

## Appendix A

# The Bottom Line

Each of The Bottom Line sections in the chapters suggest exercises to deepen skills and understanding. Sometimes there is only one possible solution, but often you are encouraged to use your skills and creativity to create something that builds on what you know and lets you explore one of many possible solutions.

## Chapter 1: Overview of Windows 7

**Choose a client operating system.** Choosing the right client operating system is a task that all IT professionals will have to face. The proper operating system is dependent on the client's hardware and job function.

**Master It** You are a consultant who needs to set up a new Windows Server 2008 network for one of your clients. The end-user machines must be able to work on the new network, but new equipment is not possible due to financial constraints. How should you determine which operating systems will go on each machine?

**Solution** The first step would be check all the end users' hardware and then choose the operating system based on hardware requirements. Because you are working with Windows Server 2008, Windows XP with SP2 or higher, Windows Vista, or Windows 7 will all work properly.

**Understand the newest features of Windows 7.** There are many new features in Windows 7, among them a new Windows Taskbar and Jump Lists, Preview pane, Windows Touch, XP Mode, simpler home networking, and Device Stage.

**Master It** You are a consultant who needs to quickly set up a home network for one of your clients. Which operating system would you use?

**Solution** Using Windows 7, you create a new HomeGroup by choosing Control Panel > Networking. When you create the HomeGroup, a password will be created. Use this password to connect all of the other Windows 7 machines to this network.

**Explain the Windows 32-bit and 64-bit architecture.** The terms 32-bit and 64-bit refer to the CPU, or processor. The number represents how the data is processed. It is processed as  $2^{32}$  or  $2^{64}$ . The larger the number, the larger the amount of data can be processed at any one time.

**Master It** How do you decide which operating system, 32-bit or 64-bit, you want to assign to your users?

**Solution** Determine which applications and job functions your users will be completing. Depending on job functions, decide whether users will need more than 4 GB of RAM. If they do, install Windows 7 64-bit. If they don't, install Windows 7 32-bit.

## Chapter 2: Installing Windows 7

**Determine the hardware requirements for Windows 7.** One of the most important tasks in installing Windows 7 is to verify that the machines that you want to install Windows 7 can handle the installation. The following hardware requirements are for Windows 7:

CPU (processor)	1 GHz 32-bit or 64-bit processor
Memory (RAM)	1 GB of system memory
Hard disk	16 GB of available disk space
Video adapter	Support for DirectX 9 graphics with 128 MB of memory (to enable the Aero theme)
Optional drive	DVD-R/W drive
Network device	Compatible network interface card

**Master It** You are a consultant who is hired by an organization to migrate the users from Windows Vista and Windows XP to Windows 7. How would you accomplish this?

**Solution** You have to verify that all the machines can work with Windows 7. To do this, you first need to verify that the machines meet the minimum hardware requirements. Second, check the HCL to verify that the hardware can handle the Windows 7 operating system. Finally, make a plan for the migration of users' data from the previous Windows operating systems to Windows 7.

**Determine which version of Windows 7 to install.** Microsoft has released six versions of the Windows 7 operating system. It is very important to install the correct version of Windows 7 to match the end user's needs. The six versions are

- ◆ Windows 7 Starter
- ◆ Windows 7 Home Basic
- ◆ Windows 7 Home Premium
- ◆ Windows 7 Professional
- ◆ Windows 7 Enterprise
- ◆ Windows 7 Ultimate

**Master It** You are an IT manager and you must install a Windows 7 operating system that supports Windows BitLocker. Which edition of Windows 7 could you use?

**Solution** You have the choice of installing Windows 7 Enterprise or Windows 7 Ultimate. Both of these Windows 7 versions support BitLocker. All of the other Windows 7 versions do not currently support BitLocker.

**Install the Windows 7 operating system.** Installing Windows 7 is an easy process but it is important to plan the installation before actually installing the operating system.

You can install Windows 7 either from the bootable DVD or through a network installation using files that have been copied to a network share point. You can also launch the `setup.exe` file from within the Windows Vista operating system to upgrade your operating system.

The Windows 7 DVD is bootable. To start the installation, you simply restart your computer and boot to the DVD. The installation process will begin automatically.

**Master It** Your company has purchased a new computer that meets all the minimum requirements for installing Windows 7. They need Windows 7 installed on the machine. How can you install Windows 7?

**Solution** Using the Windows 7 DVD, boot the computer off the installation disk. The Windows 7 installation will begin. Follow the installation process to complete the installation.

**Migrate users from Windows XP to Windows 7.** Since the upgrade option from Windows XP to Windows 7 is not available, you can use Windows Easy Transfer to integrate settings from Windows XP to Windows 7 on the same computer.

The first step in this migration process is to copy your files to a removable media such as an external hard drive or thumb drive or to a network share. After the installation of the Windows 7 operating system, you can then migrate these files onto the Windows 7 system.

**Master It** Your organization needs to convert all Windows XP machines to Windows 7. What steps should you take to complete the upgrade?

**Solution** First, you must make sure that the Windows XP machines meet the minimum hardware requirements for Windows 7. Then, using the Windows Easy Transfer utility, copy all of your Windows XP data to a removable media. Install Windows 7 to the machine and then migrate the data from the removable media back into Windows 7.

## Chapter 3: Automating the Windows 7 Installation

**Use the Microsoft Deployment Toolkit (MDT) 2010.** Microsoft Deployment Toolkit (MDT) 2010 is a way of automating desktop and server deployment. The MDT gives you tools for deployment of desktops and servers through the use of a common console. It allows for quicker deployments and standardized desktop and server images and security. MDT 2010 also allows for Zero Touch deployments of Windows 7, Windows Server 2008, Windows Vista, Windows Server 2003, and Windows XP.

**Master It** Your organization has asked you to set up one application that all administrators can use to configure and deploy Windows desktop operating systems. Which utility should you use?

**Solution** By installing and using the MDT 2010, you can use the Deployment Workbench to have one central application that all administrators can use to deploy Windows. MDT 2010 also allows you to set up Zero Touch deployments of Windows.

**Take advantage of the Windows Deployment Services (WDS).** WDS is an updated version of Remote Installation Services (RIS). WDS is a suite of components that allows you to remotely install Windows 7 on client computers.

A WDS server installs Windows 7 on the client computers. The WDS server must be configured with the Preboot Execution Environment (PXE) boot files, the images to be deployed to the client computers, and the answer file. WDS client computers must be PXE capable.

