

Presented by:



# Windows® XP

Preston Gralla

*in a*  
**Snap**

**SAMS**  
**Teach**  
**Yourself**

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## Windows® XP in a Snap

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## Fine-Tuning, Optimizing, and Protecting Your PC

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PCs always need fiddling with. Perhaps you want to make yours run faster, or you want to get more life out of your laptop's battery. You certainly want to make sure that it has the latest software protection. And if something goes wrong with it, you want to make sure that you can fix it.

Windows XP offers many built-in tools for doing all that and more. In this chapter, you'll learn how to fine-tune, optimize, and protect your PC using XP's built-in tools.

## 118 Balance Performance and Visual Effects

### See Also

- **119** Turn Off Unneeded Programs and Services



### TIP

Another way to open the **System Properties** dialog box is to click the **Start** button, choose the **Control Panel** option, click the **Performance and Maintenance** icon, and then click the **System** option. If you don't see the **Performance and Maintenance** icon in the **Control Panel** list, choose the **System** icon to launch the **System Properties** dialog box.



### NOTE

The **Performance Options** dialog box lists the various special effects that Windows XP can perform. The check boxes next to the ones currently in use are enabled. Those options without check marks are not currently being used.

One of the many things that makes Windows XP unique is its special visual effects—menu items fading in and out, showing shadows under menus, and so on.

One problem with those special effects is each takes a toll on system performance. Your computer has to work harder to use them. If you have an older computer, or if you think your computer is slower than it should be, you can turn off some or all of these special effects.

### 1 Right-Click My Computer

The **My Computer** icon might be located in several places depending on how your computer has been set up. You might find an icon for it on your desktop. If not, you'll find it on the right side of the **Start** menu after you click the **Start** button.

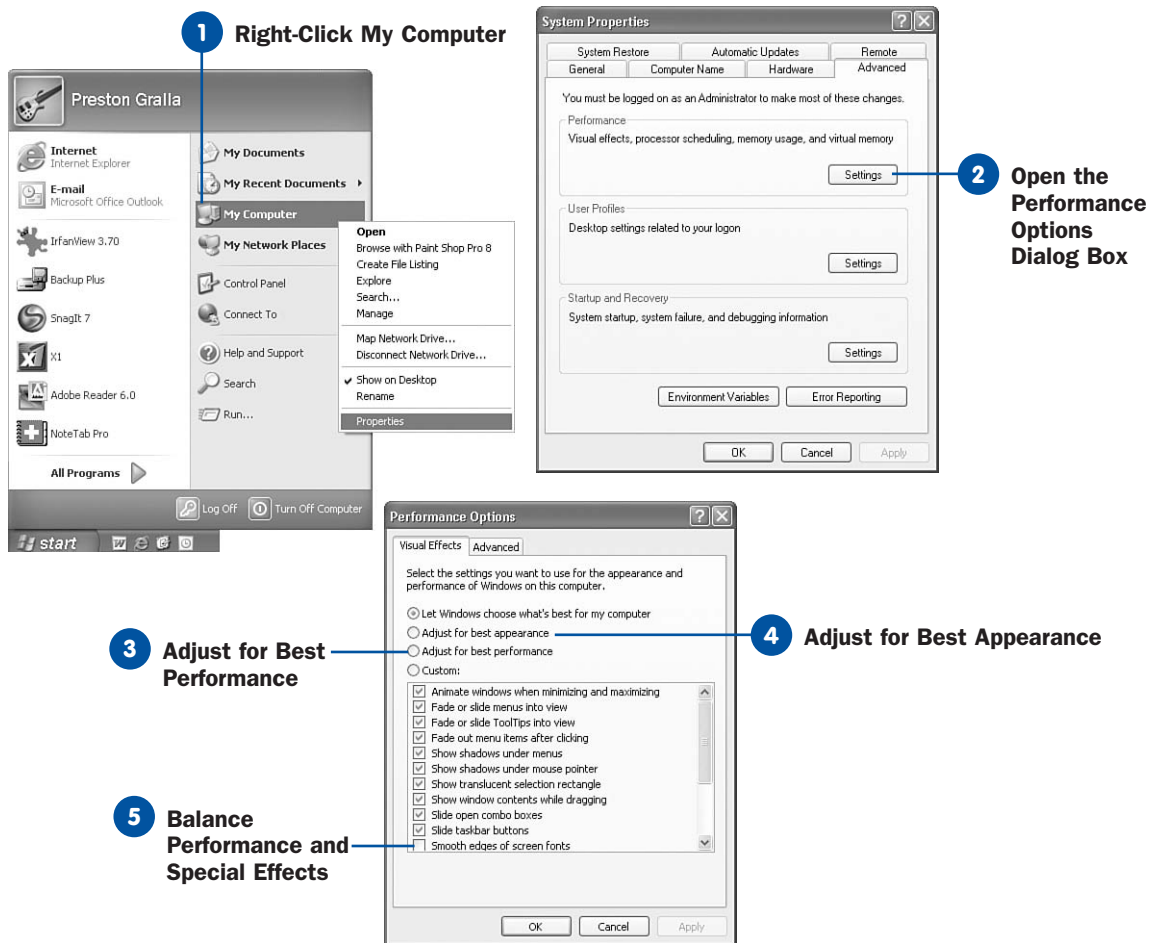
Right-click the **My Computer** icon and choose **Properties**. The **System Properties** dialog box appears.

### 2 Open the Performance Options Dialog Box

In the **System Properties** dialog box, click the **Advanced** tab. In the **Performance** section, click the **Settings** button to open the **Performance Options** dialog box.

### 3 Adjust for Best Performance

If you care more about having your system run as quickly as possible than about the appearance of the screens, choose the **Adjust for best performance** option and click **OK** twice. When you do this, Windows XP disables all the options in the dialog box and uses no special effects. The performance boost takes place immediately.



#### 4 Adjust for Best Appearance

If you care more about your system using all of XP's special visual effects than about performance, choose the **Adjust for best appearance** option and click **OK** twice. When you do this, XP enables all the check boxes in the **Performance Options** dialog box and uses all its available special effects. The improved appearance occurs immediately.



#### TIP

There are too many effects to detail them all here, so the best advice is to disable check boxes next to some effects and use Windows XP for a while; if you're pleased with the results, leave those effects disabled.

## 5 Balance Performance and Special Effects

You can decide on an effect-by-effect basis which options to use and which to turn off. Enable the check boxes next to those effects you want to use, and disable those you don't want to use. Click **OK** twice to close the dialog boxes. The effects take place immediately.

## 119 Turn Off Unneeded Programs and Services

### See Also

- **30** Stop Programs from Running on Startup
- **118** Balance Performance and Visual Effects

### KEY TERM

**Services**—Computer processes that run invisibly on your PC to provide your computer with important capabilities, such as managing your computer's sound system.

Whenever you start Windows XP, programs might run automatically without you telling them to launch. For example, your instant messenger program might launch on its own. If you don't use those programs frequently, there's no reason to have them launch automatically, because they're taking away memory and using your computer's processor for programs you do want to run.

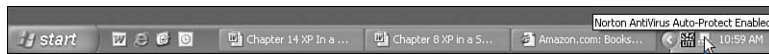
Additionally, some **services** run automatically at startup. Services run invisibly in the background and provide your PC with a variety of capabilities, such as managing your sound system. However, you don't necessarily need all those services to run because they take up memory and occupy your computer's processor.

There are ways to turn off services and programs that run on startup, and therefore give your PC a power boost.

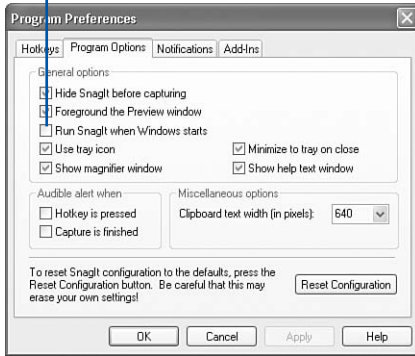
## 1 Restart Your Computer and Examine the Notification Area

Restart your computer (click the **Start** button, choose **Turn Off Computer**, and then click the **Restart** button) to make sure that the programs you see in the **Taskbar** are those that launch automatically on startup. The **Notification Area** is on the far right of the **Taskbar** at the bottom of your screen. It displays icons of most of the programs that launch when you start your computer. To see all the icons there, click the small left-pointing arrow.

