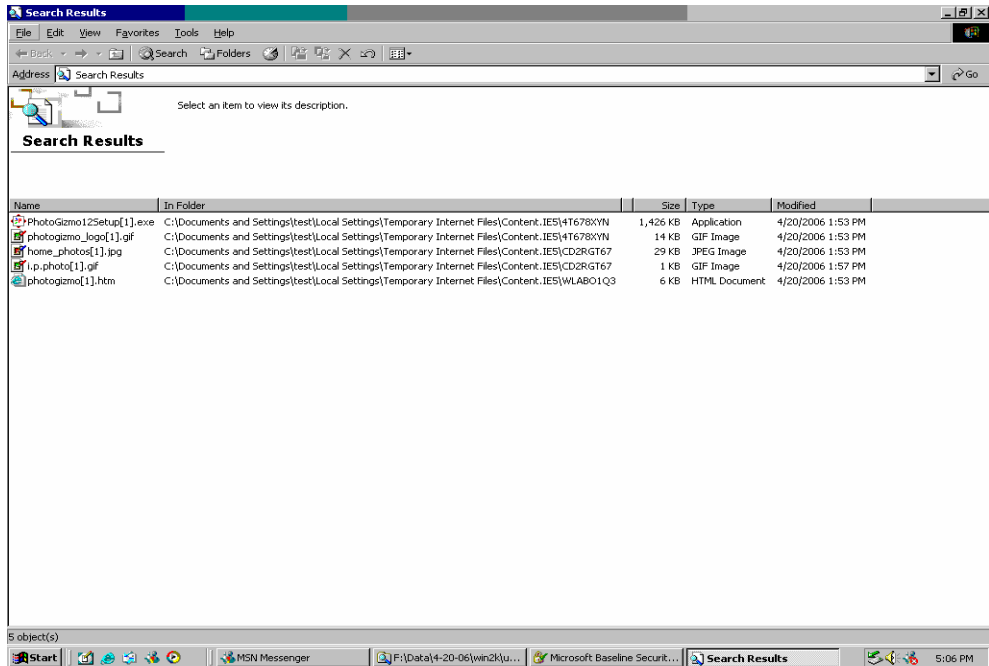


Figure M-3: PhotoGizmo (aka Preclick Silver Photo Organizer)

Appendix N

Sample screen shots of the Internet Cache directory for the Knoppix LiveCD platform.

Figure N-1: Disk cache device (Mozilla Firefox)

Number of entries: 330
Maximum storage size: 5000 KiB
Storage in use: 3094 KiB
Cache Directory: /home/knoppix/.mozilla/firefox/3d4ef4xp.default/Cache

Key:
<http://login.live.com/ThirdPartyCookieCheck.srf?vv=400&tpc=1195554953&lc=1033>

Data size: 65 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:29 2006
Expires: Wed Dec 31 19:00:00 1969

Key:
[id=4447c6c7&uri=http://by24fd.bay24.hotmail.msn.com/cgi-bin/doattach](http://by24fd.bay24.hotmail.msn.com/cgi-bin/doattach?id=4447c6c7&uri=http://by24fd.bay24.hotmail.msn.com/cgi-bin/doattach)

Data size: 4678 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:22 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://gfx2.hotmail.com/i.p.folder.drafts.gif>
Data size: 240 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.cal.task.gif>
Data size: 249 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key:
<http://z1.adserver.com/w/cp.x;rid=443;tid=6;ev=1;dt=2;ac=42;c=623;>

Data size: 0 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:56 2006
Expires: Wed Dec 31 19:00:00 1969

Key: http://www.mozilla.org/images/download_back.gif
Data size: 4156 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:11 2006
Expires: Thu Apr 20 14:40:10 2006

Key: <http://www.alexa.com/favicon.ico>
Data size: 0 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:29 2006
Expires: Wed Dec 31 19:00:00 1969

Key: http://client.alexa.com/common/images/single_dot.gif
Data size: 44 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:24 2006
Expires: Sat May 27 20:54:13 2006

Key: <http://client.alexa.com/common/images/gray-fade.gif>
Data size: 312 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:24 2006
Expires: Sun May 28 08:40:08 2006

Key: <http://client.alexa.com/common/images/now-open.jpg>
Data size: 9285 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:24 2006
Expires: Thu Apr 27 20:13:43 2006

Key: <http://client.alexa.com/common/js/swap.js>
Data size: 4079 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:23 2006
Expires: Mon Apr 24 08:13:04 2006

Key: <http://client.alexa.com/common/js/enum.js>
Data size: 7313 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:23 2006
Expires: Sat May 27 18:27:21 2006

Key: <http://rad.msn.com/ADSAdClient31.dll?GetSAd=&PG=MSNMMT>
Data size: 791 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://rad.msn.com/ADSAdClient31.dll?GetSAd=&PG=MSN9UT>
Data size: 753 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:31 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://gfx2.hotmail.com/i.p.send.gif>
Data size: 149 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:02 2006
Expires: Sun Apr 17 13:43:02 2016

Key: <http://rmd.atdmt.com/tl//DocumentDotWrite.js>
Data size: 50 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:00 2006
Expires: Sun Apr 23 00:54:44 2006

Key: <http://gfx2.hotmail.com/i.p.arr.left.gif>
Data size: 56 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.cal.note.gif>
Data size: 232 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/tab.separator.off.gif>
Data size: 59 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: <http://gfx2.hotmail.com/tab.separator.end.gif>
Data size: 46 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: <http://gfx2.hotmail.com/tab.separator.on.l.gif>
Data size: 52 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: <http://gfx2.hotmail.com/tab.separator.on.r.gif>
Data size: 57 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: http://www.google-analytics.com/_utm.gif?utmwv=1&utmn=1251633533&utmsr=1024x768&utmhc=16-bit&utmhl=en-us&utmje=1&utmfl=-&utmdt=ActiveShopper%20-%20Sample%20Page&utmhn=www.activeshopper.com&utmrl=-

http://www.activeshopper.com/images/5Cbtn_compare_prices1.gif
&utmip=/sample.asp?counter=yes&utmcc=utma%3D67204993.1740301624
.1145554781.1145554781.1145554781.1%3B%2B_utmb%3D67204993%3B%2B_utmc%
3D67204993%3B%2B_utmz%3D67204993.1145554781.1.1.utmccn%3D(direct)%7Cut
mcsr%3D(direct)%7Cutmcmd%3D(none)%3B%2B

Data size: 35 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:06 2006
Expires: Wed Dec 31 19:00:00 1969

Key:

http://www.activeshopper.com/images/btn_rss.gif

Data size: 706 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Fri May 5 07:54:31 2006

Key: <http://download.alexa.com/images/bg-box.gif>

Data size: 986 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:39 2006
Expires: Wed May 3 04:34:58 2006

Key: <http://www.alexa.com/favicon.ico>

Data size: 0 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:40 2006
Expires: Mon May 15 06:10:19 2006

Key: <http://www.ebaumsworld.com/images/tonyline.gif>

Data size: 8509 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:46 2006
Expires: Sat May 20 17:58:55 2006

Key: <http://www.ebaumsworld.com/images/searchico.gif>

Data size: 299 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:46 2006
Expires: Mon Jun 19 11:05:07 2006

Key:

<http://stb.msn.com/i/F0/F283F73959243E1160AC2B1E2E9BBF.jpg>

Data size: 2401 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Mon Dec 31 18:00:14 2029

Key: <http://stc.msn.com/br/ushp/css/2/USHP.css>
Data size: 2158 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:30 2006
Expires: Thu May 4 13:43:30 2006

Key: <http://gfx2.hotmail.com/i.p.downarrow.gif>
Data size: 52 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://spe.atdmt.com/images/pixel.gif>
Data size: 42 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:56 2006
Expires: Sun Apr 23 14:16:40 2006

Key: http://gfx2.hotmail.com/lgo_msn_118x35.gif
Data size: 914 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: <http://www.mozilla.org/images/mozilla-16.png>
Data size: 580 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:10 2006
Expires: Thu Apr 20 14:40:10 2006

Key: http://www.activeshopper.com/images/ic_send.gif
Data size: 227 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:39 2006
Expires: Wed May 24 07:37:54 2006

Key: <http://www.activeshopper.com/menus/iemenu.js>
Data size: 29910 bytes
Fetch count: 3
Last modified: Thu Apr 20 13:39:39 2006
Expires: Mon Jan 22 10:15:45 2018

Key: http://client.alexa.com/common/js/search_functions.js
Data size: 762 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:22 2006
Expires: Fri Aug 11 11:12:45 2006

Key: http://www.photogizmo.com/images/home_copy.gif
Data size: 3877 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:37:24 2006
Expires: Wed Jul 26 01:56:24 2006

Key: <http://www.ebaumsworld.com/favicon.ico>
Data size: 318 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:46 2006
Expires: Thu Jul 13 10:04:33 2006

Key: <http://www.ebaumsworld.com/images/neworange.gif>
Data size: 57 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:46 2006
Expires: Thu May 25 03:11:58 2006

Key: <http://stc.msn.com/br/ushp/css/1/simple.css>
Data size: 559 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:30 2006
Expires: Thu May 4 13:43:30 2006

Key:
http://global.msads.net/ads/33/0000000033_0000000000000000261548.gif
Data size: 636 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Fri Apr 20 13:42:55 2007

Key: http://www.mozilla.org/images/key-point_bl.gif
Data size: 102 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:11 2006
Expires: Thu Apr 20 14:40:10 2006

Key: http://www.mozilla.org/images/key-point_br.gif
Data size: 386 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:11 2006
Expires: Thu Apr 20 14:40:10 2006

Key: http://www.mozilla.org/images/key-point_tl.gif
Data size: 103 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:11 2006
Expires: Thu Apr 20 14:40:10 2006

Key: http://www.mozilla.org/images/key-point_tr.gif
Data size: 107 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:11 2006
Expires: Thu Apr 20 14:40:10 2006

Key: http://www.mozilla.org/images/header_bl.png
Data size: 2391 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:10 2006
Expires: Thu Apr 20 14:40:10 2006

Key: <http://www.activeshopper.com/includes/tooltip.js>
Data size: 6532 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:43 2006
Expires: Sat Dec 5 21:47:05 2009

Key: <http://www.activeshopper.com/favicon.ico>
Data size: 3638 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:41 2006
Expires: Sun Jun 4 16:31:56 2006

Key: <http://download.alexa.com/images/bg-box-full.gif>
Data size: 2711 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:40 2006
Expires: Mon May 15 01:42:03 2006

Key: <http://client.alexa.com/common/css/styles.css>
Data size: 20743 bytes
Fetch count: 3
Last modified: Thu Apr 20 13:38:22 2006
Expires: Sun Apr 23 13:42:22 2006

Key: <http://www.preclick.com/PhotoGizmo12Setup.exe>
Data size: 1459712 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:08 2006
Expires: Sun Jun 25 10:34:22 2006

Key: <http://gfx2.hotmail.com/i.p.junkmail.gif>
Data size: 249 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: http://www.mozilla.org/images/key-point_back.gif
Data size: 94 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:11 2006
Expires: Thu Apr 20 14:40:10 2006

Key:
<http://www.googleadservices.com/pagead/conversion/1070666072/?random=1145554806596&value=1&label=Lead&hl=en&gl=US&fmt=1&bg=FFFFFF>
Data size: 77 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:06 2006
Expires: Wed Dec 31 19:00:00 1969

Key: http://www.photogizmo.com/images/home_photos.jpg
Data size: 29478 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:37:24 2006
Expires: Wed Jul 26 22:59:18 2006

Key: http://www.ebaumsworld.com/images/red_tri2.gif
Data size: 805 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:46 2006
Expires: Mon Jun 19 11:05:10 2006

Key:
<http://h.msn.com/c.gif?RF=http%3a%2f%2fby24fd%2ebay24%2ehotmail%2emsn%2ecom%2fcgi%2dbin%2fcompose%3f%26curmbox%3dF000000001%26a%3d9ce4846151ca13adbaf53f3e1f79fc6b6563ab09dc0c32a4994cf4339dc0ed9&PI=44364&DI=7474&PS=64833>

Data size: 42 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:16 2006
Expires: Wed Dec 31 19:00:00 1969

Key: http://www.activeshopper.com/images/btn_tour.gif
Data size: 3910 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:44 2006
Expires: Thu May 25 03:11:22 2006

Key: <http://www.activeshopper.com/>
Data size: 52204 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:38 2006
Expires: Wed Dec 31 19:00:00 1969

Key:
<http://by24fd.bay24.hotmail.msn.com/cgi-bin/premail?id=4447c6c8&uri=http://by24fd.bay24.hotmail.msn.com/cgi-bin/premail>

Data size: 4612 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:25 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://gfx2.hotmail.com/i.p.attachfile.gif>
Data size: 239 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:02 2006
Expires: Sun Apr 17 13:43:02 2016

Key: <http://gfx2.hotmail.com/i.p.tools.gif>
Data size: 168 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:02 2006
Expires: Sun Apr 17 13:43:02 2016

Key: <http://gfx2.hotmail.com/i.p.cal.meet.req.gif>
Data size: 248 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006

Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.greecard.gif>

Data size: 232 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:42:59 2006

Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.black.b.gif>

Data size: 46 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:42:55 2006

Expires: Sun Apr 17 13:42:54 2016

Key: <https://login.live.com/favicon.ico>

Data size: 0 bytes

Fetch count: 5

Last modified: Thu Apr 20 13:42:52 2006

Expires: No expiration time

Key: <http://www.mozilla.org/css/cavendish/template.css>

Data size: 5469 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:40:10 2006

Expires: Thu Apr 20 14:40:09 2006

Key: http://www.activeshopper.com/images/menu_bg_on.gif

Data size: 46 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:39:44 2006

Expires: Thu May 25 22:36:35 2006

Key: http://download.alexa.com/images/logo_sm.gif

Data size: 1651 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:38:39 2006

Expires: Sat May 13 03:42:05 2006

Key: <http://stj.msn.com/br/ushp/js/1/HomeTail.js>

Data size: 106 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:43:32 2006

Expires: Thu May 4 13:43:32 2006

Key: <http://rad.msn.com/ADSAdClient31.dll?GetSAd=&PG=MSNSUR>

Data size: 398 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:43:32 2006

Expires: Wed Dec 31 19:00:00 1969

Key:

<http://stb.msn.com/i/82/ABCC23A480E62ED350B2ECA2797D67.jpg>

Data size: 2343 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:43:32 2006
Expires: Mon Dec 31 18:00:13 2029

Key:

<http://view.atdmt.com/iview/msnnkhac001300x250xHOTM4400114msn/direct;wi.300;hi.250/01>

Data size: 295 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:26 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://gfx2.hotmail.com/i.p.trash.gif>