**Master It** You are hired as a consultant by a large organization with multiple locations. The organization wants to have the ability to deploy Windows 7 remotely. How can you set this up?

**Solution** You can use (WDS) to remotely install the Windows 7 operating system. The client machines must be PXE compatible, and you must also have a DNS server, Active Directory server, and a DHCP server that can respond to PXE requests.

**Utilize the Windows Automated Installation Kit (Windows AIK).** The Windows AIK is a set of utilities and documentation that allows you to configure and deploy Windows operating systems. You can use the Windows AIK to capture Windows Images with ImageX, configure and edit your images by using the Deployment Image Servicing and Management (DISM) utility, create Windows PE images, migrate user data and profiles using the User State Migration Tool (USMT), and centrally manage volume activations by using the Volume Activation Management Tool (VAMT).

**Master It** You need to configure and deploy Windows operating systems by using images. How can you accomplish this task?

**Solution** By installing and using the Windows AIK, you can deploy Windows operating systems by using images. The Windows AIK will also allow you to manage these images all in one application.

**Make the most of the Microsoft Assessment and Planning (MAP) Toolkit.** MAP is a utility that will locate computers on a network and then perform a thorough inventory of these computers. To obtain this inventory, MAP uses multiple utilities like the Windows Management Instrumentation (WMI), the Remote Registry Service, or the Simple Network Management Protocol (SNMP).

Having this information will allow you to determine if the machines on your network will be able to load Windows 7, Windows Vista, Server 2008, Microsoft Office 2007, and Microsoft Application Virtualization. One advantage of using MAP when determining the needs for Windows 7 is that MAP will also advise you of any hardware upgrades needed for a machine or device driver availability.

**Master It** You are a consultant who is hired by an organization to migrate the computers from Windows XP to Windows 7. How would you accomplish this?

**Solution** You can use MAP to run an inventory report on all the Windows XP machines. You can use this report to verify which machines can be upgraded to Windows 7 and which machines need to be updated to allow an installation of Windows 7.

## Chapter 4: Configuring Disks

**Understand the different file systems.** When you select a file system, you can select FAT32 or NTFS. You typically select file systems based on the features you want to use and whether you will need to access the file system using other operating systems. If you have a FAT32 partition and want to update it to NTFS, you can use the Convert or Disk Management utility.

**Master It** You are the system administrator for your organization and you have to install a new Windows 7 laptop for a salesperson who goes on the road. Data protection and hard drive space are important features that must be included on the Windows 7 laptop. How would you configure the file system?

**Solution** By installing the Windows 7 laptop with NTFS as the file system, you will meet the requirements needed for the salesperson. NTFS has many benefits over using FAT32, including Encryption and Compression. These two features will allow you to set up the laptop the way the company needs it.

**Identify disk storage types.** Windows 7 supports three types of disk storage: basic, dynamic, and GUID partition table (GPT). Basic storage is backward compatible with other operating systems and can be configured to support up to four partitions. Dynamic storage is supported by Windows 2000, Windows XP, Windows Server 2003, Windows Server 2008, Windows Vista, and Windows 7, and allows storage to be configured as volumes. GPT storage allows you to configure volume sizes larger than 2 TB and up to 128 primary partitions.

**Master It** Your organization has asked you to configure a Windows 7 Desktop. The Desktop was already installed but the company would like you to reconfigure the disks so that some of the storage areas can be extended. How would you set up the disk storage?

**Solution** By configuring the disk storage as dynamic disks, you'd be able to expand your volumes. Dynamic disks can be extended as long as they are formatted as NTFS volumes. GPT storage would not work here because GPT storage has to be set up on a machine with unformatted free space, and because this machine was already installed, the storage would not be unformatted free space.

**Understand the benefits of NTFS.** NTFS offers comprehensive folder and file-level security. This allows you to set an additional level of security for users who access the files and folders locally or through the network. NTFS also offers disk management features such as compression, encryption, quotas, and data recovery features.

**Master It** You have a Windows 7 machine in your organization that multiple users operate. The users keep complaining that other users are using too much hard disk space. Your organization has asked you to set up disk space limits for the Windows 7 machine. How would you configure this?

**Solution** First you need to make sure your file system is using NTFS. If it's using FAT32, convert the file system to NTFS. After the file system is using NTFS, you can enable volume or partition quotas. Placing quotas on this Windows 7 machine ensures that no one user uses too much hard disk space.

**Use disk-management utilities.** Microsoft Windows 7 includes a few utilities that you can run to help keep your system running efficiently. Two utilities that continue to allow the machine to run at its peak performance are Disk Defragment and Disk Cleanup.

**Master It** You have users on your network who are complaining that their Windows 7 machines are starting to show slower response times when opening or managing files and applications. What are some of the ways you can help speed up the machines?

**Solution** Machines can start slowing down over time due to the hard drives getting fragmented or too many temporary files. By running the Disk Defragment and Disk Cleanup utilities, your machine can gain back response times from opening files and applications. Having faster machine responses allows users to work more efficiently.

## Chapter 5: Managing the Windows 7 Desktop

**Understand the Start menu shortcuts.** The Start menu has many default shortcuts that are preloaded when the Windows 7 operating system is created. Some of the default shortcuts are Getting Started, Windows Media Center, Calculator, Sticky Notes, Snipping Tool, Remote Desktop Connection, Startup, and Internet.

**Master It** You are the system administrator for your organization, and you have salespeople who need an application to start every time they log into the Windows 7 system. How would you configure the application so that it starts when the salespeople log into their machine?

**Solution** One of the shortcuts on the Start menu is Startup. The Startup shortcut allows an administrator or user to place a shortcut within the Startup and that application will automatically start when the user logs onto the Windows 7 system.

**Customize the Start menu and Taskbar.** Users can customize the Taskbar and Start menu using the Taskbar And Start Menu Properties dialog box. This dialog box has three tabs: Taskbar, Start Menu, and Toolbars. The easiest way to access the dialog box is to right-click a blank area in the Taskbar and choose Properties from the context menu.

**Master It** You are the system administrator for your organization, and you have a user who has received a computer that was previously used by another user. The machine was not formatted, but the new user's data was migrated over. The user complains because the Taskbar disappears on its own. The user gets the Taskbar back when the mouse is moved over the bottom of the screen. How can you stop the Taskbar from disappearing?