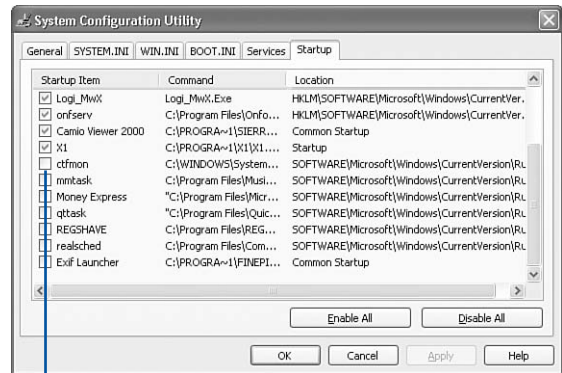
Hover your mouse over each icon. A balloon tip pops up, which almost all the time displays the name of the program, and might give more information as well. For example, an antivirus program might not only tell you its name, but also whether an important feature is turned on.



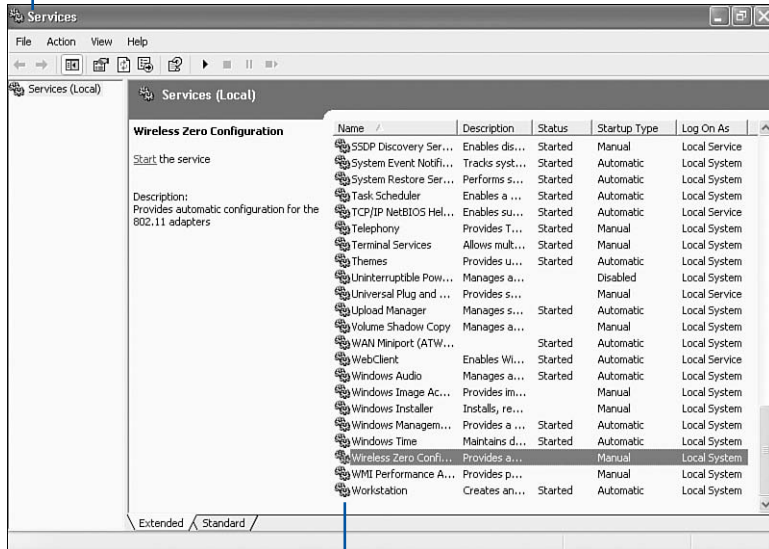
## 2 Turn Off Unneeded Programs at Startup



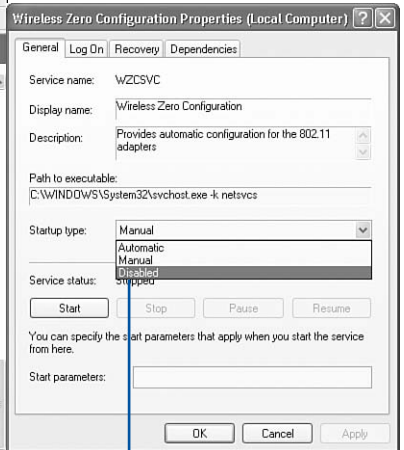
## 1 Restart Your Computer and Examine the Notification Area



## 4 Run the Services Microsoft Management Module



## 3 Turn Off Programs with the System Configuration Utility



## 5 Examine the Services

## 6 Turn Off Unneeded Services



## TIP

Each program has a unique way of launching itself at startup, so there is no way to give specific instructions for how to stop every program from automatically launching. However, you can stop most programs from launching automatically using an **Options** or **Preferences** dialog box. Often the **Options** or **Preferences** dialog box can be accessed from the program's **Tools** menu (double-click the program's icon to open the program so that you can access its menu bar).

If any icons don't display information, double-click the icon. This action runs the program so that you'll know exactly what the program is.

## 2 Turn Off Unneeded Programs at Startup

If you identify programs you don't need running all the time, such as an instant messenger program that you rarely use, you should stop it from running every time you start your PC.

Find the **Options** or **Preferences** dialog box for the program you want to stop from launching and look for an option that lets you determine whether the program should run when Windows starts. When you find it, disable the check box for that option and click **OK**. (Again, this may vary according to each program.)

## 3 Turn Off Programs with the System Configuration Utility

Not all programs show themselves in the **Notification Area** when they run on startup. Some programs run invisibly. To see a list of these programs, you must run the **System Configuration Utility**.

Click the **Start** button and choose **Run** to open the **Run** dialog box. In the text box, type **msconfig** and press **Enter**. When the **System Configuration Utility** screen appears, click the **Startup** tab. You'll see a list of programs, most or all of which have check marks next to them. Every program listed with a check next to it runs on startup. Those without checks ran at one time during startup, but were later turned off.

Examine the list of programs. If you find any that you don't want to run on startup, disable the check box next to it. Unfortunately, it can be difficult to decipher the listings because many of the programs are not listed by their actual names—it may be just a filename, such as **qtask**.

It can be difficult, and at times almost impossible, to track down what the programs listed here do. Your best bet is to look at the information in the **Command** column (drag the right edge of the **Command** column heading to widen the column so that you can read all the information there). That column lists the exact location and filename of the program. Examine the folder name and filename to see whether that helps you know what the program is and does.



## TIP

When you don't fully understand a program listing, and are not sure whether to turn it off or leave it running on startup, the safest bet is to leave it running. It might be a program your computer requires to function properly.



Disable all the check boxes for programs you don't want to run on startup. When you're done, click **OK**. Windows XP displays a message telling you that the changes won't go into effect until you restart your computer, and asks whether you want to restart now. There's no need to restart now, so restart only if you want to see the effects of your changes. To restart, click the **Restart** button in the dialog box Windows XP displays. Otherwise, click the **Exit without Restart** button. The changes will take effect, even if you don't restart now.

#### 4 Run the Services Microsoft Management Module

You've now identified programs you don't want to run at startup and turned them off, but you haven't done anything about services. To do that, you'll have to run the **Services Microsoft Management Module**. Click the **Start** button and choose **Run** to open the **Run** dialog box. In the text box, type `services.msc` and press **Enter**.

#### 5 Examine the Services

The **Services Microsoft Management Module** lists all the services available on your computer, identifies which are currently running, shows how each starts, and lets you control how each service works.

To see what a service does, click the service name in the list, and make sure that you click the **Extended** tab at the bottom of the screen. When you click the **Extended** tab, whenever you highlight a service, you'll see a description of the service in the large area to the left of the services listing.

The **Startup Type** column tells you whether the service is started automatically by Windows XP, whether it is disabled so that it can't run, or whether it must be started manually.

#### 6 Turn Off Unneeded Services

It can be difficult to identify which services you need and which you don't because the descriptions can be cryptic. Be careful about which services you decide to turn off.

However, if you use a desktop PC, and it doesn't have a wireless network adapter, and you don't plan to install one, it's a good idea to turn off the **Wireless Zero Configuration** service because it serves no purpose unless you have a wireless network adapter.



#### TIP

To see which services are currently running, look in the **Status** column. Any that are running have a listing of **Started**. Those that aren't running have that column blank.

To turn off a service, double-click it in the services list. A **Properties** dialog box for that service opens. From the **Startup Type** drop-down list, choose **Disabled** and then click **OK**. The service will not start from now on when you start Windows XP.

## 120 Create and Use Power Schemes for Laptops

### See Also

- **121** Use ClearType for Better Laptop Resolution

### KEY TERM

**Power scheme**—A profile you apply to Windows XP that determines, for example, how a laptop uses power (whether it turns off the LCD screen or hard disk after a certain amount of time elapses) to save electricity and increase battery life.

Laptop computers are extremely convenient because you can carry them wherever you go and work with them on airplanes, coffee shops, and other locations. But they also pose a problem—too often, they run out of battery power—for example, when you're on a cross-country flight.