Data size: 549 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/spacer.gif>

Data size: 42 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key:

http://c.msn.com/c.gif?na=1137&nc=9523&ps=8312&di=1070&pi=44364&xtpid=1005&TP=http%3a%2f%2fx.cb2.msn.com%2ffooter.armx&RF=http%3a%2f%2flogin.live.com%2flogin.srf%3fid%3d2%26svc%3dmail%26cbid%3d24325%26msppjph%3d1%26tw%3d0%26fs%3d1%26fsa%3d1%26fsat%3d1296000%26lc%3d1033%26_lang%3dEN%26vv%3d400

Data size: 42 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:44:57 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://loginnet.passport.com/favicon.ico>

Data size: 0 bytes
Fetch count: 11
Last modified: Thu Apr 20 13:42:27 2006
Expires: No expiration time

Key:

http://www.activeshopper.com/images/partner_logos/ActiveShopper.gif

Data size: 6332 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:43 2006
Expires: Thu May 4 01:39:08 2006

Key: <http://stats.hitbox.com/js/hbp.js>

Data size: 4130 bytes
Fetch count: 3
Last modified: Thu Apr 20 13:39:40 2006
Expires: Mon Sep 4 01:29:39 2006

Key: <http://www.activeshopper.com/images/spacer.gif>

Data size: 43 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Thu May 25 16:21:06 2006

Key:

http://www.activeshopper.com/images/partner_logos/activeshopper.gif

Data size: 6332 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:39 2006
Expires: Thu May 4 01:39:04 2006

Key: <http://www.ebaumsworld.com/images/tribull3.gif>

Data size: 79 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:45 2006
Expires: Mon Jun 19 11:04:57 2006

Key: <http://stc.msn.com/br/ushp/css/2/Decoration/Bullet.gif>

Data size: 43 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:31 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://stj.msn.com/br/ushp/js/2/Gtracking.js>

Data size: 5787 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:31 2006
Expires: Thu May 4 13:43:30 2006

Key: <http://stc.msn.com/br/ushp/css/1/blank.css>

Data size: 0 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:30 2006
Expires: Thu May 4 13:43:30 2006

Key: <http://stc.msn.com/br/ushp/css/1/slideshow.css>

Data size: 386 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:30 2006
Expires: Thu May 4 13:43:30 2006

Key: <http://spe.atdmt.com/b/MSMSNMATCVTG/300x250.1a.jpg>

Data size: 17865 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:26 2006
Expires: Sat Apr 22 23:12:14 2006

Key:

[id=4447c6c6&uri=http://by24fd.bay24.hotmail.msn.com/cgi-bin/premail](http://by24fd.bay24.hotmail.msn.com/cgi-bin/premail?id=4447c6c6&uri=http://by24fd.bay24.hotmail.msn.com/cgi-bin/premail)

Data size: 4440 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:16 2006
Expires: Wed Dec 31 19:00:00 1969

Data size: 8112 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:31 2006
Expires: Mon Dec 31 18:00:13 2029

Key: http://gfx1.hotmail.com/icon_checkmark.gif
Data size: 143 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:29 2006
Expires: Sun Apr 17 13:43:29 2016

Key: http://hm.msn.com/3,-E_@09KUW3_TV2%5BLL8T4S.jpg
Data size: 2020 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:26 2006
Expires: Thu Apr 20 15:55:41 2006

Key:
http://spe.atdmt.com/ds/MSMSNMATCLSL/160x600_pop_part.gif?ver=1
Data size: 16077 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:00 2006
Expires: Sat Apr 22 09:35:42 2006

Key: <http://hp.msn.com/c/hotmail/hotmail77x19.gif>
Data size: 362 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:28 2006
Expires: Sat May 27 01:50:35 2006

Key: <http://www.mozilla.org/css/cavendish/home.css>
Data size: 1673 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:10 2006
Expires: Thu Apr 20 14:40:10 2006

Key:
http://www.activeshopper.com/images/arrow_bottom_left.gif
Data size: 89 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:43 2006
Expires: Sat Mar 28 22:35:18 2009

Key: http://www.activeshopper.com/images/icons/top_11.gif
Data size: 4111 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Tue May 23 14:51:48 2006

Key: http://www.activeshopper.com/images/icons/top_10.gif
Data size: 3880 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Tue May 23 14:51:48 2006

Key: http://www.activeshopper.com/images/icons/top_09.gif
Data size: 3777 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Tue May 23 14:51:48 2006

Key: http://www.activeshopper.com/images/icons/top_08.gif
Data size: 4345 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Tue May 23 14:51:48 2006

Key: http://www.activeshopper.com/images/icons/top_07.gif
Data size: 4264 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Tue May 23 14:51:48 2006

Key: http://www.activeshopper.com/images/icons/top_06.gif
Data size: 3473 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Tue May 23 14:51:48 2006

Key: http://www.activeshopper.com/images/icons/top_05.gif
Data size: 4524 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Tue May 23 14:51:48 2006

Key: http://www.activeshopper.com/images/icons/top_04.gif
Data size: 3918 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Tue May 23 14:51:48 2006

Key: http://www.activeshopper.com/images/icons/top_03.gif
Data size: 4419 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Tue May 23 14:51:48 2006

Key: http://www.activeshopper.com/images/icons/top_02.gif
Data size: 3976 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Tue May 23 14:51:48 2006

Key: http://www.activeshopper.com/images/icons/top_01.gif
Data size: 4433 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Tue May 23 14:51:48 2006

Key:

<http://img.shopping.com/cctool/PrdImg/images/pr/100X100/00/01/79/0c/5e/24710238.JPG>

Data size: 2234 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Sat May 20 06:48:07 2006

Key:

http://download.alexa.com/index.cgi?mode=error&type=browser&amzn_id=

Data size: 5344 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:42 2006
Expires: Wed Dec 31 19:00:00 1969

Key:

<http://h.msn.com/c.gif?RF=http%3a%2f%2fby24fd%2ebay24%2ehotmail%2emsn%2ecom%2fcgi%2dbin%2fdattach&PI=44364&DI=7474&PS=9621>

Data size: 42 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:26 2006
Expires: Wed Dec 31 19:00:00 1969

Key:

http://adt.m7z.net/37cd6bcbdde22556bbec8235b3d0178d/img/freegiftworld/f-lash/Penguin_728x90.gif

Data size: 14934 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:00 2006
Expires: Fri Apr 21 23:03:42 2006

Key: <http://gfx2.hotmail.com/i.F42B5.gif>

Data size: 172 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://h.msn.com/c.gif?RF=&PI=44364&DI=7474&PS=8313>

Data size: 42 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Wed Dec 31 19:00:00 1969

Key:

<http://rad.msn.com/ADSAdClient31.dll?GetAd?PG=HOTO45?AP=1255?AT=0?SC=PP?LOC=H?ID=000640008F4EF0BD?UC=127>

Data size: 97 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Wed Dec 31 19:00:00 1969

Key: http://www.activeshopper.com/menus/dmb_i.gif

Data size: 43 bytes

Fetch count: 1
Last modified: Thu Apr 20 13:39:39 2006
Expires: Mon Sep 4 22:10:53 2006

Key: http://www.activeshopper.com/menus/dmb_m.gif
Data size: 43 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:39 2006
Expires: Mon Sep 4 22:10:53 2006

Key: <http://www.ebaumsworld.com/images2/feed-icon19x19.gif>
Data size: 1199 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:46 2006
Expires: Tue May 2 10:18:47 2006

Key: <http://www.ebaumsworld.com/images/bookmarksite.gif>
Data size: 313 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:46 2006
Expires: Mon Jun 19 11:06:41 2006

Key:
<http://cdn.fastclick.net/fastclick.net/cid51255/media100281.gif>
Data size: 23467 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:46 2006
Expires: Thu Apr 20 17:23:37 2006

Key:
<http://g.msn.com/0AD0002R/877867.4??PID=3014479&UIT=A&TargetID=1048194&AN=1125140609&PG=MSNREC>
Data size: 0 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Wed Dec 31 19:00:00 1969

Key:
<http://stb.msn.com/i/4F/A16ED3BB7C5C1157DC786D82E7BBCF.gif>
Data size: 1328 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Mon Dec 31 18:00:14 2029

Key:
<http://stb.msn.com/i/8C/F68A2019BBDDA925323D97CFCA6024.jpg>
Data size: 2007 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:31 2006
Expires: Mon Dec 31 18:00:13 2029

Key: <http://gfx2.hotmail.com/i.p.delete.d.gif>
Data size: 306 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:43:02 2006
Expires: Sun Apr 17 13:43:02 2016

Key: <http://by24fd.bay24.hotmail.msn.com/cgi-bin/HotMail?curmbox=F000000001&a=9ce4846151ca13adbaf53f3e1f79fc6b6563ab09dc0c32a4994cf4339dc0ed9&fti=yes>

Data size: 5180 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:58 2006
Expires: Wed Dec 31 19:00:00 1969

Key: http://global.msads.net/ads/11855/0000011855_0000000000000000197093.gif

Data size: 1073 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Fri Apr 20 13:42:55 2007

Key: <http://gfx2.hotmail.com/i.p.writenew.gif>
Data size: 348 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: http://by24fd.bay24.hotmail.msn.com/cgi-bin/dasp/EN/helppane_10210002F.js

Data size: 1439 bytes
Fetch count: 6
Last modified: Thu Apr 20 13:43:25 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://hp.msn.com/c/hotmail/go.gif>
Data size: 474 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:28 2006
Expires: Thu Jun 8 20:23:22 2006

Key: <http://hpc.msn.com/css/hotmail/default.css?v=2>
Data size: 1135 bytes
Fetch count: 8
Last modified: Thu Apr 20 13:42:28 2006
Expires: Wed May 17 06:26:51 2006

Key: <http://www.ebaumsworld.com/images/setashomesm.gif>
Data size: 311 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:46 2006
Expires: Mon Jun 19 11:04:28 2006

Key: <http://ads1.msn.com/library/dap.js>
Data size: 3990 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:30 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://hp.msn.com/global/c/shs/favicon.ico>
Data size: 1406 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:30 2006
Expires: Thu Aug 3 13:22:04 2006

Key: <http://gfx2.hotmail.com/i.p.cancel.gif>
Data size: 330 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:02 2006
Expires: Sun Apr 17 13:43:02 2016

Key: <http://gfx2.hotmail.com/i.p.sort.desc.gif>
Data size: 53 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key:
<http://view.atdmt.com/VON/view/msnkvon0740000115von/direct/01/>
Data size: 0 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:56 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://www.mozilla.org/css/base/template.css>
Data size: 1382 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:09 2006
Expires: Thu Apr 20 14:40:09 2006

Key:
http://phg.hitbox.com/HG?hc=wp189&hb=WR5501288GNM70EN3&cd=1&hv=6&n=home page&vcon=ActiveShopper&bn=Netscape&bv=500&ce=y&ss=1024*768&sc=16&dt=13&sv=13&zo=240&epg=&lm=1145554777000&cy=u&hp=u&ja=y&ln=en-US&prc=&oid=&pl=Java%28TM%29%20Plug-in%201.4.2.06-b03%3Anpdf.so%3A&cp=null&con=&rf=bookmark
Data size: 0 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Wed Dec 31 19:00:00 1969

Key:
<http://img.shopping.com/cctool/PrdImg/images/pr/100X100/00/01/55/31/1c/22360348.JPG>
Data size: 2111 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Thu Jun 8 14:48:29 2006

Key:
<http://img.shopping.com/cctool/PrdImg/images/pr/100X100/00/01/6d/53/8e/23942030.JPG>

Data size: 2982 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Fri May 5 11:49:22 2006

Key: <http://download.alexa.com/index.cgi?p=>
Data size: 7691 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:36 2006
Expires: Wed Dec 31 19:00:00 1969

Key: http://client.alexa.com/common/images/small_bullet.gif
Data size: 75 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:25 2006
Expires: Sat May 27 15:29:56 2006

Key: <http://www.alexa.com/>
Data size: 36210 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:22 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://www.photogizmo.com/images/tourbox.gif>
Data size: 15268 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:37:24 2006
Expires: Wed Jul 26 22:59:18 2006

Key: <http://stj.msn.com/br/gbl/js/1/MozCompat.js>
Data size: 3773 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:30 2006
Expires: Thu May 4 13:43:30 2006

Key:
http://switch.atdmt.com/action/msn_hm_en_US_sent_mail_confirmation
Data size: 42 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:26 2006
Expires: Wed Dec 31 19:00:00 1969

Key: http://by24fd.bay24.hotmail.msn.com/cgi-bin/dasp/EN/hotmail_1000000002.css
Data size: 1105 bytes
Fetch count: 6
Last modified: Thu Apr 20 13:43:25 2006
Expires: Wed Dec 31 19:00:00 1969

Key: http://www.activeshopper.com/images/flag_uk.gif
Data size: 245 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Wed Oct 2 00:56:27 2019

Key: http://www.activeshopper.com/images/flag_us.gif
Data size: 76 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Wed Oct 2 00:56:27 2019

Key: http://client.alexa.com/common/images/single_dot_h.gif
Data size: 44 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:24 2006
Expires: Sat May 27 20:49:44 2006

Key: http://www.ebaumsworld.com/images2/aim_icon.gif
Data size: 2426 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:46 2006
Expires: Fri May 19 23:20:45 2006

Key: http://www.ebaumsworld.com/images/ebaums_header2b.gif
Data size: 17659 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:46 2006
Expires: Sun Jun 11 12:45:44 2006

Key:
http://rad.msn.com/ADSAdClient31.dll?GetAd?PG=HOTH45?TF=_NEW?AP=1089?SC=1089?LOC=H?ID=000640008F4EF0BD?UC=127
Data size: 493 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Wed Dec 31 19:00:00 1969

