

Computer Self Help

A series of articles designed to help you through the trouble spots of Windows use



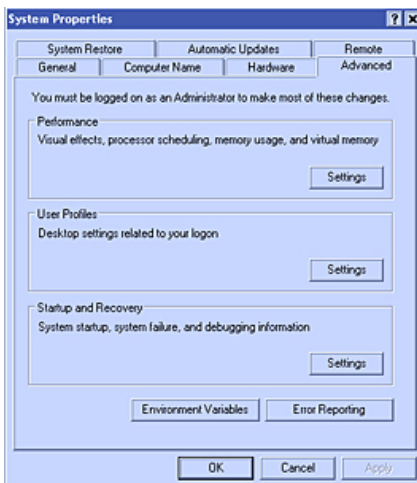
“Why is my computer so slow?”

To answer this, we must first understand this is perceptual. In order for it to feel slow, there must have been some faster operation you’ve experienced to compare it to. And, chances are good that as you have used your computer, it has become less responsive. Files and programs accumulate, problems creep in, maybe even a virus or two.

So what can we do to restore that “fresh out of the box” feel? The easiest way is to restore it to that condition, with the system or restore disk the computer came with. One problem, the minute you put back all those fonts, files and programs it will slow again. But even so, a fresh installation of the operating system is always a good start. Windows over time develops problems. Of course you also have to install all of the updates—and there can be hundreds—along with all of your other files and applications.

Set Your System for Speed

If you navigate from Start to Control Panels and then open the System, you’ll see several tabs across the top of System Properties. Here you will also see your serial number, the version and type of Windows you are running, and the basic information on your computer. Take note of the amount of RAM (Random Access Memory) you have installed. You may want to add more, we’ll get to that in a bit.



Selecting the “Advanced” tab under Windows XP brings up Performance, User Profiles as well as Startup and Recovery. Click the Settings button under Performance. This list of graphic enhancements to Windows XP makes it more attractive but requires resources. To simplify things, it allows you to choose options for

best performance, best appearance or system managed. To speed up, choose “best performance”.

Get Rid of Bloat

Navigating from Start to “All Programs” at the bottom, go all the way to the top under “Accessories”, and then move over and down to “System Tools”. Select under that heading, “Disk Cleanup”. The application will ask which disk you wish to clean, and then display the amount of hard drive space you can recover by getting rid of unnecessary files. Check the boxes to the left of the items you want to delete and click “OK” to clean the drive. Under the “More Options” tab at the top, you can also recover space by ridding yourself of Windows components you don’t use, programs that are not needed, and by deleting all but the most recent System Restore point.



When removing installed programs, you can tell a couple things about the programs—how often you’ve used them, and how large they are. It’s worth noting that just because you don’t know what a program does, doesn’t mean it is not needed. Programs often have modules or “helper” applications that once removed, can force the re-installation of the main program.

Speed Up Hardware

Inside the System control panel’s General tab, we noted how much RAM is installed in the computer. For those running Windows 98, Windows ME or Windows 2000, you may first wish to upgrade to a more modern operating system like Windows XP while you can. It won’t be easy, but copies of Windows XP can still be purchased through vendors or on internet sites like eBay. Unless you bought your system pre-installed with Windows Vista, I don’t recommend automatically upgrading to it.

If you have one of these older versions of Windows, I would recommend you have at least 512 MB of RAM installed. If you aren’t comfortable with installing memory (It requires opening the computer case) please take it to a local computer store for upgrading. They will know the type of RAM needed and perform the upgrade for you. For users of Windows XP at least 1 GB of RAM should be installed for best performance. If you crave speed, install as much as your system will handle.

Upgrade your graphics hardware

Many prebuilt or store systems ship with “onboard” graphics. These motherboards have graphics chips built-in that often share a portion of the system memory to display graphics (many also

have built-in sound). This often however, is a bare minimum set-up, and can seriously degrade the system performance on older machines—especially when running new operating systems and games. Buying an inexpensive nVidia or ATI PCI or AGP (or PCI-e) video card and installing it can make your computer feel much faster. These cards are installed into an available slot on the motherboard. A low-end card can cost as little as \$20 currently, but can be an improvement over onboard graphics. If you don't know how to buy and install these cards, see a local computer shop for help.