**Solution** The Auto-Hide option is enabled for the Taskbar. This option hides the Taskbar but reveals it when the mouse is moved over the bottom of the screen. Auto-Hide is disabled by default, but this machine was being used by a previous user. To disable the Auto-Hide option, click the Auto-Hide check box in the Taskbar And Start Menu Properties dialog box.

**Work with regional settings.** Multilanguage and regional support is available with Windows 7 that allows the user interface to be presented in different languages and that allows applications to be viewed and edited in different languages. Depending on the level

of language support required by your environment, you may use either a localized version of Windows 7 or install language files to support multiple languages.

**Master It** You are the system administrator for an organization that has multiple sites all over the world. You are responsible for rolling out Windows 7 client machines to users in all offices. You have to set up a Windows 7 machine for a user overseas. How do you configure the Windows 7 machine?

**Solution** Depending on the location of the user, you need to load the Windows 7 operating system that is created for that locale. For example, if the user is in Japan, you need to load a Japanese version of Windows 7.

**Use accessibility features.** Windows 7 allows you to configure the Desktop so those users with special accessibility needs can use the Windows 7 Desktop more easily. Through its accessibility options and accessibility utilities, Windows 7 supports users with limited sight, hearing, or mobility.

**Master It** You are the administrator for a mid-sized computer training company. You have a user who has difficulty seeing the Desktop clearly. You have already made the icons larger, but the user is still having issues. What other steps can you show the user so that the Desktop and applications are easier to see?

**Solution** Windows 7 provides several accessibility utilities for people with limited sight, including the Magnifier, the Narrator, and the On-Screen Keyboard. The Magnifier utility creates a separate window to magnify a portion of your screen. The Narrator utility can read aloud on-screen text, dialog boxes, menus, and buttons, and the On-Screen Keyboard displays a large keyboard on the screen.

## Chapter 6: Managing the Interface

**Understand Control Panel.** Windows 7 uses the Registry when the operating system starts. The Registry is the database used by the operating system to store configuration information. Control Panel is a set of GUI utilities that allow you to configure Registry settings without using a Registry editor.

**Master It** You are the administrator for a large computer company. One of your salespeople calls and asks you if they can remove an old application from their machine. How would you instruct them to remove the old application properly from the Windows 7 machine?

**Solution** One of the icons in the Control Panel is Programs and Features. The Programs and Features icon allows you to uninstall, change, or repair programs and features. The Programs and Features icon also allows you to choose which Windows 7 features that you want to install or remove on the Windows 7 machine.

**Use the System utility.** The System icon is one of the most important icons in Control Panel. The System icon allows you to view which operating system your machine is using; check system resources (processor, RAM); change the computer name, domain, or workgroup; and activate your Windows 7. From the System icon you can also configure the Device Manager, Remote Settings, System Protection, and Advanced settings.

**Master It** You are the system administrator for your organization and you have a salesperson who has been trying to activate his legal company version of Windows 7. He gets an error message stating that the product key is invalid. What can you do to help activate the Windows 7 machine?

**Solution** You can issue the user a new legal company product key and have the user change the product key. To change the product key, open the System utility and click the Change Product Key link at the bottom of the screen. Have the user enter the new product key and try to reactivate the Windows 7 machine online.

**Configure mobile computers.** Windows 7 includes several features that are useful for laptop computers. One of the best features for laptops is configuring the power options. Power options allow you to select a power plan and enable power-management features with Windows 7. By selecting the proper power plan, users can increase the life of their battery.

**Master It** You are the administrator for a small company that uses only laptops for their end users. You need to configure the laptops to extend the life of the battery. How would you configure the power options on their laptops?

**Solution** You configure power options through the Power Options Properties dialog box. To access this dialog box, open Control Panel and click Power Options. The Power Options dialog box provides the ability to manage power plans and to control power options, such as when the display is turned off, when the computer sleeps, and what the power button does.

**Configure services.** A service is a program, routine, or process that performs a specific function within the Windows 7 operating system. Most applications and features use services to help make that application run properly.

**Master It** You are the system administrator for your organization and you have a salesperson who needs a service to start every time she turns on the Windows 7 system. How would you configure the service so that it starts when the salesperson starts her machine?

**Solution** You have the ability to configure a service to start automatically in the Services snap-in. To configure the service to start automatically, double-click the service and change the Startup Type to Automatic. On the General tab you can also configure the service display name, a description of the service, the path to the service executable, the current service status, and the start parameters that can be applied when the service is started.

## Chapter 7: Using Remote Assistance and Remote Desktop

**Assist novice users with Windows 7.** Remote Assistance is a great collaboration tool used between an expert and a novice user that allows the expert to help the novice by watching the novice user's actions on another machine. If desired, the expert can even request control (which has to be granted by the novice user) to perform an action. Remote Assistance can be used as a teaching tool or simply to fix a problem for a novice user.



**Master It** You are an administrator on your local network, and one of your users is trying to find their IP address. You know it's easiest to open the command prompt and type **ipconfig**, but you're not sure if the user can follow your instructions and you would like to watch them so they don't get lost while you give the instructions. You know you've said too many times, "Tell me what you see." You have decided to use Remote Assistance to help the user. Both you and the user needing assistance are using Windows 7. How can you assist your novice user to get the IP address of their machine?

**Solution** Where you are both using Windows 7, the easiest solution is to use Easy Connect to provide Remote Assistance. Have the novice user start a Remote Assistance session by typing **msra** in the Start menu's search box. Have the novice user choose Invite Someone You Know To Help You, then choose Use Easy Connect. An invitation will be created and a password given to the novice user that will be conveyed to you (the expert user).

You will now launch Remote Assistance on your machine (by typing **msra** in the Start menu's search box). Choose Help Someone Who Has Invited You. Then select Use Easy Connect and enter the password supplied by the novice user.

The novice user will be asked if they want to accept assistance from you. When the user accepts, you'll be able to see the novice user's Desktop and can instruct them (either via the built-in chat window or by phone) how to view the IP address of the machine. Tell the user to follow these steps: enter **cmd** in the Start menu's Run box; in the command prompt window, enter the command **ipconfig**; and note the IP address in the window. The session can now be terminated and the novice user is very happy — and so are you.

**Provide help from Windows 7 to older operating systems.** Remote Assistance is available on legacy operating systems as well as Windows 7. It works the same way on most current operating systems, except that the Easy Connect option (available in Windows 7) is not available on previous operating system versions. To integrate a Windows 7 Remote Assistance session with a previous version, an invitation file or email invitation is a solution. The Remote Assistance established by a file or email invitation will allow an expert user to assist a novice user interactively (both can see what's happening).