Key: [http://www.hotmail.msn.com/cgi-bin/sbox?t=7RsSULEnaGFxWBnrPRHqbDX55qYWlyBD6hPzoo4agCJpaula16VTLbfzWMYHfraEUyJG68WzcsNTxh!Sz0FQdlnJLUQGZk69P8n9g**z4fjYXyQJSOjgig!ncoWK*FW3xOwX*ElxkvroI\\$&p=7tGStTjxwBDdUoLWJ26hjcnAv*TfNN0HrJu8rWz8ChoclOgC7LJN0CoR20A7lYxRQK2adZFZw*A5f*t1SxvYOeHPhnQ1j4jB5C!w9oQuOb*ESJbTZvGaKtVcXXJo*ujZfd9oFUllJdPqp!rSlv6T8zdZAXpGAoKEt85Eka7w0l7Cj0JNlqOF1XC1ev6OqMKdEGflL8RwFZwrraWlMTx4SZBw\\$\\$&lc=1033&id=2&vv=400](http://www.hotmail.msn.com/cgi-bin/sbox?t=7RsSULEnaGFxWBnrPRHqbDX55qYWlyBD6hPzoo4agCJpaula16VTLbfzWMYHfraEUyJG68WzcsNTxh!Sz0FQdlnJLUQGZk69P8n9g**z4fjYXyQJSOjgig!ncoWK*FW3xOwX*ElxkvroI$&p=7tGStTjxwBDdUoLWJ26hjcnAv*TfNN0HrJu8rWz8ChoclOgC7LJN0CoR20A7lYxRQK2adZFZw*A5f*t1SxvYOeHPhnQ1j4jB5C!w9oQuOb*ESJbTZvGaKtVcXXJo*ujZfd9oFUllJdPqp!rSlv6T8zdZAXpGAoKEt85Eka7w0l7Cj0JNlqOF1XC1ev6OqMKdEGflL8RwFZwrraWlMTx4SZBw$$&lc=1033&id=2&vv=400)
Data size: 0 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:52 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://hp.msn.com/c/hotmail/en-US.gif>
Data size: 913 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:28 2006
Expires: Thu Jun 8 20:23:22 2006

Key:
<http://img.shopping.com/cctool/PrdImg/images/pr/100X100/00/01/76/4f/c0/24530880.JPG>

Data size: 3039 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Sat May 20 16:37:19 2006

Key:

<http://stb.msn.com/i/AD/3B6BA1D623C04DA8A64C8655C480D8.jpg>

Data size: 15197 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:31 2006
Expires: Mon Dec 31 18:00:13 2029

Key: http://stj.msn.com/br/om/js/1/s_code.js

Data size: 18262 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:31 2006
Expires: Thu May 4 13:43:31 2006

Key: <http://stc.msn.com/br/ushp/css/11/Override.css>

Data size: 2399 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:30 2006
Expires: Thu May 4 13:43:30 2006

Key:

<http://icc.intellisrv.net/adopt.jsp?l=1116447478&sz=728x90&r=j&aclick=http://clk.atdmt.com/go/msnkhac001728x90Xhotj4300140msn/direct;wi.728;hi.90;ai.8891194.8443433;ct.1/01?href=>

Data size: 3547 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:00 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://by24fd.bay24.hotmail.msn.com/favicon.ico>

Data size: 1406 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Tue Apr 25 18:19:56 2006

Key: <http://gfx2.hotmail.com/i.p.folder.inbox.gif>

Data size: 178 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.white.b.gif>

Data size: 55 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: <http://www.activeshopper.com/sample.asp?counter=yes>

Data size: 21250 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:40:05 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://www.activeshopper.com/style.css>
Data size: 5759 bytes
Fetch count: 4

Last modified: Thu Apr 20 13:39:37 2006
Expires: Mon May 1 19:19:44 2006

Key: http://www.photogizmo.com/images/photogizmo_logo.gif
Data size: 13431 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:37:24 2006
Expires: Wed Jul 26 22:59:18 2006

Key:
[id=4447c6ca&uri=http://login.live.com/login.srf?id=2&svc=mail&cbid=24325&msppjph=1&tw=0&fs=1&fsa=1&fsat=1296000&lc=1033&_lang=EN&vv=400](http://login.live.com/login.srf?id=2&svc=mail&cbid=24325&msppjph=1&tw=0&fs=1&fsa=1&fsat=1296000&lc=1033&_lang=EN&vv=400)
Data size: 3034 bytes

Fetch count: 1
Last modified: Thu Apr 20 13:44:56 2006
Expires: Wed Dec 31 19:00:00 1969

Key:
<http://stb.msn.com/i/F5/C4DEC3B6E28469459471D04DD9D163.jpg>
Data size: 5112 bytes

Fetch count: 1
Last modified: Thu Apr 20 13:43:31 2006
Expires: Mon Dec 31 18:00:13 2029

Key: <http://stc.msn.com/br/ushp/css/2/classic.css>
Data size: 526 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:43:30 2006
Expires: Thu May 4 13:43:30 2006

Key: <http://gfx2.hotmail.com/tab.bg.on.gif>
Data size: 49 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: <http://hm.msn.com/A~/8UI%60%5BX1@0N9EU4AV%7BEC5.jpg>
Data size: 1530 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:42:55 2006
Expires: Thu Apr 20 15:54:51 2006

Key:
http://c.msn.com/c.gif?na=1137&nc=9523&ps=8312&di=1070&pi=44364&xtpid=1005&TP=http%3a%2f%2fx.cb2.msn.com%2ffooter.armx&RF=http%3a%2f%2flogin.live.com%2flogin.srf%3fid%3d2%26svc%3dmail%26cbid%3d24325%26msppjph%3d1%26tw%3d0%26fs%3d1%26fsa%3d1%26fsat%3d1296000%26lc%3d1033%26_lang%3dEN%26vv%3d400&MUID=4030B4B012AC4ACEA91E9D4AD2E8859D

Data size: 42 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:29 2006
Expires: Wed Dec 31 19:00:00 1969

Key:

[id=4447c6c4&uri=http://login.live.com/login.srf?id=2&svc=mail&cbid=24325&mspjjph=1&tw=0&fs=1&fsa=1&fsat=1296000&lc=1033&_lang=EN&vv=400](http://login.live.com/login.srf?id=2&svc=mail&cbid=24325&mspjjph=1&tw=0&fs=1&fsa=1&fsat=1296000&lc=1033&_lang=EN&vv=400)

Data size: 3019 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:27 2006
Expires: Wed Dec 31 19:00:00 1969

Key:

http://loginnet.passport.com/login.srf?id=2&svc=mail&cbid=24325&mspjjph=1&tw=0&fs=1&fsa=1&fsat=1296000&lc=1033&_lang=EN

Data size: 433 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:44:55 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://www.mozilla.org/css/cavendish/content.css>

Data size: 7437 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:09 2006
Expires: Thu Apr 20 14:40:09 2006

Key:

http://phg.hitbox.com/HG?hc=wp189&hb=WR5501288GNM70EN3&cd=1&hv=6&n=Sample&vcon=ActiveShopper&bn=Netscape&bv=500&ce=y&ss=1024*768&sc=16&dt=13&sv=13&zo=240&epg=&lm=1145554805000&cy=u&hp=u&ja=y&ln=en-US&prc=&oid=&pl=Java%28TM%29%20Plug-in%201.4.2_06-b03%3Anppdf.so%3A&cp=null&con=&rf=bookmark

Data size: 43 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:06 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://www.googleadservices.com/pagead/conversion.js>

Data size: 1469 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:06 2006
Expires: Fri May 26 13:26:17 2006

Key: http://www.activeshopper.com/sample_step1.asp?

Data size: 1371 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:06 2006
Expires: Wed Dec 31 19:00:00 1969

Key:

http://www.activeshopper.com/includes/functions_search.js

Data size: 23329 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:39:43 2006
Expires: Thu Apr 20 20:41:23 2006

Key: http://www.photogizmo.com/images/lifetime_nav_home.gif
Data size: 3892 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:37:24 2006
Expires: Wed Jul 26 22:59:18 2006

Key:
<http://media.fastclick.net/w/get.media?sid=6042&m=1&tp=5&d=j&t=n>
Data size: 271 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:45 2006
Expires: Wed Dec 31 19:00:00 1969

Key:
<http://global.msads.net/defaultads/ads/defaultads/1376.gif?C=P&E=10&N=F01>
Data size: 85 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Fri Apr 20 13:43:32 2007

Key: <http://gfx2.hotmail.com/tab.slide.hm.li.gif>
Data size: 2961 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key:
<http://login.live.com/pp400/CSS/WEBblue1033.css?x=4.0.5610.0>
Data size: 2047 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:42:27 2006
Expires: Fri Apr 20 13:42:27 2007

Key: <http://www.mozilla.org/products/firefox/start/>
Data size: 22712 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:08 2006
Expires: Thu Apr 20 14:40:08 2006

Key: http://www.activeshopper.com/images/home_18.gif
Data size: 3823 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:44 2006
Expires: Thu May 25 16:19:34 2006

Key: http://www.activeshopper.com/images/home_17.gif
Data size: 5555 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:44 2006
Expires: Thu May 25 16:19:34 2006

Key: http://www.activeshopper.com/images/home_19.gif
Data size: 6367 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:44 2006
Expires: Wed May 24 07:42:46 2006

Key: http://www.activeshopper.com/images/home_15.gif
Data size: 6075 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:44 2006
Expires: Thu May 25 16:21:10 2006

Key: http://www.activeshopper.com/images/home_10.gif
Data size: 17602 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:44 2006
Expires: Thu May 25 16:21:10 2006

Key: http://www.activeshopper.com/images/home_07.gif
Data size: 6078 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:44 2006
Expires: Thu May 25 16:21:10 2006

Key: http://www.activeshopper.com/images/home_02.gif
Data size: 6112 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:43 2006
Expires: Fri May 19 08:48:22 2006

Key:
<http://img.shopping.com/cctool/PrdImg/images/pr/100X100/00/01/5b/9b/0e/22780686.JPG>
Data size: 2744 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Thu Jun 15 23:55:19 2006

Key:
http://thumbnails.alex.com/image_server.cgi?size=small&url=http://www.irs.gov
Data size: 3132 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:28 2006
Expires: Sat May 20 13:38:23 2006

Key:
<http://rad.msn.com/ADSAdClient31.dll?GetSAd=&PG=MSNLGC&AP=1376>
Data size: 116 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://stj.msn.com/br/gbl/js/1/Navigation.js>
Data size: 871 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:30 2006
Expires: Thu May 4 13:43:30 2006

Key:
http://global.msads.net/ads/363/0000000363_0000000000000000291761.gif
Data size: 1220 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:26 2006
Expires: Fri Apr 20 13:43:26 2007

Key: http://ads.msn.com/ads/pronws/hm/mailBeta_v2.gif
Data size: 9058 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:16 2006
Expires: Fri Apr 20 13:43:16 2007

Key: <http://gfx2.hotmail.com/i.p.folder.gif>
Data size: 163 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key:
http://global.msads.net/ads/363/0000000363_0000000000000000291792.gif
Data size: 561 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Fri Apr 20 13:42:55 2007

Key: http://www.mozilla.org/images/header_tr.gif
Data size: 466 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:11 2006
Expires: Thu Apr 20 14:40:10 2006

Key: http://www.mozilla.org/images/header_br.gif
Data size: 546 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:11 2006
Expires: Thu Apr 20 14:40:10 2006

Key: http://www.mozilla.org/images/header_tl.gif
Data size: 836 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:10 2006
Expires: Thu Apr 20 14:40:10 2006

Key: <http://client.alexa.com/common/images/powered-google.gif>
Data size: 950 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:38:24 2006
Expires: Mon May 29 15:28:18 2006

Key: <http://www.photogizmo.com/favicon.ico>
Data size: 0 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:37:24 2006
Expires: No expiration time

Key: <http://www.ebaumsworld.com/images/sendfriend.gif>
Data size: 8063 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:43:46 2006
Expires: Mon May 22 01:56:43 2006

Key:
<http://stb.msn.com/i/29/1BEA5A85C3FF53E3CD9E7F46FB3A0.jpg>

Data size: 2501 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Mon Dec 31 18:00:14 2029

Key: <http://stj.msn.com/br/ushp/js/3/Home.js>
Data size: 4921 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:43:31 2006
Expires: Thu May 4 13:43:31 2006

Key:
http://rad.msn.com/ADSAdClient31.dll?GetAd?PG=PROHO2?TF=_NEW?AP=1090?SC=D1?LOC=I?ID=000640008F4EF0BD?UC=127

Data size: 635 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Wed Dec 31 19:00:00 1969

Key: http://www.activeshopper.com/images/right_sep.gif
Data size: 105 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:39:40 2006
Expires: Thu May 25 19:44:54 2006

Key: http://www.activeshopper.com/images/tab_seperator.gif
Data size: 57 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:39:40 2006
Expires: Thu May 25 22:36:36 2006

Key: http://ebaumsworld.com/images2/nav_bac_eb.jpg
Data size: 1184 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:43:45 2006
Expires: Wed May 17 08:25:36 2006

Key: <http://www.ebaumsworld.com/mainstyle.css>
Data size: 4674 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:44 2006
Expires: Mon Apr 24 08:31:17 2006

Key:
http://global.msads.net/ads/7945/0000007945_000000000000000293973.gif
Data size: 7869 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Fri Apr 20 13:43:31 2007

Key:
<http://stb.msn.com/i/D3/BB752D1BDC6C7ACF8E7C731E2E74.jpg>
Data size: 1975 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Mon Dec 31 18:00:13 2029

Key:
<http://login.live.com/ThirdPartyCookieCheck.srf?ct=1145558595>
Data size: 0 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:29 2006
Expires: Wed Dec 31 19:00:00 1969

Key:
<http://view.atdmt.com/iview/msnkhac001160x600xPROHO200093msn/direct/wi.160;hi.600/01>
Data size: 4933 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://gfx2.hotmail.com/i.p.folder.sent.gif>
Data size: 162 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.putinfolder.gif>
Data size: 172 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://www.mozilla.org/css/base/content.css>
Data size: 7861 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:09 2006
Expires: Thu Apr 20 14:40:08 2006

Key:

http://www.activeshopper.com/includes%5Cfunctions_search.js

Data size: 23329 bytes
Fetch count: 3
Last modified: Thu Apr 20 13:39:38 2006
Expires: Thu Apr 20 20:41:17 2006

Key:

http://www.macromedia.com/shockwave/download/license/desktop/ssi/eula_ssi.html

Data size: 14527 bytes
Fetch count: 11
Last modified: Thu Apr 20 13:44:43 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://www.ebaumsworld.com/pacman.html>

Data size: 13090 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:44 2006
Expires: Wed Dec 31 19:00:00 1969

Key:

<http://stb.msn.com/i/8F/F740A1255567F4AA79475D7621159.jpg>

Data size: 1769 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Mon Dec 31 18:00:13 2029

Key:

<http://h.msn.com/c.gif?RF=http%3a%2f%2fby24fd%2ebay24%2ehotmail%2emsn%2ecom%2fcgi%2dbin%2fhmhome%3ffti%3dyes%26curmbox%3dF000000001%26a%3d9ce4846151ca13adbafef53f3e1f79fc6b6563ab09dc0c32a4994cf4339dc0ed9&PI=44364&DI=7474&PS=74565>

Data size: 42 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Wed Dec 31 19:00:00 1969

Key:

<http://rad.msn.com/ADSAdClient31.dll?GetAd?PG=HOTD43?AP=1447?TF=adframe?SC=1447?LOC=I?ID=000640008F4EF0BD?UC=127>