The best way to preserve battery life is to create different power profiles, which Windows XP calls **power schemes**. With these schemes, you control how much power Windows XP uses for different functions. For example, you can create a scheme for when your laptop is plugged into a power outlet, and another for when it's running on batteries. For the plugged-in scheme, you can specify no power-savings features, but when it's unplugged, you can have XP turn off your hard disk after several minutes when it hasn't been accessed.

### 1 Open the Power Options Properties Dialog Box

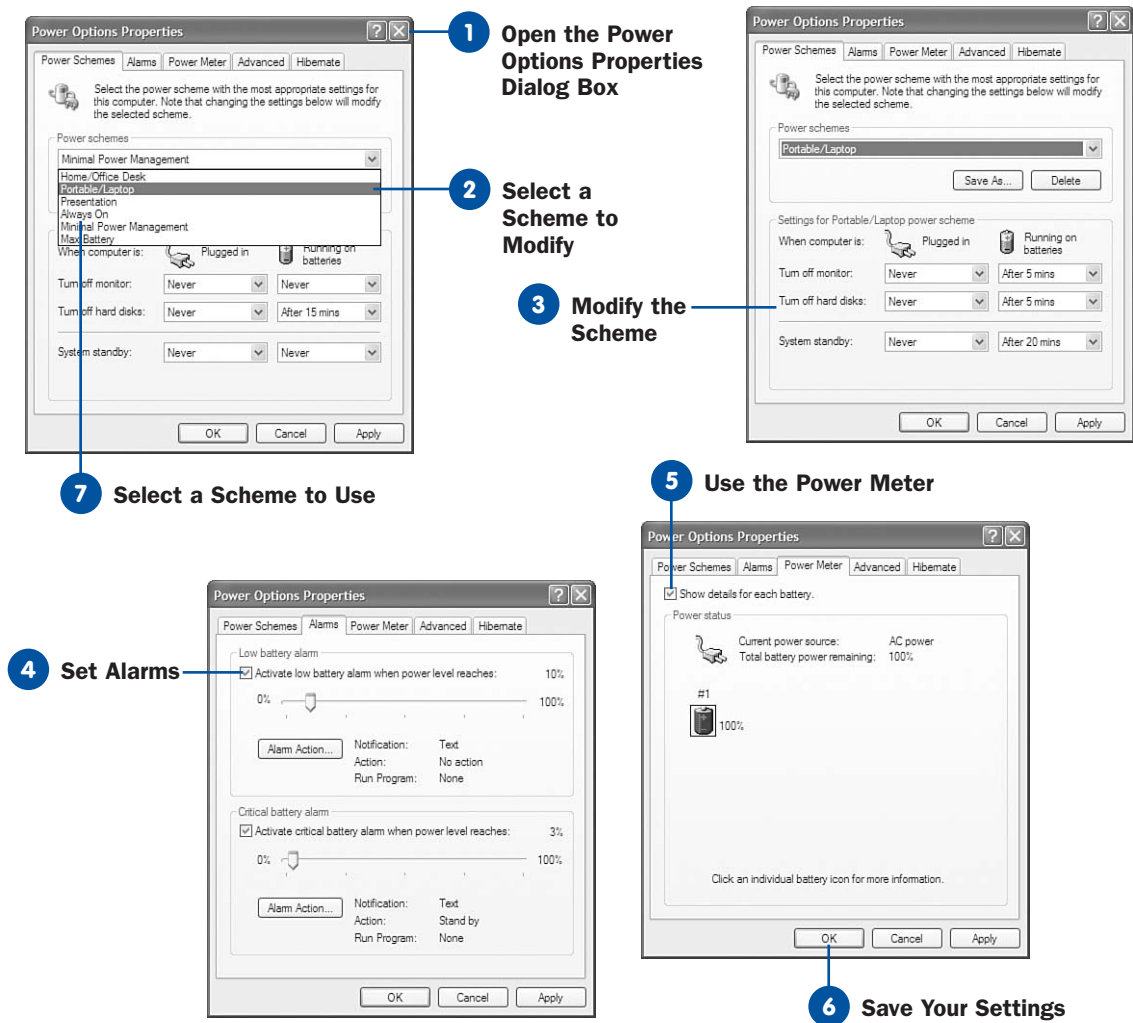
Click the **Start** button and choose **Control Panel**. From the **Control Panel**, choose **Performance and Maintenance** and then choose **Power Options**.

### 2 Select a Scheme to Modify

Click the **Power Scheme** tab and from the **Power schemes** drop-down list, choose a scheme you want to modify. There are a number of preset schemes from which you can choose, including **Home/Office Desk**, **Portable/Laptop**, **Presentation**, **Always On**, **Minimal Power Management**, and **Max Power**.

### 3 Modify the Scheme

After you've selected a scheme, you can modify how it uses power. For this example, I've decided to modify how my laptop uses power when it's plugged in and when it's running on batteries.



For each power scheme you modify, you have the following choices:

- **Turn off monitor.** You can have the laptop turn off the monitor after a set amount of time. The laptop will still function, and your work won't be lost, but no power will be sent to the laptop screen. Screens use a great deal of power, so this can

be a big electricity saver. In the **Running on batteries** section, choose the amount of time you want your laptop to wait before turning off your screen when you're idle. If you choose **After five mins**, for example, your laptop will turn off the power to your screen if you do not use your laptop for five minutes. Your screen automatically comes back to life when you press any key.

- **Turn off hard disks.** You can have the laptop turn off power to the hard disk after a set amount of time. The laptop will still function, and your work won't be lost, but no power will be sent to the hard disk. Choose this option in the same way you chose the **Turn off monitor** option. Your hard disk will automatically come back to life when you press any key.
- **System standby.** Your laptop can automatically go into a state of suspended animation after you don't use it for a certain amount of time. In this state, almost all the power is shut off to it. From the **System standby** drop-down list, choose the amount of idle time you want your laptop to wait until it goes into system standby. To bring your PC out of standby or hibernation, press the power button.

## NOTE

You can also have your laptop go into hibernation mode, which uses even less power than system standby. For information about how to use system standby and hibernation, see [10 Use Hibernation and Standby](#).

## 4 Set Alarms

When you're using a laptop on battery power and the battery runs out, your laptop will shut down and you'll lose any unsaved data you might have been working with. Because of that, you should set alarms so that you're notified enough in advance of the laptop shutting down that it's very low on batteries.

In the **Power Options Properties** dialog box, click the **Alarms** tab. In the **Low battery alarm** section, enable the **Activate low battery alarm when power level reaches** check box; drag the slider to select the percent of battery life that you want to trigger the alarm. Click the **Alarm Action** button to select what action should be taken, such as a text pop-up notification and a sound alarm.

Doing that sets the basic alarm, but you set a second alarm as well to provide a second notification. In the **Critical battery alarm** section, enable the **Activate critical battery alarm when power level reaches** check box; drag the slider to select the percentage of battery life that you want to trigger this second alarm.

## TIP

When your alarm goes off, you should close all the files you're working on, close all your programs, and then shut off your laptop. If you want to continue working, either put a fresh battery into the laptop or connect the laptop to a power outlet.

## 5 Use the Power Meter

You'll most likely want to know about your battery level not just when you're about to run out of power, but at all times, so that you can gauge how much working time you have left on your laptop.

To do this, you can have a power meter always display in the **Notification Area** in the **Taskbar** when your laptop is running on battery power. A small icon shows how much battery power is left, and when you hover the mouse pointer over the icon, it will report the percent of battery life left. If you double-click the icon, it will report the total amount of time you have left before the computer shuts down.

To have the power meter display on your laptop, click the **Power Meter** tab in the **Power Options Properties** dialog box, and enable the **Show details for each battery** check box.

## 6 Save Your Settings

When you're done modifying power schemes, alarms, and the power meter, save your settings by clicking **OK** at the bottom of any tab in the **Power Options Properties** dialog box. Your new power scheme settings are now in effect.

## 7 Select a Scheme to Use

To change to a new power scheme at any time, go to the **Power Schemes** tab of the **Power Options Properties** dialog box and choose the scheme from the **Power schemes** drop-down list.



