

Advanced Windows XP

Lesson 5

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Lesson 5 — Maintaining Your Computer

Introduction

In previous lessons we have discussed how to download and install anti-virus, anti-spyware and other security features. These are necessary and prudent actions for users of the Internet. However, one must also keep all of these features up to date, as new threats and problems are constantly appearing. This lesson will cover basic maintenance of your computer including updating the operating system and other security features and other good housekeeping suggestions.

Keeping Updated

It is good practice to keep all of your software up to date, both from a security and an operational standpoint. This is easily accomplished over the Internet

and in many cases done automatically if you are set up properly. As a minimum it is recommended that you continually update the following major programs.

- Windows XP
- Anti-Virus
- Anti-Spyware
- Others such as Microsoft Office, Word Perfect, etc.

The first three programs are critical and they all feature automatic updates. You should enable this feature on each program. Some of the other applications are not as critical and they may require you to manually initiate the updates. For example, IrfanView is a free image viewer/manipulator program, and the originator may occasionally issue updates and/or new versions. Thus, you may want to download and install these updates. Most programs have a Version number that gets changed when the program is updated. Most often the Version can be found somewhere in the Help menu — most often under the sub-menu “About” (i.e. information “About” the program). There may also be a link in the Help or About menus that take you to a program’s web site where you can check for and/or download new updates.

Maintaining Your Computer

Cleaning out old files and defragmenting your hard drive are maintenance functions that you should run now and then. These actions keep things running smoothly. Sometimes your computer slows down or even hangs up on a particular process. The Windows Task Manger is a tool for handling these problems as well as monitoring and reporting on your computers “health.”

Exercise 5 — Protection & Maintenance

Keeping Applications Updated

Windows XP

Click on Start | Control Panel | Security Center. In the center of this window is a section similar to that shown here. Your firewall and anti-virus should be turned on. Automatic Updates should be enabled either as shown. i.e. install after checking with you) or Automatic Updates. This is a personal choice item on your home computer, but for training purposes go ahead and click on “Turn on Automatic Updates” if it is not already turned on.



On your home computer you may click on Automatic Updates at the bottom of the screen and select the type of updates that you desire.

Windows update will periodically contact the Microsoft Corporation and then download and install any required updates. This not only keeps you up to date, but it often installs security features to prevent intrusions by hackers or other malfeasants.

Anti-Virus

It is important to keep your anti-virus program updated with the latest program modifications and virus definitions. New virus's pop up almost weekly, and your software must be kept current. Most anti-virus programs have an auto-update feature similar to the Windows update described above. You may notice that when you start up one of the SSCE lab computers a window pops up letting you know that the AVG (Grisoft anti-virus program) is downloading an update. Following the download it proceeds to install the update. Other AV programs are similar. For example, Norton Anti-Virus has "Live Update" — a similar service.

These update facilities can be set to automatically check for updates whenever you are connected to the Internet, or they can require you to manually initiate each update. It is recommended that you use the auto-update features.

However, to illustrate a manual procedure, perform the following exercise on your SSCE computer.

1. Double click on the AVG icon (multi-colored square) in the Notification Area (lower right corner of your screen).
2. Click on Update manager then on Update.