Data size: 1394 bytes
Fetch count: 3
Last modified: Thu Apr 20 13:43:26 2006
Expires: Wed Dec 31 19:00:00 1969

Key:

<http://rad.msn.com/ADSAdClient31.dll?GetAd?PG=HOTC43?AP=1447?TF=adframe?SC=1447?LOC=I?ID=000640008F4EF0BD?UC=127>

Data size: 1524 bytes
Fetch count: 3
Last modified: Thu Apr 20 13:43:26 2006
Expires: Wed Dec 31 19:00:00 1969

Key:

<http://rad.msn.com/ADSAdClient31.dll?GetAd?PG=HOTA43?AP=1447?TF=adframe?SC=1447?LOC=I?ID=000640008F4EF0BD?UC=127>

Data size: 1434 bytes
Fetch count: 3
Last modified: Thu Apr 20 13:43:26 2006
Expires: Wed Dec 31 19:00:00 1969

Key:

<http://rad.msn.com/ADSAdClient31.dll?GetAd?PG=HOTB43?AP=1447?TF=adframe?SC=1447?LOC=I?ID=000640008F4EF0BD?UC=127>

Data size: 1418 bytes
Fetch count: 3
Last modified: Thu Apr 20 13:43:26 2006
Expires: Wed Dec 31 19:00:00 1969

Key: [http://by24fd.bay24.hotmail.msn.com/cgi-](http://by24fd.bay24.hotmail.msn.com/cgi-bin/dasp/EN/hotmail_102100022.js)

[bin/dasp/EN/hotmail_102100022.js](http://by24fd.bay24.hotmail.msn.com/cgi-bin/dasp/EN/hotmail_102100022.js)

Data size: 4936 bytes
Fetch count: 6
Last modified: Thu Apr 20 13:43:25 2006
Expires: Wed Dec 31 19:00:00 1969

Key: [http://by24fd.bay24.hotmail.msn.com/cgi-](http://by24fd.bay24.hotmail.msn.com/cgi-bin/hmhome?fti=yes&curmbox=F000000001&a=9ce4846151ca13adbaf53f3e1f79fc6b6563ab09dc0c32a4994cf4339dc0ed9)

[bin/hmhome?fti=yes&curmbox=F000000001&a=9ce4846151ca13adbaf53f3e1f79fc6b6563ab09dc0c32a4994cf4339dc0ed9](http://by24fd.bay24.hotmail.msn.com/cgi-bin/hmhome?fti=yes&curmbox=F000000001&a=9ce4846151ca13adbaf53f3e1f79fc6b6563ab09dc0c32a4994cf4339dc0ed9)

Data size: 4703 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:54 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://hp.msn.com/c/hotmail/fin.jpg>

Data size: 972 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:44:57 2006
Expires: Fri Jun 9 04:14:44 2006

Key: <http://hp.msn.com/c/hotmail/env.jpg>

Data size: 1376 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:28 2006
Expires: Fri Jun 9 04:12:01 2006

Key: http://www.mozilla.org/images/download_bl.gif

Data size: 162 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:12 2006
Expires: Thu Apr 20 14:40:10 2006

Key: http://www.mozilla.org/images/download_br.gif

Data size: 386 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:12 2006
Expires: Thu Apr 20 14:40:10 2006

Key: http://www.mozilla.org/images/download_tl.gif
Data size: 105 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:11 2006
Expires: Thu Apr 20 14:40:10 2006

Key: <http://client.alexa.com/common/images//shim.gif>
Data size: 43 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:24 2006
Expires: Fri Sep 8 11:17:05 2006

Key: http://client.alexa.com/common/images/bg_image.gif
Data size: 1888 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:24 2006
Expires: Mon May 29 15:56:08 2006

Key: <http://www.ebaumsworld.com/images/spacer.gif>
Data size: 55 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:45 2006
Expires: Sun May 14 11:05:19 2006

Key: <http://rad.msn.com/ADSAdClient31.dll?GetSAd=&PG=MSNREC>
Data size: 3984 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:31 2006
Expires: Wed Dec 31 19:00:00 1969

Key:
http://global.msads.net/ads/8373/0000008373_0000000000000000245374.gif
Data size: 1162 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Fri Apr 20 13:42:55 2007

Key:
http://c.live.com/c.gif?na=1137&nc=9523&ps=8312&di=1070&pi=44364&xtpid=1005&TP=http%3a%2f%2fx.cb2.msn.com%2ffooter.armx&RF=http%3a%2f%2flogin.live.com%2flogin.srf%3fid%3d2%26svc%3dmail%26cbid%3d24325%26msppjph%3d1%26tw%3d0%26fs%3d1%26fsa%3d1%26fsat%3d1296000%26lc%3d1033%26_lang%3dEN%26vv%3d400&RedC=c.msn.com
Data size: 0 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:29 2006
Expires: Wed Dec 31 19:00:00 1969

Key:
<http://login.live.com/pp400/JS/PPPrimary.js?x=4.0.5610.0>
Data size: 4345 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:42:28 2006

Key: <http://www.activeshopper.com/images/carrot.gif>
Data size: 177 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Thu May 25 22:36:24 2006

Key: <http://www.photogizmo.com/>
Data size: 5708 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:37:24 2006
Expires: Fri May 26 03:51:37 2006

Key:
http://www.ebaumsworld.com/___utm.gif?utm=400367521&utmsr=1024x768&utmsa=1024x721&utmsc=16-bit&utmsb=1016x576&utm=enus&utmje=1&utmce=1&utmtz=-0400&utmjv=1.5&utmcn=1&utmr=-&utmp=/pacman.html
Data size: 35 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:45 2006
Expires: Wed Jun 14 23:18:32 2006

Key: <http://stj.msn.com/br/gbl/js/1/flash.js>
Data size: 1066 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:30 2006
Expires: Thu May 4 13:43:30 2006

Key: http://gfx2.hotmail.com/i.p.trend_small.gif
Data size: 808 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:16 2006
Expires: Sun Apr 17 13:43:16 2016

Key: <http://gfx2.hotmail.com/i.p.importance.1.gif>
Data size: 171 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:02 2006
Expires: Sun Apr 17 13:43:02 2016

Key: <http://gfx2.hotmail.com/i.p.attach.gif>
Data size: 68 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.importance.h.gif>
Data size: 160 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.cont.group.gif>

Data size: 256 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.delete.gif>
Data size: 306 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key:
http://rad.msn.com/ADSAdClient31.dll?GetAd?PG=HOTJ43?TF=_NEW?AP=1390?SC=LG?LOC=I?ID=000640008F4EF0BD?UC=127

Data size: 628 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Wed Dec 31 19:00:00 1969

Key:
http://login.live.com/pp400/images/icon_err.gif?x=4.0.5610.0

Data size: 1037 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:28 2006
Expires: Fri Apr 20 13:42:28 2007

Key: http://www.activeshopper.com/images/firefox_icon.gif
Data size: 355 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:43 2006
Expires: Sun Dec 6 10:31:37 2009

Key: http://client.alexa.com/ds/images/down_arrow.gif
Data size: 204 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:24 2006
Expires: Sat May 20 18:01:26 2006

Key: <http://global.msads.net/ads/ABUIMG/clear.gif>
Data size: 85 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:43:32 2006
Expires: Mon Sep 11 20:29:06 2006

Key: http://by24fd.bay24.hotmail.msn.com/cgi-bin/logout?curmbox=F000000001&a=9ce4846151ca13adbaf53f3e1f79fc6b6563ab09dc0c32a4994cf4339dc0ed9&t=1145558591&loru=&id=2&fs=1&cb=_lang%3dEN%26country%3dUS&ct=1145558591

Data size: 0 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:28 2006
Expires: Wed Dec 31 19:00:00 1969

Key:
http://cdn.fastclick.net/adserver.com/10002/ins/mid8855/circle_silver_b.gif

Data size: 8022 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:56 2006
Expires: Fri Apr 21 23:40:34 2006

Key: http://gfx2.hotmail.com/crs_918.gif
Data size: 799 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key:
<http://cb2.msn.com/signup.armx?lid=1033&cbpage=login&lc=1033&x=4.0.5610.0>

Data size: 2005 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:44:56 2006
Expires: Wed Dec 31 19:00:00 1969

Key: http://www.mozilla.org/images/body_back.gif
Data size: 526 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:10 2006
Expires: Thu Apr 20 14:40:10 2006

Key: <http://www.mozilla.org/css/print.css>
Data size: 1102 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:08 2006
Expires: Thu Apr 20 14:40:08 2006

Key: <http://stj.msn.com/br/gbl/js/1/ieminwidth.js>
Data size: 784 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Thu May 4 13:43:32 2006

Key: <http://stj.msn.com/br/ushp/js/1/themes.js>
Data size: 3037 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:30 2006
Expires: Thu May 4 13:43:30 2006

Key: <http://www.hotmail.msn.com/cgi-bin/expire?ct=1145558595>
Data size: 0 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:29 2006
Expires: Wed Dec 31 19:00:00 1969

Key:
[id=4447c6c9&uri=http://login.live.com/logout.srf?_lang=EN&lc=1033&id=2&ru=http%3a%2f%2fsigninout%2emsn%2ecom&dontall=&vv=400](http://login.live.com/logout.srf?_lang=EN&lc=1033&id=2&ru=http%3a%2f%2fsigninout%2emsn%2ecom&dontall=&vv=400)

Data size: 1255 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:29 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://gfx2.hotmail.com/bgcolor.gif>
Data size: 151 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: http://www.activeshopper.com/images/btn_download_a.gif
Data size: 17596 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:44 2006
Expires: Thu May 25 03:11:22 2006

Key: http://www.activeshopper.com/images/header_final_04.gif
Data size: 1023 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Thu May 25 19:51:36 2006

Key:
http://client.alexa.com/common/images/an_amazon_company.gif
Data size: 961 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:24 2006
Expires: Fri Sep 8 11:17:05 2006

Key: http://client.alexa.com/ds/images/up_arrow.gif
Data size: 204 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:24 2006
Expires: Sat May 20 18:01:24 2006

Key: <http://client.alexa.com/common/images/alexa.gif>
Data size: 2161 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:24 2006
Expires: Sat May 6 20:28:05 2006

Key: <http://by24fd.bay24.hotmail.msn.com/cgi-bin/compose?&curmbox=F000000001&a=9ce4846151ca13adbafef53f3e1f79fc6b6563ab09dc0c32a4994cf4339dc0ed9>
Data size: 4563 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:01 2006
Expires: Wed Dec 31 19:00:00 1969

Key:

<http://cb2.msn.com/footer.armx?lid=1033&cbpage=login&lc=1033&x=4.0.5610.0>

Data size: 1417 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:44:56 2006
Expires: Wed Dec 31 19:00:00 1969

Key:

<http://cb2.msn.com/header.armx?lid=1033&cbpage=login&lc=1033&x=4.0.5610.0>

Data size: 1910 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:44:56 2006
Expires: Wed Dec 31 19:00:00 1969

Key: http://www.mozilla.org/images/header_logo.gif

Data size: 5162 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:11 2006
Expires: Thu Apr 20 14:40:10 2006

Key: <http://www.mozilla.com/press/image-library/firefox-wordmark-horizontal.png>

Data size: 29722 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:11 2006
Expires: Thu Apr 20 13:55:10 2006

Key: <http://www.activeshopper.com/download/setupactiv.exe>

Data size: 212384 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:46 2006
Expires: Sat May 6 21:26:08 2006

Key: <http://stc.msn.com/br/ushp/css/11/Decoration/new.gif>

Data size: 72 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:31 2006
Expires: Thu May 4 13:43:31 2006

Key: <http://stc.msn.com/br/ushp/css/2/Decoration/Pipe.gif>

Data size: 43 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:31 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://signout.msn.com/?lc=1033>

Data size: 9554 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:30 2006
Expires: Wed Dec 31 19:00:00 1969

Key:

<http://h.msn.com/c.gif?RF=http%3a%2f%2fby24fd%2ebay24%2ehotmail%2emsn%2ecom%2fcgi%2dbin%2fpemail&PI=44364&DI=7474&PS=8318>

Data size: 42 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:43:23 2006

Expires: Wed Dec 31 19:00:00 1969

Key:

<http://h.msn.com/c.gif?RF=http%3a%2f%2fby24fd%2ebay24%2ehotmail%2emsn%2ecom%2fcgi%2dbin%2fHoTMaiL%3fcurmbbox%3dF000000001%26a%3d9ce4846151ca13adbafe53f3elf79fc6b6563ab09dc0c32a4994cf4339dc0ed9%26fti%3dyes&PI=44364&DI=7474&PS=8318>

Data size: 42 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:43:02 2006

Expires: Wed Dec 31 19:00:00 1969

Key:

http://phg.hitbox.com/HG?hc=wp189&hb=WR5501288GNM70EN3&cd=1&hv=6&n=download&vcon=ActiveShopper&bn=Netscape&bv=500&ce=y&ss=1024*768&sc=16&dt=13&sv=13&zo=240&epg=&lm=1145554782000&cy=u&hp=u&ja=y&ln=en-US&prc=&oid=&pl=Java%28TM%29%20Plug-in%201.4.2_06-b03%3Anppdf.so%3A&cp=null&con=&rf=http%3A//www.activeshopper.com/&fn=se tupactiv.exe

Data size: 43 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:39:45 2006

Expires: Wed Dec 31 19:00:00 1969

Key: [http://www.google-](http://www.google-analyt)

[analytics.com/___utm.gif?utmwv=1&utmn=2067629796&utmsr=1024x768&utmssc=16-bit&utmml=en-us&utmje=1&utmfl=-&utmdt=ActiveShopper%20-%20Free%20Comparative%20Shopping%20Toolbar%20Download%20Page&utmhn=www.activeshopper.com&utmr=0&utmp=/download.asp&utmcc=UA-228859-1&utmcc=__utma%3D67204993.1740301624.1145554781.1145554781.1145554781.1%3B%2B_utmb%3D67204993%3B%2B_utmc%3D67204993%3B%2B_utmz%3D67204993.1145554781.1.1.utmccn%3D\(direct\)%7Cutmcsr%3D\(direct\)%7Cutmcmd%3D\(none\)%3B%2B](http://www.google-analyt)

Data size: 35 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:39:44 2006

Expires: Wed Dec 31 19:00:00 1969

Key: <http://download.alexa.com/favicon.ico>

Data size: 1406 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:38:42 2006

Expires: Wed Sep 27 20:19:41 2006

Key: http://www.ebaumsworld.com/images2/email_icon.gif

Data size: 1793 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:43:46 2006
Expires: Fri May 19 23:20:35 2006

Key: <http://stj.msn.com/br/ushp/js/1/slideshow.js>
Data size: 2553 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Thu May 4 13:43:32 2006