### TIP

If you use have a wireless network adapter that you plug into your laptop when you travel so that you can connect to **HotSpots** on the road, only plug in the adapter when you actually need to connect to a HotSpot. The adapter requires power to run, so if you plug it in when you don't need it, you're reducing your battery life. For details about how to connect to HotSpots, see [63 Connect to a HotSpot or Wi-Fi Network](#).

## 121 Use ClearType for Better Laptop Resolution

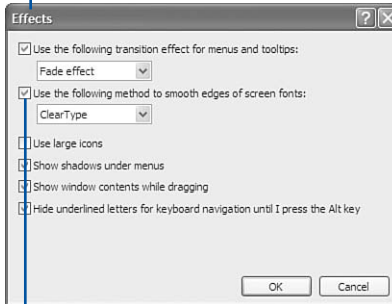
Laptop screens can be very hard on the eyes, especially because many laptops are designed to work at very high screen resolutions. When you have a high screen resolution, the type on the screen appears very small.

As laptop screens get larger, resolutions increase and type gets smaller. In addition, the LCDs used to make laptop screens can be hard on the eyes. The problem isn't confined to laptops—increasingly popular desktop flat-panel LCD screens have the same problem.

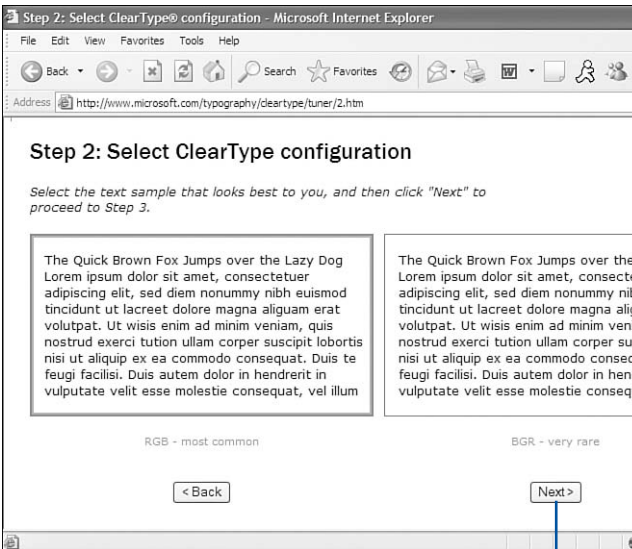
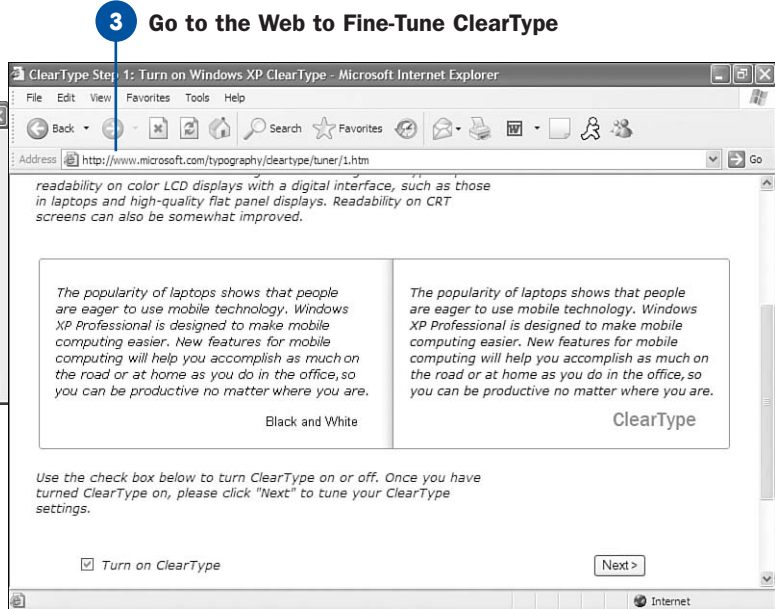
### See Also

→ [120](#) Create and Use Power Schemes for Laptops

### 1 Open the Effects Dialog Box



### 2 Turn On ClearType



### 4 Select Your Basic ClearType Configuration

### 5 Choose Final Settings



There is a fix for the problem, however. You can use a built-in feature of Windows XP called ClearType, in which text is smoothed, making it much easier to read and much easier on the eyes.

### 1 Open the Effects Dialog Box

Right-click the desktop and choose **Properties** from the context menu. When the **Display Properties** dialog box opens, click the **Appearance** tab and then click the **Effects** button to open the **Effects** dialog box.

### 2 Turn On ClearType

Enable the **Use the following method to smooth edges of screen fonts** check box. Select the **ClearType** option from the drop-down list and click **OK** twice. The ClearType feature is now turned on.

### 3 Go to the Web to Fine-Tune ClearType

Although the ClearType feature is now turned on, you can't fine-tune the way it looks on your screen. It's important that you fine-tune it, because LCD screens are very different from one another, and you should customize it for your screen. You must go to a website to fine-tune its appearance. Connect to the Internet and go to <http://www.microsoft.com/windowsxp/pro/using/howto/customize/cleartype/tuner>.

You'll be asked whether you want to install and run the **Microsoft ClearType Tuning Control**. Click **Yes**. There are two versions of the control; depending on your version of Windows XP and whether you have certain XP service packs installed, you will see one or the other of the controls. In one of them, from the opening page, click **Next**, and in the other, from the opening page, click **Move on to Step 2: Tuning ClearType Settings**.

### 4 Select Your Basic ClearType Configuration

Depending on the version of the control the site has provided you with, the next page displays two versions of the same text and asks which looks better. Choose the text that looks better and click **Next**. (One version of the control skips this page entirely, so you might not see it.)



#### TIP

You can use ClearType on a normal (non-LCD) PC monitor, but it often makes the text appear blurry. Additionally, people have complained that it gives them headaches.



## 5 Choose Final Settings

You'll next come to a page that displays a block of text six different ways. Click the text block that looks best and then click the **Finish** button. You're done; you've tuned ClearType so that it looks best for your LCD.

## 122 Get System Updates Automatically

### See Also

- **124** Protect Your System with System Restore



### TIPS

To check whether you have Windows XP SP-2 installed, right-click the **My Computer** icon, choose **Properties**, and click the **General** tab in the **System Properties** dialog box. At the bottom of the **System** area, read about your precise version of Windows XP. If it reads **Service Pack 2**, SP-2 is installed; otherwise, it isn't.

Another way to open the **System Properties** dialog box is to click the **Start** button, choose the **Control Panel** option, click the **Performance and Maintenance** icon, and then click the **System** option. If you don't see the **Performance and Maintenance** icon in the **Control Panel** list, choose the **System** icon to launch the **System Properties** dialog box.

Microsoft is constantly updating Windows XP by issuing new fixes and patches. Sometimes it issues them because it finds security vulnerabilities that must be repaired. Other times, Microsoft finds bugs. And still other times, it adds new features.

It's especially important to keep your system up to date with these fixes because without the updates, your computer could be vulnerable to hackers and Internet dangers. You can have Windows XP automatically check for updates and install them using **Automatic Updates**—the safest way for getting system updates. When you use **Automatic Updates**, XP accesses the Internet to check the Microsoft site for updates and then downloads and installs them on your PC. You can customize the **Automatic Updates** settings in a variety of ways.

