

Windows 7



The Pocket Guide

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Windows 7 – The Pocket Guide

v 0.2.2

Master Microsoft's Newest Operating System

Rich Robinson


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Windows 7 – The Pocket Guide

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*Dedicated to my wife, Mallory—thank you for  
putting up with all the hours I spend writing books,  
writing guides, and getting to know like-minded  
Windows enthusiasts*

*You are very special to me*

~~~

About the Author

Rich Robinson is the author and creator of [Windows Guides](#), [Windows Forums](#), and [MyWindowsPC](#). Rich is a [Microsoft MVP](#) in the Desktop Experience category and authored Windows Vista – The Pocket Guide and Windows Vista – Customization Manual. His hobbies include spending time with family, web design, programming, running, soccer, skiing, and swimming.

See [more books Rich authored](#)

Credits

Proofreader

Larry Schwartz

Acknowledgments

I consider all visitors to Windows Guides and Windows Forums contributors to this book. Your questions and advice helped inspire me to compile this book. Many of you take hours of your time helping me improve my work and helping me find errors. Others share the word of this book with their friends, family, and online acquaintances. Many readers of this book are referred by other Windows-themed websites and I thank the respective owners of these sites for their kind words and advice.

Thank you to my wife, Mallory, who works hard as I isolate myself for days on end to complete this book; you are more wonderful than you can ever perceive.

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Introduction

Windows 7 is Microsoft's newest operating system. If you are looking to add a personal touch to your installation of Windows 7, this book will help you get started.

There are thousands of customizations you can apply and this pocket guide only scratches the surface. As always, I've written this book so anyone can pick it up and work through it.

I recommend you begin by reading the first chapter—[Get Started](#); this chapter will give you a good foundation for the rest of the book. A basic knowledge of how Windows works is required to follow most of the sections; however, if you are very new with computers, I am confident you will learn a great amount as you go through this book—taking things one step at a time.

Once you have read the [Get Started](#) section, you're ready to explore the rest of the book and personalize your

machine to match your style. I'm sure there's something here for everyone; take a browse through the [Contents](#) page and see what strikes your interest. You do not need to read this book in order; feel free to explore.

If you have questions or feedback, head to the [Contact Me](#) section at the end of this book and get in touch with me. Is

If this version of the book seems a little dated, head to Windows Guides for an [updated version](#).

I began writing this book as soon as the public beta came out. I felt this was a good time to start getting familiar with the features that would soon be ready with the released version of the operating system. However, as features are updated, some of these sections may no longer work exactly as stated. I will continually update this book and make sure that it's ready for the final release of Windows 7. Please note: This guide is up to date as of Windows 7 RTM (Released August 6, 2009.)

Notational Conventions

In this guide, I have used these notational conventions:

Italic: Text from the current dialogue you are working with.

Bold: the name of a keyboard key.

Italic bold: something you type as shown, e.g., ***regedit***.

Unless otherwise specified, you can use uppercase or lowercase letter. Note that some URLs extend over multiple lines in this guide; when you type them, do not insert spaces between parts of the URL.

Click: move the cursor to the referenced item and press the left mouse button.

Press: push on a keyboard key.

Select: choose from a list.

[Blue Links](#): Links to external websites

[Green Links](#): Links to navigate within this book

Additional Help

I've organized the following resources to help you use this book and improve your skills with and knowledge of Windows 7:

- [Glossary](#): Common terms are explained here.
- [Appendices](#): Common tasks are taught here.
- [Index](#): Search the book and find relevant information.
- [Windows 7 Forum](#): Meet Windows 7 enthusiasts and get your questions answered.
- [Windows 7 Resources](#): Get the latest tips and guides here.
- [Contact Me](#): Get in touch with me if you have questions.

1 Get Started

Before you get started with this book, there are a few questions you should ask yourself:

- Should I install Windows 7 and still keep Vista or XP on my computer?
- What version of Windows 7 should I use?
- Should I upgrade or do a clean installation?
- Should I use the 32 or 64 bit version of Windows 7?

This chapter addresses these questions and helps you get the answers that best suit your needs.

In the latter half of this chapter, you'll learn about the Windows Registry and Group Policy Editor, which are referenced throughout this book.

Enjoy working through this book and remember: More is less when you customize your system; don't try to change every last thing. Make changes that look good and keep your system clean and tidy.

1.1 Windows 7 System Requirements

The minimum system requirements to run Windows 7 are:

- 1 gigahertz (GHz) or faster 32- bit (x86) or 64- bit (x64)
- 1 gigabyte (GB) RAM (32- bit) or 2 GB RAM (64- bit)
- 16 GB available hard disk space (32- bit) or 20 GB (64- bit)
- DirectX 9 graphics device with WDDM 1.0 or higher driver

Additional requirements to use certain features:

- Internet access (fees may apply)
- Depending on resolution, video playback may require additional memory and advanced graphics hardware
- For some Windows Media Center functionality a TV tuner and additional hardware may be required
- Windows Touch and Tablet PCs require specific hardware

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- HomeGroup requires a network and PCs running Windows 7
- DVD/CD authoring requires a compatible optical drive
- BitLocker requires Trusted Platform Module (TPM) 1.2
- BitLocker To Go requires a USB flash drive
- Windows XP Mode requires an additional 1 GB of RAM, an additional 15 GB of available hard disk space, and a processor capable of hardware virtualization with Intel VT or AMD-V turned on
- Music and sound require audio output

Product functionality and graphics may vary based on your system configuration. Some features may require advanced or additional hardware.

I've [tested Windows 7 with 512MB of RAM](#) and found it to work well; however, I do not recommend running with such low memory—unless you really have to.

1.2 Which Version of Windows 7?

Windows 7 is available in four editions. Windows 7 Starter is not sold individually, so I will not explain its features. I personally recommend Windows 7 Home Premium as this is suitable for home use and will provide you with most of the functionality needed to do everything in this book. However, if you want all the features, you'll need Windows 7 Ultimate.

1.2.1 Buy Your Copy of Windows 7



[Upgrade](#)

[Full Version](#)



Windows 7
Professional

[Upgrade](#)

[Full Version](#)



Windows 7
Ultimate

[Upgrade](#)

[Full Version](#)

Microsoft compiled a [feature chart](#), which is included in this guide for your convenience:

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Choose the Windows 7 edition that is best for you



Windows 7
Home Premium



Windows 7
Professional



Windows 7
Ultimate

Features

Make the things you do every day easier with improved desktop navigation.	✓	✓	✓
Start programs faster and more easily, and quickly find the documents you use most often.	✓	✓	✓
Make your web experience faster, easier and safer than ever with Internet Explorer 8.	✓	✓	✓
Watch, pause, rewind, and record TV on your PC.	✓	✓	✓
Easily create a home network and connect your PCs to a printer with HomeGroup.	✓	✓	✓
Run many Windows XP productivity programs in Windows XP Mode.		✓	✓
Connect to company networks easily and more securely with Domain Join.		✓	✓
In addition to full-system Backup and Restore found in all editions, you can back up to a home or business network.		✓	✓
Help protect data on your PC and portable storage devices against loss or theft with BitLocker.			✓
Work in the language of your choice and switch between any of 35 languages.			✓

1.3 Windows 7 32 or 64- bit?

When deciding to move up to a 64- bit operating system, you should first consider what 64- bit gets you. Knowing what software runs on 64- bit should influence your decision; you will see no advantage if you are running 32- bit software on a 64- bit OS. You also lose the ability to run 16- bit software, which shouldn't be a problem unless you rely on older software, such as old work software or home- made packages you haven't yet updated.

1.3.1 What Does 64- Bit 7 Get Me?

More bits gets you access to more memory; the processor inside your PC communicates with your system memory (RAM) with numeric addressing. Thus, the maximum amount of memory a 32- bit processor can address is 4 gigabytes. Newer 64- bit processors—not to mention the 64- bit operating systems that run on them—can address 17,179,869,184 gigabytes (16 exabytes) of RAM.

Windows NT, released in 1993, was Microsoft's first fully 32- bit operating system; however, it took eight years

before the platform, which had since evolved into Windows 2000 and then XP, became mainstream. (Yes, Windows 9x ran 32-bit applications, but it was a hybrid OS that ran on a 16-bit DOS foundation, which was one of the reasons it was so unstable.) 64-bit Windows became a reality in XP, and Vista was Microsoft's first serious attempt to make 64-bit computing mainstream. I am sure more people will use Windows 7 64 bit because of the increasing demands for more RAM. The question is: how mainstream is 64 bit?

1.3.2 How Mainstream is 64 bit?

While 64-bit Windows 7 can run most 32-bit applications without a problem, it's not compatible with 32-bit hardware drivers or 32-bit utilities like Windows Explorer extensions (e.g., context menu add-ons.) This means you need a native 64-bit driver for every device on your PC; finding support for all your hardware can be a bit of a challenge, at least on older computers

1.3.3 Is there a Performance Increase?

Now, 64-bit software running on 64-bit Windows has been known to run as much as 10% faster, which illustrates the other reason—aside from memory addressing—that people find 64-bit 7 alluring. Just be prepared for lackluster industry support, at least for the next few years until Microsoft releases a 64-bit-only OS.

1.4 Install Windows 7

Now you've decided which version of Windows 7 to use, you should [check your system's compatibility](#) online. If your PC is compatible, you have four options:

1. [Upgrade to 7 from Windows Vista](#)
2. [Install Windows 7 as a Virtual Machine](#)
3. [Dual Boot Windows XP/Vista with Windows](#)
4. [Install Windows from Scratch](#)

You'll learn how to do each of these in this section.