Key:
http://global.msads.net/ads/1/0000000001_00000000000000000017246.gif
Data size: 85 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Fri Apr 20 13:43:32 2007

Key: <http://gfx2.hotmail.com/i.p.new.gif>
Data size: 235 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key:
<http://z1.adserver.com/w/cp.x;rid=443;tid=6;ev=1;dt=2;ac=42;c=623;inc=1>
Data size: 2647 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:56 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://gfx2.hotmail.com/i.p.cal.gif>
Data size: 237 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key:
<http://login.live.com/pp400/images/LiveID16.gif?x=4.0.5610.0>
Data size: 371 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:28 2006
Expires: Fri Apr 20 13:42:28 2007

Key: http://www.activeshopper.com/images/arrow_top_left.gif
Data size: 89 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:43 2006
Expires: Thu Dec 3 20:37:56 2009

Key: <http://www.activeshopper.com/download.asp>
Data size: 21823 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:43 2006
Expires: Wed Dec 31 19:00:00 1969

Key: http://www.activeshopper.com/images/menu_bg_off.gif
Data size: 157 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Thu May 25 22:36:30 2006

Key: http://www.ebaumsworld.com/__utm.js
Data size: 21832 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:45 2006
Expires: Wed Jun 14 23:19:09 2006

Key: <http://www.ebaumsworld.com/pageback.js>
Data size: 403 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:45 2006
Expires: Tue Jun 13 10:48:49 2006

Key:
<http://stb.msn.com/i/D2/E5D1CB480A13EF73AD494880656E.jpg>
Data size: 13259 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:31 2006
Expires: Mon Dec 31 18:00:13 2029

Key:
http://c.msn.com/c.gif?di=5324&pi=7317&ps=83967&tp=http://signout.msn.com/&rf=http://login.live.com/logout.srf?_lang=EN&lc=1033&id=2&ru=http%3a%2f%2fsignout%2emsn%2ecom&dontall=&vv=400
Data size: 42 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:31 2006
Expires: Wed Dec 31 19:00:00 1969

Key:
<http://rad.msn.com/ADSAdClient31.dll?GetAd?PG=HOTM44?AP=1089?LOC=H?ID=000640008F4EF0BD?UC=127>
Data size: 635 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:26 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://gfx2.hotmail.com/tab.bg.sln.gif>
Data size: 46 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: <http://gfx2.hotmail.com/tab.bg.off.gif>
Data size: 176 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: <http://gfx2.hotmail.com/tab.bg.dln.gif>
Data size: 56 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: http://www.mozilla.org/images/header_tab.gif
Data size: 4296 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:11 2006
Expires: Thu Apr 20 14:40:10 2006

Key:
http://phg.hitbox.com/HGct?hc=wp189&hb=WR5501288GNM70EN3&cd=1&hv=6&n=homepage&vcon=ActiveShopper&bn=Netscape&bv=500&ce=y&ss=1024*768&sc=16&dt=13&sv=13&zo=240&epg=&lm=1145554777000&cy=u&hp=u&ja=y&ln=en-US&prc=&oid=&pl=Java%28TM%29%20Plug-in%201.4.2_06-b03%3Anppdf.so%3A&cp=null&con=&rf=bookmark
Data size: 43 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://download.alexa.com/?p=>
Data size: 0 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:33 2006
Expires: Wed Dec 31 19:00:00 1969

Key: http://client.alexa.com/common/images/alexa_firefox.gif
Data size: 2146 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:24 2006
Expires: Fri Jun 9 03:59:14 2006

Key:
http://3.adbrite.com/mb/text_group.php?sid=19822&newwin=1&br=1
Data size: 7461 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:46 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://www.hotmail.com/>
Data size: 0 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:44:55 2006
Expires: Wed Dec 31 19:00:00 1969

Key:
http://phg.hitbox.com/HG?hc=wp189&hb=WR5501288GNM70EN3&cd=1&hv=6&n=download&vcon=ActiveShopper&bn=Netscape&bv=500&ce=y&ss=1024*768&sc=16&dt=13&sv=13&zo=240&epg=&lm=1145554782000&cy=u&hp=u&ja=y&ln=en-US&prc=&oid=&pl=Java%28TM%29%20Plug-in%201.4.2_06-b03%3Anppdf.so%3A&cp=null&con=&rf=http%3A//www.activeshopper.com/

Data size: 43 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:44 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://client.alexa.com/common/images/shim.gif>
Data size: 43 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:24 2006
Expires: Fri Sep 8 11:17:05 2006

Key: http://www.photogizmo.com/images/purchase_pro.gif
Data size: 5487 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:37:24 2006
Expires: Wed Jul 26 22:59:18 2006

Figure N-2: Memory cache device (Mozilla Firefox)

Number of entries: 257
Maximum storage size: 21504 KiB
Storage in use: 9138 KiB
Inactive storage: 7713 KiB

Key: http://www.mozilla.org/images/download_back.gif
Data size: 1125600 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:11 2006
Expires: Thu Apr 20 14:40:10 2006

Key: http://www.mozilla.org/images/header_tab.gif
Data size: 1500800 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:40:11 2006
Expires: Thu Apr 20 14:40:10 2006

Key:
http://spe.atdmt.com/ds/MSMSNMATCLSL/160x600_pop_part.gif?ver=1
Data size: 568344 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:00 2006
Expires: Sat Apr 22 09:35:42 2006

Key: http://www.mozilla.org/images/header_bl.png
Data size: 450000 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:10 2006

Expires: Thu Apr 20 14:40:10 2006

Key: <http://www.mozilla.com/press/image-library/firefox-wordmark-horizontal.png>

Data size: 316416 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:40:11 2006

Expires: Thu Apr 20 13:55:10 2006

Key: http://www.ebaumsworld.com/images/ebaums_header2b.gif

Data size: 269352 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:43:46 2006

Expires: Sun Jun 11 12:45:44 2006

Key:

<http://cdn.fastclick.net/fastclick.net/cid51255/media100281.gif>

Data size: 287356 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:43:46 2006

Expires: Thu Apr 20 17:23:37 2006

Key: http://www.photogizmo.com/images/photogizmo_logo.gif

Data size: 151200 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:37:24 2006

Expires: Wed Jul 26 22:59:18 2006

Key: http://www.photogizmo.com/images/home_copy.gif

Data size: 146484 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:37:24 2006

Expires: Wed Jul 26 01:56:24 2006

Key: http://www.photogizmo.com/images/home_photos.jpg

Data size: 159720 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:37:24 2006

Expires: Wed Jul 26 22:59:18 2006

Key:

http://cdn.fastclick.net/adserver.com/10002/ins/mid8855/circle_silver_b.gif

Data size: 225000 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:42:56 2006

Expires: Fri Apr 21 23:40:34 2006

Key:

http://adt.m7z.net/37cd6bcbdde22556bbec8235b3d0178d/img/freegiftworld/f-lash/Penguin_728x90.gif

Data size: 196560 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:43:00 2006

Expires: Fri Apr 21 23:03:42 2006

Key: <http://spe.atdmt.com/b/MSMSNMATCVTG/300x250.1a.jpg>

Data size: 225000 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:43:26 2006

Expires: Sat Apr 22 23:12:14 2006

Key:

<http://stb.msn.com/i/AD/3B6BA1D623C04DA8A64C8655C480D8.jpg>

Data size: 144000 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:43:31 2006

Expires: Mon Dec 31 18:00:13 2029

Key:

<http://stb.msn.com/i/D2/E5D1CB480A13EF73AD494880656E.jpg>

Data size: 144000 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:43:31 2006

Expires: Mon Dec 31 18:00:13 2029

Key:

<http://stb.msn.com/i/F5/C4DEC3B6E28469459471D04DD9D163.jpg>

Data size: 144000 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:43:32 2006

Expires: Mon Dec 31 18:00:13 2029

Key: <http://www.photogizmo.com/images/tourbox.gif>

Data size: 82268 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:37:24 2006

Expires: Wed Jul 26 22:59:18 2006

Key: <http://client.alexa.com/common/images/now-open.jpg>

Data size: 80496 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:38:24 2006

Expires: Thu Apr 27 20:13:43 2006

Key: <http://download.alexa.com/images/bg-box-full.gif>

Data size: 103680 bytes

Fetch count: 2

Last modified: Thu Apr 20 13:38:40 2006

Expires: Mon May 15 01:42:03 2006

Key:

http://www.activeshopper.com/images/partner_logos/activeshopper.gif

Data size: 78000 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:39:39 2006

Expires: Thu May 4 01:39:04 2006

Key: <http://www.activeshopper.com/firefox/searchbox1.gif>
Data size: 94248 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:43 2006
Expires: Sun May 17 04:38:12 2009

Key:
http://www.activeshopper.com/images/partner_logos/ActiveShopper.gif
Data size: 78000 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:39:43 2006
Expires: Thu May 4 01:39:08 2006

Key: http://www.activeshopper.com/images/home_02.gif
Data size: 88200 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:43 2006
Expires: Fri May 19 08:48:22 2006

Key: http://www.activeshopper.com/images/btn_download_a.gif
Data size: 116696 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:44 2006
Expires: Thu May 25 03:11:22 2006

Key: http://www.activeshopper.com/images/home_19.gif
Data size: 89984 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:44 2006
Expires: Wed May 24 07:42:46 2006

Key: http://www.activeshopper.com/images/home_17.gif
Data size: 125248 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:44 2006
Expires: Thu May 25 16:19:34 2006

Key: http://www.activeshopper.com/images/home_18.gif
Data size: 127680 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:44 2006
Expires: Thu May 25 16:19:34 2006

Key: http://www.activeshopper.com/images/home_10.gif
Data size: 90216 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:44 2006
Expires: Thu May 25 16:21:10 2006

Key: http://www.activeshopper.com/images/small_homepage.gif
Data size: 65536 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:06 2006
Expires: Sat May 20 03:59:52 2006

Key: http://ads.msn.com/ads/pronws/hm/mailBeta_v2.gif
Data size: 109772 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:43:16 2006
Expires: Fri Apr 20 13:43:16 2007

Key:
<http://stb.msn.com/i/80/3E20BB5DE039C177BB62FE359ADF7.jpg>
Data size: 69760 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:31 2006
Expires: Mon Dec 31 18:00:13 2029

Key:
http://global.msads.net/ads/7945/0000007945_0000000000000000293973.gif
Data size: 117500 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Fri Apr 20 13:43:31 2007

Key: <http://www.ebaumsworld.com/images/tonyline.gif>
Data size: 86400 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:46 2006
Expires: Sat May 20 17:58:55 2006

Key: <http://www.ebaumsworld.com/images/sendfriend.gif>
Data size: 79980 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:46 2006
Expires: Mon May 22 01:56:43 2006

Key: <http://hp.msn.com/c/hotmail/env.jpg>
Data size: 72000 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:42:28 2006
Expires: Fri Jun 9 04:12:01 2006

Key: http://www.photogizmo.com/images/lifetime_nav_home.gif
Data size: 54700 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:37:24 2006
Expires: Wed Jul 26 22:59:18 2006

Key: http://www.photogizmo.com/images/purchase_pro.gif
Data size: 49136 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:37:24 2006
Expires: Wed Jul 26 22:59:18 2006

Key: <http://client.alexa.com/common/images/alexa.gif>
Data size: 46176 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:38:24 2006
Expires: Sat May 6 20:28:05 2006

Key: http://www.activeshopper.com/images/home_07.gif
Data size: 44400 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:44 2006
Expires: Thu May 25 16:21:10 2006

Key: http://www.activeshopper.com/images/home_15.gif
Data size: 51504 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:44 2006
Expires: Thu May 25 16:21:10 2006

Key: http://www.mozilla.org/images/header_logo.gif
Data size: 48024 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:11 2006
Expires: Thu Apr 20 14:40:10 2006

Key: http://www.mozilla.org/images/key-point_br.gif
Data size: 50016 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:11 2006
Expires: Thu Apr 20 14:40:10 2006

Key: http://www.mozilla.org/images/download_br.gif
Data size: 50016 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:12 2006
Expires: Thu Apr 20 14:40:10 2006

Key:
http://thumbnails.alexas.com/image_server.cgi?size=small&url=http://www.irs.gov
Data size: 27552 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:28 2006
Expires: Sat May 20 13:38:23 2006

Key: http://client.alexas.com/common/images/alexas_firefox.gif
Data size: 17316 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:38:24 2006
Expires: Fri Jun 9 03:59:14 2006

Key:
<http://img.shopping.com/cctool/PrdImg/images/pr/100X100/00/01/6d/53/8e/23942030.JPG>
Data size: 30000 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Fri May 5 11:49:22 2006

Key:

<http://img.shopping.com/cctool/PrdImg/images/pr/100X100/00/01/55/31/1c/22360348.JPG>

Data size: 30000 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Thu Jun 8 14:48:29 2006

Key:

<http://img.shopping.com/cctool/PrdImg/images/pr/100X100/00/01/76/4f/c0/24530880.JPG>

Data size: 30000 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Sat May 20 16:37:19 2006

Key:

<http://img.shopping.com/cctool/PrdImg/images/pr/100X100/00/01/5b/9b/0e/22780686.JPG>

Data size: 30000 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Thu Jun 15 23:55:19 2006

Key:

<http://img.shopping.com/cctool/PrdImg/images/pr/100X100/00/01/79/0c/5e/24710238.JPG>

Data size: 30000 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Sat May 20 06:48:07 2006

Key: http://www.activeshopper.com/images/icons/top_01.gif

Data size: 24276 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Tue May 23 14:51:48 2006

Key: http://www.activeshopper.com/images/icons/top_02.gif

Data size: 24276 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Tue May 23 14:51:48 2006

Key: http://www.activeshopper.com/images/icons/top_03.gif

Data size: 24276 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Tue May 23 14:51:48 2006

Key: http://www.activeshopper.com/images/icons/top_04.gif

Data size: 24276 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:39:40 2006
Expires: Tue May 23 14:51:48 2006

Key: http://www.activeshopper.com/images/icons/top_05.gif
Data size: 24276 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:39:40 2006
Expires: Tue May 23 14:51:48 2006

Key: http://www.activeshopper.com/images/icons/top_06.gif
Data size: 24276 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:39:40 2006
Expires: Tue May 23 14:51:48 2006

Key: http://www.activeshopper.com/images/icons/top_07.gif
Data size: 24276 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:39:40 2006
Expires: Tue May 23 14:51:48 2006

Key: http://www.activeshopper.com/images/icons/top_08.gif
Data size: 24276 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:39:40 2006
Expires: Tue May 23 14:51:48 2006

Key: http://www.activeshopper.com/images/icons/top_09.gif
Data size: 24276 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:39:40 2006
Expires: Tue May 23 14:51:48 2006