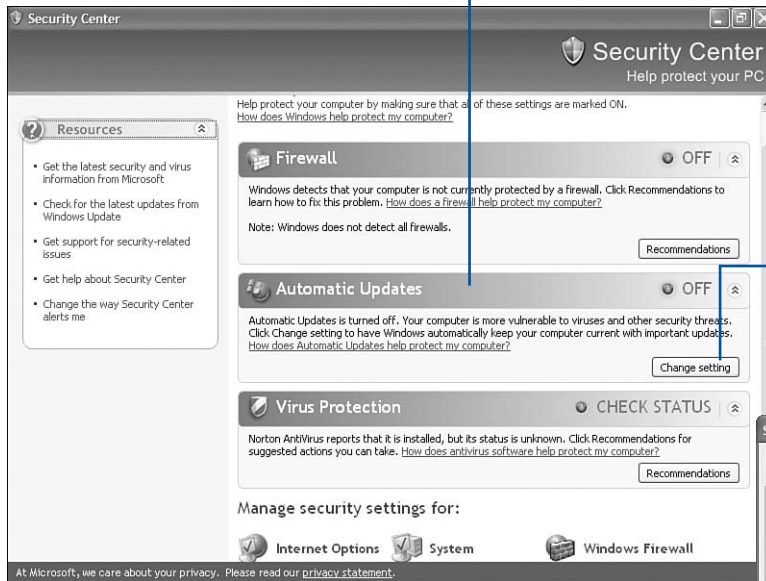
## 1 Check Whether Automatic Updates Is Turned On

If you're running Windows XP Service Pack 2 (SP-2) or later, a small **Security Center** icon is in the **Notification Area** in the **Taskbar**. Click the icon to open the **Security Center**. Look in the **Automatic Updates** area. If this feature is turned on, you will see a green **On** button. If it is not turned on, you will see a red **Off** button.

If you don't have Windows XP SP-2, you can check to see whether **Automatic Updates** is turned on by right-clicking the **My Computer** icon, choosing **Properties**, and then clicking the **Automatic Updates** tab in the **System Properties** dialog box. If the **Keep my computer up to date** check box is enabled, **Automatic Updates** is turned on.

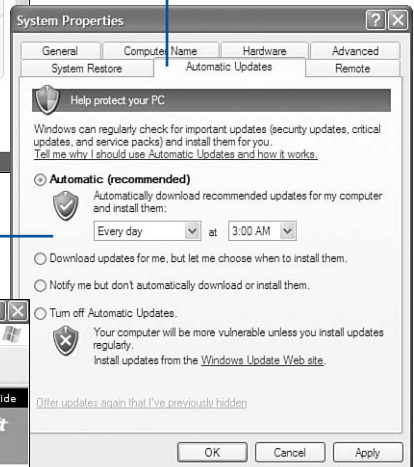


## 1 Check Whether Automatic Updates Is Turned On

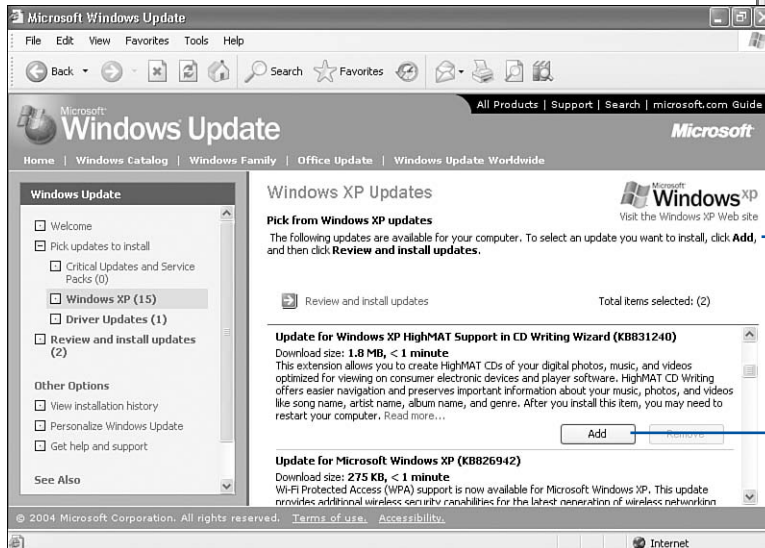


## 2 Turn On Automatic Updates

## 3 Go to the Automatic Update Tab



## 4 Customize Automatic Updates



## 5 Manually Check for Updates

## 6 Download and Install Updates

## 2 Turn On Automatic Updates

To turn on the **Automatic Updates** feature, click the **Change setting** button. The red **Off** button changes to a green **On** button, and automatic updates are turned on.

If you don't have SP-2, in the **Automatic Updates** tab of the **System Properties** dialog box, enable the **Keep my computer up to date** check box. (Note that this option does not show up if you have the SP-2 version of Windows XP.)

## 3 Go to the Automatic Updates Tab

Windows XP lets you control how **Automatic Updates** are handled. You can have XP automatically download and install all updates, you can have it download the updates but then let you choose when to install them, or you can have it notify you that updates are available but without automatically downloading or installing them.

To customize how the **Automatic Updates** feature works, you need to get to the **Automatic Updates** page of the **System Properties** dialog box. In the **Security Center**, click the **System** icon at the bottom of the screen to open the **System Properties** dialog box, and then click the **Automatic Updates** tab.



### TIPS

You must be connected to the Internet to receive updates, because they are transferred over the Internet. Because downloading update files can take a substantial amount of time over a dial-up connection, be patient.

You might want to download system updates but not install them. The installation procedure can take some time, might interfere with your current work, and might require you to reboot your computer. You might want to do the actual installation at a time when you're not doing anything else on your computer.

## 4 Customize Automatic Updates

The **Automatic Updates** tab presents these options for customizing how the updates occur:

- **Automatic.** If you choose this option, XP automatically checks for updates, downloads them, and installs them without your intervention. If you choose this option, you must also choose the interval and time when you want XP to check for updates from the drop-down boxes; for example, every day at 3 p.m. It's not a bad idea to check for updates daily, just in case an important security update has been released.
- **Download updates for me, but let me choose when to install them.** If you choose this option, XP automatically checks for updates and downloads them. But it won't

automatically install them. Instead, it alerts you that it has downloaded an update, and asks whether you want to install it. You can choose to install it at the time of the alert, or tell XP to remind you at a later time.

- **Notify me but don't automatically download or install them.** If you choose this option, XP checks for updates automatically, but won't download them. Instead, it alerts you when an update is ready, and asks whether you want to download it. You can choose to download it at the time of the alert, or tell XP to remind you at a later time. You can then install it, or tell XP to remind you to install it at a later time.
- **Turn off Automatic Updates.** If you choose this option, XP won't automatically check for updates.

## 5 Manually Check for Updates

If you turn off the **Automatic Updates** feature, you can manually check for updates yourself and choose which to install. First connect to the Internet. When you're connected, click the **Start** button and choose **Control Panel**. From the left side of the screen, click **Windows Update**.

You'll be sent to the **Windows Update** website. To check whether there are any updates, click the **Scan for Updates** link in the middle of the welcome page.

## 6 Download and Install Updates

Windows XP checks the site to see whether any updates are available. It then lists all the potential updates. Scroll through the list and click the **Add** button next to any you want to install. If there are any listed as critical updates, you should make sure to install those.

After you have chosen all the updates you want to install, click the **Review and install updates** link. You'll see a list of all the updates you've chosen. To remove any, click the **Remove** button. To install your updates, click **Install Now**. All the selected updates are downloaded to your computer and installed.



### TIP

You should always install critical updates, but whether you want to install others is a personal decision. Many updates fix only a very specific feature of a program—and you might never use that program or feature. If you locate a large update that would take a long time to download and install, it doesn't always make sense to install it because you wouldn't use it anyway. Read the description of each update carefully, and then use your judgment about how important that update is to you.

**123 About Backing Up Your Hard Disk****See Also**

→ **124** Protect Your System with System Restore

**TIP**

How often you should make a backup depends on how important your files are to you. If you use your computer for work, you should make a backup every day, if at all feasible. But no matter what, you should back up at least once a week at a minimum.

It's an unfortunate fact of life that hard disks and computers sometimes crash. That means you can lose all your files, data, and programs.

There is a way to protect yourself against these dangers, though. You can use a backup program that makes copies of what's on your computer and stores the data somewhere else (on a CD, another hard drive, and so on). If your computer crashes, you can get the data back from wherever it is stored.

