

The CCS Computer Tune-Up

By, John P. Hennessy

FNB - customer Computer Services (870) 423-6601

Evaluation:

Use "Task manager" to view all the programs, processes and services that are running on your computer. To start Task manager > Hold down the Ctrl, Alt and Delete keys all at the same time and select > [Task Manager] look at the number of processes running and the CPU and memory performance. The lower the number of processes and percentage of CPU and memory being used the better. If your CPU and memory are close to 100% you are in trouble!

Before you begin!

Set a system restore point before beginning the tune up and at completion.

Start > All programs > Accessories > System Tools > System Restore > Create restore point

Step One:

Hardware maintenance and upgrades

- **Environmental concerns** - Heat, moisture and vibration are often the cause of poor performance and hardware failure. Open the computer case and use a can of compressed air to clean the dust from the inside surfaces of your system especially around the fans, vents and heat syncs. Some computer desks do not provide adequate ventilation. Make sure you have at least 4" of air space around the computer. If your computer is hot to the touch, you need better ventilation.
- **System memory (RAM)** - Make sure your system meets the recommended system requirements
Note: The sweet spot for XP - 512MB, Vista - 1 to 2GB
- **Graphics Cards** – Most new computers come equipped with the graphics card built into the motherboard. These systems use shared memory. A separate graphics card with its own processor and memory can greatly improve performance.
- **Internet connection** – Be aware of your bandwidth limitations. If you have four computers sharing the same connection, you should expect reduced performance while using the internet. Wireless systems are much slower than wired systems and any security or filtering implemented will slow performance. If you are using a dial-up connection you may have difficulty downloading large files, pictures etc. **Note:** Use an internet speed test like Toast.com to evaluate speed.

Step Two:

Hard Disc Maintenance – Maintain and optimize your Hard disks.

Remove all files and programs you do not absolutely need.

- a. Use the Disk Cleanup tool or Ccleaner to remove files and programs you do not need.

Junk files to delete include: Downloaded programs, any type of temporary files, Offline files, cached web Pages and the deleted files in the Recycle Bin.

1. Click on My computer > Right click on your Hard disk
2. Select properties > Select [Disk cleanup] choose the files to delete
3. Use the [more options] or [advanced tab] to delete programs, windows components, old restore points and shadow copies.

*** Performance Tip** – Always keep at least 500MB of free space available on your Hard Disk.

b. Check Hard Disk for errors – Disk problems can cause system errors and performance problems.

1. Click on My computer > Right click on your Hard disk > Select properties
 2. Select the [Tools Tab] Select Error-checking [Check Now] box
 3. Check the boxes to scan for [bad sectors] and or [fix file system errors]
- Select > [Start] the service will schedule to run the next time you shut down.

c. Defrag your Hard Disk - You must turn off all running programs, screen saver and power management before defragmenting.

1. Right click and close any programs running on the task bar
2. Right Click on the Desktop and select properties > Graphics > Turn off screen saver by selecting [none] and change power management to [always on]

To defragment you Hard Disk:

1. Click on My computer > Right click on your Hard disk > Select properties
 2. Select the [Tools Tab] and Select [Defrag Now]
 3. Select [analyze] if the report says you should defrag select [defragment]
- Vista** = Control Panel > Performance Information and Tools > see > Visual effects / startups /indexing Power settings / disk cleanup > Advanced Tab > Defrag

Step Three:

Clean out browser files and adjust settings for better performance

- a. **Clean out IE (Browser) files** – browsing history, cached files, and cookies
 - From the IE Browser Click > select Tools from drop down menu > Select > Internet options > Select > see Browsing History > Select [Delete] Check > the boxes for the files you want to delete or select [Delete all]

Note: Ccleaner will also perform this task.
- b. **Manage IE Add-ons - Disable anything you do not need**
(Use “Google” to research or experiment for best results)
 - From the IE Browser Click > Tools > Manage Add-ons > Enable or Disable Add-ons
- c. **Disable the Phishing Filter** (Automatic Web Site Checking)
 - From the IE Browser Click > Tools > Phishing Filter >select Turn off Automatic Website Checking > Check [Turn off Phishing Filter] and click OK.
- d. **Turn off “Automatically checking for RSS feeds”** – If you do not know what this is, you do not need it.
 - From the IE Browser Click > Tools > Content >Feeds > Settings > uncheck the boxes.
- e. **Disable visual and multimedia effects**
 - From the IE Browser Click > Tools> Internet Options > Advanced > move the slider until you see [Multimedia] un-check [ClearType] and any animations, sounds, pictures and effects you can live without.

Step Four:

Remove all malware – Use Anti-virus / Spyware software to discover and remove threats.

Note: To protect your system you need a firewall, Plus a Antivirus\Malware scanning program.