**Master It** You are the network administrator for your company and you have taken a phone call from a novice user asking for help changing the default printer they are on from one device to another. You know this is a fairly simple operation but would like to be looking over the user's shoulder as the changes are made to avoid any problems that may be created by the change. The novice user is running Windows Vista and you are running Windows 7. How can you have the user request a Remote Assistance session with you so you won't have to physically go to the novice user's location?

**Solution** One appropriate solution here is to have the novice user send you a Remote Assistance invitation by email. You should have the novice user start a Remote Assistance session. Instruct the user to type **msra** in the Start menu's search box and then to choose Invite Someone You Trust To Help You. Because they're on Vista, the user can also select Start > Help and Support, choose Windows Remote Assistance in the Ask Someone section, and then click Invite Someone You Trust To Help You. After choosing the Invite option, the novice user must select Use E-mail To Send An Invitation. The user will be asked to enter and confirm a password to give to you, the expert user, to allow you to establish the

connection. An invitation file will be created and added as an email attachment within the user's default email program (the novice user must have a default email program configured, or this solution will not work). The novice user will send the email to you. You will receive the email and open the invitation attachment, launching the expert side of the Remote Assistance session. You will enter the password given to you by the novice user. The novice user will still have to accept the Remote Assistance session, and then you can help the novice user change default printers. Ask the user to open Control Panel, select Printers, right-click the printer the user wants to be the default, and choose Set As Default Printer. The novice user is happy and you've avoided another road trip to a user's desk.

**Access a machine from a remote location.** Remote Desktop is another form of remote access that allows a user to connect to a machine and have access to that machine's resources. The host machine is the machine being connected to; the client machine is where the user accessing the remote resources is located. The host machine can be the end user's in the case of telecommuting or even that of the end user if the user is in a different office for the day.

**Master It** You are currently working in a remote office and realize you have left an important document on your home office machine. You thought you'd put it on your stick, but alas, it's not there and you don't think asking someone to log into your machine and retrieve it is a good idea (good thinking, by the way). You need to access your machine remotely to get the file. How will you do it?

**Solution** You use Remote Desktop to gain access to your machine and copy the file to the machine you're sitting at in the remote office. Your account will have been added to the Remote Desktop Users group and the Allow Remote Desktop Connections option will have to be selected on your machine (at the home office). With these criteria met, you can launch Remote Desktop from the machine you're sitting at in the remote office, specify the IP address of your machine in the remote office, and enter your authorizing credentials for your machine. You will then essentially have a remote keyboard, monitor, and mouse to your local machine. Locate the file you need in the remote office, then copy and paste it to the machine you're using. You can log off and continue working as you have the necessary file to complete your task.

**Script a session for automated connection.** As the network administrator, you need to log in to a server machine on a regular basis to check on its performance and make minor changes. You have been going down to the server room and physically logging in every time you have to make changes or log data. You now know you can use Remote Desktop to access the server and would like to start using the application.

**Master It** You know you can launch Remote Desktop from the menu structure of Windows 7, but you would like to be able to have an icon on your Desktop to launch a Remote Desktop session with one of the servers you are responsible for. You know that down the road you will have to manage more machines this way, and if you create an icon for one now it will be pretty easy to create more icons later so you can simply double-click any one of the individual icons to initiate the Remote Desktop session to any of several individual servers. You want to create a Notepad file with the appropriate command line to launch a Remote Desktop session to a server at 192.168.1.62 and make it so double-clicking it will initiate the Remote Desktop session.

**Solution** Open Notepad by typing notepad in the Start menu's search box or choosing Start > All Programs > Accessories > Notepad. Type the command line to launch Remote Desktop with the desired IP parameter: `mstsc.exe /v:192.168.1.62`. Save the file with an intuitive name to your desktop with a `.bat` extension. You can now double-click the generic icon and a Remote Desktop session to `192.168.1.62` will start; you will still have to enter credentials.

## Chapter 8: Configuring Users and Groups

**Understand user account types.** Windows 7 uses two basic account types: Administrator and Standard User. The Administrator account type provides unrestricted access to performing administrative tasks. Administrator accounts should be used only for performing administrative tasks and should not be used for normal computing tasks.

The Standard User type is the account type that should be applied for every user of the computer. Standard User accounts can perform most day-to-day tasks on the Windows 7 machine.

**Master It** You are the administrator for a large computer company. You need to set up 20 Windows 7 machines and 20 local user accounts on those machines. When setting up the user accounts, what type of user account should these users have?

**Solution** These users should be set up with the Standard User account type. Standard User accounts can do the end-user tasks like working with email, Microsoft Office, and so forth. Administrator access not only would allow these users to perform the day-to-day tasks but would also let the users manipulate and change the Windows 7 operating system.

**Create accounts.** To create user accounts for your Windows 7 users, you have multiple options. To create local user accounts you can use the Local Users and Groups MMC snap-in, or you can use the User Accounts option in Control Panel. To create domain users accounts, you use Active Directory Users and Computers (see Chapter 12 for more information).

**Master It** You are the administrator for a large computer company. You need to create 20 local users accounts for the 20 new Windows 7 machines that your company has just purchased. How would you accomplish this task?

**Solution** To create the local accounts, use the Local Users and Groups MMC snap-in. In the Local Users and Groups snap-in, right-click the Users folder and choose New User. Enter the data for the users of that Windows 7 machine. Repeat the process for all local users for all Windows 7 machines.

**Configure accounts.** When you're configuring users' accounts, you deal with three main categories of properties: General, Member Of, and Profile.

The General tab contains the information you supplied when you set up the new user account, including any Full Name and Description information, the password options you selected, and whether the account is disabled.

The Member Of tab allows you to place this account into local groups on this Windows 7 machine. The Profile tab enables you to configure a user's Profile data, including user profile path, logon scripts, and home folder locations.

**Master It** You are the administrator for a small pottery company. Your users are complaining that when they work on any machine that is not their own, the desktop settings are different. This is causing an issue for your users. What can you do to make sure that all users have their own desktop settings no matter which machine they are working on?

**Solution** To solve this problem you can set up roaming profiles. A roaming profile is stored on a network server and allows users to access their user profile, regardless of the client computer to which they're logged on. Roaming profiles provide a consistent Desktop for users who move around, no matter which computer they access.