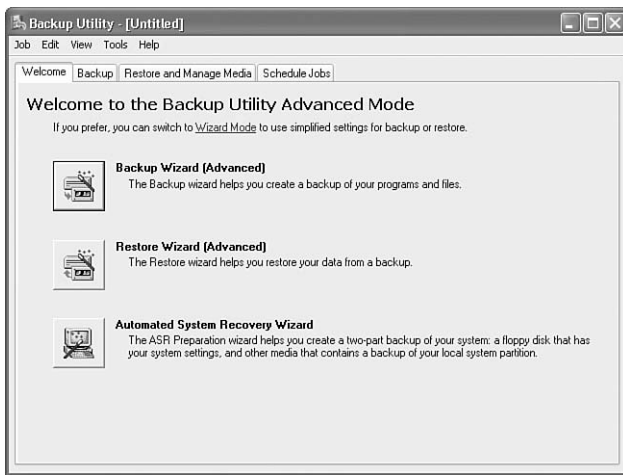
When you use a backup program, you have a choice of backing up your entire computer, just your files and not your programs, or only selected folders and files. Your programs are very large, and it can take a very long time and a large amount of storage space to store them. As a general rule, there's really no reason to back them up, not only because of how long it will take to back them up, but also because you have copies of the programs on the original installation discs, and it's easy to re-install them from those discs if necessary.

Hard disks are large, and you most likely have a lot of files you want to back up. If you have a CD-R or a DVD-R drive, your best bet is to back up to CDs or DVDs. These storage media have large capacities, are inexpensive, and are easy to store. If you have a network at home, you might want to back up your hard disk from one computer to another.

Which backup program to use is a more difficult problem. Windows XP includes a built-in Backup program. To run it, click the **Start** button, click the **All Programs** button, and choose **Accessories**. Then choose **System Tools** and from there, choose **Backup**. From the **Backup Utility** screen that appears, you can choose to use a wizard to back up your hard disk, or you can customize the backup yourself.

However, there's a very serious problem with the Windows XP backup program: It can't back up to CDs or DVDs. In addition, it's not particularly easy to use, either when backing up your files or if you need to recover them.

Because of that, it's a good idea to buy a separate backup program. There are a variety of good ones, including **NTI Backup Now!** available in stores and online at [www.ntibackupnow.com](http://www.ntibackupnow.com), and **Backup Plus**, available in stores and online at [www.backupplus.net](http://www.backupplus.net).



*Windows XP's built-in Backup utility has some problems with it, most notably that you can't use it to back up to CDs or DVDs.*

## 124 Protect Your System with System Restore

The software you install on your PC isn't always particularly well behaved. There may be times when you install a new program that does some kind of harm to your system, or interferes with other programs. The same holds true when you install a piece of hardware. There's a chance that it could damage your computer as well.

To protect against that kind of damage to your system, Windows XP includes an excellent form of protection called **System Restore**. At regular intervals, **System Restore** takes snapshots of your system. Then, if you run into a problem—for example with a piece of software or hardware—you can restore your system to the state it was in when that snapshot was taken. These snapshots include only the software and settings on your computer. They don't include data. Let's say that you install a piece of software, then create new files or edit existing ones, and afterwards realize that the piece of software has created problems for your computer. When you restore your computer using **System Restore**, it won't touch the files you created or edited, it will only touch the damaging software.

### See Also

→ **123** About Backing Up Your Hard Disk



### TIP

To protect your data files, back them up using a reliable backup program, as described in **123** **About Backing Up Your Hard Disk**.

**TIP**

Another way to open the **System Restore** window is to click the **Start** button, choose **All Programs**, **Accessories**, **System Tools**, and then click the **System Restore** option.

**NOTE**

When you scroll through the calendar, you'll find more system restore points than you created. That's because Windows XP automatically creates restore points at certain times and in response to certain events. For example, it creates a restore point whenever you install a program that uses the installation program **Windows Installer** or **Install Shield Pro** version 7.0 or later, when you install an update using the **Automatic Updates** feature (see [123 Get System Updates Automatically](#)), or when a piece of hardware is installed that XP can't verify is safe. Windows XP also creates a restore point every 24 hours if the computer is turned on, or if it has been 24 hours since the last restore point was created.

**1 Run System Restore**

Click the **Start** button, choose **Control Panel**, click the **Performance and Maintenance** icon, and click **System Restore** in the left pane. The **System Restore** welcome window opens.

**2 Create Restore Point**

From the welcome screen, select the **Create a restore point** option and click the **Next** button. On the screen that appears, type a description of the restore point you are about to create. Make sure that it's descriptive enough so that its name will remind you why you created it. You don't have to include the date because you can see the dates and times on which all your restore points were created.

After you name the restore point, click **Create**. When the screen appears telling you that the restore point has been created, click **Close**. If you want to go back to the main screen for creating and managing restore points, click **Home**.

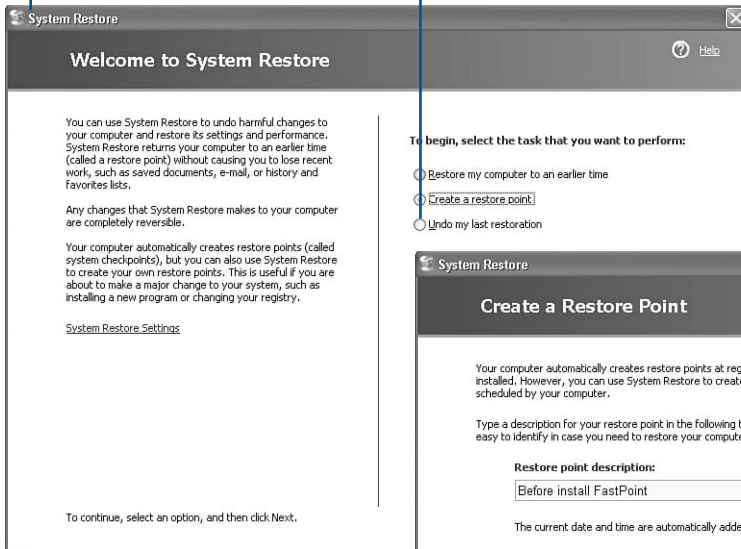
**3 Use a Restore Point**

If your computer starts running into problems, and you want to restore it to a time when it was running properly, first get back to the **Welcome to System Restore** screen. Get there by following the directions in step 1.

Select the **Restore my computer to an earlier time** option and click the **Next** button. The screen that appears is a calendar; listed on the calendar are all the restore points on your system. Click any date on the calendar to see what restore points were created that day, along with their names and times of creation.

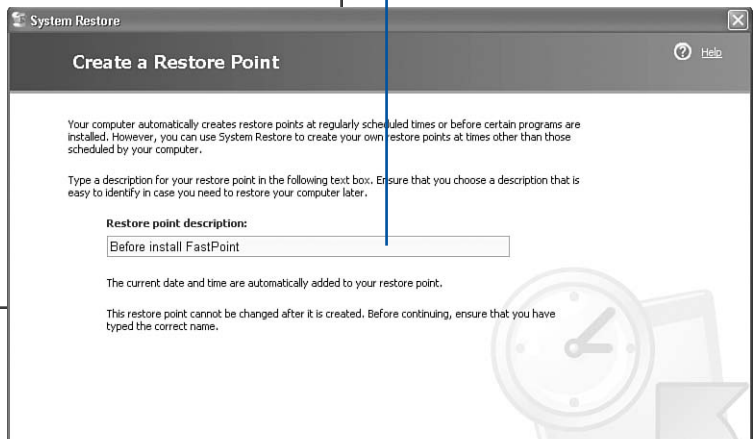
Click the restore point you want to use and click **Next**. You'll be told that you're going to restore your computer to an earlier time, and that you should save all your open files and close your open programs. Save your files, close your programs, and click **Next**. You will be logged off, and your computer will be restored using the selected restore point. Windows XP displays the progress of the operation. Your computer will then turn off and restart, and you'll get a message telling you that the restoration was complete. Click **OK** and use your computer.

