

---

//THIS SECTION EXPLAINS HOW TO USE **INTERNET ACCESS** SOFTWARE ON YOUR OFFICE OR HOME COMPUTER. YOU DO NOT NEED TO READ THIS SECTION IF YOU INTEND TO DO ALL OF YOUR WORK IN THE ITS STUDENT COMPUTING LABS, BECAUSE THE SOFTWARE IS ALREADY INSTALLED AND CONFIGURED//

---

## **SOFTWARE AVAILABILITY AND CONNECTIVITY OVERVIEW**

### **GETTING STARTED**

With computers, patience is a virtue and in this case, a must, so take your time as you read and decide what to do. You can access the Internet from your own computer or from one in a Student Computing Lab. When using Penn State networks or computing resources to access the Internet, you must have a Penn State Access Account.

### **YOU'LL NEED A NETWORK CONNECTION:**

In your office or residence hall, a backbone (LAN) Ethernet connection or from home, a modem and an ordinary telephone connection, or a high-speed Broadband cable or DSL connection (explained in the "Networking" section).

See additional information in the sections "Internet Connections" and "Residence Halls." Also, see this guide on the Web at <http://css.its.psu.edu/internet/> for expanded information.

No one has been able to make a "single-click" package that does everything for everybody. There are just too many variations among operating systems, computer hardware and how computers connect to the network. You have to read a little bit and make some decisions to get the best results.

First, it's important to understand the difference between your computer's Network Connection and the Application Software that you install on it. Most application software for the newer versions of Microsoft Windows (the "32-bit" versions) works on all versions of Windows 2000 and Windows XP.

Unfortunately the network connection installation instructions are different for different versions of Windows and Mac. It can be a tedious chore or it may already be done for you on the computer you have, so our instructions try to cover all the bases. This means you have to take a little extra time and care to read and decide whether some (or all) of the steps apply to you or not.

### **NETWORK CONNECTIONS**

The "pipe" between your computer and the Internet consists of hardware and software. The communication hardware is either broadband (such as a cable modem, a DSL modem or a satellite connection), or LAN (Local Area Network, such as Ethernet). The software, called "drivers," is what makes the communication hardware work. More communication software, called TCP/IP (Transmission Control Protocol/Internet Protocol)—independent of the communication hardware—enables your computer to communicate with other computers on the Internet. All this software comes right in the box with any Windows, Macintosh or Linux system, so you have everything you

---

need. Recent computers come with “plug and play” (PnP) hardware that allows the system and drivers to communicate with every piece of hardware—so almost all systems and their components are self-configuring. The only information you need supply are things that are unique to your use of the system. Examples are your name, your initials, the phone number to dial to connect to your Internet Service Provider, and your e-mail address.

## LAN CONNECTIONS

In some Penn State residence halls and offices, this may be called an IBC (Individual Backbone Connection) or SIBC (Student IBC). See the section “Residence Halls” for important information on basic requirements and obtaining assistance. In a University office, you may need assistance from your department or college computer consultant or network administrator.

Make sure your computer has an installed Ethernet card and then connect the appropriate cable between the adapter and the wall jack. (This wall jack looks like a fat telephone wall jack, but it isn't. You can tell the difference because a LAN jack and cable have eight pins or connectors, while a telephone cable and wall jack have only four pins or connectors.)

Configuration instructions and settings for Residence Halls are provided when you register your computer. Please see <http://www.rescom.psu.edu/> for more information. Configuration instructions and settings for office computers will be provided by your network administrator.

## BROADBAND CONNECTIONS

These connections are much like regular LAN connections, but they also involve connecting your communication equipment (TV cable, DSL phone line or satellite link) to a special modem and then connecting an Ethernet or USB connection in your computer to the special modem—much like a LAN. The difference is that your service provider gives you special software to install on your computer to support your type of connection and cable or DSL modem. Often, the service provider will send a technician (an installer) to make sure everything is set-up

correctly and working properly. Always follow the instructions provided by your provider.

To be safe, always copy down the networking settings that the installer specifies. You'll need these anytime you upgrade your machine or if something goes wrong. These settings are NOT the same as the LAN settings in this article, even though they're called the same thing and they go in the same LAN configuration menus and windows.

## FIREWALL SOFTWARE

A software firewall is a valuable program that can block Trojan horse software and Internet worms from infecting your computer. If you use Mac OS X, Windows XP or XP home version, there is a built-in firewall. If you have a different version of Windows or want more control over your firewall, there are many good firewall packages available for download. Some are even free. Many people use the free version of Zone Alarm from Zone Labs. There's also a for-fee version of Zone Alarm Pro, Black Ice PC Protection, McAfee Personal Firewall or Symantec's Norton Personal Firewall—as well as others. Some are easier to use than others, but all are excellent products.

## ANTI-SPYWARE SOFTWARE

As if you didn't have enough to worry about, there's a relatively new class of insidious software called SpyWare or AdWare that can track every web page you visit, everything you type (including passwords and credit card information—even on SSL “secure” web sites) and your computing work—or play—habits. This information is collected and then sent back to a central site where the information is often entered in a database that provides easy profiling of your Internet activities, not to mention your credit card and financial information.