Finally, older slower systems often use 5,400 RPM hard disk drives (or slower). These can be upgraded for performance to faster 7,200 RPM SATA or ATA hard drives—and increase storage capacity at the same time. This will of course require a re-install of the operating system, along with all files and programs. Again, seek the help of a local computer shop if needed. A faster hard drive can make a big difference in performance, especially on systems with smaller amounts of RAM. If your system is old enough to have one of these drives, it may be advisable to get a new computer instead. For a bit more money, you'll get more performance all across the board, not just from the hard drive.

You may also have a processor (Pentium 4, Pentium III, etc.) that is upgradeable. This is almost always outside the realm of users' abilities. And, it is not always cost-effective. It may be cheaper and easier to simply purchase a newer computer. Ask a local computer shop if your computer's processor can be economically upgraded.

Get Rid of Problems

Viruses, Trojans, corrupted Registries and other file-related problems can seriously degrade your system's performance. By far the easiest way to rid yourself of these problems is to take it into a local shop and have them clean it out and install virus protection. If you are up to the task, online help is available. This is covered in the next section.



“My System is Bugged Down with Viruses!”

Experts in the industry estimate that a new computer running unprotected will get a virus or other internet nasty within 15 minutes after connecting to the internet. That's a pretty sobering thought. There are a lot of reasons why hackers and other criminals write these malicious programs, and it's up to you to protect yourself from them. This section assumes you have an active internet connection (why else would you need an antivirus program?).

Scan your Computer for Viruses and Rootkits

This section will be full of links to download software that can protect and maintain your computer. But before you do, let's get rid of things that may already be there. Let's start by making sure you have some form of antivirus. Popular brands are: Norton Antivirus, Panda, AVG, McAfee, AntiVir, Trend Micro and others. If you don't recognize one of these, or are sure you don't have an antivirus, let's get one.



<http://free.avg.com>

Head to this link to download and install the very good AVG free version—on the same page is their complete suite of applications for purchase (which are also recommended). Please note there are other free antivirus programs out there for download. Many are very good, and all will at least afford some protection. I am using this one because it is free and easy to install and setup. There are some recent scams regarding antivirus programs that in fact install viruses when downloaded. Check out the program you use before downloading if you are unsure of its authenticity.

Some internet service providers (mine included) also have available for customers free internet security suites for download. You may wish to check if yours does. Click the link and follow through a couple pages (they want to sell you the paid version of course) to get to the download link. Click it and “save file”, then click the Desktop at the top of the list. After the download is complete, close Internet Explorer or whatever browser you use, and find the installation file you've saved. Open it to install the program, and when asked, restart your computer. If it does not launch itself after installation, open AVG and under Computer Scanner, select Scan Whole Computer. Allow it to finish and delete or quarantine the items it uncovers.

With the antivirus in place and protecting you, let's look for problems it may not have found. This time, let's head to:

<http://housecall.trendmicro.com>.

They sell antivirus products, but offer free online scanning and a very useful command-line application. Click the “Scan Now It's Free” link to begin. On the next page, click “Launch HouseCall Free Scan”. Your browser and system may need Sun Microsystem's Java application in order to run the scan.

<http://www.java.com> is the link for getting the latest Java.

After another sales pitch, the scan will download and install updates to the antivirus definitions (what signals the program a

file is a virus) that are about 1.5mb in size. On dialup systems, this may take a bit before the scan starts. While the scan runs the main window again offers more sales pitches. But it will remove any viruses and other nasties AVG has missed.

If you don't want to spend the time it takes to run the online scanner, you can alternatively get their command line application SysClean and run it from a restart to remove bugs. You can find SysClean and the antivirus/malware definition files it needs at: <http://www.trendmicro.com/download/>

Create a new folder (right-click on the Desktop anywhere and choose "New Folder") on your Desktop—name it SysClean. Now, on the download page listed, on the right-hand side near the bottom click "SysClean". Click "back" on your browser to get the definition files. Just above SysClean is "Trend Micro Pattern Files". Click this link—you want three of these: Virus Pattern File (Controlled Pattern Release), Spyware Pattern File (Controlled Pattern Release) and ssapiptn685.zip, which is on the same page as the Spyware definition.

On the download pages, click the files under Controlled Pattern Release, they are "zipped" files. If you cannot open Zip files, go to: <http://www.7-zip.org/> and download the free expander and install it. After downloading all of the pattern files to the desktop, place SysClean.com and the .zip files inside the SysClean folder you made previously.