## 1 Run System Restore

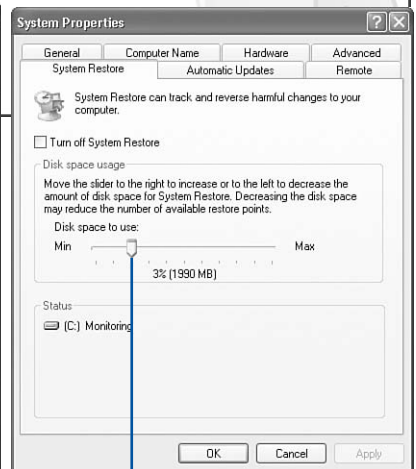
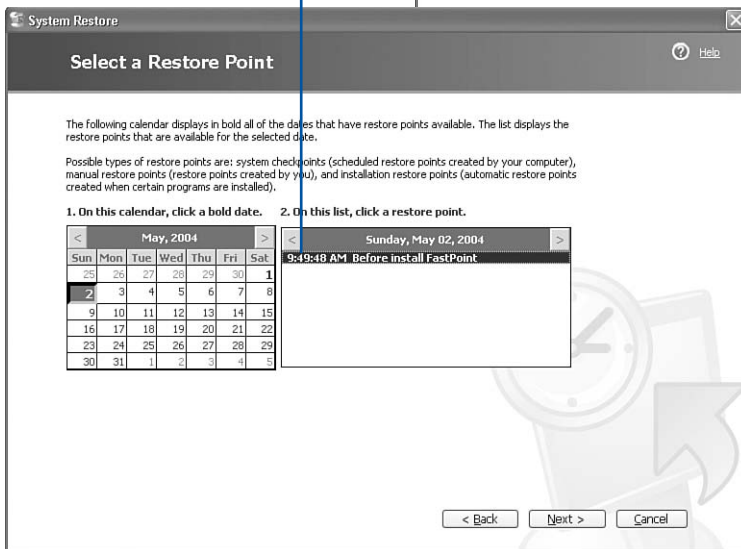


## 4 Undo the Restoration

## 2 Create Restore Point



## 3 Use a Restore Point



## 5 Change the Space Devoted to Restore Points



#### 4 Undo the Restoration

If you've made a mistake and used the wrong restore point, or for some other reason want to undo the restoration, you can put your PC back into the state it was in before you applied the restore point. Get back to the **Welcome to System Restore** screen following the directions in step 1. Then click the **Undo my last restoration** option and click **Next**. Follow the same procedure outline in step 3 for using a restore point.

#### NOTE

The more space you have devoted to restore points, the more of them you can have on your computer, but the less space you have for your files and programs. When the amount of space allocated to restore points becomes filled, as new restore points are created, earlier restore points are deleted to make way for new ones.

#### 5 Change the Space Devoted to Restore Points

Restore points can take up a substantial amount of space on your hard disk. In fact, XP devotes several gigabytes or more of your hard disk space to restore points, depending on your total hard disk size.

You can increase or decrease the hard disk space devoted to restore points. Go to the **Welcome to System Restore** screen following the directions in step 1. On the left side of the screen, click the **System Restore Settings** link. In the **System Properties** dialog box that appears, click the **System Restore** tab (if it is not already selected) and move the slider to the left to devote less disk space to it (and "lose" some of the restore points you might have already set); move the slider to the right to devote more space to it. When you're done, click **OK**; the new settings go into effect immediately.

## 125 Free Up Space on Your Hard Disk

### See Also

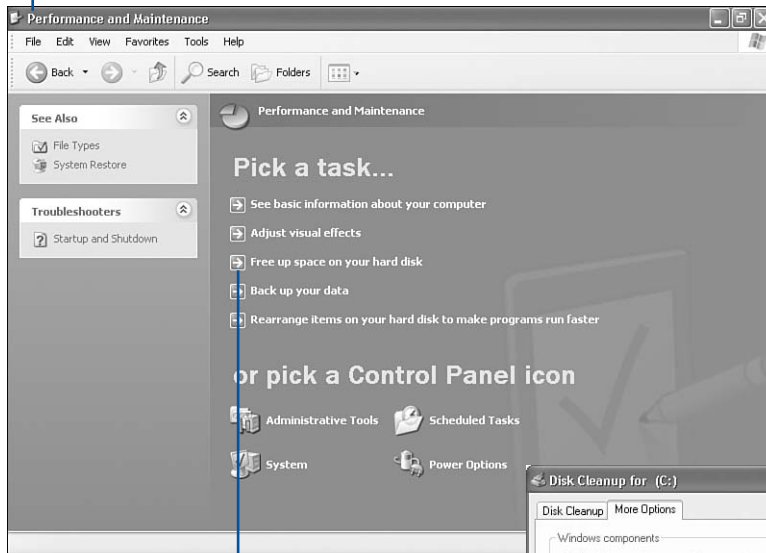
- **54** Clean Up Cookies and Delete Temporary Files
- **123** About Backing Up Your Hard Disk
- **124** Protect Your System with System Restore

The longer you use your computer, the less hard disk space you have. You install programs, you create files, and pretty soon what looked like a large hard disk isn't so large any more.

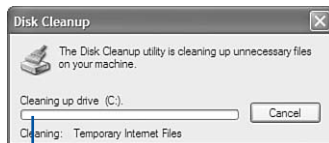
There is a way to reclaim some space on your hard disk, however. You can have Windows XP automatically delete unnecessary files. Depending on how many unnecessary files you have on your disk, this action can get you back either a little space or potentially hundreds of megabytes of space.



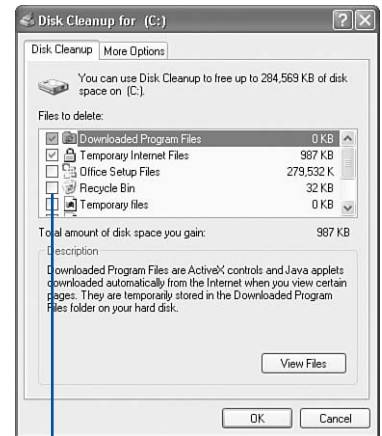
### 1 Open the Performance and Maintenance Screen



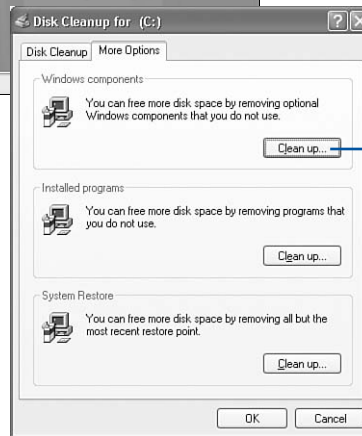
### 2 Click Free Up Space On Your Hard Disk



### 4 Clean Up Your Hard Disk



### 3 Choose Which Files to Delete



### 5 Make Additional Deletions

## 1 Open the Performance and Maintenance Screen

Click the **Start** button and choose **Control Panel**. Click the **Performance and Maintenance** icon to open the **Performance and Maintenance** screen.

## 2 Click Free Up Space On Your Hard Disk

Click the **Free up space on your hard disk** link in the **Pick a task** list. XP examines your hard disk, looking for unneeded files, and calculates how much hard disk space you can reclaim. This process might take a few minutes, depending on the size of your hard disk. A small **Disk Cleanup** window appears, telling you the progress of the search.



### TIP

If you want more information about the files you're about to delete, you can try to view them by highlighting the file type and clicking the **View Files** button. This action launches Windows Explorer and puts you into the folder where the files are located. You'll have to browse through the files with Windows Explorer. Be forewarned: Most of the files identified for potential deletion will have incomprehensible names, and not all can be viewed. Although viewing files before you delete them is a good idea in theory, in practice it often won't help you.

## 3 Choose Which Files to Delete

After the **Disk Cleanup** utility does its calculations, it shows you its findings and asks which files you want to delete. It lists the types of files it can delete, such as **Temporary Internet Files** (files your computer creates when you browse the Web, but which you don't need), files in the **Recycle Bin**, and so on. For each type of file, you'll see how much space you can save by deleting those types of files. You'll also see the total of all the space you'll save, based on all the file types selected for deleting.

**Disk Cleanup** enables the check boxes next to the types of files it recommends you delete. As a general rule, it's a good idea to follow **Disk Cleanup**'s recommendations, unless you're a very experienced user.

