NUIIT Tech Talk: Get to Know Your Computer

January 20, 2009

Jacob Jones
Senior Distributed Support Specialist
Agenda

• A Word About Security
  – Staying Secure
  – 7 Steps for New Computers

• Maximizing Performance
  – Completing functional upgrades
  – Keeping your hard disk clean
A Word About Security
YOU are the KEY to keeping your computer secure...
Your PC

Think about the data on your PC and how it may be accessed.

• Sensitive information
  - Social Security Numbers
  - Credit card numbers
  - Personal information financial information (Quicken, Microsoft Money)

• Important, irreplaceable information

• Encryption with Checkpoint: a viable solution
Whole Disk Encryption

• Easy for the user
  – User friendly, transparent
  – Efficient performance
  – Reduces/eliminates the users responsibility for security

• Easy for the administrator
  – Unattended installation, centralized management capabilities
  – Fast and convenient enforcement of security policy on all PCs
  – Emergency recovery tools
  – Mature and Proven Solution
  – [link]
  – February 3rd's tech talk covers encryption!

• Secure
  – Protection of sensitive data against outsiders
  – Secure login with user ID / PW or cryptographic two-factor hardware token
  – Strong algorithms implemented (AES, IDEA, Blowfish, 3DES)
  – Certified trustworthy software (Common Criteria, FIPS)
  – TPM support, secure Hibernation, PBA, etc.,
Basic Survival

Before you start…

• Allow enough time
• Backup data before you make changes
• Registry changes—not for the novice
• Write down EXACTLY the steps you take
• Copy text of any error messages received
• Iron Mountain backup solution
• http://www.it.northwestern.edu/ecommunicator/2008_winter/faculty/ironmountain.html
Connected® Backup for PC: How It Works

Enterprise PC, Laptop, or File Server

Connected® Backup for PC Agent
- SendOnce®
- Delta Block®
- EmailOptimizer™
- Compression
- Encryption

PC Disk scanned for New Files & Changes
Decompress, Decrypt & Restore Data

TCP/IP
Data Center
Mirrored Data Center

Backup Session
Data De-Dupe

Backup Session
Recovery Session

Information Technology
Passphrases/Passwords

• NetID passphrase/password
  – Be creative
    • Rd&m&mD (Rainy days & mondays always get me Down)
  – Longer is better

• Windows passphrase/password
  – For separate accounts use separate (long & strong) passphrases/passwords
  – Change them regularly
Physical Controls

• A PC is that is “powered off” can’t be compromised
• Use the power-on password
• Use a cable lock for laptops (desktops) to prevent theft
• Lock the computer when you leave.
  – Windows Users: Hold down the Windows Key and press “L”
  – Macintosh Users: Require a password when coming back from a screensaver and set your screensaver to be activated via a hot corner
Firewall Protection

• Standard with Windows XP SP 2, Vista and Mac OS X
• Always keep your firewall active, current
• Commercially available products:
  – Tiny Personal Firewall ($30 for 3 – personal)
    http://www.ca.com
  – Home use ONLY: Router w/ firewall
    http://www.firewallguide.com
Antivirus Software

• Keep AV software up-to-date and active
  – Set to auto-update, check manually – be online
  – Symantec/Norton AntiVirus – available to NU community for free
  – New LiveUpdate requirement
  – http://www.it.northwestern.edu/transitions/2008/savswitchtool.html

• Run regular scans (weekly)
  – Try it from Safe Mode, it’s faster (reboot, hold F8)

• Never open unexpected files

• Always delete files from quarantine
Spyware

• Disable ActiveX and Javascript
  – Tools > Internet Options > Security
• **Be careful** when downloading programs
• Use spyware detection/removal programs
  – Spybot - Search & Destroy
    http://www.it.northwestern.edu/security/spyware
  – Microsoft Windows Defender
    http://www.microsoft.com/athome/security/spyware
Other Useful Scans

• Symantec (IE, Netscape, Safari)
  http://security.symantec.com

• Shields Up!
  http://www.grc.com

• TrendMicro
  http://housecall.trendmicro.com
Updates & Patches

• Operating System and Applications
  – Administrator privilege may be required
  – Windows or Microsoft Update (IE): Set to run automatically,
    check manually – be online

• Software: the list is endless…
  – E-mail software: Outlook, Thunderbird…
  – Web browser: IE, Firefox, Opera…
  – Suites: Microsoft Office, StarOffice…
  – Adobe, Instant Messenger, RealPlayer…
Security for New Computers

Before you connect to the network or Internet…

Step 1: Create user account (non-admin)

Step 2: Use passphrases for all accounts

Step 3: Turn on your operating system firewall
Security for New Computers

Continued…

Step 4: Load antivirus software and disable system restore

Step 5: Upload updates and patches
Security for New Computers

Once connected…

**Step 6:** Download & install virus definitions, OS and application updates

**Step 7:** Load anti-spyware tools

For more information, visit US-CERT: [www.us-cert.gov/reading_room/before_you_plug_in.html](http://www.us-cert.gov/reading_room/before_you_plug_in.html)
Security Mindset

Always question:
• New sites
• New services
• Unusual ads and pop-ups
• Things that seem too good to be true
• E-mail with unusual or foreign characters
• Unexpected e-mail or IM
Security Mindset

Check that link:

• Hover your mouse over any link in an e-mail; the actual URL will show up in your status bar
Poor Performance

- Lack of free disk space
- Disk fragmentation
- Spyware
- Add-ons
- Out-dated software
- Less than 1 gigabyte of memory
Cleaning Your Hard Disk

Regular disk cleanup can improve system performance.

• Determines which files are no longer needed and delete them
• Frees up potentially significant amounts of disk space
Disk Cleanup

- Downloaded program files
- Temporary Internet files
- Recycling bin or trash can
- Temporary remote desktop files
- Setup log files
- Back-up files
- Offline files
- Compressed old/unused files
Disk Fragmentation

Fragmentation:
• Builds rapidly
• Causes system slowdowns and crashes
• Slows boot times
• Can result in system failure
Disk Defragmentation

It’s not your imagination—Computer systems do slow down over time.

Weekly defragmentation will keep your computer running with optimal performance!
Does software slow my computer?

- Inherently—no; software has no real impact on system performance
- Applets may be installed in the system tray by some applications; these may degrade performance
Software Updates

- Functional changes in software
- Programming changes to address “bugs”
- Programming changes to address security issues
Need Support?

• Call NUIT: 847-491-HELP (4357)
• http://www.it.northwestern.edu
NUIIT Resources

• “Get Control” Web site
  http://www.it.northwestern.edu/getcontrol/

• E-mail Defense System
  www.it.northwestern.edu/security/eds/

• Computer and Network Security
  www.it.northwestern.edu/security/
Essential Software

• Symantec/Norton AntiVirus
  http://www.it.northwestern.edu/software/sav

• Spybot – Search and Destroy
  www.it.northwestern.edu/security/spyware/win-spybot-install.html
Contact

Jacob Jones

jacob-jones@northwestern.edu
Questions?