1.4.1 Upgrade to 7 from Windows Vista

Upgrading is the easiest option of the three. However, upgrading can take a long time. To upgrade to Windows 7 from Windows Vista:

1. Insert the Windows 7 DVD into your DVD- ROM drive.
2. Click *Run setup.exe* from the Autoplay menu.

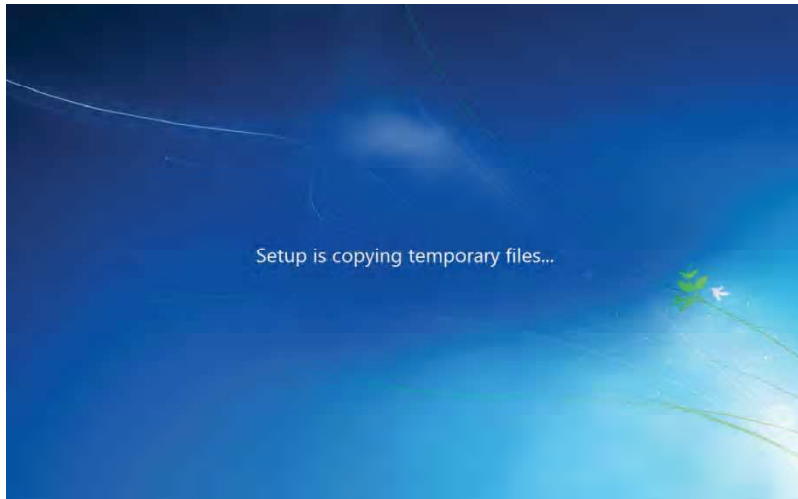


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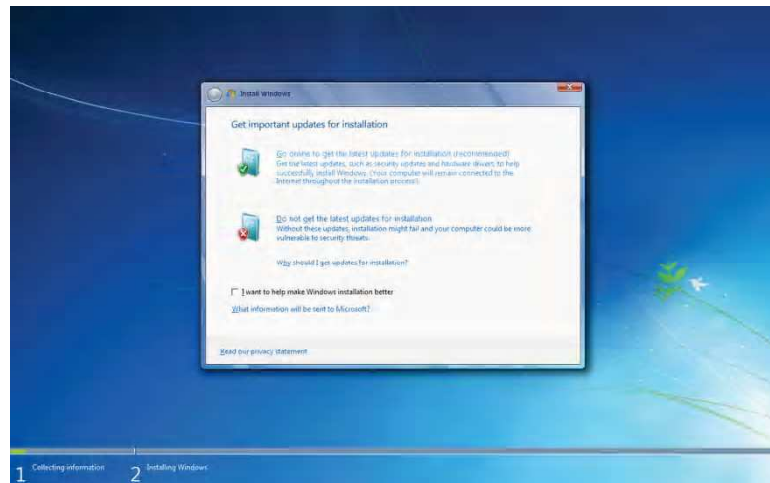
3. Click *Install now* on the Install Windows screen.



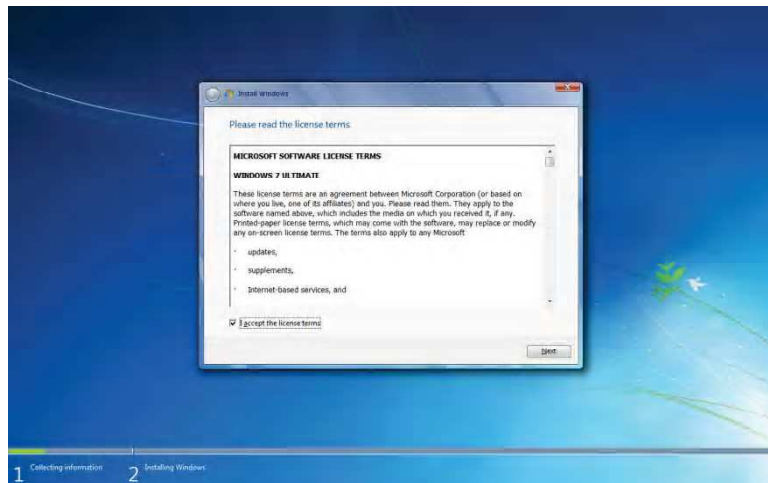
4. Setup will begin by copying files to your computer.



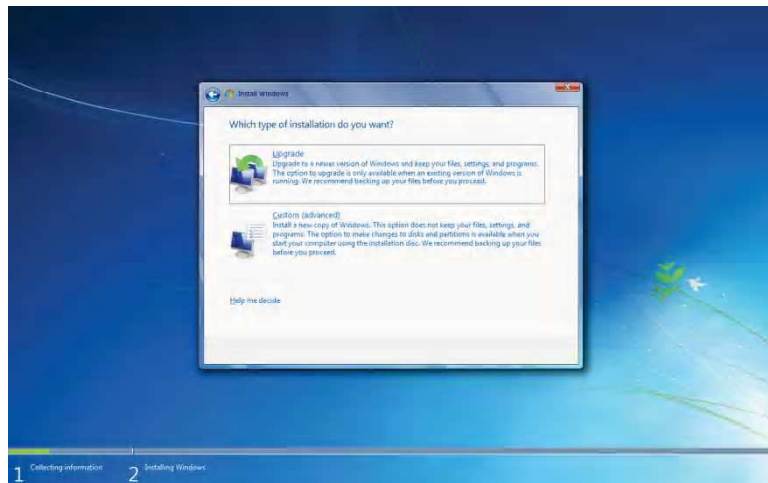
5. I recommend you get Windows updates online before upgrading Windows. This will ensure greater security and compatibility.



6. Accept the license terms and click *Next*.



7. Now click *Upgrade* and follow the instructions. You may get a compatibility report, which will help you determine what may not work properly after the upgrade.



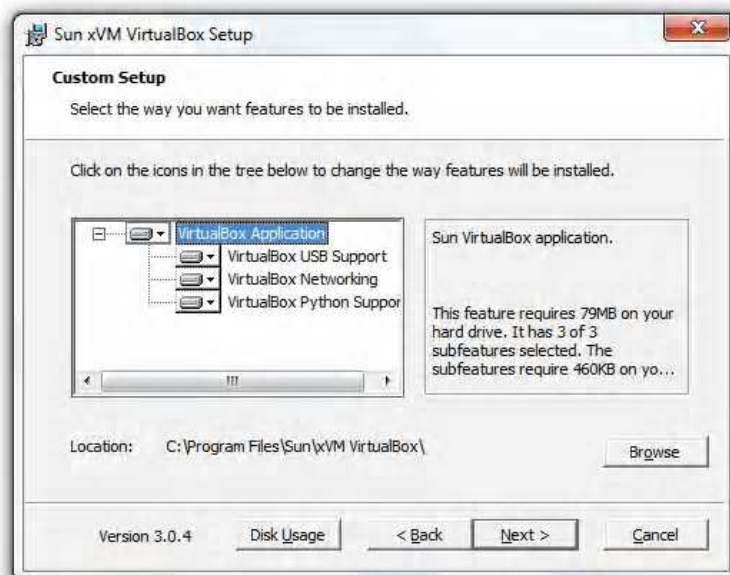
1.4.2 Install Windows 7 as a Virtual Machine

If you would like to use Windows 7 and still use Windows Vista or XP, rebooting your computer every time can be a pain. A virtual machine (VM) can be used to simulate hardware and run Windows (or any operating system) within Windows.

1.4.2.1 Install Virtual Box

Virtual box is a VM host that facilitates in VM creation and deployment. To install virtual box:

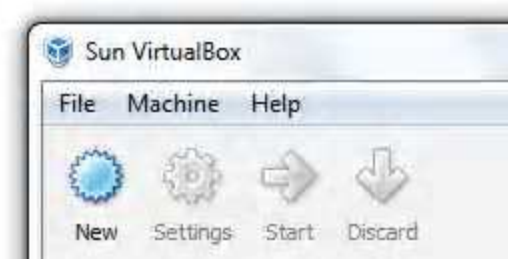
1. Download [Virtual Box](#).
2. Install Virtual Box and ensure all options are selected via the *Custom Setup*.



3. You'll be asked whether you want to install drivers; these are essential and should be installed.



4. Open Virtual Box and click *New*.



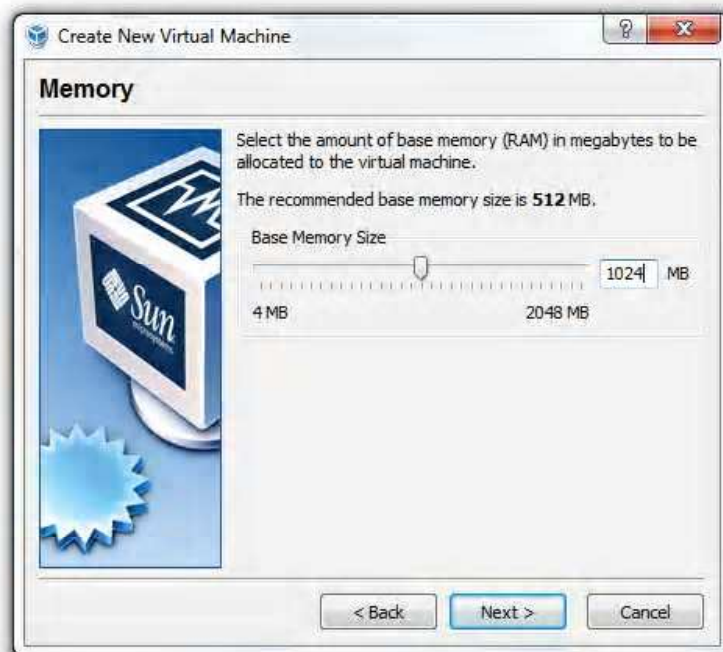
5. On the *Virtual Machine Wizard*, click *Next*.



6. Give the VM a name (***Windows 7*** will do) and select ***Windows 7*** from the *Version* drop down list.



7. Select the amount of memory you want to use (I recommend using no more than half your physical RAM amount i.e., 4GB RAM = 2GB allocated.)



