How do I protect my computer these days?

What are the threats?

- Passive attacks: Viruses, Trojans, SpyWare, AdWare, Hoaxes, etc.
- Active attacks against your computer: Hackers
- Active attacks against you:
    - Social Engineering: This is ___ and we need your password to complete some testing on the line or your network will fail later today.
    - PopUps, "Warning: Your computer may be infected….Press OK for a full system scan". Yea, Right…
    - Bogus Anti-virus / Anti-spyware software "Free Download", Why is it free?

What are all these things?

Viruses: Like their biological equivalent, they infect, replicate, spread, and do unwanted things.

- Boot Sector Virus: Runs every time you start your computer
- Macro Virus: Infects documents that use macros such as Excel and can do anything including erasing your hard drive.
- File Infecting Virus: If this gets on your computer and runs, it can basically do anything it wants!

Malware

- Trojan Horse: A program that does something useful but contains a part that does something else. Ex. A game that also collects email addresses and then sends them off to spammers
- Worms: Like Viruses but they create complete copies of themselves
- Logic Bombs: They do something unexpected like deleting files on a certain date.
- Dialers: Software downloaded from a website without a person's knowledge that use your phone lines to place expensive calls.
- Adware: Programs that are funded by advertising revenues generated through ads shown while using the program. They may download spyware programs without a user's knowledge.
- Spyware: Programs that capture information and return it to a controller. Usually the information is browsing habits, but sometimes it is credit card info, etc.
- Backdoors: Programs that provide an attacker the ability to remote control your computer
- Hoaxes: Usually emails that say that something is wrong and tell you to do something. Ex., An email went around a few years ago saying there was a new virus going around and you needed to delete a file from your computer. This file was actually necessary to Internet Explorer.
- RootKits: A RootKit is a program that installs itself onto your computer and hides all traces of itself. This makes it hard for an Anti-Virus or Anti-Spyware program to find and remove the Root-Kit. One use of a Root-Kit is to turn your computer into a "Zombie" and then use it to send out spam mailings to other users.

How can you protect yourself

Firewall: Hardware vs software

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- On the Internet, you are a target at a location. A firewall keeps the computer's network doors locked
- Windows XP comes with a built-in firewall. Leave it on even if you are on an office network. It will protect you if another computer on your local network is infected.

Antivirus Software

- Current programs protect you against the major viruses, Trojans, Backdoors, Worms, and Logic Bombs. Some are starting to stop AdWare and SpyWare.

AntiSpyware Software

- Free: SpyBot, AdAware, Fake AntiSpyware Programs
- Purchased:
    - From Store: SpySweeper from WebRoot in Boulder
    - Online: Be aware! Some of these are fakes and cost you $29.95 also!

Safe Computing

- Don't download that file or useful program. Free should make you think Warning! Check using Google if you are not sure. Search on **program-name** Virus SpyWare.
- Don't open any e-mail you do not recognize.
- Turn off the Reading Pane in Outlook. Whether you open the email or the computer does, it is still open.
- Don't click on the "CANCEL" button on a pop-up. Buttons in pop-ups do whatever the people that created the pop-up want them to do!
- Keep your computer up-to-date! Install those patches that Microsoft sends out!
- Be sure your AntiVirus / Anti-Spyware definitions are up to date.
- Use complex passwords.
- Try a different Browser, Internet Explorer is a major target for attack. Firefox from the people that brought you Netscape is free and immune to many current attacks at this time.
- Keep personally identifiable information off the computer. Remove Tax Info, Credit Card Numbers, Social Security Numbers, etc.
- A popular threat going around is a Bank notice stating that they need you to verify some account information. Just "click here" and you are taken to **their** website to answer a few questions. They just got you!
- Many companies such as Symantec will let you do an on-line scan for viruses. This scan will not fix the problem, but since some of the newer viruses first disable the major antivirus programs, this is a good check if your system is infected.

Unfortunately…

- This is a war between the good guys and the bad guys. Sometimes they win. This seems to be especially true these days in the case of AdWare and Spyware. These products are sometimes motivated by money so they can afford to put the best programmers on the job to ensure that you cannot remove them from your computer.
- Some Viruses, Spyware, and Adware cannot be automatically removed. They must be manually removed.
- Some actually cause permanent damage to a system. Unfortunately, the cost-effective solution is to backup all data, format the hard drive, reload Windows and your programs, and finally restore your data. Drastic but necessary.

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