**Understand local groups.** Groups are a way to make sure that similar users get access to similar resources without having to add individual user accounts to each resource. Groups are an important part of network management.

Windows 7 includes built-in local groups, such as Administrators and Backup Operators. These groups already have all the permissions needed to accomplish specific tasks. Windows 7 also uses default special groups, which the system manages. Users become members of special groups based on their requirements for computer and network access.

You can create and manage local groups through the Local Users and Groups utility. The Local users and Groups snap-in allows you to add groups, change group membership, rename groups, and delete groups.

**Master It** You are the administrator for a large organization. You have decided to set up local groups on all the Windows 7 machines so that all salespeople have access to the same resources. How do you accomplish this goal?

**Solution** You can create, manage, disable, and delete groups in the Local Users and Groups. You would need to create a Sales group and add all salespeople into this group. Then give this group access to all the sales resources.

## Chapter 9: Managing Security

**Understand Local Group Policy Objects.** Local Group Policy Objects (LGPOs) are a set of security configuration settings that are applied to users and computers. LGPOs are created and stored on the Windows 7 computer.

If your Windows 7 computer is a part of a domain, which uses the services of Active Directory, then you typically manage and configure security through Group Policy Objects (GPOs). LGPOs are rules that can be placed on either users or computers.

**Master It** You are the administrator for a large computer company. You need to make sure that all of the Windows 7 machines reset their passwords every 45 days. How can you accomplish this?

**Solution** You can set up an LGPO on these Windows machines or set up a GPO for the domain that sets the Maximum Password Age. The Maximum Password Age forces users

to change their password after the maximum password age is exceeded. Setting this value to 0 will specify that the password will never expire.

**Understand User Account Control (UAC).** User Account Control (UAC) enables nonadministrator users to perform standard tasks, such as install a printer, configure a VPN or wireless connection, and install updates, while preventing them from performing tasks that require administrative privileges, such as installing applications.

**Master It** You are the administrator for a small plumbing company. You need to set 20 Windows 7 machines so that the users can always run applications with elevated privileges. How do you accomplish this goal?

**Solution** You can enable an executable file to run with elevated privileges. To do so, on a one-time basis, you can right-click a shortcut or executable and select Run As Administrator.

But what if you need to configure an application to always run with elevated privileges? Log in as an administrator, right-click a shortcut or executable and select Properties. On the Compatibility tab, check the Run This Program As An Administrator check box.

**Configure NTFS security.** NTFS permissions control access to NTFS files and folders. The person who owns the object has complete control over the object. You configure access by allowing or denying NTFS permissions to users and groups.

NTFS permissions are cumulative, based on group memberships if the user has been allowed access. This means that the user gets the highest level of security from all the different groups they belong to. However, if the user had been denied access through user or group membership, those permissions override the allowed permissions.

**Master It** You are the administrator for a small organization that has decided to use NTFS on each Windows 7 machine. The company needs to make sure that all files and folders are secure. How do you make sure that all files and folders are secure on the Windows 7 NTFS drives?

**Solution** You can secure all of the Windows 7 drives by using NTFS file and folder level security. Giving access to just the users who are supposed to access these drives verifies that unauthorized users will not get data from these drives.

**Manage shared permissions.** Sharing is the process of allowing network users access to a resource located on a computer. A network share provides a single location to manage shared data used by many users. Sharing also allows an administrator to install an application once, as opposed to installing it locally at each computer, and to manage the application from a single location.

**Master It** You are the administrator for a large computer company. You need everyone in the company to have access to the reports folder on Server A. How should you give everyone enough access to change and create reports?

**Solution** On Server A, share the reports folder and give the Everyone group the Change permission to the folder. By giving Everyone the Change permission, all users will be able to create and modify reports.

## Chapter 10: Configuring Hardware and Printers

**Use Device Manager.** Device Manager is the primary management tool for installing, configuring, troubleshooting, and updating hardware devices and their associated driver components.

**Master It** You recently updated a piece of hardware on one of your servers; you have added a video capture card that will be tied in to the security system in the server room. You did all the necessary due diligence before installing the hardware and verifying prerequisites successfully. The card seems to have installed correctly from the manufacturer's setup program. Now that you're trying to use the connected camera to capture video, you cannot get it to work correctly. You need to verify that Windows 7 sees the device and believes the status is good. How will you do it?

**Solution** You should look for the device in Device Manager. This will verify that the operating system recognized the device. You need to also look at the properties of the device by right-clicking the device and selecting Properties from the context menu. The General tab provides a Device Status window that reports how Windows 7 is viewing the device/device driver communication.

**Manage and update device drivers.** Device Manager shows you the driver status as seen by Windows 7 for the hardware installed in your machine. If there is a problem, you should be able to see that a problem exists.

**Master It** After installing a video capture card into one of your servers, you find that it is misbehaving. You see in Device Manager that the device driver is not communicating with the device. Researching the manufacturer's website, you find they have identified a bug in the driver code and offer an updated device driver. How will you install the new device driver on your server?

**Solution** Download the updated driver from the hardware vendor and save it. You will use Device Manager to update the device driver. Find the hardware in question in Device Manager, right-click the device, and select Properties. On the Driver tab, click the Update Driver button to launch the Update Driver Software Wizard. Choose Browse My Computer For Driver Software and locate the updated driver. Select the driver and click OK. The new driver will be installed and the hardware will now work.

**Install, uninstall, and disable hardware.** Device Manager in Windows 7 gives you the ability to install, uninstall, and disable hardware installed in your machines. Troubleshooting hardware issues many times requires actions to be performed from Device Manager.

**Master It** You have recently changed a piece of hardware you had installed to a device with more functionality from a different vendor. You physically disconnected the old device and installed the new device. You are using a server health program that monitors your servers, including the one with the new hardware. Your health program is now showing the old hardware as failed (although it does not even exist in the machine now). You must uninstall the old device's software components so Windows will not try to report its status.

**Solution** Use Device Manager to remove the software components for the missing hardware. Locate the old hardware in Device Manager and right-click it. From the context menu,

choose Uninstall. Confirm the un-installation and you will no longer have the issue with the software of the server.

**Manage I/O and removable storage devices.** Device Manager is the central application for controlling hardware installed in your machines, which includes I/O devices such as your keyboard and mouse. Ease Of Access features allow you to control keyboard and mouse behavior.

**Master It** Managing I/O devices for users is not normally a concern, but you are now opening an office and have inexperienced users who are having problems following the mouse they are learning to use. You need to turn on the option to have mouse trailers available and would also like the users to be able to find the mouse on the screen easily. How will you do it?