8. Select *Create new hard disk*.



9. Click *Next*.



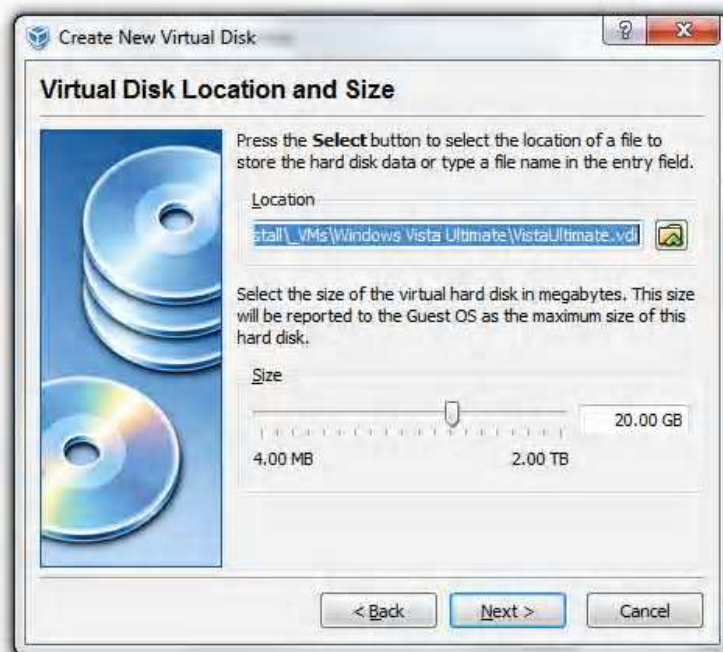
10. Select *Dynamically expanding storage* and click *Next*.



11. Choose where you will save your VM data.



12. Click *Next*.



13. Click *Finish*.



14. Click *Finish* to create your VM.



1.4.2.2 Install Windows 7 as a VM

Now you've created your VM, you'll need to boot it up and install the operating system:

1. Open Virtual Box, click your VM, and click *Start*.



2. Click *Next*.



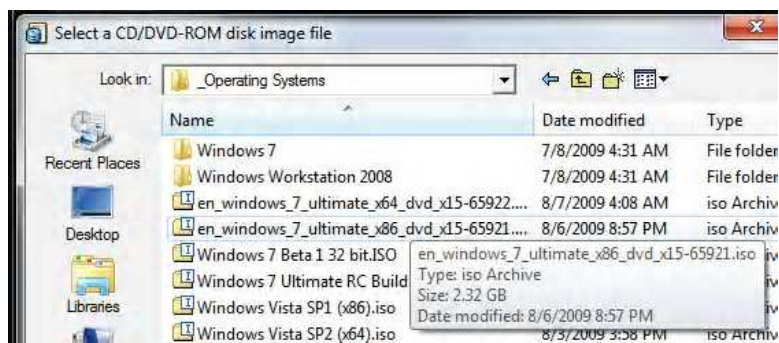
3. Leave *CD/DVD Rom Device* selected. If you are using the Windows 7 DVD (upgrade DVDs won't work for a clean install), click *Next*. If you are using an ISO image, select *Image File* and browse to your ISO.



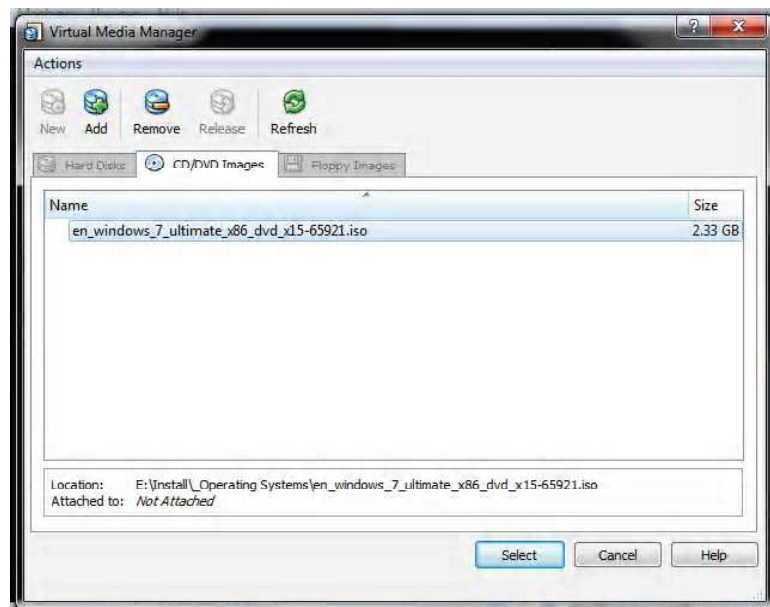
4. ISO Only: Click *Add* to browse to your ISO file.



5. ISO Only: Locate your ISO and click *Open*.



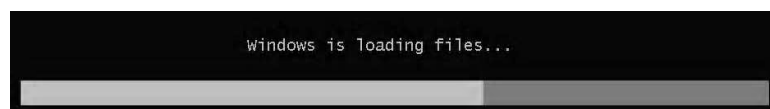
6. ISO Only: Click *Select*.



7. Click *Finish* to begin installation.



8. Windows 7 will now boot.



9. Refer to [Install Windows from Scratch](#) to install Windows 7 as a VM.

1.4.3 Dual Boot Windows XP/Vista with Windows 7

Dual booting Windows is the most challenging of the three options; however, making it work can be very rewarding. The process of creating a dual boot environment differs from Windows Vista to XP. Please follow the instructions according to which version of Windows you are currently using.

To run two operating systems on your computer, you will need to add a second partition. If you are not familiar with adding a partition, you can learn how in this section. Please note: each operating system will be able to see the other partition; thus, you can share files between them.

1.4.3.1 Dual Boot Windows XP with Windows 7

You will need third party software to create a second partition for Windows 7; once you have created the partition, you can install Windows 7 on it.

Create a New Partition (XP)

To create a second partition on your hard drive in Windows XP:

1. Download the GParted live CD [here](#).
2. Burn the image to a CD ([Appendix G: Burn an ISO Image to a Disc](#)), reboot your computer, and boot from the CD ([Appendix H: Boot from a CD or DVD](#).)
3. Once you've booted into GParted, create a partition for Windows 7 (16 GB+ recommended) ([Appendix I: Create a Partition with GParted](#).)

Refer to the [Install Windows from Scratch](#) section of this chapter to learn how to install Windows 7 on your newly created partition.

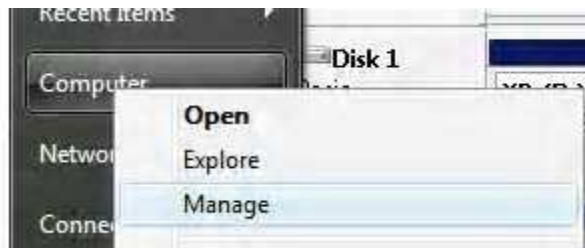
1.4.3.2 Dual Boot Windows Vista with Windows 7

Windows Vista natively manages partitions; you will need to create a second partition for Windows 7. Once you have created the partition, you can install Windows 7 on it.

Create a New Partition (Vista)

To create a second partition on your hard drive in Windows Vista:

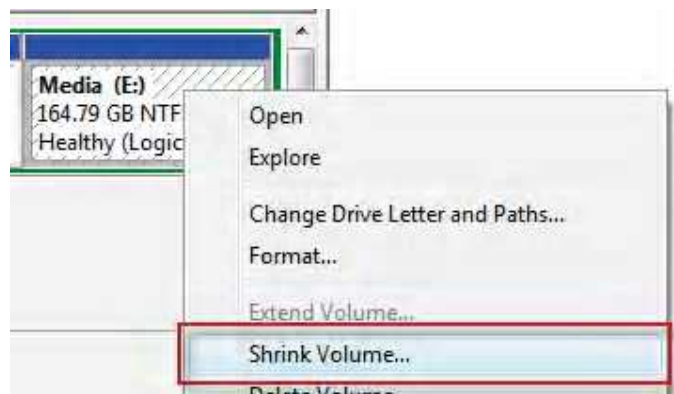
1. Click the Start button, right click *Computer*, and click *Manage*.



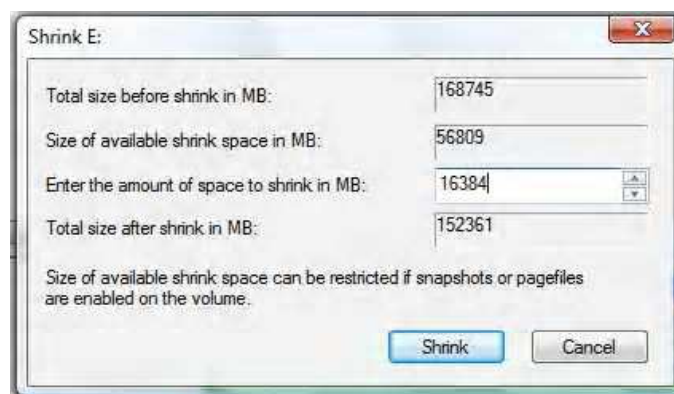
2. In the left pane, click *Disk Management*.



3. Now create a new partition by shrinking a previous volume so you can use the newly created space.
Right click on the partition and click *Shrink Volume*.



4. Input the size, in MB, by which you want to shrink the partition. I recommend 32 GB (32,768 MB.) Windows 7 requires a minimum of 16 GB (16,384 MB.)



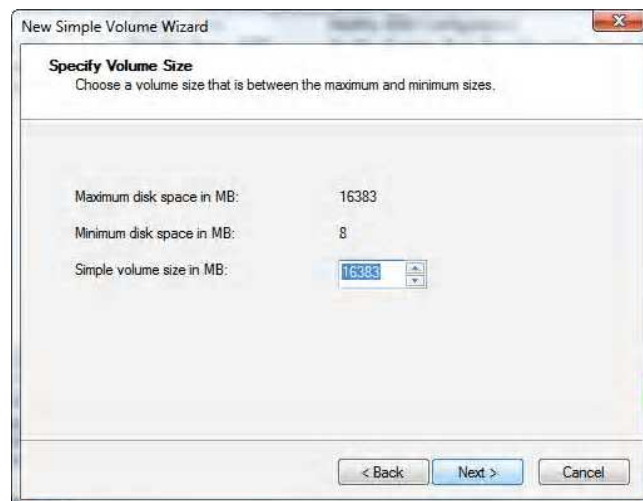
5. Now right click the free space and click *New Simple Volume...*