## 4 Clean Up Your Hard Disk

After you've selected the check boxes for the types of files to delete, click **OK**. You'll get a warning box asking whether you want to delete the files. Click **Yes**. The **Disk Cleanup** utility cleans out those files and reports its progress as it's doing its work. When it finishes, the dialog box goes away.

## 5 Make Additional Deletions

The **Disk Cleanup** utility can clean other types of files from your hard disk as well. Run **Disk Cleanup** as explained in steps 1 and 2. When the **Disk Cleanup** dialog box opens, click the **More Options** tab. Here are three more options for additional disk cleanup:

- **Windows components.** You can delete various Windows utilities and programs, such as **Windows Media Player** and **Windows Messenger**. Click the **Clean up** button in the **Windows components** section of the dialog box. The **Windows Components Wizard** appears to walk you through the process of removing whatever components you no longer want.
- **Installed programs.** You can delete any of the programs installed on your hard disk. Click the **Clean up** button in the **Installed programs** section of the dialog box, and the **Add/Remove Programs** utility launches. To remove a program, highlight it and click the **Change/Remove** button.
- **System Restore.** You can delete all your restore points except the most recent one. (For more details, see [124 Protect Your System with System Restore](#).) Click the **Clean up** button in the **System Restore** section of the dialog box, and a warning screen appears asking whether you want to delete all but the most recent restore point. Click **Yes** to delete them.

## 126 Defragment Your Hard Disk


As you use your computer, it slows down over time because your hard disk becomes *fragmented*. Files on your PC are stored in different sections on the hard disk, and as you open and close them, the sections are not stored next to one another on the hard disk—the files become fragmented. That means that when Windows XP opens a file, it must take extra time to find it, because the fragments are spread over your hard disk rather than being found contiguously.

The same thing happens with programs. As you use them, the files needed to run them become fragmented and are slower to load and run. The upshot is that your computer gradually runs slower and slower.

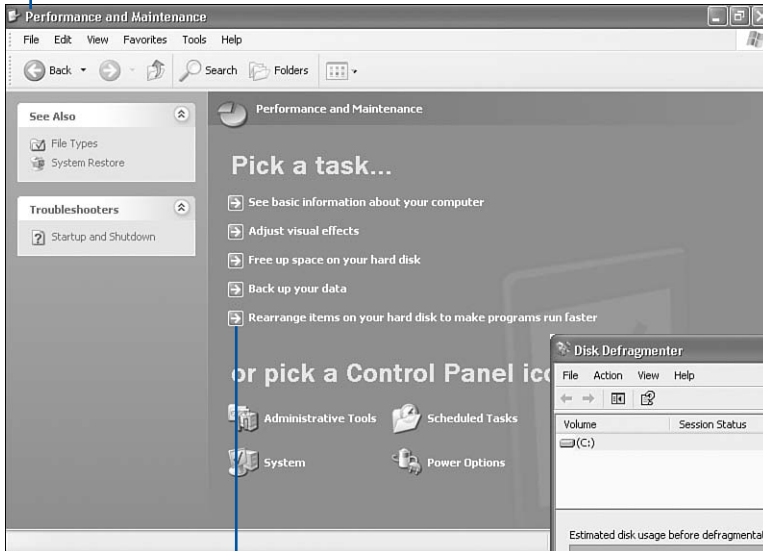
You can speed up your PC by defragmenting your hard disk so that the parts of files are stored next to one another once again. You do this by using XP's built-in defragmentation utility.

### See Also

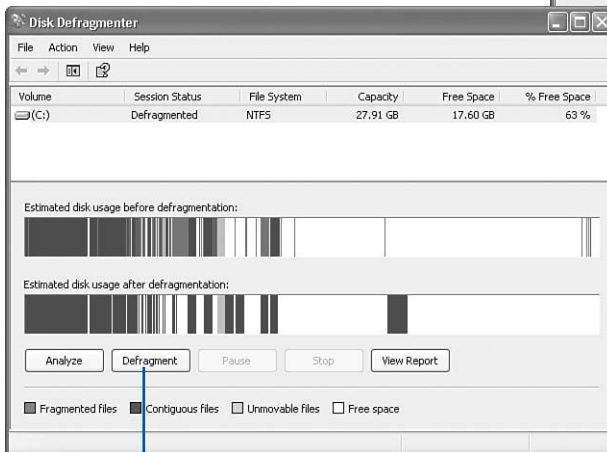
- [123 About Backing Up Your Hard Disk](#)

 **KEY TERM**  
**Fragmentation**—When the different sections of files and programs on your PC are stored far apart from each other on your hard disk. This leads to a slower operating PC.

# 1 Open the Performance and Maintenance Screen

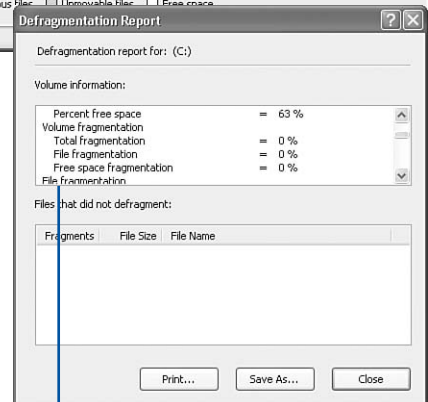
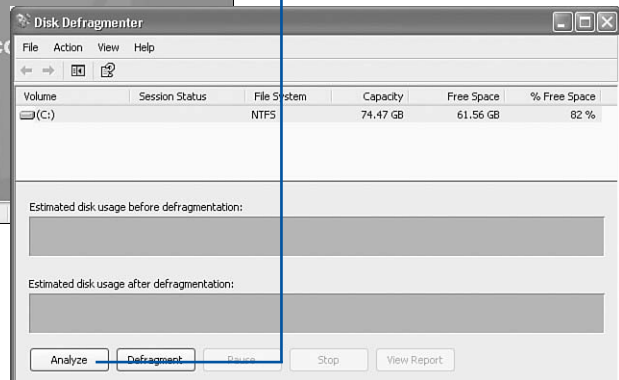


## 2 Run the Disk Defragmenter



## 4 Defragment Your Hard Disk

## 3 Analyze Your Hard Disk



## 5 View the Defragmentation Report

## 1 Open the Performance and Maintenance Screen

Click the **Start** button and choose **Control Panel**. Click the **Performance and Maintenance** icon to open the **Performance and Maintenance** screen.

## 2 Run the Disk Defragmenter

Click the **Rearrange items on your hard disk to make programs run faster** link in the **Pick a task** list. The **Disk Defragmenter** screen opens.

## 3 Analyze Your Hard Disk

Instead of defragmenting your hard disk right away, you can have Windows XP examine your hard disk and tell you whether your hard disk needs defragmenting. To do this, click the **Analyze** button. XP examines your hard disk and reports back to you. If it determines that your hard disk should be defragmented, it pops up a screen telling you that you should defragment your hard disk. If it determines that your hard disk does not need to be defragmented, it pops up a screen telling you so.

## 4 Defragment Your Hard Disk

To defragment your hard disk, click the **Defragment** button. Windows XP begins defragmenting your hard disk and displays its progress on the **Disk Defragmenter** screen. The top part of the screen shows the state of your hard disk before defragmentation. The bottom part shows the state of your hard disk as XP defragments your hard disk.

At the end of the defragmentation process, you'll get a notice that defragmentation is complete. The notice may also note that not all your files could be defragmented. Click **Close**.

When defragmentation is complete, the bottom part of the screen shows you the final state of your hard disk after defragmentation, while the top part shows you the state before defragmentation.



### NOTE

Note that the **Defragment** button appears whether or not Windows XP recommends that you defragment your hard disk. You can defragment the hard disk even if XP does not recommend defragmenting it.

## **5 View the Defragmentation Report**

If you're interested, you can view a report that gives you details about your hard disk, including defragmentation information. Click **View Report** at the bottom of the screen to display it. You'll see a variety of information about your hard disk, including its size and how much disk space is used, as well as information about how much of the hard disk, if any, remains defragmented.