**Solution** Access the Ease Of Access Center found in Control Panel to turn on mouse pointer trails and the location of mouse pointer functionality. Open Control Panel and select Ease Of Use. Select the Make The Mouse Easier To Use option and then choose Mouse Properties. On the Pointer Options tab, click Display Pointer Trails and click Show Location Of Pointer When I Press The CTRL Key option.

**Install and configure printers.** Printers and print devices can be one of the most problematic areas for IT staff to handle. Every user will need to have at least one printer installed on their machine. Although many times this is an automated process, it is possible to manually install the software printer on the end user's machine.

**Master It** You are completing the installation of several new machines in a remote office. The last Windows 7 machine you are setting up has a specific requirement to connect to a network printer in the main office, which is not part of your automated installation. How do you install the network printer in the local machine?

**Solution** In Windows 7, you choose the Devices And Printers applet from the Start menu. From this window you choose the Add A Printer menu item to launch the Add Printer Wizard. You select the Add A Network, Wireless Or Bluetooth Printer option and supply the required parameters to connect to the print device in the main office.

## Chapter 11: Configuring Network Connectivity

**Set up hardware to provide network connectivity.** After installing a new piece of hardware into Windows 7, the operating system goes through a process of discovery and installation. This goes smoothly most of the time, although occasionally, you must step in as the administrator and correct an issue.

**Master It** You have just installed a new network adapter into one of your Windows 7 machines. The operating system discovered the new device and installed the driver, but the adapter doesn't work. You checked Device Manager and the network adapter appears to have been installed with a generic network adapter driver. You have a disk with the correct driver for Windows 7. How do you install a network adapter driver from a disk supplied by the hardware vendor to allow Windows 7 to use the NIC to connect to the network?

**Solution** First, open Device Manager by clicking Start and typing **Device Manager** into the Start menu's search box. Then, double-click Network Adapters in Device Manager to list the network adapters if this is where the misidentified adapter has been added. (Or double-click Other Devices if this is the Device Manager option that has the misidentified NIC.) Right-click the misidentified network adapter and select Properties. Click the Driver tab for the network adapter properties dialog box and click the Update Driver button. Choose Browse My Computer For Driver Software. Click the Browse button in the Update Driver Software screen and locate the driver file on the hardware vendor's disk. The new drivers will install and the network card will work. You can close the windows still open from the install and return the machine to service.

**Connect to network devices.** Windows 7 offers many enhancements for administrators to connect to network devices. One option that can make implementation easier is to connect to a network capable projector.

**Master It** One of your training rooms has a new overhead projector that has the capability of being connected to the network and displaying information from the connection. Tim, the instructor, just received a new machine in the classroom running Windows 7 and has asked you to configure the machine to use the network projector to present his PowerPoint presentations. The projector has an IP address of 172.25.2.100. How will you set up a network projector option in Windows 7 to allow PowerPoint to display using the current network infrastructure rather than a video cable in your classroom?

**Solution** Select Start and then type **Network Projector** into the Start menu's search box (you can also choose Start > All Programs > Accessories > Connect To A Network Projector) to initiate the connection process. Click Search For A Projector to locate a projector connected to your wired or wireless network. If no projectors are found, you can go back and enter the name or IP address of a projector. If you know the name or IP address, you can simply choose Enter The Projector Address during the initial wizard progression. You might also need the password of the projector if there is a password configured.

**Set up peer-to-peer networking.** Having the ability to share resources has been one of Windows' main features since network capability was added to the operating system. Each release of Windows has added new or enhanced functionality to peer-to-peer networking and Windows 7 is no exception with the addition of HomeGroups.

**Master It** How can you use the HomeGroup functionality in Windows 7 to allow users in the remote office to share file and printer resources with each other?

**Solution** Click Start and then type **Network and Sharing Center** in the Start menu's search box. In the Network And Sharing Center, select Choose Homegroup And Sharing Options. If a HomeGroup has been created on one of the machines in the Windows 7 network, the machine will be displayed in the screen here; if not, click the Create A Homegroup button. In the Network And Sharing Center choose Change The Password; change the password to a secure password (you can leave it to the default and just note it for the other Windows 7 machines if you choose). On the other Windows 7 machines that need to be members of the HomeGroup, in the Network And Sharing Center choose Homegroup And Sharing Options, click the Join button, and enter the password. If the default libraries to be shared are not correct, you can modify here as well.



**Configure network protocols.** In order to allow machines to communicate through a network, network protocols must be installed and configured on each device. As administrators, we can use dynamic methods to configure our users' machines, but sometimes we may need to manually configure the network protocol.

**Master It** As a network administrator, you are responsible for ensuring users have a proper network configuration to access the network. Your network is set up for DHCP for the client machines. One of your users currently set up as a DHCP client needs to have a static IP address due to the use of a specific application. How do you configure a Windows 7 client machine that is set up as a DHCP client to have a Static IPv4 address of 172.16.1.50 with a subnet mask of 255.255.255.0 and a default gateway of 172.16.1.1?

**Solution** From the Network And Sharing Center, choose Local Area Connection in the View Your Active Networks section. Click the Properties button in the Local Area Connection Status properties dialog box. Select Internet Protocol Version 4 (TCP/IPv4) and click the Properties button. Click Use The Following IP Address radio button. Enter the IP address, subnet mask, and default gateway parameters. You should enter a static DNS server for the configuration as well.

## Chapter 12: Networking with Windows Server 2008

**Connect Windows 7 to the domain.** In almost all corporate environments, the client machines (Windows 7) will be connected to the domain environment. Having the Windows 7 machine on the domain offers many benefits, including:

- ◆ You can deploy GPOs from one location instead of LGPOs on each machine (see Chapter 9, "Managing Security").
- ◆ Users can back up their data to a server. This way, the nightly backups cover user information. Most Windows 7 machines will *not* be backed up separately.
- ◆ You can manage users and groups from one central location (Active Directory) instead of on each Windows 7 machine.
- ◆ You can manage security to resources on servers instead of resources on each Windows 7 machine.

**Master It** You are the administrator of a large organization that has decided to implement the Windows 7 operating system on all machines. As you load Windows 7 onto the machines, you need to join them to the domain. How do you accomplish this goal?

**Solution** There are two ways to connect the Windows 7 machine to the domain. You can connect the Windows 7 machine to the domain from the Windows 7 operating system or from Active Directory.