Getting these three components can take a bit on slow connections. But once complete, open your new SysClean folder and expand the zipped definition files. Double-click the "SysClean" application, and when the program launches click "Scan". Allow the program to scan and remove dangerous files from your computer. You may need to run it from Safe Mode in a command-line. To do this, open "My Computer", and drag the SysClean folder from the desktop onto the "C" icon in the window. Restart your computer, and hold down the F8 key— choose "safe mode with command prompt". In the command line window that opens, type: `c:\SysClean\SysClean.com` then select "Scan" and let the program run. It may take quite a while depending on how large your hard drive is. It will scan the entire system and automatically remove threats, so if you have multiple drives it will take longer.

Once finished, restart your computer and enjoy—your system is safe and clean of viruses that can be found under ordinary means. By default, AVG will monitor and update itself if an internet connection is available. For more options, launch AVG and consult the built-in or online help available.

"Help! My Computer Won't Boot!"

There is no way to get "help" on your computer when it won't start—and unless you know ahead of time what you can do yourself, you're limited to consulting with someone else for assistance. This isn't a bad idea. If your computer doesn't boot, there are problems with either the software or hardware, and professional help from a computer shop is always recommended. If your computer tries to startup, but you get a blue screen or some other cryptic "file missing or corrupt" message, there may be hope. If it will not light up and run at all, the motherboard or power supply (or other hardware) could be bad—take it to a friend or professional for help. This problem is outside the scope of this article.

Some Basic Maintenance

Use the following techniques at your own risk. It is always ad-



visible to seek professional help when you are having computer troubles. If you notice your computer behaving strangely— i.e., re-booting itself with a blue screen, hanging/freezing up for extended periods, giving you errors saying a file cannot be found or copied—or "IO" (input/output) errors—it's time for some quick maintenance. You may eventually have to re-install your operating system.

If your computer will boot-up (start) and can progress to the desktop (after you log-in), you can start here.

Download the very nice free version of Glary Utilities if you can. From the first menu after installing and running the program, you can select "1-Click Maintenance", which can cure many Registry related errors. It's a great tool to have (and use) frequently.

<http://www.glaryutilities.com/gu.html>

Once you've done this, navigate from Start at the bottom left of the screen to "My Computer". You'll likely see a hard drive labeled "C" and a CD or DVD drive (Any extra drives will also be shown). Right-click on the "C" hard drive (for most users) and in the dialog that pops up, go to the bottom and select "Properties". Inside the box that appears, click the "Tools" tab. In this window, the top button is "Error-checking" and clicking it will bring up a small box with two options: "Automatically fix file system errors" and "Scan for and attempt recovery of bad sectors". Leave the top one



checked and click the “Start” button (checking the second option results in a thorough but time-consuming 5-step disc check). This will make your computer run the 3-step “Chkdsk”. The dialog box will notify you that it cannot continue and will check the disc at the next boot. Restart your computer.

When it starts up, a screen will appear and notify you that a disk check has been scheduled and will start soon. Allow it to begin, and wait patiently for it to finish. The 3-step check disc process is not as lengthy but does require some time—the larger the disc, the longer the wait. Do not interrupt the process, even if it appears to stall—or reboots during the check. Wait it out, and eventually the system will restart normally in most cases.



I find it a good practice to re-run the disk check a second time after a restart, going through the above steps again to make sure it does not find any additional errors. If this process clears up your problem, great. It’s now a good time to defragment and backup your computer if you haven’t done so recently.

If Disk Check does not complete successfully after several attempts, or does not cure the problem, restart the computer.

If necessary, hit any key during the disc check start-up (when prompted) to abort the scan. Boot as normal to the desktop if you can, and go back to the disc’s properties to then select both options for the check—and complete the longer 5-step checking process. Repeat if necessary, and be patient. If these do not cure your system’s ills, you may have to re-install.

On a side note, also inside “Tools” are the Defragmentation and Backup utilities, which are both something you should do semi-frequently.

If your computer will not startup and progress to the desktop, start here.

Before you resort to restoring/replacing/reinstalling, don’t panic. Using your Windows installation disk, start up from the CD into the installer. If you have an OEM “restore” disk, you may be limited to restoring your installation to “factory fresh” configuration—wiping out what is on the disk currently.