FREE Software to protect your system from threats:

- **Zone Alarm Firewall** – The world’s most popular FREE firewall Program
http://www.zonealarm.com/store/content/catalog/products/sku_list_za.jsp
- **Windows Defender** – Microsoft’s own FREE anti-spyware program. (Included with Vista or download it for XP)
<http://www.microsoft.com/downloads/details.aspx?FamilyID=435bfce7-da2b-4a6a-afa4-f7f14e605a0d&DisplayLang=en>
- **AVG Free** – A highly rated FREE AV Programs
<http://free.grisoft.com/ww.download?prd=afe>
- **AVAST Free** – A highly rated FREE AV Programs
<http://www.avast.com/eng/download-avast-home.html>
- **Spyware Doctor** – A highly rated FREE AV Programs
<http://www.pctools.com/spyware-doctor/download/>
- **Advanced Windows care** – Uses AVG plus combines other cleanup tools for a one click solution.
<http://www.iobit.com/advancedwindowscareper.html?Str=download>

Step Five:

Clean and optimize the windows registry – (use a registry cleaner)

When programs are uninstalled, they often leave invalid registry entries behind. Use a registry cleaner to clean and repair the registry.

Warning - One mistake editing the registry can disable your entire system. Always create a backup and know how to restore it before editing.

FREE- Registry cleaners and optimizers:

- Advanced Windows care - <http://www.iobit.com/advancedwindowscareper.html>
- Ccleaner - <http://www.Ccleaner.com/>
- Easy Cleaner - <http://personal.inet.fi/business/toniarts/ecleane.htm>

Step Six:

Adjust windows visual effects – Windows uses a lot of resources to produce a beautiful desktop. Reduce eye candy to improve performance.

1. Right Click on > My Computer > Select > Properties

2. Select > Advanced tab > Select > Performance settings
3. Select > adjust for best performance or un-check whichever boxes you can live without
4. Select > [OK] exit and take a look at the changes on your desktop

Vista = Control Panel > Performance Information and Tools > Visual effects

Note: Selecting Best Performance will remove the graphical beauty of your desktop items, everything will appear very plain. Experiment until you reach a compromise between appearance and performance.

Step Seven:

Prevent Programs from auto starting and running in the background

Use “Task manager” to view all the programs, processes and services that are running on your computer. To start Task manager > Hold down the Ctrl, Alt and Delete keys all at the same time and select > [Task Manager]

Note: removing programs, process and services can cause adverse effects, so if you are not sure what something is research it on Google or leave it alone.

Use the following methods to stop programs from running in the background

1. Remove programs from the Startup folder
2. Remove any scheduled tasks from the Tasks folder
3. Use the windows configuration tool (MSCONFIG.EXE) to change startup programs.

How to start the windows configuration tool

1. Click > Start > Run > Type “MsConfig” in the box > Press the Enter Key
2. Use the [startup tab] to remove any programs you do not need starting.
3. Use the [services tab] to manage services, When finished select > Apply > now restart your system. After restarting, disable the warning message that system has changed.

Vista = Control Panel > Admin Tools > system configuration

Tip – You can select “hide all Microsoft Services” this will make it easier to sort thru services

Note: You can also use Windows Defender or Cleaner to disable programs from auto starting.

Additional Performance Tips:

- **Disable hibernate on desktop computers** – you do not need this feature
Vista = Control Panel > Performance info and tools > Adjust power settings > Select > high performance
- **Update Windows - Make** sure you are getting updates. Check Add and remove Programs in control panel for updates. If not check Automatic updates is turned on

Control Panel > Security center > Get updates
- **Adjust window folder options** – Simplify visual and operating properties
My Computer > Tools > Folder Options > View > Check > launch folder in separate process > Check > do not Cache thumbnails > Un-Check > automatically search for network folders > Set view settings > to classic folders with no thumbnails | **VISTA** = control panel > Folder options
- **Adjust windows sounds** – If you do not use sounds turn them off
Control Panel > Sound > Sound scheme > No sound
- **Remove any unneeded scheduled Tasks** - Control panel > Task Scheduler >

Windows Vista only - Performance Tips

- **Turn off UAC service** – This Vista User Account Control forces user to confirm actions before continuing. Control Panel > Users Accounts > Select > turn off UAC
- **Go with a non Aero theme** - windows vista basic, windows classic, windows standard - Aero uses up a lot of your systems resources.
- **Disable the Vista sidebar** – Control panel >. Windows Sidebar > un-check [Start sidebar]
- **Use Vista's ready Boost** - A new concept in adding memory to a system, it allows you to use non-volatile flash memory—like a USB flash drive or a memory card
<http://www.maximumpcguides.com/how-to-use-readyboost/>

Advanced Performance Tips:

- Disable or adjust search indexing – **Increases** disk performance.
To disable - Click on > My computer Right click > on your Hard disk Select > properties Uncheck or adjust “Allow indexing service for fast file searching”
- Update your drivers – To check drivers go to - <http://www.driveragent.com/>
- Adjust IE for maximum internet connections - This is a registry hack. Use the script below.
<http://reliancepc.com/menu/tips/Downloads/setuserIEmaxconnections.reg>
You can also edit the registry manually > <http://support.microsoft.com/kB/282402>
- Windows cannot defrag files that are in use. Run a defrag program from a boot disk.