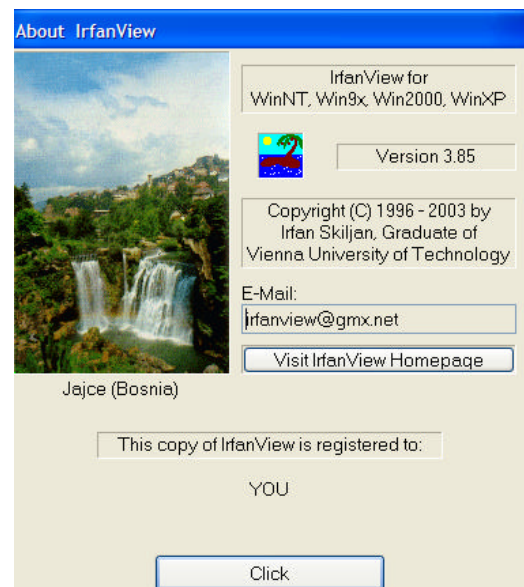
Anti Spy-Ware

There are several free anti-spyware programs available on the internet. Three of the most popular are: Windows Defender, AdAware and SpyBot. (These were referenced in a previous lesson). Microsoft's Windows Defender program is installed on all SSCE computers. This program automatically updates itself whenever you connect to the Internet. No manual procedures are required to maintain it.

Other Applications

You may have other applications running on your computer that require periodic updates. Many of these applications do not have an automatic update feature, but the following exercises demonstrate typical methods for obtaining them.

1. Microsoft Office — Open Internet Explorer and go to www.Microsoft.com. In the left pane click on Office Update. This should open the Office Online page. Here you will find a “Check for updates” hyperlink. (DON’T click on the update link, as all updates are already installed.) If you have Office on your home computer clicking on this link will start an update session that first examines your computer and determines what updates are available. It will then take you through a process for installing the updates.
2. IrfanView — This program doesn’t have an auto-update feature — for that matter it doesn’t have a manual update feature either! However, you can easily check to see if there is a new, updated version available and then download and install it as covered in a previous lesson. To determine the present version number, double click on the IrfanView icon on the desktop. On the menu bar click on Help then on About IrfanView to obtain the following window.



Note the present version number (in this case 3.85). Click on “Visit IrfanViewHomepage.” Look near the bottom of the page and note the current version. If it is later than your version, then download and install the newer version.

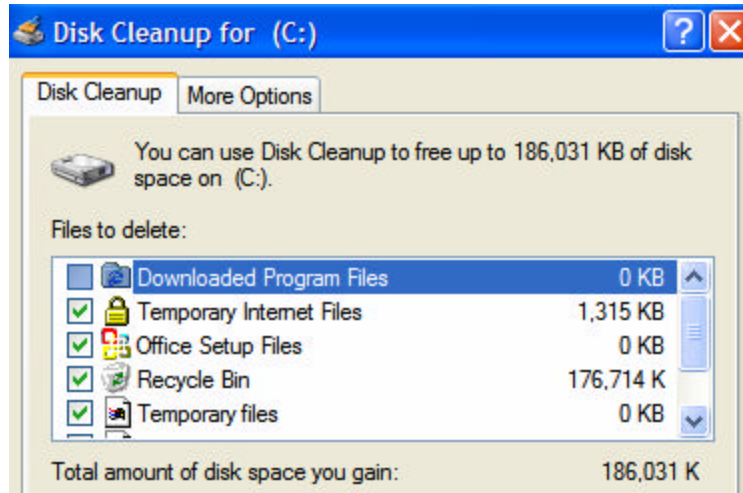
Many other applications work in a similar manner. You either go to Start | Programs and find the application name with an update link, or you start up the application, go to Help, then About and find a link.

Disk Maintenance

Disk Cleanup

Your disk may accumulate many temporary and other unused files, and it is prudent to clean these files out on occasion.

1. Click on Start | All Programs | Accessories | System Tools and then select Disk Cleanup. After a long pause you will see a display similar to that shown here.
2. Check the boxes for files you wish to delete (in most cases check all the boxes).
3. When done, click on OK at the bottom of the window and your excess files will be removed from the hard disk.



Defragment

Files on a disk cannot always be written in one continuous track, so the computer often splits the files up into small fragments scattered about on the disk. It keeps track of them, so nothing is lost, and you are probably unaware that this is happening. If you have a lot of files that are badly fragmented, your computer may slow down a bit while it searches them all out. Thus, occasionally (perhaps every six months or so with today's large capacity hard drives) you may need to "defrag" the drive which puts all the fragments together. Here is the process:

1. Restart your computer in the "Safe Mode." This is accomplished by holding down the F8 function key when your computer is first starting up. The safe mode loads only the minimum programs needed to operate your computer — it does not load and run background software such as Antivirus or similar programs that may have active files open during the defrag process. This can cause the defrag program to "hang" and never finish.