For Windows Vista: if it is an upgrade or retail/express install disk, you will go through the “Windows is installing files...” screen, followed by a large dialog in the center of the screen inviting you to “Install Now”. At this point, on the lower left corner of this dialog, the option to “Repair my Computer” is available if the installer can find a previous installation of Vista. Clicking this will bring you to the Repair options, from which you can go through these if you like, but for now select “Command Prompt”.

For Windows XP/Windows 2000: at the end of the loading phase the screen will display choices for Repair or Install. Choose the Repair Console option and then in the following window, en-

ter a “1” and hit the Return key. A command-line interface is next, with a “C” prompt in most cases.

For Windows 95/98/ME: choose option 1 or 2 if you need CD access (you do), and then at the command prompt, type: scandisk /all --notice the space between scandisk and the forward slash. You can also run chkdsk as outlined below.

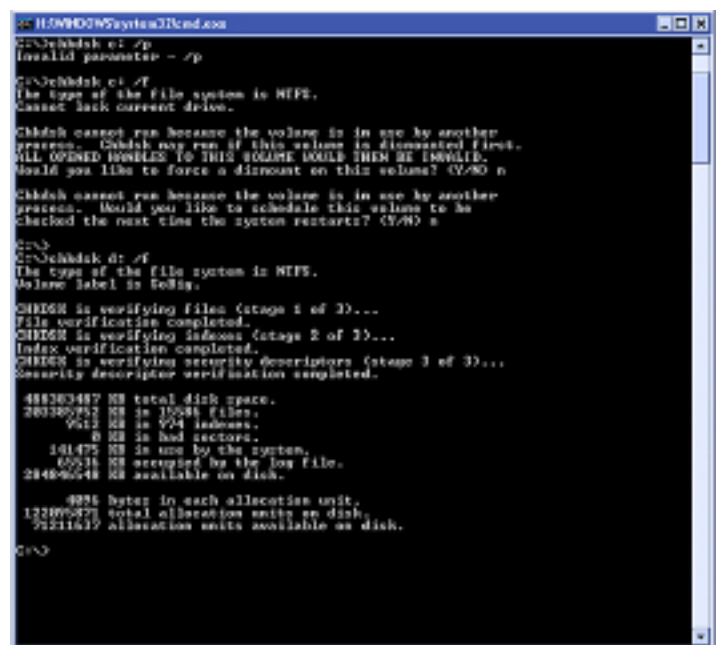
In the command window, you should see the “C:/” prompt. Type the following line:

Chkdsk C: /f

Please note that there is a space between the C: and the /f. This tells the application Check Disk to scan your C: drive for errors and correct them. If you have more than one drive installed, or have your Windows installation on some other disk drive, you will need to do this again, substituting “D”, “E” or another letter for the default “C” drive. Scan Disk can take a very long time to run and correct the problems. You don’t need to sit and watch, but do not interrupt the process—doing so can introduce more errors and make things worse. When it has completed, it will tell you it has made corrections to the drive, or that it has found no problems. If it finds errors, type it in again to make sure it has corrected the problems. In some circumstances, I have seen the application restart itself during the repair when it encounters severe problems. It may take several times to correct your problems.

If this solves the problems you were experiencing, then you can stop here, then perhaps defragment and backup your drive (in case). If not, you may wish to open the Device Manager inside Control Panels and update your drivers (if the system is bootable). Again, seek professional assistance if you are unsure how to update device drivers.

Having exhausted these other options, if you are still experiencing problems you may have to re-install your operating system.



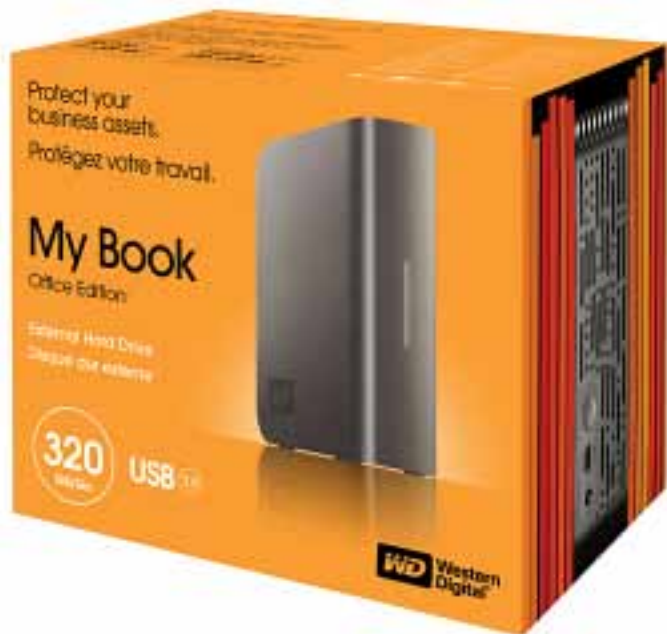
This is a good time to evaluate whether or not you should upgrade your operating system and/or computer. In any event, for the less-experienced it is a good idea to take your computer to a professional for re-installation. They can often recover all of your important files and documents if you have not or were not able to backup before your problem began. They can then install a fresh copy of your system and restore your data intact.