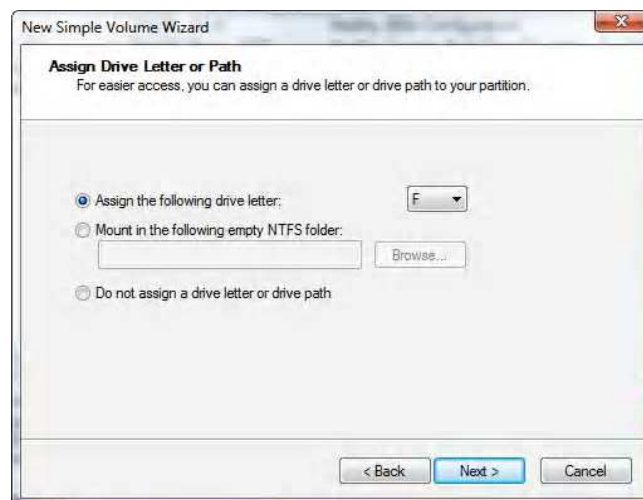
6. Click *Next*.



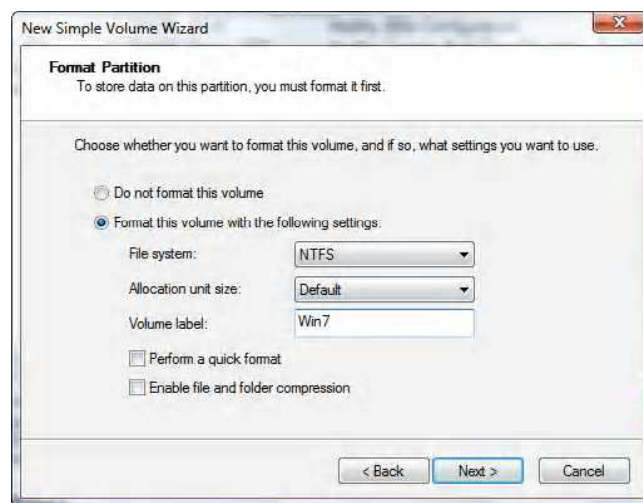
7. Specify the volume size and click *Next*.



8. Assign an unused letter to the drive and click *Next*.



9. Format the drive as NTFS, give it a label, and click *Next*.



10. Click *Finish*.



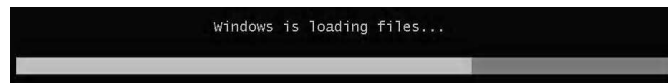
Refer to [Install Windows from Scratch](#) to learn how to install Windows 7 on your newly created partition.

1.4.4 Install Windows from Scratch

Whether you are installing Windows 7 on a blank hard drive or a newly created partition, the procedure is the same.

To install Windows 7 from scratch:

1. Power on your computer, insert the Windows 7 DVD, and restart your computer.
2. Press the necessary key to initiate booting from your DVD (usually Esc or F12.) ([Appendix H: Boot from a CD or DVD.](#))
3. Windows will now load the installation files.



4. Click *Install now*.



5. On the *Get important updates for installation* page, I recommend getting the latest updates to help ensure a successful installation and protect your computer against security threats. You need an Internet connection to get updates.
6. On the *Please read the license terms* page, if you accept the license terms, click *I accept the license terms*. (You must accept to continue the installation.)
7. On the *Which type of installation do you want?* page, click *Custom*.
8. On the *Where do you want to install Windows?* page:
 - a. Click *Next* to begin the installation (unless you want to create a partition.)
 - b. OR If you already have another existing partition with enough free space and want to install Windows 7 on that partition to create a multi- boot configuration, select the partition you want to use, and click *Next* to begin the installation. (Be sure to install Windows 7 on a different partition from

where your current version of Windows is installed.)

Windows will take some time to install, so be patient

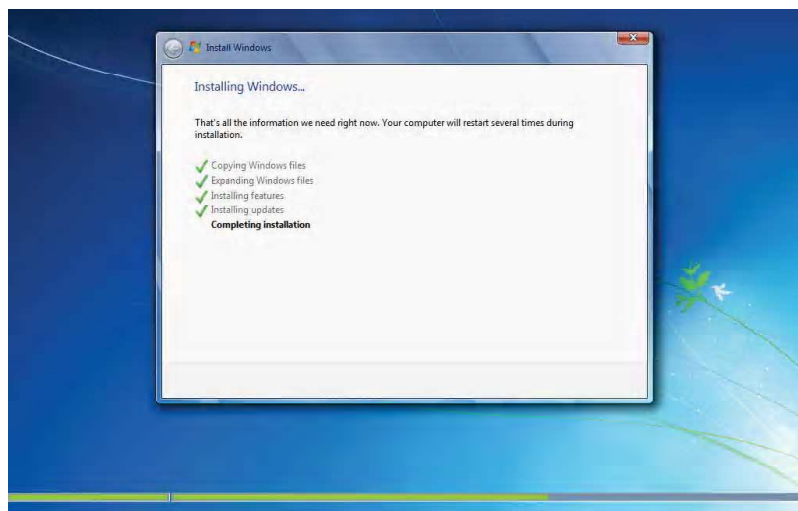


Figure 1: Installing Updates

Your computer will restart several times during the process as it configures itself and installs updates (Figure 1.) Be sure to leave the DVD in the drive and let Windows take care of itself.



Figure 2: Installation Complete

After some time, Windows will now be installed (Figure 2.) If you are running a dual boot, you should have the choice of either version of Windows when you power on your computer.

1.5 Use Virtual XP Mode

Windows 7 comes with built-in support to virtually run Windows XP. This is a great feature for those who are still holding on to XP or have applications that are not compatible with Windows 7 and Vista.

1.5.1 Requirements for XP mode

- Check for compatibility with [SecurAble](#).
- 1 GHz 32-bit / 64-bit processor required.

- Memory (RAM) – 1.25 GB required, 2 GB memory recommended.
- Recommended 15 GB hard disk space per virtual Windows environment.
- **NB:** Windows XP Mode is only available in Windows 7 Enterprise, Windows 7 Professional, and Windows 7 Ultimate.

1.5.2 Windows Virtual PC features for Windows XP Mode

- Once both the Windows Virtual PC and the virtual Windows XP environment are installed, Windows Virtual PC provides a simple wizard to setup the Windows XP Mode with just a few clicks.
- Users can access USB devices attached to Windows 7 directly from Windows XP Mode. These devices include Printers and Scanners, Flash Memory/Sticks and External Hard Disks, Digital Cameras and more.
- Publish and Launch applications installed on Windows XP Mode directly from the Windows 7

desktop, as if they were installed on the Windows 7 itself.

- Access your Windows 7 Known Folders - My documents, Pictures, Desktop, Music, Video, from inside the virtual windows environment, such as Windows XP Mode.
- Cut and paste between your Windows 7 and Windows XP Mode.
- Print directly to your attached printer from your Windows XP Mode applications either in application mode or desktop mode.

More information available [here](#).

1.5.3 Install and Use Virtual XP Mode

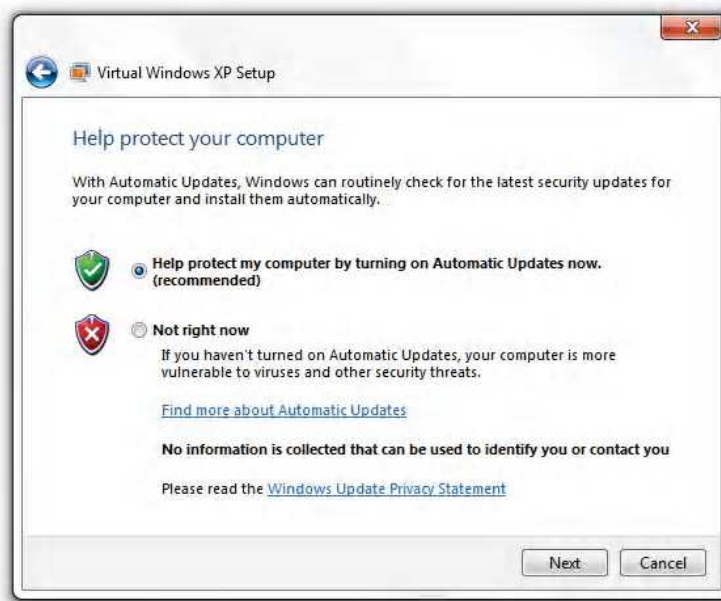
To enable and use Virtual XP mode, first check for compatibility, with [SecurAble](#), or you'll be presented with the error below:



1. Download [Windows XP Mode and Windows Virtual PC](#).
2. Install *Windows6.1-KB958559-x86.msu*.
3. Restart Your Computer.
4. Install *VirtualWindowsXP.msi* and accept the default settings.
5. Set a login Password.



6. I recommend enabling Automatic Updates.



7. Windows XP will now install and be ready to use.

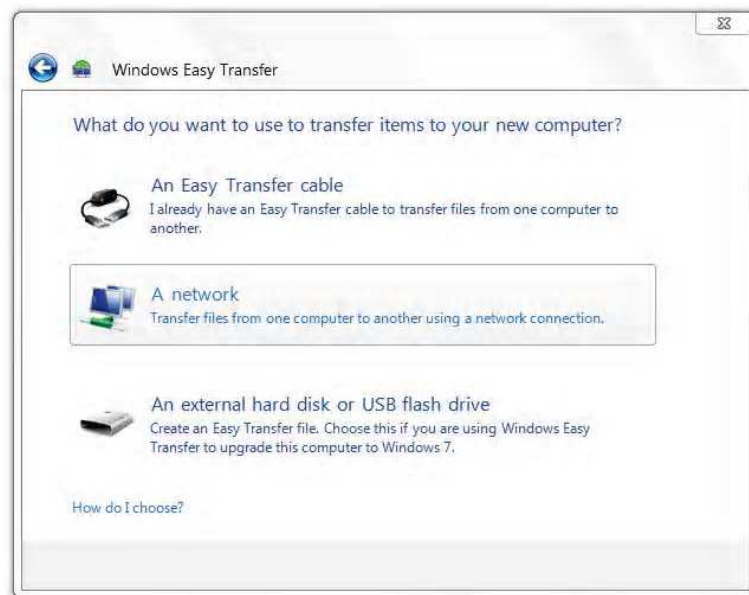
1.6 Transfer Your Files from Your Old PC

Windows Easy Transfer is used to transfer your files from your old PC (Windows XP, Vista, or 7) to your new PC.



You can transfer your files through the following ways:

- An Easy Transfer Cable
- A Network
- An external hard disk or USB flash drive



You can specify which accounts to move to your new PC and everything is pretty simple and straight forward.