Key: http://www.activeshopper.com/images/icons/top_10.gif
Data size: 24276 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:39:40 2006
Expires: Tue May 23 14:51:48 2006

Key: http://www.activeshopper.com/images/icons/top_11.gif
Data size: 24276 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:39:40 2006
Expires: Tue May 23 14:51:48 2006

Key: http://www.activeshopper.com/images/btn_tour.gif
Data size: 31020 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:39:44 2006
Expires: Thu May 25 03:11:22 2006

Key: http://ebaumsworld.com/images2/nav_bac_eb.jpg
Data size: 26400 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:43:45 2006
Expires: Wed May 17 08:25:36 2006

Key: http://www.ebaumsworld.com/images2/email_icon.gif
Data size: 21376 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:46 2006
Expires: Fri May 19 23:20:35 2006

Key: http://www.ebaumsworld.com/images2/aim_icon.gif
Data size: 21376 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:46 2006
Expires: Fri May 19 23:20:45 2006

Key:
http://client.alexa.com/common/images/an_amazon_company.gif
Data size: 10080 bytes
Fetch count: 3
Last modified: Thu Apr 20 13:38:24 2006
Expires: Fri Sep 8 11:17:05 2006

Key: http://download.alexa.com/images/logo_sm.gif
Data size: 13224 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:38:39 2006
Expires: Sat May 13 03:42:05 2006

Key: http://www.activeshopper.com/images/header_final_04.gif
Data size: 10296 bytes
Fetch count: 3
Last modified: Thu Apr 20 13:39:40 2006
Expires: Thu May 25 19:51:36 2006

Key: http://www.mozilla.org/images/body_back.gif
Data size: 11284 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:10 2006
Expires: Thu Apr 20 14:40:10 2006

Key: <http://gfx2.hotmail.com/tab.slide.hm.li.gif>
Data size: 15744 bytes
Fetch count: 6
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: http://gfx2.hotmail.com/lgo_msn_118x35.gif
Data size: 13020 bytes
Fetch count: 6
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: http://hm.msn.com/3,-E_@09KUW3_TV2%5BLL8T4S.jpg
Data size: 15300 bytes

Fetch count: 1
Last modified: Thu Apr 20 13:43:26 2006
Expires: Thu Apr 20 15:55:41 2006

Key: <http://hp.msn.com/global/c/lg/msft94.gif>
Data size: 13020 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:31 2006
Expires: Wed Dec 31 19:00:00 1969

Key:
<http://stb.msn.com/i/8C/F68A2019BBDDA925323D97CFCA6024.jpg>
Data size: 14840 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:31 2006
Expires: Mon Dec 31 18:00:13 2029

Key:
<http://stb.msn.com/i/8F/F740A1255567F4AA79475D7621159.jpg>
Data size: 14840 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Mon Dec 31 18:00:13 2029

Key:
<http://stb.msn.com/i/D3/BB752D1BDC6C7ACF8E7C731E2E74.jpg>
Data size: 14840 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Mon Dec 31 18:00:13 2029

Key:
<http://stb.msn.com/i/82/ABCC23A480E62ED350B2ECA2797D67.jpg>
Data size: 14840 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Mon Dec 31 18:00:13 2029

Key:
<http://stb.msn.com/i/F0/F283F73959243E1160AC2B1E2E9BBF.jpg>
Data size: 14840 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Mon Dec 31 18:00:14 2029

Key:
<http://stb.msn.com/i/29/1BEA5A85C3FF53E3CD9E7F46FB3A0.jpg>
Data size: 14840 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Mon Dec 31 18:00:14 2029

Key: <http://hp.msn.com/c/hotmail/en-US.gif>
Data size: 13020 bytes

Fetch count: 2
Last modified: Thu Apr 20 13:42:28 2006
Expires: Thu Jun 8 20:23:22 2006

Key: <http://hp.msn.com/c/hotmail/fin.jpg>
Data size: 14960 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:44:57 2006
Expires: Fri Jun 9 04:14:44 2006

Key: http://client.alex.com/common/images/bg_image.gif
Data size: 4560 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:24 2006
Expires: Mon May 29 15:56:08 2006

Key: <http://download.alex.com/images/bg-box.gif>
Data size: 7760 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:40 2006
Expires: Mon May 15 06:10:19 2006

Key: <http://hm.msn.com/A~/8UI%60%5BX1@0N9EU4AV%7BEC5.jpg>
Data size: 7600 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Thu Apr 20 15:54:51 2006

Key: <http://ads.msn.com/ads/pronws/HM010804msnbutton.gif>
Data size: 5700 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Fri Apr 20 13:42:54 2007

Key: http://gfx2.hotmail.com/i.p.trend_small.gif
Data size: 5928 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:16 2006
Expires: Sun Apr 17 13:43:16 2016

Key:
<http://stb.msn.com/i/4F/A16ED3BB7C5C1157DC786D82E7BBCF.gif>
Data size: 7600 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Mon Dec 31 18:00:14 2029

Key: http://www.ebaumsworld.com/images/red_tri2.gif
Data size: 5120 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:46 2006
Expires: Mon Jun 19 11:05:10 2006

Key: <http://hp.msn.com/c/hotmail/hotmail77x19.gif>

Data size: 4408 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:42:28 2006
Expires: Sat May 27 01:50:35 2006

Key: <http://client.alexa.com/common/images/powered-google.gif>

Data size: 2924 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:24 2006
Expires: Mon May 29 15:28:18 2006

Key: http://www.mozilla.org/images/header_br.gif

Data size: 2240 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:11 2006
Expires: Thu Apr 20 14:40:10 2006

Key: http://gfx2.hotmail.com/crs_918.gif

Data size: 4028 bytes
Fetch count: 6
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: <http://client.alexa.com/common/images/gray-fade.gif>

Data size: 1216 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:24 2006
Expires: Sun May 28 08:40:08 2006

Key: <http://download.alexa.com/favicon.ico>

Data size: 1024 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:42 2006
Expires: Wed Sep 27 20:19:41 2006

Key: http://www.activeshopper.com/images/btn_rss.gif

Data size: 1624 bytes
Fetch count: 3
Last modified: Thu Apr 20 13:39:39 2006
Expires: Wed May 3 04:34:58 2006

Key:
http://www.activeshopper.com/images%5Cbtn_compare_prices1.gif

Data size: 7480 bytes
Fetch count: 5
Last modified: Thu Apr 20 13:39:40 2006
Expires: Fri May 5 07:54:31 2006

Key: <http://www.mozilla.org/images/mozilla-16.png>

Data size: 1024 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:10 2006
Expires: Thu Apr 20 14:40:10 2006

Last modified: Thu Apr 20 13:43:46 2006
Expires: Mon Jun 19 11:06:41 2006

Key: <http://www.ebaumsworld.com/images/setashomesm.gif>
Data size: 1216 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:46 2006
Expires: Mon Jun 19 11:04:28 2006

Key: <http://www.ebaumsworld.com/images/searchico.gif>
Data size: 1216 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:46 2006
Expires: Mon Jun 19 11:05:07 2006

Key: <http://www.ebaumsworld.com/images2/feed-icon19x19.gif>
Data size: 1216 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:46 2006
Expires: Tue May 2 10:18:47 2006

Key: <http://www.ebaumsworld.com/favicon.ico>
Data size: 1024 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:46 2006
Expires: Thu Jul 13 10:04:33 2006

Key: <http://hp.msn.com/c/hotmail/go.gif>
Data size: 1080 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:42:28 2006
Expires: Thu Jun 8 20:23:22 2006

Key: http://www.activeshopper.com/images/flag_us.gif
Data size: 520 bytes
Fetch count: 3
Last modified: Thu Apr 20 13:39:40 2006
Expires: Wed Oct 2 00:56:27 2019

Key: http://www.activeshopper.com/images/flag_uk.gif
Data size: 520 bytes
Fetch count: 3
Last modified: Thu Apr 20 13:39:40 2006
Expires: Wed Oct 2 00:56:27 2019

Key: http://www.activeshopper.com/images/arrow_top_left.gif
Data size: 780 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:43 2006
Expires: Thu Dec 3 20:37:56 2009

Key:
http://www.activeshopper.com/images/arrow_bottom_left.gif
Data size: 780 bytes

Fetch count: 1
Last modified: Thu Apr 20 13:39:43 2006
Expires: Sat Mar 28 22:35:18 2009

Key: http://www.activeshopper.com/images/q_mark.gif
Data size: 520 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:44 2006
Expires: Sun Dec 6 10:31:40 2009

Key: <http://www.activeshopper.com/favicon.ico>
Data size: 1024 bytes
Fetch count: 3
Last modified: Thu Apr 20 13:39:41 2006
Expires: Sun Jun 4 16:31:56 2006

Key: http://www.mozilla.org/images/header_tr.gif
Data size: 588 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:11 2006
Expires: Thu Apr 20 14:40:10 2006

Key: http://www.mozilla.org/images/key-point_back.gif
Data size: 1008 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:11 2006
Expires: Thu Apr 20 14:40:10 2006

Key:
https://login.live.com/ppsecure/post.srf?id=2&svc=mail&cbid=24325&msspjph=1&tw=0&fs=1&fsa=1&fsat=1296000&lc=1033&_lang=EN&vv=400&bk=1145558534

Data size: 502 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:51 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://gfx2.hotmail.com/i.p.junkmail.gif>
Data size: 624 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.search.gif>
Data size: 624 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.putinfolder.gif>
Data size: 624 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.folder.gif>
Data size: 624 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.greetingcard.gif>
Data size: 624 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.cal.meet.req.gif>
Data size: 624 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.cal.task.gif>
Data size: 624 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.cont.group.gif>
Data size: 624 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.cal.note.gif>
Data size: 624 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.folder.inbox.gif>
Data size: 624 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.folder.sent.gif>
Data size: 624 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.F42B5.gif>
Data size: 624 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.send.gif>
Data size: 520 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:43:02 2006
Expires: Sun Apr 17 13:43:02 2016

Key: <http://gfx2.hotmail.com/i.p.tools.gif>
Data size: 624 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:43:02 2006
Expires: Sun Apr 17 13:43:02 2016

Key: <http://gfx2.hotmail.com/i.p.cancel.gif>
Data size: 528 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:43:02 2006
Expires: Sun Apr 17 13:43:02 2016

Key: <http://gfx2.hotmail.com/i.p.attachfile.gif>
Data size: 624 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:43:02 2006
Expires: Sun Apr 17 13:43:02 2016

Key:
http://global.msads.net/ads/8373/0000008373_00000000000000000245374.gif
Data size: 1656 bytes
Fetch count: 3
Last modified: Thu Apr 20 13:42:55 2006
Expires: Fri Apr 20 13:42:55 2007

Key:
http://global.msads.net/ads/11855/0000011855_00000000000000000197093.gif
Data size: 1656 bytes
Fetch count: 3
Last modified: Thu Apr 20 13:42:55 2006
Expires: Fri Apr 20 13:42:55 2007

Key: <http://www.hotmail.msn.com/cgi-bin/expire?ct=1145558595>
Data size: 728 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:29 2006
Expires: Sun Apr 17 13:43:29 2016

Key: [http://msnportal.112.2o7.net/b/ss/msnportalhome/1/H.1-pdv-2/s94981980549471?\[AQB\]&pccr=true&&ndh=1&t=20/3/2006%2013%3A43%3A31%204%20240&ns=msnportal&pageName=US%20Homepage&g=http%3A//signout.msn.com/%3Flc%3D1033&r=http%3A//login.live.com/logout.srf%3F_lang%3DEN%26lc%3D1033%26id%3D2%26ru%3Dhttp%253a%252f%252fsignout%252ems%252ecom%26dontall%3D%26vv%3D400&cc=USD&ch=signout.msn.com&server=msn.com&cl=Portal&c2=en-US&c3=V9.7&c4=B&c23=5F164A21EB5C5622AD0AC12FFFFFFFF&c29=http%3A//signo](http://msnportal.112.2o7.net/b/ss/msnportalhome/1/H.1-pdv-2/s94981980549471?[AQB]&pccr=true&&ndh=1&t=20/3/2006%2013%3A43%3A31%204%20240&ns=msnportal&pageName=US%20Homepage&g=http%3A//signout.msn.com/%3Flc%3D1033&r=http%3A//login.live.com/logout.srf%3F_lang%3DEN%26lc%3D1033%26id%3D2%26ru%3Dhttp%253a%252f%252fsignout%252ems%252ecom%26dontall%3D%26vv%3D400&cc=USD&ch=signout.msn.com&server=msn.com&cl=Portal&c2=en-US&c3=V9.7&c4=B&c23=5F164A21EB5C5622AD0AC12FFFFFFFF&c29=http%3A//signo)

[ut.msn.com/&s=1024x768&c=16&j=1.3&v=Y&k=Y&bw=1016&bh=576&p=Java%28TM%29%20Plug-in%201.4.2_06-b03%3Bnppdf.so%3B&\[AQE\]](http://ut.msn.com/&s=1024x768&c=16&j=1.3&v=Y&k=Y&bw=1016&bh=576&p=Java%28TM%29%20Plug-in%201.4.2_06-b03%3Bnppdf.so%3B&[AQE])

Data size: 43 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:43:32 2006

Expires: Wed Dec 31 19:00:00 1969

Key:

<http://login.live.com/pp400/images/LiveID16.gif?x=4.0.5610.0>

Data size: 832 bytes

Fetch count: 2

Last modified: Thu Apr 20 13:42:28 2006

Expires: Fri Apr 20 13:42:28 2007

Key: http://client.alexa.com/ds/images/down_arrow.gif

Data size: 440 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:38:24 2006

Expires: Sat May 20 18:01:26 2006

Key: http://www.activeshopper.com/images/ic_send.gif

Data size: 624 bytes

Fetch count: 2

Last modified: Thu Apr 20 13:39:39 2006

Expires: Wed May 24 07:37:54 2006

Key: <http://www.activeshopper.com/images/carrot.gif>

Data size: 320 bytes

Fetch count: 3

Last modified: Thu Apr 20 13:39:40 2006

Expires: Thu May 25 22:36:24 2006

Key: http://www.activeshopper.com/images/right_sep.gif

Data size: 372 bytes

Fetch count: 3

Last modified: Thu Apr 20 13:39:40 2006

Expires: Thu May 25 19:44:54 2006

Key: http://www.activeshopper.com/images/firefox_icon.gif

Data size: 572 bytes

Fetch count: 2

Last modified: Thu Apr 20 13:39:43 2006

Expires: Sun Dec 6 10:31:37 2009

Key: http://www.mozilla.org/images/key-point_tr.gif

Data size: 280 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:40:11 2006

Expires: Thu Apr 20 14:40:10 2006

Key: http://www.mozilla.org/images/download_tl.gif

Data size: 288 bytes

Fetch count: 1

Last modified: Thu Apr 20 13:40:11 2006

Expires: Thu Apr 20 14:40:10 2006

Key: <http://gfx2.hotmail.com/tab.separator.on.r.gif>
Data size: 280 bytes
Fetch count: 6
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: <http://gfx2.hotmail.com/tab.separator.on.l.gif>
Data size: 280 bytes
Fetch count: 6
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: <http://gfx2.hotmail.com/tab.bg.on.gif>
Data size: 280 bytes
Fetch count: 6
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: <http://gfx2.hotmail.com/tab.bg.off.gif>
Data size: 280 bytes
Fetch count: 6
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: <http://gfx2.hotmail.com/i.p.arr.left.gif>
Data size: 288 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.trash.gif>
Data size: 528 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.delete.d.gif>
Data size: 480 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:02 2006
Expires: Sun Apr 17 13:43:02 2016