**Configure Hyper-V.** Microsoft Hyper-V is the next-generation hypervisor based virtualization technology. With the release of Microsoft Windows Server 2008, Microsoft has now incorporated server virtualization into the operating system with the release of Hyper-V. This

gives an organization the ability to take full advantage of the next generation of 64-bit server hardware.

**Master It** You are the administrator for a large computer company. You need to set up a machine that can run multiple versions of Windows 2008 and Windows 7 for testing and evaluation. What Microsoft server product would you install to solve this issue?

**Solution** Microsoft Hyper-V allows an organization to run both Microsoft and non-Microsoft operating systems (Windows, Linux, Unix, and so forth), giving an organization more flexibility. The operating systems can be both 32-bit and 64-bit versions.

**Use Microsoft Virtual PC.** Microsoft also has a virtualization environment that can operate on its client software called Virtual PC. Virtual PC allows you to create and manage virtual machines without the need of a server operating system. The advantage here is that you can run server operating systems in a client environment like Windows XP, Windows Vista, or Windows 7.

**Master It** You are asked by your organization to set up a training room. This training room will be required to run multiple operating systems, including Windows Server 2008, Windows Vista, and Windows 7. This solution is for training only. How can you implement the computers?

**Solution** Virtual PC gives you the ability to set up virtualization on a client operating system. This is beneficial for anyone in the industry who has to do testing or configuration. Virtual PC is not meant to run a network like Hyper-V, but it does give you the ability to test software, install patches, and do training in a controlled environment and not on a live server where you can end up doing more damage than good.

## Chapter 13: Configuring Internet Explorer 8

**Use IE8 accelerators and web slices.** IE8 has added accelerators and Web Slices to its arsenal of features available to users to make browsing more efficient. Accelerators add a quick launch feature to services such as searching, while Web Slices add the ability to receive updates to content that changes dynamically.

**Master It** You would like to add the ability to see Microsoft's stock price reflected in your browser throughout the course of the day. It seems as though adding a Web Slice would be the most efficient way of getting this information. You have been told that Microsoft belongs to NASDAQ and would like to see a quick definition of the term. You know that there's an accelerator that provides a definition. How can you accomplish these tasks using IE8?

**Solution** First, use Bing to look up Microsoft's stock quote. Open IE8 and go to Bing (if it's not already your home page) by typing **www.bing.com** in the address bar.

Enter **Microsoft Stock** in the search box and click the search icon.

There will be an entry for Microsoft showing current information regarding its stock quote. Fortunately the word NASDAQ is also available in the entry. Highlight the word NASDAQ and the accelerator icon appears. Click the accelerator icon and hover over the Define With Bing option; a box will appear with the Encarta definition of NASDAQ.

Hovering over the Microsoft Stock search item in Bing displays a framed box that contains the Web Slice icon. Click the Web Slice icon, and a confirmation box displays. Choose to add the Web Slice to your Favorites toolbar. You can now click the Microsoft Corp favorite and the Web Slice will be displayed to you. Any time IE8 detects a change to the content of the Web Slice, the favorite will flash and the Microsoft Corp text will become bold (indicating updated content is available).

**Configure Pop-up Blocker in IE8.** Pop-ups are used within websites to launch a separate window with additional content from the site. Most of the time this is an advertisement or some other unwanted content, and it is blocked by default in IE8. However, there are some sites that use pop-ups to present information that you would like to see, but IE8 still blocks it.

**Master It** You routinely browse to your local newspaper's website to see what's happening in the local area as well as the world. It is extremely annoying that they use a pop-up for breaking news. You know the pop-up gives you good information and would like to see the content any time you surf to the site. How will you disable pop-ups from occurring anywhere within the local newspaper website?

**Solution** Browse to your local news website and note the message from IE8 that indicates the pop-up has been blocked. You have a couple of choices to allow the pop-ups to be displayed, the easiest of which is to click the message and choose Allow Pop-ups for this site. You can also choose Tools > Pop-up Blocker and add the news site to the Allowed Sites list in the Pop-up Blocker Settings dialog box.

**Use the InPrivate security feature of IE8.** InPrivate browsing is a new addition that allows a separate browsing session to be initiated where none of the browsing history, cookies, or other data pertaining to the session are retained on the local machine.

**Master It** You have entered an Internet cafe and are going to use one of the local machines to surf around the Internet for a bit. You would like to make sure that nothing you do is recorded on the Internet cafe computer. You notice that the Internet cafe is using Windows 7 and realize you can feel confident that your browsing history, cookies, and other data will not be kept on the local machine. How will you surf privately?

**Solution** Knowing the Internet cafe is using Windows 7 means that you can use IE8 as your browser and you will be able to use InPrivate browsing.

Launch IE8 and choose Safety > InPrivate Browsing (or simply press Ctrl+Shift+P for InPrivate browsing). You should verify that the address bar now indicates InPrivate, and you can feel confident that no information about your surfing will be recorded on the local machine. You must remember to close the browser before you leave the machine as the data from your session will still be available as long as that browsing session is active.

**Configure security for IE8.** IE8 allows you to change the security settings for different zones or areas where you will be browsing. The default settings are Medium for both the Internet and Intranet zones.

**Master It** You have decided that you would like to increase the security settings for sites you browse to in both the Internet and Intranet zones. You would like to set the security to the highest available level. How will you accomplish this task?

**Solution** Open IE8 and choose Tools ► Internet Options. On the Security tab, you can select the zones that you want to change the level. Click Internet, and move the slider in Security Level For This Zone to High. There is a brief description of High, and you can compare this to the default Medium. Click Local Intranet in Select A Zone To View Or Change Security Settings. Move the slider to High for the Local Intranet zone as well. If either of these is too restrictive and you cannot access the sites and data you need, you can always go back and try a lower level, thus providing the highest but not restrictive security levels for your browsing pleasure and safety.

## Chapter 14: Installing and Configuring Applications

**Use Windows 7's Getting Started feature.** The Getting Started screen in Windows 7 offers the user several quick links for configuring some of Windows 7's features and online resources.

**Master It** You recently installed Windows 7 and when logging in you saw the Getting Started window, but immediately closed it and starting exploring your new operating system. You remember seeing something about accessing online resources and would like to go back to Getting Started to see if you can find out more about Windows 7. How will you get back to Getting Started and find the online resources you saw previously?