To use Windows Easy Transfer: click Start, type **transf** and click *Windows Easy Transfer*. Follow the on-screen instructions to copy your data.

1.7 About the Windows Registry

Throughout this book, some sections require you to access the Windows Registry and make changes. I try to make executable registry hacks in most cases, but it can be fun to script or create your own registry files. Before doing anything with the Windows Registry, you should know what the registry is, how to back it up, how to restore it to a previous state, and how to add keys and values.

1.7.1 What is the Windows Registry?

Think of the Windows registry as a control center for your computer. Windows settings, individual program settings, and other important configuration information are stored here.

The registry is made up of the following components:

- Keys
- Subkeys
- Values

1.7.2 Access the Windows Registry Editor



Figure 3: Starting Registry Editor

Figure 3 shows how to open the registry editor. For more information, see [Appendix D: Launch Windows Registry Editor](#).

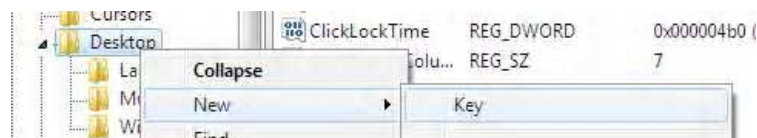
1.7.3 Add Keys or Values

In some of the tutorials in this book, you will need to create a new key or value.

1.7.3.1 Add a New Key

To add a new key:

1. Right click on the parent key.
2. Click *New > Key*.

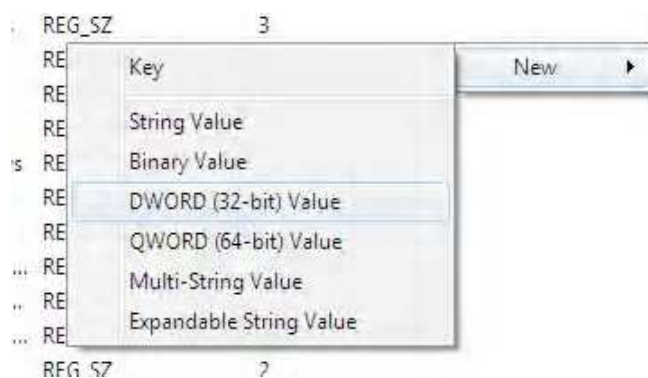


3. Follow the section's instructions for what key name to assign.

1.7.3.2 Add a New Value

To add a new value:

1. Navigate to the key that you want to add a value to.
2. Right click in the blank space of the right pane.
3. Click *New* > *xx* (Where *xx* is the value specified in the section.)



4. Follow the section's instructions for what value to assign.

1.7.4 Back up the Registry

To back up the registry, please refer to [Appendix E: Back up the Windows Registry](#).

1.8 About the Group Policy Editor

Group Policy is a feature of Microsoft Windows that provides centralized management and configuration for your computer or computers in a domain. This tool is mainly used by systems administrators to control a group of PCs; however, you can use it to customize your personal machine.

Please Note: The Group Policy Editor (Figure 5) is not included with every version of Windows 7 and is currently only available in Windows 7 Ultimate.

1.8.1 Access the Group Policy Editor

Click the Start button, type ***gpedit.msc***, and press **Enter** (Figure 4.)

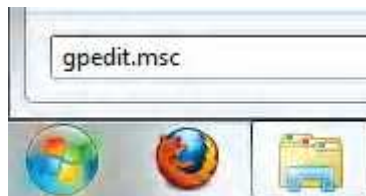


Figure 4: Access the Group Policy Editor

1.8.2 Work with the Group Policy Editor

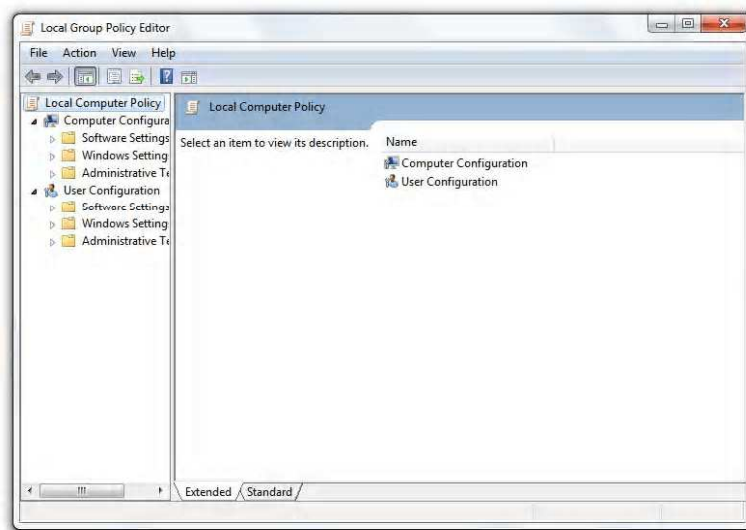


Figure 5: The Group Policy Editor

To enable options, double click on the specified option in the right-hand pane, and change the setting to *Enabled* (Figure 6.)



Figure 6: Enabling/Disabling Options in Group Policy Editor

1.9 You Are Ready to Begin

You made it this far and now you are ready to begin. As a brief recap, you learned the requirements of Windows 7, the version to install, and how to install your chosen version. You also learned about the Windows Registry and the Group Policy Editor. I strongly suggest you review the [2 Back up Your Data](#) chapter before proceeding; however, you're welcome to explore and experiment—hopefully you'll learn something new along the way.

2 Back up Your Data

If you are not familiar with data backup or currently choose not to back up your files, please read this chapter. Making changes to your computer brings a certain level of risk. This risk is alleviated greatly when you make backups that are timely, complete, and functional.

If you are one of the lucky people who have never lost a file on your computer, congratulations; however, this chapter is still for you. If you have lost files before—yep that's you—then you should review this chapter too before you begin.

In this chapter, you'll learn how to use *Backup and Restore*, backup and restore your registry, and how to recover lost files.

2.1 Backup and Restore

Backup and Restore—bundled with Windows 7—is an excellent tool, which allows you to backup and restore either your files or an image of your operating system.

2.1.1 Launch Backup and Restore

To launch the Backup and Restore Center:

1. Click the Start button and type ***Backup***.



2. Click *Backup and Restore*.

2.1.2 Back up Your Files

To back up your files:

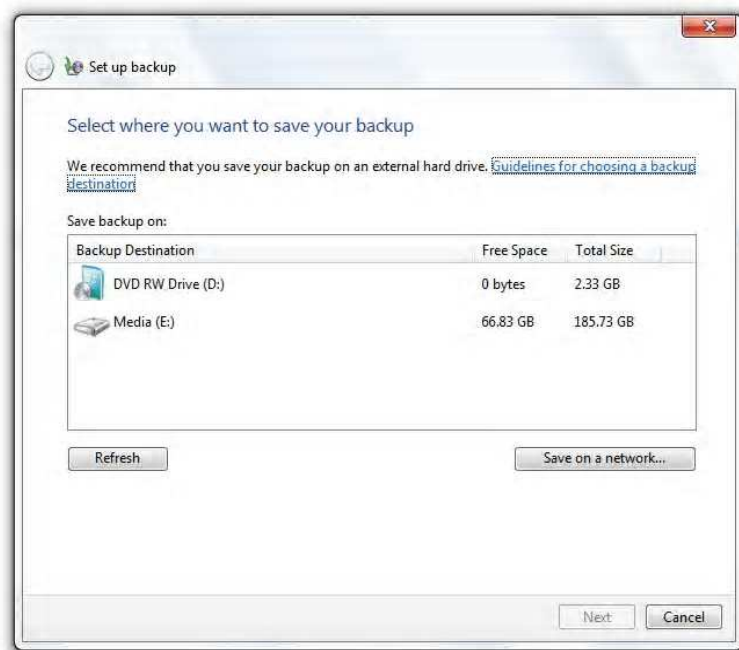
1. Click *Set up backup...*



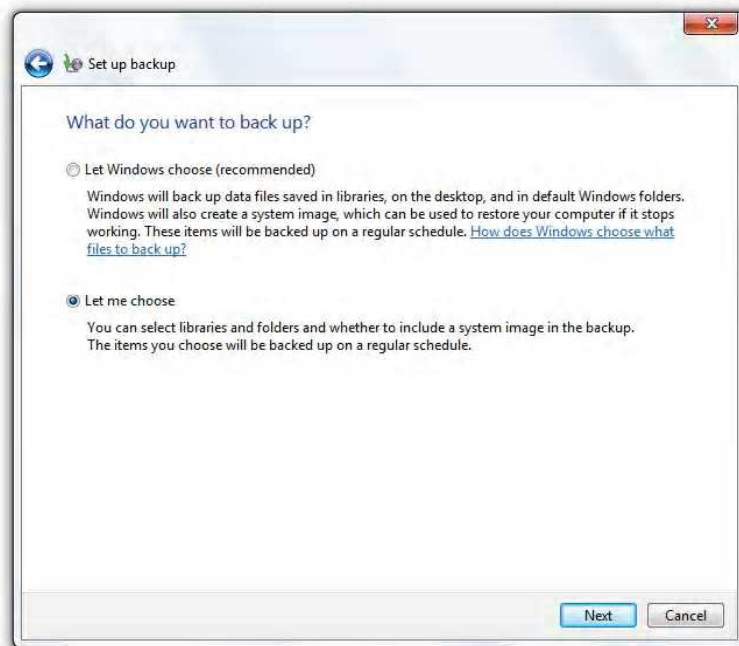
2. Windows will now prepare your system for backup.



3. Choose a backup destination and click *Next*.

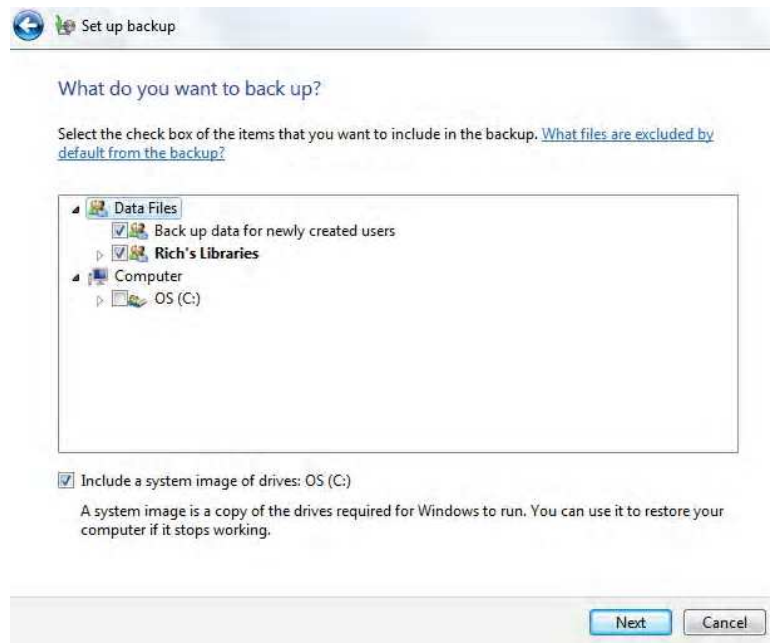


4. I recommend you choose your files to backup.



5. Specify the files you want to backup. You can include a system image, which will save your Windows settings as they are. This can be restored if something goes really wrong.