Key: <http://gfx2.hotmail.com/i.p.folder.drafts.gif>
Data size: 624 bytes
Fetch count: 3
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.attach.gif>
Data size: 528 bytes
Fetch count: 3
Last modified: Thu Apr 20 13:42:59 2006

Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.importance.1.gif>
Data size: 280 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:43:02 2006
Expires: Sun Apr 17 13:43:02 2016

Key: <http://gfx2.hotmail.com/i.p.delete.gif>
Data size: 480 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.cal.gif>
Data size: 576 bytes
Fetch count: 3
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: <http://by24fd.bay24.hotmail.msn.com/favicon.ico>
Data size: 1024 bytes
Fetch count: 5
Last modified: Thu Apr 20 13:42:59 2006
Expires: Tue Apr 25 18:19:56 2006

Key: <http://stc.msn.com/br/ushp/css/11/Decoration/new.gif>
Data size: 504 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:31 2006
Expires: Thu May 4 13:43:31 2006

Key:
http://login.live.com/pp400/images/icon_err.gif?x=4.0.5610.0
Data size: 832 bytes
Fetch count: 4
Last modified: Thu Apr 20 13:42:28 2006
Expires: Fri Apr 20 13:42:28 2007

Key: http://client.alexa.com/ds/images/up_arrow.gif
Data size: 440 bytes
Fetch count: 3
Last modified: Thu Apr 20 13:38:24 2006
Expires: Sat May 20 18:01:24 2006

Key: http://www.activeshopper.com/images/menu_bg_off.gif
Data size: 128 bytes
Fetch count: 6
Last modified: Thu Apr 20 13:39:40 2006
Expires: Thu May 25 22:36:30 2006

Key: http://www.activeshopper.com/images/menu_bg_on.gif
Data size: 128 bytes
Fetch count: 3

Last modified: Thu Apr 20 13:39:44 2006
Expires: Thu May 25 22:36:35 2006

Key: http://www.mozilla.org/images/header_tl.gif
Data size: 252 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:10 2006
Expires: Thu Apr 20 14:40:10 2006

Key: http://www.mozilla.org/images/key-point_tl.gif
Data size: 224 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:11 2006
Expires: Thu Apr 20 14:40:10 2006

Key: http://www.mozilla.org/images/key-point_bl.gif
Data size: 224 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:11 2006
Expires: Thu Apr 20 14:40:10 2006

Key: http://www.mozilla.org/images/download_bl.gif
Data size: 224 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:12 2006
Expires: Thu Apr 20 14:40:10 2006

Key: <http://gfx2.hotmail.com/tab.separator.end.gif>
Data size: 136 bytes
Fetch count: 6
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: <http://gfx2.hotmail.com/tab.separator.off.gif>
Data size: 280 bytes
Fetch count: 12
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: <http://gfx2.hotmail.com/i.p.new.gif>
Data size: 484 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.sort.desc.gif>
Data size: 196 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.cont.individual.gif>
Data size: 576 bytes
Fetch count: 5

Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: <http://gfx2.hotmail.com/i.p.writenew.gif>
Data size: 624 bytes
Fetch count: 4

Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: <http://www.ebaumsworld.com/images/tribull3.gif>
Data size: 384 bytes
Fetch count: 3

Last modified: Thu Apr 20 13:43:45 2006
Expires: Mon Jun 19 11:04:57 2006

Key: <http://www.ebaumsworld.com/images/spacer.gif>
Data size: 360 bytes
Fetch count: 3

Last modified: Thu Apr 20 13:43:45 2006
Expires: Sun May 14 11:05:19 2006

Key: <http://www.ebaumsworld.com/images/neworange.gif>
Data size: 240 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:43:46 2006
Expires: Thu May 25 03:11:58 2006

Key:
<https://pfs.mozilla.org/plugins/PluginFinderService.php?mimetype=application/x-shockwave-flash&appID={ec8030f7-c20a-464f-9b0e-13a3a9e97384}&appVersion=2005091104&clientOS=Linux%20i686&chromeLocale=en-US>

Data size: 1396 bytes
Fetch count: 11
Last modified: Thu Apr 20 13:44:42 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://gfx2.hotmail.com/tab.bg.dln.gif>
Data size: 192 bytes
Fetch count: 12

Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: <http://gfx2.hotmail.com/bgcolor.gif>
Data size: 96 bytes
Fetch count: 7

Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: <http://gfx2.hotmail.com/i.p.importance.h.gif>
Data size: 160 bytes
Fetch count: 3

Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key: <http://gfx2.hotmail.com/i.p.toarrow.gif>
Data size: 364 bytes
Fetch count: 6
Last modified: Thu Apr 20 13:43:02 2006
Expires: Sun Apr 17 13:43:02 2016

Key: http://client.alexa.com/common/images/orange_arrow.gif
Data size: 308 bytes
Fetch count: 7
Last modified: Thu Apr 20 13:38:24 2006
Expires: Sun May 28 10:50:47 2006

Key: http://www.activeshopper.com/images/tab_seperator.gif
Data size: 256 bytes
Fetch count: 18
Last modified: Thu Apr 20 13:39:40 2006
Expires: Thu May 25 22:36:36 2006

Key:
http://phg.hitbox.com/HG?hc=wp189&hb=WR5501288GNM70EN3&cd=1&hv=6&n=home&vcon=ActiveShopper&bn=Netscape&bv=500&ce=y&ss=1024*768&sc=16&dt=13&sv=13&zo=240&epg=&lm=1145554777000&cy=u&hp=u&ja=y&ln=en-US&prc=&oid=&pl=Java%28TM%29%20Plug-in%201.4.2_06-b03%3Anppdf.so%3A&cp=null&con=&rf=bookmark
Data size: 8 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Wed Dec 31 19:00:00 1969

Key:
http://phg.hitbox.com/HG?hc=wp189&hb=WR5501288GNM70EN3&cd=1&hv=6&n=download&vcon=ActiveShopper&bn=Netscape&bv=500&ce=y&ss=1024*768&sc=16&dt=13&sv=13&zo=240&epg=&lm=1145554782000&cy=u&hp=u&ja=y&ln=en-US&prc=&oid=&pl=Java%28TM%29%20Plug-in%201.4.2_06-b03%3Anppdf.so%3A&cp=null&con=&rf=http%3A//www.activeshopper.com/
Data size: 8 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:44 2006
Expires: Wed Dec 31 19:00:00 1969

Key:
http://phg.hitbox.com/HG?hc=wp189&hb=WR5501288GNM70EN3&cd=1&hv=6&n=download&vcon=ActiveShopper&bn=Netscape&bv=500&ce=y&ss=1024*768&sc=16&dt=13&sv=13&zo=240&epg=&lm=1145554782000&cy=u&hp=u&ja=y&ln=en-US&prc=&oid=&pl=Java%28TM%29%20Plug-in%201.4.2_06-b03%3Anppdf.so%3A&cp=null&con=&rf=http%3A//www.activeshopper.com/&fn=se tupactiv.exe
Data size: 8 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:45 2006
Expires: Wed Dec 31 19:00:00 1969

Key:

http://phg.hitbox.com/HG?hc=wp189&hb=WR5501288GNM70EN3&cd=1&hv=6&n=Sample&vcon=ActiveShopper&bn=Netscape&bv=500&ce=y&ss=1024*768&sc=16&dt=13&v=13&zo=240&epg=&lm=1145554805000&cy=u&hp=u&ja=y&ln=en-US&prc=&oid=&pl=Java%28TM%29%20Plug-in%201.4.2_06-b03%3Anppdf.so%3A&cp=null&con=&rf=bookmark

Data size: 8 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:06 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://h.msn.com/c.gif?RF=&PI=44364&DI=7474&PS=8313>

Data size: 8 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:55 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://gfx2.hotmail.com/tab.bg.sln.gif>

Data size: 140 bytes
Fetch count: 18
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key:

<http://h.msn.com/c.gif?RF=http%3a%2f%2fby24fd%2ebay24%2ehotmail%2emsn%2ecom%2fcgi%2dbin%2fHotMail%3fcurlmbox%3dF000000001%26a%3d9ce4846151ca13adbafe53f3elf79fc6b6563ab09dc0c32a4994cf4339dc0ed9%26fti%3dyes&PI=44364&DI=7474&PS=8318>

Data size: 8 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:02 2006
Expires: Wed Dec 31 19:00:00 1969

Key:

<http://h.msn.com/c.gif?RF=http%3a%2f%2fby24fd%2ebay24%2ehotmail%2emsn%2ecom%2fcgi%2dbin%2fcompose%3f%26curlmbox%3dF000000001%26a%3d9ce4846151ca13adbafe53f3elf79fc6b6563ab09dc0c32a4994cf4339dc0ed9&PI=44364&DI=7474&PS=64833>

Data size: 8 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:16 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://gfx2.hotmail.com/i.p.downarrow.gif>

Data size: 196 bytes
Fetch count: 6
Last modified: Thu Apr 20 13:42:59 2006
Expires: Sun Apr 17 13:42:58 2016

Key:

<http://h.msn.com/c.gif?RF=http%3a%2f%2fby24fd%2ebay24%2ehotmail%2emsn%2ecom%2fcgi%2dbin%2fpremail&PI=44364&DI=7474&PS=8318>

Data size: 8 bytes
Fetch count: 1

Last modified: Thu Apr 20 13:43:23 2006
Expires: Wed Dec 31 19:00:00 1969

Key:

http://switch.atdmt.com/action/msn_hm_en_US_sent_mail_confirmation

Data size: 8 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:26 2006
Expires: Wed Dec 31 19:00:00 1969

Key:

<http://h.msn.com/c.gif?RF=http%3a%2f%2fby24fd%2ebay24%2ehotmail%2emsn%2ecom%2fcgi%2dbin%2fdoattach&PI=44364&DI=7474&PS=9621>

Data size: 8 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:26 2006
Expires: Wed Dec 31 19:00:00 1969

Key:

<http://login.live.com/ThirdPartyCookieCheck.srf?ct=1145558595>

Data size: 8 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:29 2006
Expires: Wed Dec 31 19:00:00 1969

Key:

http://c.msn.com/c.gif?di=5324&pi=7317&ps=83967&tp=http://signout.msn.com/&rf=http://login.live.com/logout.srf?_lang=EN&lc=1033&id=2&ru=http%3a%2f%2fsignout%2emsn%2ecom&dontall=&vv=400

Data size: 8 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:31 2006
Expires: Wed Dec 31 19:00:00 1969

Key: [http://msnportal.112.2o7.net/b/ss/msnportalhome/1/H.1-pdv-](http://msnportal.112.2o7.net/b/ss/msnportalhome/1/H.1-pdv-2/s94981980549471?[AQB]&ndh=1&t=20/3/2006%2013%3A43%3A31%204%20240&ns=msnportal&pageName=US%20Homepage&g=http%3A//signout.msn.com/%3F1c%3D1033&r=ht tp%3A//login.live.com/logout.srf%3F_lang%3DEN%26lc%3D1033%26id%3D2%26ru %3Dhttp%253a%252f%252fsignout%252emsn%252ecom%26dontall%3D%26vv%3D400&c c=USD&ch=signout.msn.com&server=msn.com&cl=Portal&c2=en-US&c3=V9.7&c4=B&c23=5F164A21EB5C5622AD0AC12FFFFFFFF&c29=http%3A//signo ut.msn.com/&s=1024x768&c=16&j=1.3&v=Y&k=Y&bw=1016&bh=576&p=Java%28TM%29 %20Plug-in%201.4.2_06-b03%3Bnppdf.so%3B&[AQE])

[2/s94981980549471?\[AQB\]&ndh=1&t=20/3/2006%2013%3A43%3A31%204%20240&ns=msnportal&pageName=US%20Homepage&g=http%3A//signout.msn.com/%3F1c%3D1033&r=ht tp%3A//login.live.com/logout.srf%3F_lang%3DEN%26lc%3D1033%26id%3D2%26ru %3Dhttp%253a%252f%252fsignout%252emsn%252ecom%26dontall%3D%26vv%3D400&c c=USD&ch=signout.msn.com&server=msn.com&cl=Portal&c2=en-US&c3=V9.7&c4=B&c23=5F164A21EB5C5622AD0AC12FFFFFFFF&c29=http%3A//signo ut.msn.com/&s=1024x768&c=16&j=1.3&v=Y&k=Y&bw=1016&bh=576&p=Java%28TM%29 %20Plug-in%201.4.2_06-b03%3Bnppdf.so%3B&\[AQE\]](http://msnportal.112.2o7.net/b/ss/msnportalhome/1/H.1-pdv-2/s94981980549471?[AQB]&ndh=1&t=20/3/2006%2013%3A43%3A31%204%20240&ns=msnportal&pageName=US%20Homepage&g=http%3A//signout.msn.com/%3F1c%3D1033&r=ht tp%3A//login.live.com/logout.srf%3F_lang%3DEN%26lc%3D1033%26id%3D2%26ru %3Dhttp%253a%252f%252fsignout%252emsn%252ecom%26dontall%3D%26vv%3D400&c c=USD&ch=signout.msn.com&server=msn.com&cl=Portal&c2=en-US&c3=V9.7&c4=B&c23=5F164A21EB5C5622AD0AC12FFFFFFFF&c29=http%3A//signo ut.msn.com/&s=1024x768&c=16&j=1.3&v=Y&k=Y&bw=1016&bh=576&p=Java%28TM%29 %20Plug-in%201.4.2_06-b03%3Bnppdf.so%3B&[AQE])

Data size: 24 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Wed Dec 31 19:00:00 1969

Key:

<http://c.msn.com/c.gif?na=1137&nc=9523&ps=8312&di=1070&pi=44364&xtpid=1005&TP=http%3a%2f%2fx.cb2.msn.com%2ffooter.armx&RF=http%3a%2f%2flogin.live.com%2flogin.srf%3fid%3d2%26svc%3dmail%26cbid%3d24325%26msppjph%3d1%26>