2. Click on Start | All Programs | Accessories | System Tools and then click on Disk Defragmenter.
3. Click on the Analyze action button. After a pause you should see a pop up window advising you that the disk does or does not need to be defragged.
4. On your home computer click on the appropriate action button. Please DO NOT initiate defragging on the SSCE computers — it can be a very long process of up to several hours depending on the size of the disk and the computer's speed.

Windows Task Manager

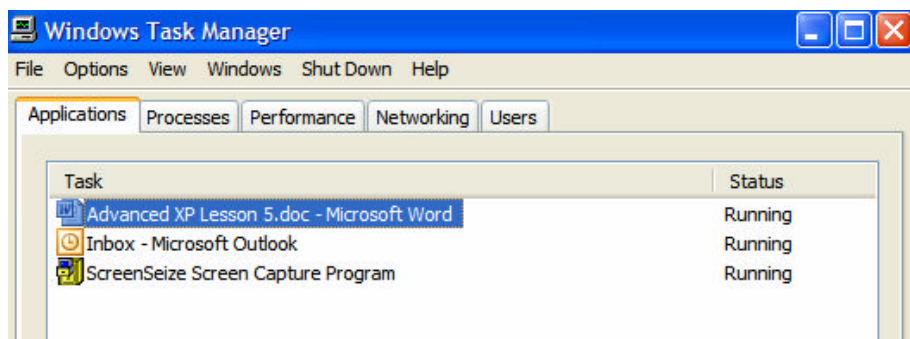
You may have occasion to abort faulty tasks, see exactly what kinds of tasks are running, and monitor performance of your computer. The Windows Task Manager handles these services.

Handling Hangups

Although relatively rare with the Windows XP operating system, sometimes a program can “hang” or “freeze” and you cannot close it or proceed with other tasks. In most cases you can force the computer to close or abort a process with XP's Task Manager. Here's how:

1. Start up several tasks such as Solitaire, Calculator, etc.

2. At the keyboard, hold the Ctrl and Alt keys down and click the Delete key. (If this doesn't work try right-clicking the mouse in the empty task bar area then clicking on



Task Manager in the pop-up menu). A display similar to that shown here should appear on top of all other windows.

3. Select the Applications tab if not already selected. Here you will see listed the tasks currently running on your computer. The Status column should indicate any applications that have problems.

4. Highlight a task (e.g. Solitaire), then at the bottom of the window click on End Task. If this were a “hung” task there may be a delay and another window may pop up advising that the task is not responding and asking you to confirm that you want to end it. The task should then close. (If not, then you may have a much more severe problem most likely causing you to power down and restart the computer to clear it out.)

Processes

You may be surprised to learn that there are many processes (mini-applications) running in the background on your computer. These programs perform a myriad of tasks usually having to do with monitoring your computer, controlling networking tasks, checking for viruses, etc. Click on the Processes tab to see the list. Do not be surprised to see 40 or more of them. Although you can end any of these processes in the manner described above, most of them are essential to proper operation of your computer and you are advised not to end any unless you are following good technical advice.

Performance

Click on the Performance tab to obtain a graphical display that shows how busy your computer is in terms of Central Processor Unit (CPU) and Page File (roughly memory) usage. Graphs of CPU and PF usage are also presented.

This display may be useful at times especially if you notice that your computer is running very slow for a reason you cannot determine. For example, your anti-virus program may be performing a full disk scan while running in the background. If you check CPU usage you may find that it is running at or near 100% capacity, and that leaves little capacity for whatever you are trying to do at the same time. You can either wait for the background task to finish, or return to the Applications tab and end the task.