65 | 2 Back up Your Data



6. Review your backup settings.
7. Set the frequency of backup.

How often do you want to back up?

Files that have changed and new files that have been created since your last backup will be added to your backup according to the schedule you set below.

☒ Run backup on a schedule (recommended)

How often: Weekly

What day: Sunday

What time: 7:00 PM

8. Windows will now backup your files.

Back up or restore your files



2.1.3 Restoring Your Files

Launch *Backup and Restore* and click *Restore Files*. Locate your backup files and follow the instructions to get your previously backed up files back.

2.2 Back Up and Restore the Registry

Some sections in this book will require you to change values in your registry. If you make a mistake and don't correct it, you may find your computer is not as functional as it was before. To protect yourself from any mistakes, you need to backup your registry.

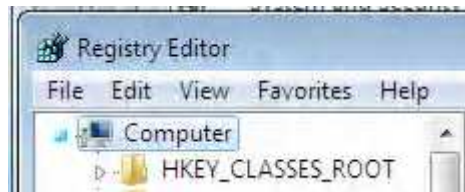
2.2.1 Back up the Registry

See: [Appendix E: Back up the Windows Registry.](#)

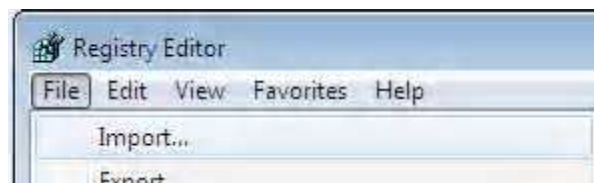
2.2.2 Restore the Registry

Before restoring the registry, [make a back up](#), so you can roll back if anything goes wrong. To restore your registry from a backup:

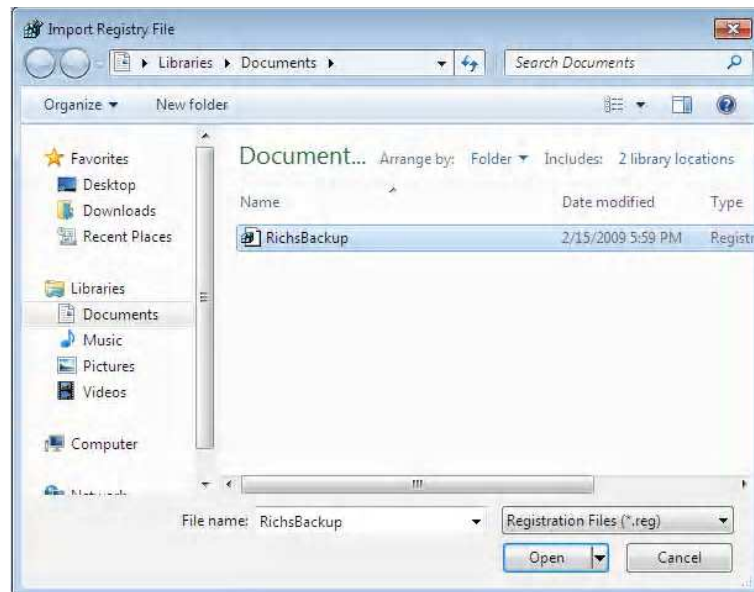
1. Open the Registry Editor ([Appendix D: Launch Windows Registry Editor.](#))
2. Left click *Computer* in the left pane.



3. Go to *File > Import*.



4. Click your backup file and click *Open*.



2.3 Create a System Recovery Disc

If Windows 7 goes wrong, you can attempt a repair, at boot up, to see if the problem can be fixed. To do this, you will need to create a system recovery disc; if you have the original Windows 7 disc, it will act as a recovery disc.

The system recovery disc cannot be used to install Windows, but it can be used to fix common problems that

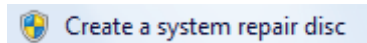
prevent Windows from booting. I recommend you make a system recovery disc before playing with Windows' settings.

To create a system recovery disc:

1. Click the Start button.
2. Type ***Backup***.



3. Click *Backup and Restore*.
4. In the left column, click *Create a system repair disc*.



5. Select your DVD drive and click *Create disc*.



6. Wait for the disc to burn.



7. Test the disc by rebooting your PC with the disc in the drive. Boot from the optical drive ([Appendix H: Boot from a CD or DVD](#)) and ensure the disc works by waiting for the main menu to load; if the menu

loads, you should be good to go in the event of a computer problem.

8. Save the recovery disc in a safe place.

2.4 Recovering Lost Data on Your Drive

If you lose your data, be sure to check the recycle bin first. If there are no files in the recycle bin, there is still hope. Even though your files are deleted, the data may still be recoverable because the reference to the file has simply been deleted and not the data itself. As long as your file has not been overwritten, you have a chance at recovery.

After trying many file recovery programs, I've decided [Recuva](#) is by far the best.

Recuva (pronounced “recover”) is a freeware Windows utility to restore files that have been accidentally deleted from your computer. This includes files emptied from the Recycle bin as well as images and other files that have been deleted by user error from digital camera memory cards or MP3 players. It will even bring back files that have been deleted by bugs, crashes and viruses!

3 Security

One of the most important ways to protect yourself, when you are using your computer, is to be in control of security. There are so many threats out there that it is important to be proactive and protect your computer.

In this chapter, you will learn how to choose anti-virus, anti-malware, and firewall software; how to take ownership of your files; how to encrypt your sensitive data; and how to protect your privacy online and in Windows Media Player 11. While there are many PC security options available, this section should give you a good start.

3.1 Choose an Anti-virus Program

To protect yourself, you must have an anti-virus program. A virus is designed to disrupt the normal operation of your PC and can be costly: both in your time and in repairs that need to be made to recover your system.

Microsoft currently supplies a [list of all vendors whose software works with Windows 7](#). Of the current software, I recommend AVG Free, which is free for personal use.

3.2 Anti- spyware Software

Anti- spyware software helps you keep malicious software off your PC. Spyware is malicious programs that often send personal data, passwords and other private personal and financial data to third parties.

As listed above: you can visit Microsoft's [list of compatible security programs](#). AVG comes with a great anti- spyware module that should keep you free of harm.

3.3 Firewalls

A firewall is a hardware or software device that controls access to computers on a Local Area Network (LAN.) It examines all traffic routed between the two networks - inbound and outbound—to see if it meets certain criteria. If it does it is routed between the networks, otherwise it is

stopped. It can also manage public access to private networked resources such as host applications.

Many people got to great lengths to find a good firewall and often pay large sums of money to increase protection. For the average home user, Windows Firewall is sufficient and will protect you from unwanted communications between your computer and the world wide web.

To access Windows Firewall: Click the Start button, type *fire*, and click *Windows Firewall*.

3.4 Add Take Ownership to Context Menu

Many folders in 7 are protected from changes and require administrative approval to change every time. Sometimes this can become tedious, so I've created a registry hack you can use to take ownership of your files.

1. Download [TakeOwnership.zip](#).
2. Unzip the file.

3. Double click InstallTakeOwnership.reg and accept the prompts.
4. You can now take ownership of a file by right clicking it and clicking *Take Ownership*.

Remove Take Ownership from your context menu by merging RemoveTakeOwnership.reg into your registry.

3.5 Encrypt your USB Drive's Data

Please note: I prefer TrueCrypt, which is explained in this section; however, Windows 7 is bundled with USB encryption software: [BitLocker To Go](#).

Do you have data on your USB drive that could be accessed by someone if they found your key drive? Do you have sensitive data that you need to protect, but don't want to pay for expensive software? TrueCrypt was designed for you and in this section you'll learn how to use it. If you would like to protect data on your hard drive, move to the [next section](#) where I show you an easier- to- use program.

This section is written for TrueCrypt 6.2a (currently not compatible with Windows 7, but it works for the desired

outcome of this section); newer versions should operate in a similar fashion.

I will refer to your USB drive as a “USB key drive” throughout this section. If you are encrypting your hard disk drive, simply replace this phrase with “hard disk drive”—the procedure is identical.

Final word: do not encrypt the entire drive your OS is stored on. You can encrypt parts of the drive, but not system files.

3.5.1 Download TrueCrypt

1. Download [TrueCrypt](#).
2. Run the installer.
3. When prompted, select *Extract* and click *Next*.



4. Extract the files to your USB key drive in a folder named ***TrueCrypt***.



Figure 7: TrueCrypt Files

You can delete other files in the directory if you wish. Ensure you keep the four files as depicted above (Figure 7.)

3.5.2 Encrypt part of your USB drive

1. Run TrueCrypt.exe.
2. Once loaded, specify a drive letter that will become the encrypted volume (the drive letter of your USB drive won't change—but will show as two different drive letters when you complete this tutorial.)
3. Click *Create Volume*. Your USB drive will still keep its letter (e.g., "R"), but it will be split into two virtual drives (so the encrypted data will appear as a "[your chosen letter]" drive in *Computer* after you finish the setup.)
4. Now click *Create a standard TrueCrypt volume* and click *Next*.
5. The next screen will ask you where you want to store the volume. Save a file named ***Container*** in the TrueCrypt folder on your USB thumb drive and click *Next*.

