Computer Safety and Security

- What’s the difference between computer safety and computer security
- You do things to secure your computer and make it safe from attack
- You do things to keep your computer safe from attack so the information on your computer is secure
- What you need to know and do to protect yourself and your computer
- What is the difference between a virus and a antivirus program verses malware and a malicious software detection and removal program
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- Let's start with a quiz

  Q: Do you have anti-virus software installed on your computer to block email virus and worms?
  
  - Yes
  - No

- Only one antivirus program
- Need to update the data base every time you start your computer
- How do you know the data base has been updated
- Occasionally check for an update to the program
- Make sure the program is configured to provide maximum security
- Occasionally scan your computer for viruses
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- What programs are available
  - Free - Avast, AVG, Avira Free Antivirus, Windows Security Essentials
  - Not free - BitDefender, G Data, Kaspersky

- Recommendation
  - All you need is an antivirus program
  - Don’t purchase an Internet security suite
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“Real World” Protection Test results from www.av-comparititives.org

### Summary Results (March-June)

Test period: March – June 2012 (2159 Test cases)

<table>
<thead>
<tr>
<th>Software</th>
<th>Blocked</th>
<th>User dependent</th>
<th>Compromised</th>
<th>Protection Rate</th>
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<td>G DATA</td>
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Cluster:

1. BitDefender, G DATA, Kaspersky, Qihoo, BullGuard, F-Secure, Avast, ESET, AVIRA, Sophos, Trend Micro, AVG, GFI, Panda, eScan, PC Tools, Tencent, Fortinet, McAfee
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Q: Does your anti-virus software automatically update itself with current virus definitions?

- Yes
- No

- Does it update immediately when you start your computer

- How do you know the data files have been updated

  Q: Do you have a policy of never opening an email attachment even if it is from someone you know?

- Yes
- No

- The from information in an email message can be changed
Q: Do you use strong passwords -- those which contain a combination of at least eight alpha and numeric characters?

- Yes
- No

- A strong password
- Ten to twelve characters
- Upper and lower case letters and numbers
- A symbol (? @ & *)
- Never use a word that can be found in the dictionary
- Don’t use proper names
- Don’t use numbers that represent your birth date, telephone number, street address, zip code
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- Use a pass phrase
  - I bought my last new car at Hendron Chevrolet in 08
  - !bmlnc@HCl08

- Use a program like LastPass that generates a random password for sites where a password is needed

Q: Do you regularly back up your important files on a removable disk or other removable media?

- Yes
- No

- Only copy information you have created and stored to the hard drive
- CD, DVD, or external USB hard drive is best
Q: Do you have a software program installed that can detect and remove spyware?

- Yes
- No

- This is the area of computer security that should be given the most attention
- Malicious software can be installed on your computer without your permission or knowledge
- It runs invisibly
- The program can be controlled by the person that owns the program
- Some malicious programs can turn your computer into a "zombie" that can be used for malicious or illegal purposes
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- **Categories of malware**
  - Adware - generate ads for products
  - Spyware - track your computer activity
  - Spam - unsolicited email messages
  - Fast flux - use your computer to hide the origin of phishing emails
  - Click fraud - creating false web traffic on a web site
  - Denial of Service attack - using compromised computers to shut down a web site
  - Scareware - program the attempts to scare you in to buying software
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- Malware detection and removal programs
  - Malwarebytes Anti-Malware
  - Microsoft Security Essentials
  - Spybot Search and Destroy
  - SuperAntiSpyware
  - Windows Defender

- You should use multiple programs
  - Make sure you update the program before you run it
  - To completely remove a piece of malicious software the program might need to run at startup
  - The program can be run in the safe mode
For Internet Explorer, version 9

- Have you checked the security settings for the Internet and Restricted sites zones
- Is the Protected Mode enabled
- Have you changed the Privacy setting to Medium High
- Have you told the program to never allow a web site to request your physical location
- Is the Pop-up Blocker turned on and properly configured
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- Have you turned off AutoComplete for user names and passwords
- Have you told the program to let you know if Internet Explorer is not the default browser
- Have you checked the Advanced security settings
- Do you use ActiveX Filtering
- Do you use InPrivate Browsing
- Do you use the SmartScreen Filter
- Do you frequently clear the browsing history
- Do you click on ads that appear around the edges of a web page
- Do you click on pop-up boxes
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Q: Do you regularly delete cookies and remove temporary Internet files from your computer?
- Yes
- No

You need to do this

Q: Do you turn off software features that you do not use, such as instant messenger type services and file-sharing?
- Yes
- No

- Uninstall the programs you don’t use
- Disable all of the unnecessary things that start when you start your computer
  - WinPatrol is an excellent free program for doing this
Q: Do you have a Firewall installed to block your computer from attacks from hackers?

- Yes
- No

- You have a firewall - is it turned on
- You can add an additional layer of protection between your computer and the Internet by installing a wired or wireless router
- More things to do
  - It’s essential that you install the updates from Microsoft
    - Important
    - Recommended
    - Optional
It’s essential that you keep all of the programs you use updated

- Adobe Reader
- Adobe Flash
- Adobe Shockwave
- Java
- Picasa
- Google Earth

All of your malware detection and removal programs

If the email program you use has a spam and phishing filter, make sure they are active
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- The most valuable tools for keeping you and your computer safe

A little knowledge
Common sense