[26tw%3d0%26fs%3d1%26fsa%3d1%26fsat%3d1296000%26lc%3d1033%26_lang%3dEN%26vv%3d400](http://www.alexa.com/common/images/single_dot_h.gif)

Data size: 8 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:44:57 2006
Expires: Wed Dec 31 19:00:00 1969

Key: http://client.alexa.com/common/images/single_dot_h.gif
Data size: 20 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:24 2006
Expires: Sat May 27 20:49:44 2006

Key: http://client.alexa.com/common/images/single_dot.gif
Data size: 24 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:38:24 2006
Expires: Sat May 27 20:54:13 2006

Key: http://client.alexa.com/common/images/small_bullet.gif
Data size: 192 bytes
Fetch count: 9
Last modified: Thu Apr 20 13:38:25 2006
Expires: Sat May 27 15:29:56 2006

Key: [http://www.google-analytics.com/utm.gif?utmwv=1&utmh=1740301624&utmsr=1024x768&utmssc=16-bit&utmml=en-us&utmje=1&utmfl=-&utmcn=1&utmdt=ActiveShopper%20%E2%80%93%20Compare%20and%20Buy%20Consumer%20Products%20at%20the%20Best%20Prices&utmhn=www.activeshopper.com&utmr=-&utmp=/&utmcc=__utma%3D67204993.1740301624.1145554781.1145554781.1145554781.1%3B%2B__utmb%3D67204993%3B%2B__utmc%3D67204993%3B%2B__utmz%3D67204993.1145554781.1.1.utmccn%3D\(direct\)%7Cutmcsr%3D\(direct\)%7Cutmcmd%3D\(none\)%3B%2B](http://www.google-analytics.com/utm.gif?utmwv=1&utmh=1740301624&utmsr=1024x768&utmssc=16-bit&utmml=en-us&utmje=1&utmfl=-&utmcn=1&utmdt=ActiveShopper%20%E2%80%93%20Compare%20and%20Buy%20Consumer%20Products%20at%20the%20Best%20Prices&utmhn=www.activeshopper.com&utmr=-&utmp=/&utmcc=__utma%3D67204993.1740301624.1145554781.1145554781.1145554781.1%3B%2B__utmb%3D67204993%3B%2B__utmc%3D67204993%3B%2B__utmz%3D67204993.1145554781.1.1.utmccn%3D(direct)%7Cutmcsr%3D(direct)%7Cutmcmd%3D(none)%3B%2B)

Data size: 4 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:40 2006
Expires: Wed Dec 31 19:00:00 1969

Key: [http://www.google-analytics.com/utm.gif?utmwv=1&utmh=2067629796&utmsr=1024x768&utmssc=16-bit&utmml=en-us&utmje=1&utmfl=-&utmdt=ActiveShopper%20-%20Free%20Comparative%20Shopping%20Toolbar%20Download%20Page&utmhn=www.activeshopper.com&utmr=0&utmp=/download.asp&utmcc=__utma%3D67204993.1740301624.1145554781.1145554781.1145554781.1%3B%2B__utmb%3D67204993%3B%2B__utmc%3D67204993%3B%2B__utmz%3D67204993.1145554781.1.1.utmccn%3D\(direct\)%7Cutmcsr%3D\(direct\)%7Cutmcmd%3D\(none\)%3B%2B](http://www.google-analytics.com/utm.gif?utmwv=1&utmh=2067629796&utmsr=1024x768&utmssc=16-bit&utmml=en-us&utmje=1&utmfl=-&utmdt=ActiveShopper%20-%20Free%20Comparative%20Shopping%20Toolbar%20Download%20Page&utmhn=www.activeshopper.com&utmr=0&utmp=/download.asp&utmcc=__utma%3D67204993.1740301624.1145554781.1145554781.1145554781.1%3B%2B__utmb%3D67204993%3B%2B__utmc%3D67204993%3B%2B__utmz%3D67204993.1145554781.1.1.utmccn%3D(direct)%7Cutmcsr%3D(direct)%7Cutmcmd%3D(none)%3B%2B)

Data size: 4 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:44 2006
Expires: Wed Dec 31 19:00:00 1969

Key: [http://www.google-analytics.com/_utm.gif?utmwv=1&utmn=1251633533&utmsr=1024x768&utmssc=16-bit&utmul=en-us&utmje=1&utmfl=-&utmdt=ActiveShopper%20-%20Sample%20Page&utmhn=www.activeshopper.com&utm=-&utmp=/sample.asp?counter=yes&utmcc=UA-228859-1&utmcc=__utma%3D67204993.1740301624.1145554781.1145554781.1145554781.1%3B%2B__utmb%3D67204993%3B%2B__utmc%3D67204993%3B%2B__utmz%3D67204993.1145554781.1.1.utmccn%3D\(direct\)%7Cutmcsr%3D\(direct\)%7Cutmcmd%3D\(none\)%3B%2B](http://www.google-analytics.com/_utm.gif?utmwv=1&utmn=1251633533&utmsr=1024x768&utmssc=16-bit&utmul=en-us&utmje=1&utmfl=-&utmdt=ActiveShopper%20-%20Sample%20Page&utmhn=www.activeshopper.com&utm=-&utmp=/sample.asp?counter=yes&utmcc=UA-228859-1&utmcc=__utma%3D67204993.1740301624.1145554781.1145554781.1145554781.1%3B%2B__utmb%3D67204993%3B%2B__utmc%3D67204993%3B%2B__utmz%3D67204993.1145554781.1.1.utmccn%3D(direct)%7Cutmcsr%3D(direct)%7Cutmcmd%3D(none)%3B%2B)

Data size: 4 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:40:06 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://h.msn.com/c.gif?RF=http%3a%2f%2fby24fd%2ebay24%2ehotmail%2emsn%2ecom%2fcgi%2dbin%2fhmhome%3ffti%3dyes%26curmbox%3dF00000001%26a%3d9ce4846151ca13adbafef53f3elf79fc6b6563ab09dc0c32a4994cf4339dc0ed9&PI=44364&DI=7474&PS=74565>

Data size: 8 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:42:59 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://gfx2.hotmail.com/i.p.black.b.gif>
Data size: 64 bytes
Fetch count: 6
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: <http://stc.msn.com/br/ushp/css/2/Decoration/Bullet.gif>
Data size: 16 bytes
Fetch count: 3
Last modified: Thu Apr 20 13:43:31 2006
Expires: Wed Dec 31 19:00:00 1969

Key: http://www.activeshopper.com/menus/dmb_m.gif
Data size: 8 bytes
Fetch count: 3
Last modified: Thu Apr 20 13:39:39 2006
Expires: Mon Sep 4 22:10:53 2006

Key: http://www.activeshopper.com/menus/dmb_i.gif
Data size: 8 bytes
Fetch count: 3
Last modified: Thu Apr 20 13:39:39 2006
Expires: Mon Sep 4 22:10:53 2006

Key: <http://gfx2.hotmail.com/i.p.white.b.gif>
Data size: 100 bytes
Fetch count: 11
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: <http://stc.msn.com/br/ushp/css/2/Decoration/Pipe.gif>
Data size: 4 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:43:31 2006
Expires: Wed Dec 31 19:00:00 1969

Key: <http://global.msads.net/ads/ABUIMG/clear.gif>
Data size: 8 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Mon Sep 11 20:29:06 2006

Key:
http://global.msads.net/ads/1/0000000001_000000000000000000017246.gif
Data size: 8 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Fri Apr 20 13:43:32 2007

Key:
<http://g.msn.com/0AD0002R/877867.4??PID=3014479&UIT=A&TargetID=1048194&AN=1125140609&PG=MSNREC>
Data size: 8 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Mon Sep 11 20:29:06 2006

Key:
<http://global.msads.net/defaultads/ads/defaultads/1376.gif?C=P&E=10&N=F01>
Data size: 8 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:32 2006
Expires: Fri Apr 20 13:43:32 2007

Key: <http://www.activeshopper.com/images/spacer.gif>
Data size: 8 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:39:40 2006
Expires: Thu May 25 16:21:06 2006

Key:
<http://view.atdmt.com/VON/view/msnkvon0740000115von/direct/01/>
Data size: 8 bytes
Fetch count: 3
Last modified: Thu Apr 20 13:42:56 2006
Expires: Sun Apr 23 14:16:40 2006

Key:
http://www.ebaumsworld.com/___utm.gif?utm=400367521&utmsr=1024x768&utmsa=1024x721&utmsc=16-bit&utmsb=1016x576&utm=enus&utmje=1&utmce=1&utmtz=-0400&utmjv=1.5&utmcn=1&utm=-&utmp=/pacman.html

Data size: 4 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:45 2006
Expires: Wed Jun 14 23:18:32 2006

Key: <chrome://global/skin/scrollbar/slider.gif>
Data size: 24 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:37:08 2006
Expires: No expiration time

Key: <chrome://global/skin/arrow/arrow-lft.gif>
Data size: 80 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:37:08 2006
Expires: No expiration time

Key: <chrome://global/skin/arrow/arrow-rit.gif>
Data size: 80 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:37:08 2006
Expires: No expiration time

Key: <chrome://global/skin/arrow/arrow-up.gif>
Data size: 60 bytes
Fetch count: 5
Last modified: Thu Apr 20 13:37:08 2006
Expires: No expiration time

Key: <chrome://global/skin/arrow/arrow-dn.gif>
Data size: 60 bytes
Fetch count: 14
Last modified: Thu Apr 20 13:37:08 2006
Expires: No expiration time

Key: <chrome://global/skin/icons/tabstrip-bottom.png>
Data size: 4 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:37:10 2006
Expires: No expiration time

Key: <chrome://global/skin/icons/folder-item.png>
Data size: 6144 bytes
Fetch count: 9
Last modified: Thu Apr 20 13:37:10 2006
Expires: No expiration time

Key: <chrome://global/skin/icons/close.png>
Data size: 3072 bytes
Fetch count: 7
Last modified: Thu Apr 20 13:37:10 2006
Expires: No expiration time

Key: <chrome://global/skin/toolbar/chevron.gif>

Data size: 140 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:37:11 2006
Expires: No expiration time

Key: <chrome://browser/skin/Toolbar.png>
Data size: 138240 bytes
Fetch count: 10
Last modified: Thu Apr 20 13:37:11 2006
Expires: No expiration time

Key: <chrome://global/skin/arrow/arrow-dn-dis.gif>
Data size: 60 bytes
Fetch count: 4
Last modified: Thu Apr 20 13:37:11 2006
Expires: No expiration time

Key: <chrome://browser/skin/Go.png>
Data size: 4800 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:37:11 2006
Expires: No expiration time

Key: <chrome://browser/skin/search-arrow.gif>
Data size: 360 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:37:11 2006
Expires: No expiration time

Key: <file:///UNIONFS/usr/lib/mozilla-firefox/searchplugins/google.gif>
Data size: 832 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:37:11 2006
Expires: No expiration time

Key: <chrome://mozapps/skin/update/extensionalert.png>
Data size: 3072 bytes
Fetch count: 4
Last modified: Thu Apr 20 13:37:10 2006
Expires: No expiration time

Key: <resource://gre/res/loading-image.gif>
Data size: 768 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:37:24 2006
Expires: No expiration time

Key: <resource://gre/res/broken-image.gif>
Data size: 768 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:37:24 2006
Expires: No expiration time

Key: <chrome://mozapps/skin/downloads/viewFader.png>
Data size: 40000 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:37:28 2006
Expires: No expiration time

Key:
<chrome://mozapps/skin/downloads/downloadCleanupDisabled.png>
Data size: 1848 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:37:28 2006
Expires: No expiration time

Key: <chrome://mozapps/skin/downloads/downloadCleanup.png>
Data size: 1848 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:37:28 2006
Expires: No expiration time

Key: <http://client.alexa.com/common/images//shim.gif>
Data size: 8 bytes
Fetch count: 10
Last modified: Thu Apr 20 13:38:24 2006
Expires: Fri Sep 8 11:17:05 2006

Key: <http://client.alexa.com/common/images/shim.gif>
Data size: 8 bytes
Fetch count: 61
Last modified: Thu Apr 20 13:38:24 2006
Expires: Fri Sep 8 11:17:05 2006

Key: <resource://gre/res/arrow.gif>
Data size: 112 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:39:39 2006
Expires: No expiration time

Key: <chrome://global/skin/icons/Question.png>
Data size: 4096 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:42:25 2006
Expires: No expiration time

Key: <chrome://browser/skin/Secure.png>
Data size: 1024 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:42:51 2006
Expires: No expiration time

Key: <chrome://global/skin/icons/Warning.png>
Data size: 4096 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:42:50 2006
Expires: No expiration time

Key: <http://gfx2.hotmail.com/spacer.gif>
Data size: 8 bytes
Fetch count: 85
Last modified: Thu Apr 20 13:42:55 2006
Expires: Sun Apr 17 13:42:54 2016

Key: <chrome://global/skin/Filepicker.png>
Data size: 20736 bytes
Fetch count: 2
Last modified: Thu Apr 20 13:43:18 2006
Expires: No expiration time

Key: <chrome://global/skin/tree/columnpicker.gif>
Data size: 576 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:18 2006
Expires: No expiration time

Key: <chrome://global/skin/tree/sort-asc.gif>
Data size: 196 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:18 2006
Expires: No expiration time

Key:
<chrome://mozapps/skin/xpinstall/xpinstallItemGeneric.png>
Data size: 4096 bytes
Fetch count: 11
Last modified: Thu Apr 20 13:39:40 2006
Expires: No expiration time

Key: <chrome://global/skin/checkbox/cbox-check.gif>
Data size: 196 bytes
Fetch count: 1
Last modified: Thu Apr 20 13:43:50 2006
Expires: No expiration time

Key: <chrome://global/skin/radio/radio-check-dis.gif>
Data size: 64 bytes
Fetch count: 11
Last modified: Thu Apr 20 13:43:48 2006
Expires: No expiration time

Key: <chrome://global/skin/radio/radio-check.gif>
Data size: 64 bytes
Fetch count: 24
Last modified: Thu Apr 20 13:37:27 2006
Expires: No expiration time

Key: <chrome://browser/skin/Throbber-small.png>
Data size: 832 bytes
Fetch count: 25
Last modified: Thu Apr 20 13:37:11 2006

Expires: No expiration time

Key: <chrome://browser/skin/Search-bar.png>

Data size: 1024 bytes

Fetch count: 2

Last modified: Thu Apr 20 13:37:11 2006

Expires: No expiration time

Key: <chrome://browser/skin/Throbber-small.gif>

Data size: 6656 bytes

Fetch count: 23

Last modified: Thu Apr 20 13:37:23 2006

Expires: No expiration time

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