6. Specify the size of the encrypted volume (I suggest you use 1/2 the size of the drive.)
7. Create a secure password.
8. Now click *Format* and your Container will be formatted.
9. After a confirmation message, click *Exit*.

3.5.3 Verify Your Encrypted Drive Works

1. Go to your *Computer* and look for a “W” (or letter you chose) drive. It’s not there; good news!
2. Open TrueCrypt.
3. Click the drive letter you chose in the previous steps.
4. Click *Select File* and find your ***Container*** you created.
5. Click *Mount*.
6. Type in your password and click *OK* and your volume will mount.
7. Go to *Computer* and your drive will be there.

When you are done, go back to TrueCrypt and click *Dismount*. Congratulations, you now have your data encrypted on your USB drive.

3.6 Protect Your Data in a Hidden Container

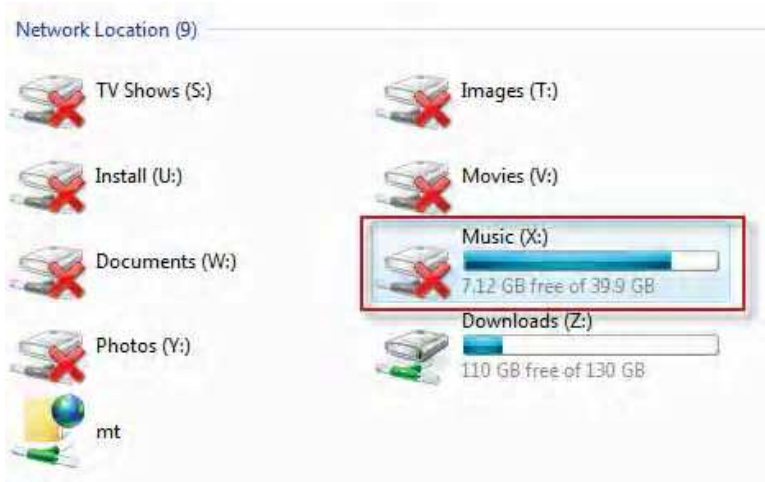
If you want to protect the files on your computer in an easy way, Secret Disk provides a great solution. Please note: if you are trying to protect your files from a customs, or similar, inspection, you may be required to enter your password. Thus, using a program like this is not a solution to hiding illegal information—don't do it!

To set up your secret container:

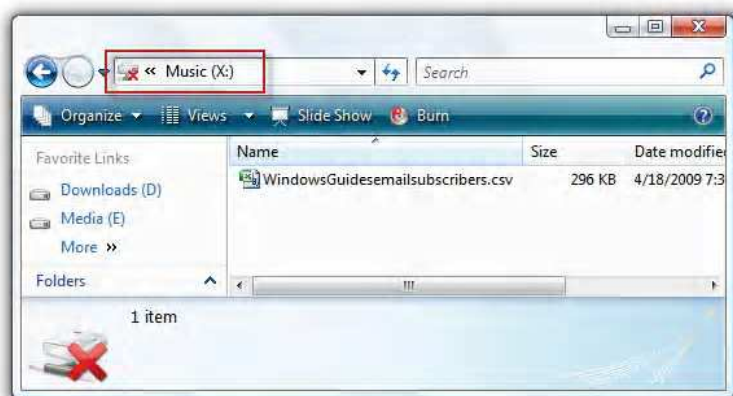
1. Download [Secret Disk](#).
2. Install Secret Disk on your computer.
3. Start the program and select a password.



4. Secret Disk creates a partition for your hidden files (note: if you already have the X drive mapped on your network, like I have, Secret Disk will replace this mapping until you close the program.)



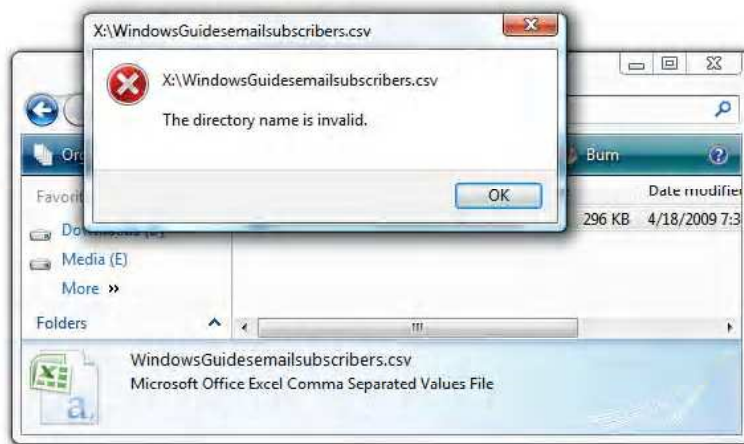
5. Now you can store your files on this partition.



6. Lock your disk when you are finished with it.



7. Now the disk is locked, it cannot be accessed.



8. To unlock the secret partition, just start the program, click unlock, and type in your password.



9. You can delete your secret disk at any time.



This program is an excellent solution for anyone who is looking to protect sensitive files.

3.7 Maximize Privacy: Browser Ad Blocking

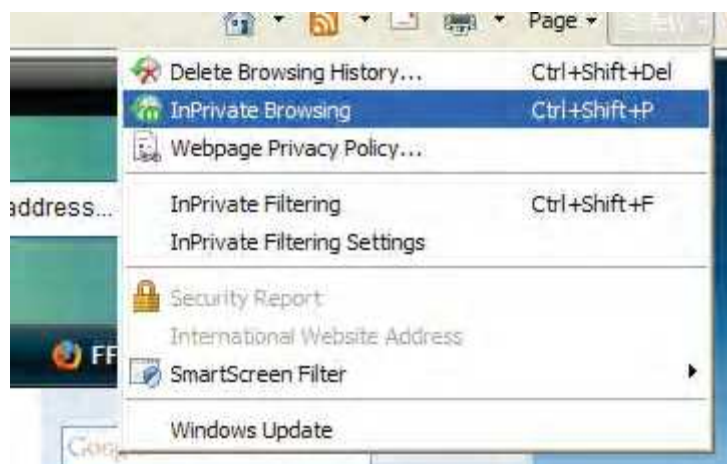
Let me begin by saying: adverts can be very useful and help you find what you are looking for; some ads are unobtrusive and inoffensive. However, I personally don't like seeing ads and I always encourage people to block them. In this section, you'll learn how to block ads in IE8*, Mozilla Firefox, Opera, and Google Chrome.

*IE has no supported extension, and your results will vary.

3.7.1 Internet Explorer 8

To block ads in Internet Explorer:

1. If you haven't already, [upgrade to version 8](#).
2. While browsing, click *Safety > InPrivate Browsing* (CTRL+ SHIFT+ P.)



3. You will be notified InPrivate browsing is running.



4. Over time, InPrivate will build a list of content that should be blocked and you will see less ads.

If you'd like to speed up the process, see [this discussion](#) on importing Adblock definitions to InPrivate.

3.7.2 Mozilla Firefox

To block ads in Mozilla Firefox:

1. Download [Adblock Plus](#).



2. When prompted, select EasylistUSA as your subscription
3. Enjoy ad- free browsing!

3.7.3 Google Chrome

To block ads in Google Chrome:

1. Go to the [AdSweep site](#).

2. Follow the instructions for Google Chrome (these are subject to change and better referenced than replicated.)

3.7.4 Opera

To block ads in Opera:

1. Go to the [AdSweep site](#).
2. Follow the instructions for Opera (these are subject to change and better referenced than replicated.)

3.7.5 Safari

To block ads in Safari:

1. Download [Safari AdBlock](#).
2. Install the software and enjoy ad- free web browsing

3.8 Maximize Privacy: Windows Media Player 11

Personally, I like to ensure maximum privacy when using my computer. There are many programs that gather and send data; however, I will focus on Windows Media Player 11 because this is bundled with Windows 7. This section will show you how to ensure maximum privacy in Windows Media Player 11 (WMP11.) Microsoft, in the interest of privacy, allows you to protect your data; this section shows you how to do this.

3.5.1 Configuring Privacy When Setting up WMP11 for the First Time

To configure privacy settings, when setting up WMP11 for the first time:

1. a. Click on the Windows Media Player icon on the Taskbar.
b. OR click the Start button, type **Media**, and click *Windows Media Player.*)



1. Click *Custom Settings* and click *Next*.



2. Adjust the privacy options accordingly. Review the screenshot, below, for my recommendations. Click *Next*.



3. Choose whether or not to make Windows Media Player your default media player. Click *Finish*.



Your privacy is now protected when viewing and listening to media.