“Is My Data Safe?”

Backups- Securing your data

If you have important data on your computer, you stand the risk of losing it all due to hard drive failure or system corruption.

With today's data often consisting of video, audio and other large files, it is likely no longer possible for users to backup onto a couple of floppies. It may take a CD, a DVD (or multiple disks) or even a separate external hard drive to accomplish a backup. Data that does not often change can be backed up infrequently, but critical data in constant use needs more attention. Luckily, most backup solutions take this into consideration and offer incremental backups-- which only looks at what has changed and adds it to the original full backup.



One thing to note-- while backup utilities do an excellent job of keeping your important data safe, “imaging” is a powerful safeguard. Essentially, this is copying your system and then storing it in file form. Personally, the first thing I do with a fresh installation of Windows is image the drive—once I’ve installed all of the fonts and applications I need. When everything is just how I like it, I then save this “image” of the clean system. If sometime later the system becomes corrupt, I can restore this image and start over, all of the programs newly installed. Of course it’s a good idea to patch or update all of your programs before imaging. Likewise with the system-- be sure to run Windows Update repeatedly after a fresh install to make sure it has all of the latest security updates. But no matter what, there will be additional updates and patches to apply after a restore. You’ll also have to have your files and documents backed up—things like photos, music, text files, Word files and so on.

First, where do we backup? Backing up your information to the same disk on your computer isn’t effective. When needed, you can’t get to the backup—it must be an external disk of some kind—CD, DVD, USB drive, or a dedicated external hard drive. If your computer has a burner (CD or DVD) chances are the software that came with the drive or system includes some form of backup that will “span” multiple (if needed) disks. This is often enough—or the included Windows backup—to get the job done. If you have an older system that does not have a burner, you may

need to buy a CD/DVD burner or get an external, and choose a backup program if one is not included.

With prices steadily dropping, the best bet here is to get an inexpensive backup drive that connects via USB. If you do not have USB ports, you can add a PCI card for USB access. Adding cards to your computer means opening the case and installing hardware and software. If you are not comfortable with doing this—by all means seek out a professional’s help.

Department and variety stores (**Mart) among others now carry \$50-150 (approx.) external hard drives in various capacities—the more storage you need the higher the cost. These are often “one-touch” drives that have a button on them for automatic backup with the bundled software. These are good options and can be unplugged and stored away somewhere safe when not in use. You can also find them through local computer shops and online. Be sure and get one large enough to accommodate your hard drive’s contents. If you have an 80GB hard drive, get one at least 80GB in size.

Whether you use CD’s, DVD’s, floppies or an external drive—backing up is essential if you don’t want to lose those precious photos or important documents. And it must be done regularly—this cannot be stressed enough. A backup option is useless if the last time you did it was months ago—things change.

Now let’s look at a couple of good backup software options. This is by no means a comprehensive list—there is a wide variety of free and commercial backup/imaging titles available on the market. Backup applications don’t always have an imaging ability, whereas all imaging programs will backup your files (the entire drive). It’s good to use a backup program that will also image your hard drive. These offer double protection, imaging the drive first, and then adding to that image incrementally, and offering the option to backup files and folders individually.



What we expect from a backup software package is; full or incremental backups to a native drive (hard disk, CD/DVD), or a connected external drive (thumb drive, external HD). Bonus points for backing up to a networked drive, an FTP location or other offsite storage. We also expect built-in data compression, error-checking, file verification and backup indexes. Here, bonus points for a mountable backup "image", a bootable "Rescue CD" and the ability to backup system files and those in use by the computer. Lastly, we expect the software to have built-in scheduling, unattended with reports generated to monitor problems. The package should have the ability to shut down the system on its own after the backup has run.



If these sound a bit much, don't be alarmed—most, if not all of the dedicated packages today have these features and more. You can often buy packages for under \$100, and some are free.