As reported by <http://spywareguide.com/>, common examples of otherwise popular Spyware programs include Alexa Toolbar, Bargain Buddy, Coolbar, Dogpile Search Tool, Gator and over 400 others, not to mention many Internet Trojans and Worms like Assassin, Klez, Blaster, MyDoom, Sasser and Slammer.



---

## //ANTI-VIRUS SOFTWARE

ONE OF THE MOST VALUABLE APPLICATION PROGRAMS YOU CAN INSTALL TO HELP KEEP YOUR COMPUTER SAFE IS AN ANTI-VIRUS PROGRAM. IF YOU ARE NETWORK CONNECTED, YOU CAN DOWNLOAD A COPY FROM THE PENN STATE SOFTWARE SERVERS AT [HTTPS://DOWNLOADS.ITS.PSU.EDU/](https://downloads.its.psu.edu/)

---



What can you do? There are many freeware and shareware programs available for download, but you would be wise to be alert to “social engineering” as an attempt to get you to download a purported Spyware remover, only to find that it is actually SpyWare itself. The following are a few reputable products: SpyBot, Ad-aware (Lava Software), Pest Patrol, McAfee Anti Spyware and Spy Sweeper. For a more complete list and comparison, visit: <http://reviews.cnet.com/4520-3513-5134965.html>.

This author uses several different ones—each good at certain things: Ad-aware Pro Plus and Ad-Watch Pro (the real-time component), Pest Patrol, Key Patrol and Cookie Patrol—not to mention OptOut, one of Steve Gibson’s many excellent and free security tools. Visit the site at: <http://www.grc.com/optout.htm>.

### FIRST THINGS FIRST

We recommend that you make sure the network connection is working and that you have downloaded and installed all the “critical updates” and “fixes” for your system before you start installing applications. Our reasoning is very simple: the Internet is literally crawling with computer viruses, worms, Adware and Spyware that didn’t exist when your Windows system CD was originally shipped. Some of

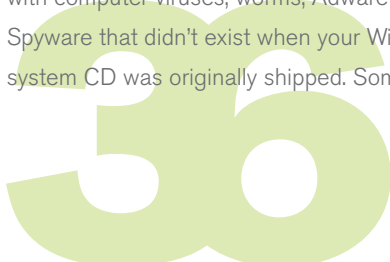
this bad software—or “malware” as it’s called—is quite vicious and capable of destroying all the files on a whole system in just seconds. There is a free Security Guidance Kit on CD available from Microsoft at <http://www.microsoft.com/security/guidance/default.aspx> which contains articles, guides and checklists to help you apply fixes and updates appropriate for your version of Windows.

### MACINTOSH SOFTWARE

This section explains several ways to obtain Internet access software on your Macintosh computer. Whether you use the Internet from your own machine or a lab, you must first get a Penn State Access Account. You do not need to read this section if you intend to do all of your work in the Student Computing labs, because all the software you need is already installed there.

If you use your own Mac, it should have at least 512 MB of memory. Hard drive size obviously is totally dependent on how you are going to use your machine, but 40 GB is probably a minimum size. Mac OS 9 is still supported for a few applications.

For reference, Information Technology Services (ITS) has taken care to ensure good performance in all of the Student Computing



---

Labs at University Park. The minimum Mac configuration will be a dual 2.1 GHz iMac G5 with 1.5GB ram and a 230 GB hard drive. The maximum Mac configuration will be a quad 2.66 GHz Mac Pro with 2 GB ram and 460 GB hard drive.

### **WHERE TO FIND THE MAC INTERNET CLIENTS**

The best place to get the most recent version of these clients is from the vendors' Web sites. However, you can obtain a licensed and tested version from the ITS download site at <https://downloads.its.psu.edu/>.

Mac OS X includes Mail and Safari for e-mail and web access and these applications may be sufficient for some people. In addition, many people are now using Thunderbird and Firefox for these tasks. Links to these products, in addition to others, are available on the downloads site.

### **WINDOWS SOFTWARE**

This section explains how to obtain Internet access software on your office or home Windows computer. You do not need to read this section if you intend to do all of your work in the ITS Student Computing Labs, because the software is already installed and configured.

If you're configuring a personal computer to run Windows XP, you'll get good performance with a CPU speed of about 800 MHz or greater, at least 512 MB or more main memory and an absolute minimum of 10 GB disk space. More is always better! (A "reasonable" minimally configured machine would have a 1.2 GHz processor, 256 MB RAM memory and at least 20 GB of hard disk space.)

For reference, ITS has taken care to ensure good performance in all of the Student Computing Labs at University Park. You'll find minimally configured Windows XP machines with a Pentium IV 3.4 GHz, 2 GB of RAM and a 160 GB Hard Drive. High-performance computing labs are equipped with a Pentium Core 2 Duo 2.4 Ghz, 2GB of RAM and a 250GB Hard Drive.

### **WHERE TO FIND THE WINDOWS INTERNET CLIENTS**

The best place to get the most recent version of these clients is from the vendors' Web sites. However, you can obtain a licensed and tested version from the ITS download site at <https://downloads.its.psu.edu/>.

Windows includes Outlook Express and Internet Explorer for e-mail and web access. In addition, many people are now using Thunderbird and Firefox for these tasks. Links to these products, in addition to others, are available on the downloads site.