**Solution** Choose Start, type **getting started** in the search box, and press Enter. The Getting Started window will appear. You will see a Getting Started option called "Go online to find out what's new in Windows 7." Select this option and a link will appear in the upper right that reads Go Online To Learn More. Click this link to launch Windows Internet Explorer 8 and the Windows 7 web page.

**Manage Live Essentials' Mail features.** Live Essentials is a program suite for collaborative or online programs that includes Live Mail (taking the place of Windows Mail). There are several configurable Live Mail convenience features.

**Master It** You have downloaded Live Essentials from download.live.com and installed the program. You selected several of the Live Essential programs, including Live Mail. You have set up Live Mail and it's working just fine. You saw a colleague using Live Mail and it was making spelling suggestions as your colleague wrote the email (just as Word does), and you want to make this option available in your Live Mail. How do you enable the spelling suggestions?

**Solution** Launch Live Mail and log in if you have created your Live account (you don't have to log in to make the option change). Press the Alt key to display the menu bar and select Tools Options. In the Options window, select the Spelling tab. On the Spelling tab, click the Check My Spelling As I Type option. Click OK to save your change and return to the Live Mail program.

**Play a saved digital video in Windows Media Center.** Windows Media Center has the ability to play music, TV, and video; launch applications; and even gather Internet statistics for sports teams. Media Center is an entertainment portal that provides superior functionality from a simple interface.

**Master It** You have downloaded a digital video from your camera and placed it into the Video library in Windows 7. You know you can play it in Media Player, but would like to

play it in Windows Media Player on your large-screen TV and listen to the audio on your entertainment center. You have installed the required hardware to use your TV and audio system. How do you find the video and play the movie?

**Solution** Launch Windows Media Center. From the Windows Media Center program interface, scroll down to Pictures+Videos (using the up or down scroll arrow at the top or bottom of the Categories column). After you have selected Pictures+Videos, scroll horizontally left or right (using the left and right arrows at the left edge or right edge of the screen in the row containing Pictures+Videos) to the Video Library item. Click Video Library and you will be able to select the digital video you placed in your Video library. You can then double-click the movie or click the play button in the bottom right of the Windows Media Center screen to play the movie.

**Use Repair to fix a corrupted application.** You can use Control Panel's Programs And Features application to repair or change installation items in Windows 7.

**Master It** You installed an application some time ago from a CD and it's been running fine. While cleaning up, you deleted some files you thought were not being used and now your application won't run. You would like to repair the installation. How do you repair an application in Windows 7?

**Solution** To repair an installation in Windows 7, open Control Panel and select Programs. From In the Programs window, select Programs And Features. In the Programs and And Features window, click the application you want to repair and then click the Repair menu item. An installation wizard will launch (just like the original) launch and will let you choose to repair your application (it will replace the deleted file without changing configuration parameters). Don't forget to have the original media available — you will probably need it.

## Chapter 15: Maintaining and Optimizing Windows 7

**Use Performance Monitor to view CPU usage.** Performance Monitor gives you a way to view real-time statistics of several of the Windows 7 subsystems.

**Master It** You recently installed a new Windows 7 application. It seems as though your machine is operating more slowly than normal. Someone told you to look at how busy your CPU is while the application is running. How will you view the CPU utilization while the application is running?

**Solution** Choose Start, type **performance monitor** into the search box, and press Enter. Performance Monitor launches and CPU utilization is the default counter displayed. You can note the base utilization before you launch the new application and then launch the new program. Watching Performance Monitor gives you an idea of whether the new application is overutilizing your CPU. You can also click the plus button to add other CPU counters to better view what's happening inside the machine in real time.

**Maintain Windows 7 with system tools.** There are several system tools within Windows 7 to help you monitor and maintain your operating system. These tools include Task Manager, Performance Information and Tools, and System Configuration (MSConfig).

**Master It** After you install a new application on your Windows 7 machine, you find that it is causing you problems in performance. The longer the application runs, the more your machine seems to lag. After a period of time, the application no longer responds. It even displays “Not Responding” in its title bar and the whole application interface has become translucent. You would like to shut the application down but can’t even click the close “X” in the upper-right corner. How can you force the application to close?

**Solution** You can use Task Manager to end the application. Launch Task Manager by typing **task manager** in the Start menu’s search box. On the Applications tab, locate the misbehaving application in the Task column. Select the hung application and click the End Task button. This will close the application. You can then troubleshoot any issues and restart the application to see if it’s causing you problems.

**Schedule a task to launch daily.** There are times when you would like an application to run periodically to perform some function on your Windows 7 machine. You can use Task Scheduler to perform this operation.

**Master It** You are concerned about security on your local machine and have purchased a software product to collect security information such as open ports, applications that are running, and services that are enabled. The application has the ability to take a snapshot of several of the security parameters you’re concerned with and save them to a log file; you just have to run the application. You would like to run the program daily and save the logs so you can review them periodically at your convenience. How can you run the program daily without having to launch it manually?

**Solution** The best solution to automatically run your security logging application is by using Task Scheduler. Launch Task Scheduler by typing **task manager** in the Start menu’s search box. Select Create A Basic Task from the Actions pane and follow the wizard to specify the time schedule you would like have the program run. You will also specify the program within the wizard and have the option to pass parameters into the program (which might be needed to pass optional switches depending on the application). Once you finish the wizard, your task will be scheduled and will run at the scheduled time. You can then review the output logs at your convenience while being confident the logs will always be generated.

**Back up critical data files.** You can use the Backup and Restore application in Windows 7 to make backup copies of operating system and critical data files that might be needed even if they’re deleted by mistake or become corrupted.

**Master It** Your main application that stores critical financial data files for your company is stored locally on your Windows 7 machine. You’re nervous that these files can severely impact your day-to-day operation if they somehow become corrupted or are deleted. You would like to save a copy of the whole financial data folders so you can recover any or all of the data files with minimal impact. How can you back up the critical files in Windows 7?

**Solution** You can use the Windows 7 Backup and Restore application to save your data files. Launch the Backup and Restore application by typing **backup and restore** into the Start menu’s search box. Click the Set Up Backup option to launch the Backup wizard.

You can choose just the financial data files and/or directories (as well as other critical files) while you're here. You should also consider backing up the operating system files, but you don't have to. After you are finished with the wizard, your initial backup commences and you have a copy of today's data. You can now recover the data as of the time and day the backup was taken. You might also want to consider scheduling the backup to occur periodically using Windows 7's Task Scheduler to make sure you always have as close to a current set of critical data files as possible.