Macrium Reflect Free Version:

<http://www.macrium.com/reflectfree.asp>

Reflect version 4.2 is a disk imaging and backup software package free for non-commercial use. For businesses the cost is \$39.99. The simple wizard interface is perfect for the inexperienced, making backup and imaging effortless. Like similar products available, Reflect will take snapshots, produce full, differential (what's changed), incremental (add-on) and selective backups. The package can automate with scheduled backups, and compress/encrypt the resultant data file or disc. The Reflect Rescue CD allows for a boot disc in the event you cannot boot to the system-if you buy the full version.

The restoration process, like most, allows for full or selective restoration of files and folders. It has the ability, like many, to backup tricky "in-use" files Windows operating systems lock when the system is running. This feature allows for backups to take place while you are using the computer, eliminating the necessity of starting up with a CD/DVD to use the program. It allows for specific file types to be included or omitted from the backup script. The company also offers extensive online help, support options and contacts, a user forum and a lengthy tutorial for new users. Powerful, and easy to use—highly recommended.

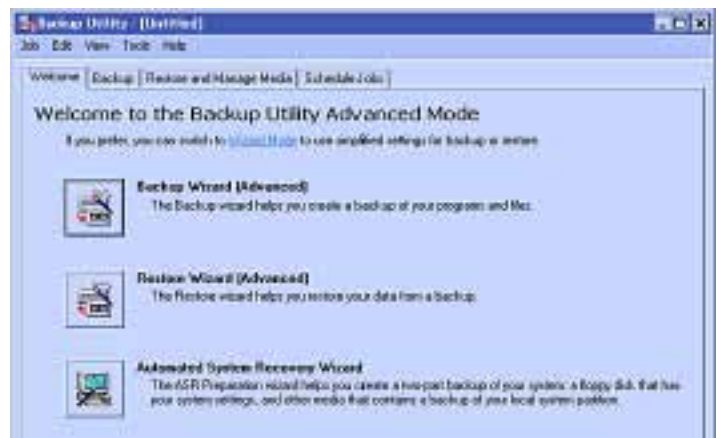
Of course Microsoft Windows XP and Vista users have built-in options. They're limited, cumbersome and sometimes confusing.

Microsoft Vista Backup and Restore Center was designed to make backups and restoration easy. From the Start/Accessories/

menu, the Backup and Restore Center lets you backup your entire computer to an external device (or networked device) or to your CD/DVD/RW drive (spanning multiple discs). Remember when choosing this last (DVD) option, you may need 50 or more DVD's to complete the backup and it may require several hours. Also note that Windows Complete PC Backup and Restore is not included with Windows Vista Home Basic or Windows Vista Home Premium. Microsoft recommends you run the backup application immediately after installing the OS (Operating System) or when installing a major upgrade, like a service pack. There is the standard backup for Vista Home users.

For those Vista users without the Complete PC Backup, you can still select the files and folders you want to safeguard. The interface is simple, clean and works well. Vista compresses your backup data on the fly as it writes to a backup file that can then be used to restore the data.

The Complete PC Backup will make an exact duplicate of your system, from which you can recover in case of a hard drive failure. It has the ability to copy files that are open and in use by the OS (operating system), so it can copy your system files as well.



Microsoft XP Backup Utility

Windows XP also has a backup plan, accessible from a command line prompt. Put your Windows XP installation disc into the computer and from "Start/My Computer", select your CD/DVD drive with the right mouse button and choose "Explore". From the window that opens, open the "valueadd" folder, inside it open the "msft" folder and then open the "ntbackup" folder. Here you'll see ntbackup.msi. Double clicking this installer package will make sure it's in your system. Most installations don't automatically include it.

Once installed, from the Start menu, click Run and then type ntbackup.exe and click OK. Once the "Welcome to the Backup and Restore Wizard" page has loaded, select "Advanced Mode". Click the Backup tab. On the Job menu, click "New". Click to select the check boxes for the drive(s) you want to backup. You can narrow your selections here by expanding the drive letter and selecting individual folders. Click to select the System State check box. It's important to note here that if you want to backup your system settings and data files, backup your entire hard drive and the System State as well.

Microsoft says: "the System State data includes such things as the registry, the COM+ class registration database, files that are under Windows File Protection, and boot files." It allows for complete, incremental and other types of backups. At least it's included at no charge with the OS.