- Put swap file on a separate partition from the OS – (You must have two partitions)
- Check your system files - (Make sure you have your system disks before performing this tweak) Click Start > Click Run > Type > **SFC /SCANNOW** and press Enter > Follow instructions on screen
- **Shut off Windows Processes you do not need - WARNING** - Be careful not to shut down items that are required by your system. Backup your registry before making changes.

Note: Process scanner and AutoRuns are some good utilities to help managing running services

List of possible un-needed Windows services that you can turn off:

- **AdobeLM Service:** Not all computers have this service, still it is useless, disable it if you have it.
- **Alerter:** Disable this one if you are not on a network because you will not receive alerts.
- **Application Management:** Set this to manual.
- **Automatic Updates:** Disable it if you don't require auto updating and patching of Windows.
- **ClipBook:** Disable this if you are not on a network, since you don't need to share anything.
- **Computer Browser:** Disable this too if you are not on a network, as you don't need to browse and monitor connected computers.
- **Cryptographic Services:** Set this to manual if you are not sure you need it.
- **Distributed Transaction Service:** Set this to manual.
- **DNS Client:** Set this to manual if you are not on a network.
- **Error Reporting Service:** Disable this useless service for reporting errors to Microsoft.,
- **Fast User Switching Compatibility:** Disable it if you have only a single user on your computer, or if you do not use fast user switching feature much.
- **FTP Publishing:** Disable this if you do not use FTP.
- **Help and Support:** Set it to manual or turn it off if you do not use the help feature often. You can turn it on again when you want help.
- **HTTP SSL:** Set it to manual.
- **Human Interface Device Access:** Turn it off if you do not use hot-keys or remote systems on your computer; if you use them sometimes, it is better turn it to manual.
- **Indexing Service:** Turn it off, it uses lots of CPU. If you are an avid searcher, like a maniac, on your computer, leave it on since it will help you. If you know where your files are and do not use search that often, then disable it for your good.
- **InstallDriver Table Manager:** Disable it; it does no harm in doing so.
- **IPSEC Services:** Set this to manual.
- **Windows Messenger:** Disable this if you are not on a network, it uses too much memory and it is a hog.
- **MS Software Shadow Copy Provider:** Set this to manual.
- **Net Logon:** Disable if you are not on a network.
- **NetMeeting Remote Desktop Sharing:** Disable this if you do not use Remote Desktop feature
- **Network Provisioning Service:** Disable this; it is useless if you are not on a network.
- **NT LM Security Support Provider:** Disable this, it's useless too.
- **NVIDIA Display Driver Service:** If you do not use the features of nVidia Desktop, this service must be disabled.
- **Office Source Engine:** Disable it if you have a MS Office CD handy always, it's helpful if your installation goes corrupt.
- **Portable Media Serial Number Service:** Set it to manual if you connect portable media, otherwise disable it.
- **Protected Storage:** Disable it if you don't allow strangers to sit on your encrypted storage computer.
- **Remote Desktop Help Session Manager:** Disable it if you don't use Remote Desktop feature
- **Remote Procedure Call Locator:** Set it to manual.
- **Remote Registry:** Serious security threat if turned on, disable it no matter what.
- **Routing and Remote Access:** Set it to manual.
- **Secondary Logon:** Useless feature for most, disable it or turn it manual.
- **Security Accounts Manager:** Disable it, it's pretty useless, unless you use NTFS Encryption.
- **Security Center:** Damn useless and irritating feature. Disable it.
- **Server:** Set it to manual or disable it if you are not on network.
- **Smart Card:** Disable it if you don't use smart cards on your computer.

- **SSDP Discovery Service:** Disable it if not on network or don't have UPnP devices on home networks.
- **Task Scheduler:** Disable it if you don't schedule tasks like defragmentation, error scans etc...
- **TCP/IP NetBIOS Helper:** Set it to manual if on network, otherwise disable it.
- **Telnet:** Set it to manual if you use this feature, otherwise disable it, especially if you are home users.
- **Terminal Services:** Since you aren't using Remote Desktop etc... disable it for good.
- **Uninterrupted Power Supply:** Disable it if you don't have an UPS attached to the serial port of your computer.
- **Universal Plug and Play Device Host:** Set it to manual.
- **User Privilege Service:** Set it to manual.
- **Volume Shadow Copy:** Disable it if you don't backup using System Restore or Windows Backup.
- **Windows Firewall/Internet Connection Sharing (ICS):** Disable this if you have another firewall such as Norton or Zone Alarm installed, otherwise let it remain ON for better security.