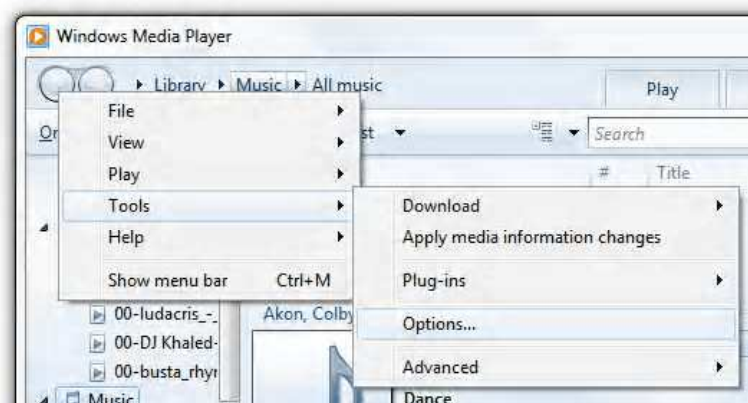
3.5.2 Configuring Privacy after WMP11 is Set Up

To configure privacy settings, after WMP11 is already set up:

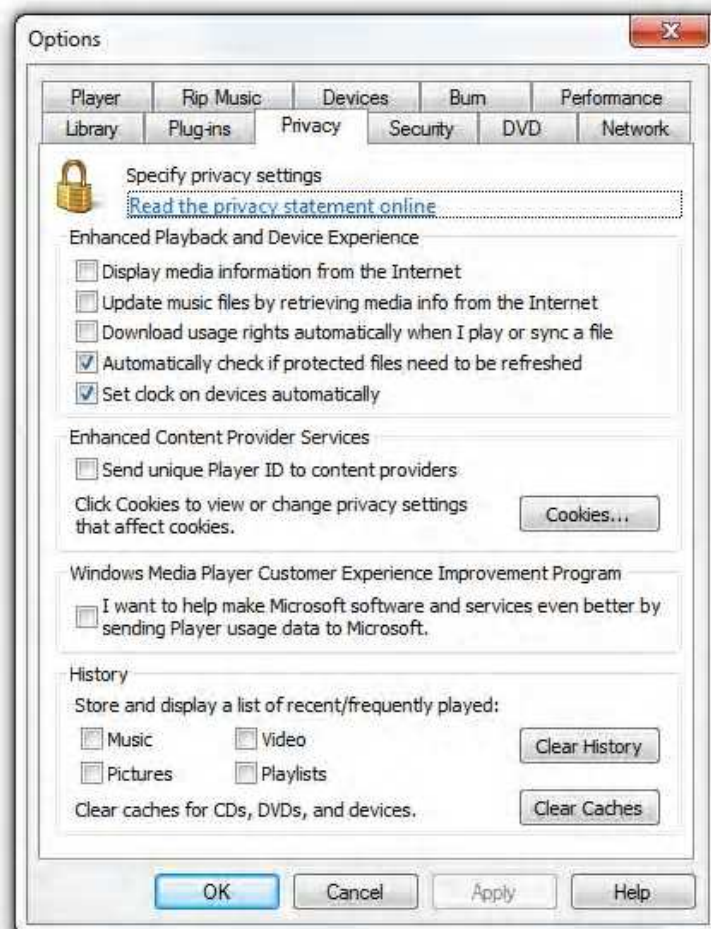
2. a. Click on the Windows Media Player icon on the Taskbar.
b. OR click the Start button, type Media, and click Windows Media Player.)



3. On the Windows Media Player screen, Press the **Alt** key, and click *Tools > Options...*



4. Under the *Privacy* tab, configure your privacy settings. Review the screenshot, below, for my recommendations. Click *OK*.



Your privacy is now protected when viewing and listening to media.

4 Windows 7's New Features

Windows 7 is packed with a whole host of new features. In this chapter, we'll take a look at some of these new features and how they can help you work more efficiently on your computer. While this is not an exhaustive breakdown of each feature, my hope is to both bring awareness of what Windows 7 has to offer and inspire you to make the most of what is available.

Some of these features are explained in more detail later in this book.

4.1 Libraries

Libraries are special folders, which aggregate your current media folders into one. For example: if you have three video folders (e.g., Movies, TV Shows, and Camera Videos), you can merge them into one, and have quick access to all your files at once. Public folders will also be merged into

your libraries so your whole network can have seamless access to public files. This feature is particularly useful if you have a home media server and want to access the media on the server without navigating to mapped drives.

Figure 8 shows the *Libraries* view, which gives you quick access to your documents, music, pictures, videos, and more.



Figure 8: Windows 7's libraries

Figure 9 shows an example of a library, which contains two different folders. A library can contain many folders from different locations including network locations.

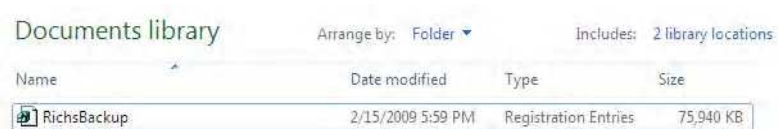


Figure 9: Libraries can contain many different folders

4.2 AeroSnap and AeroPeek

AeroSnap and AeroPeek are two features, which help you work more efficiently in Windows 7. Both features work with Aero enabled; however, AeroPeek will not work if Aero is disabled.

4.2.1 AeroSnap

AeroSnap is used to “dock” your windows to a side of the screen. If you’ve ever wanted to compare two windows side by side, this is the feature you’ve been waiting for.

Simply drag the window you are using to the left or right hand side of the screen. The window will then “snap” to that side of the screen, as shown in Figure 10. You can also drag a window to the top of the screen to maximize it.

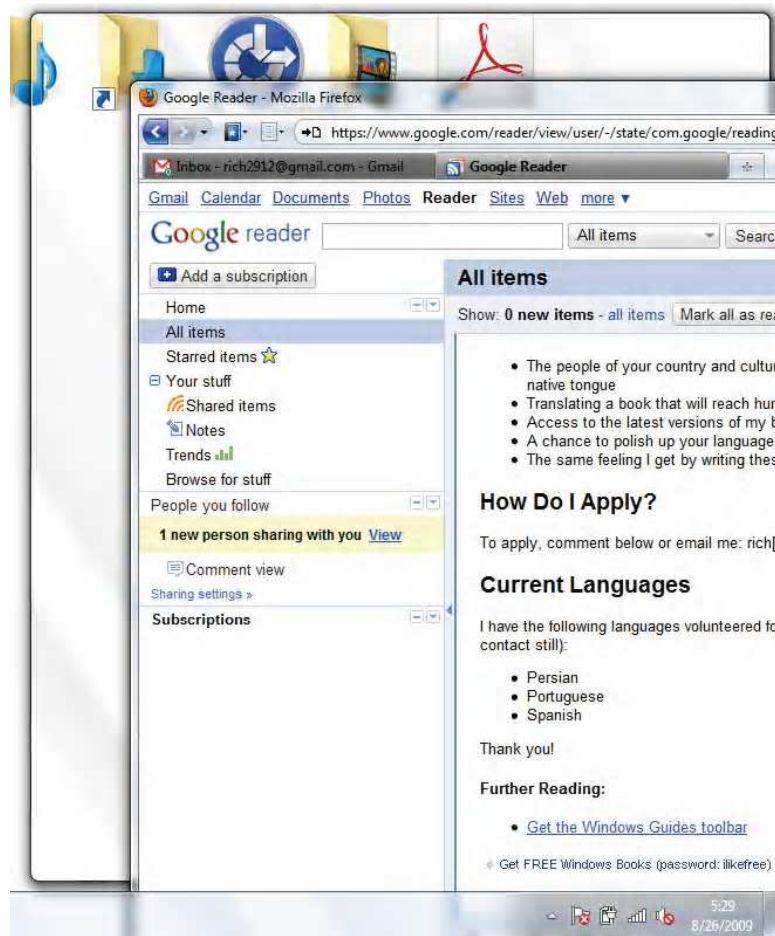


Figure 10: AeroSnap “snaps” your windows to screen edges

4.2.2 AeroPeek

AeroPeek helps you take a “peek” at your desktop by moving the cursor to the bottom, right- hand side of the screen. This feature helps you regain focus. I’ve not found this feature as useful as AeroSnap, but I am sure the idea will grow on me and I will find myself using it more often as I become more familiar with it. Figure 11 shows an example of AeroPeek in action.

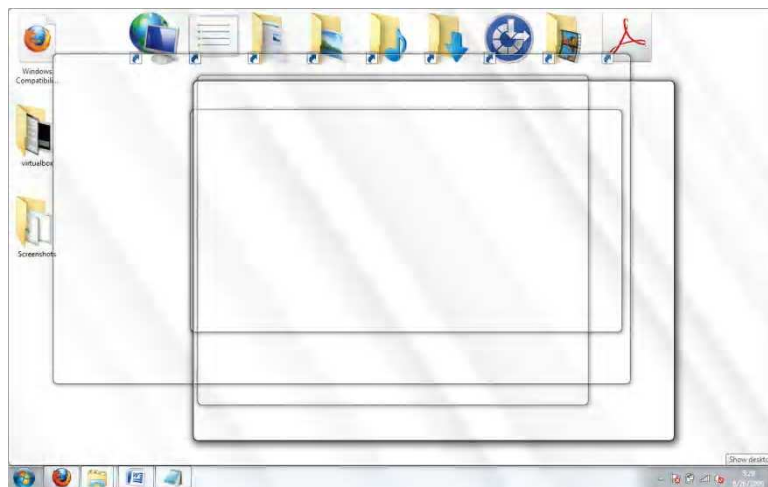


Figure 11: AeroPeek lets you “peek” at your desktop

4.3 Federated Search



Federated search is used to search beyond the scope of your PC. Based upon OpenSearch and RSS, you can search remote repositories. You can create your own connectors, which is very easy because of the standard format used by

OpenSearch. Figure 12 shows the Live Search connector after installation; you can now use Live Search directly from Windows Explorer.

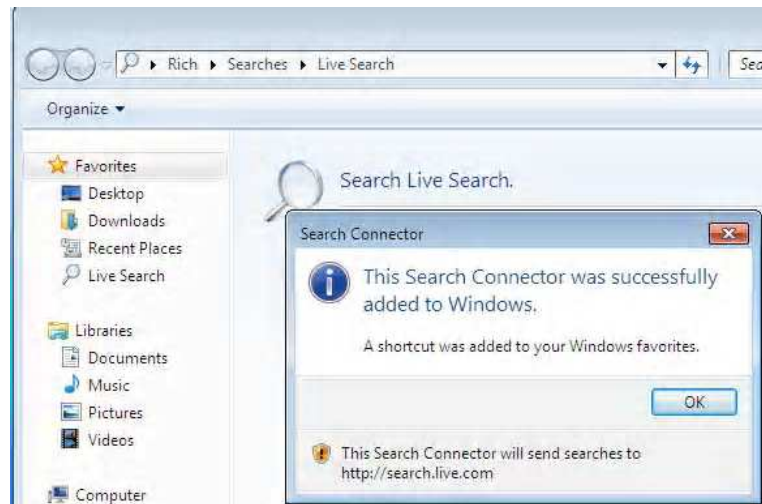


Figure 12: Use Federated Search connectors

4.4 Improvements in User Account Control

One of Windows Vista's most criticized features is User Account Control (UAC.) Things need to be simple when using your computer and UAC seemingly added a new level of complexity that rarely helped the average user. Yes, asking a user if they want to take a specific action does add a level of security; however, if the user is clicking

yes to everything, then this level of security becomes more of a stumbling block.

Microsoft listened to users and has greatly improved UAC. For example, the default user in Windows 7 (the one you set up when you installed Windows) has the setting enabled whereby self-made changes to Windows settings do not need a prompt. However, changes made by programs still need approval. Figure 13 shows the details of this setting. With this setting, only warnings are given when changes to the computer are requested by software.

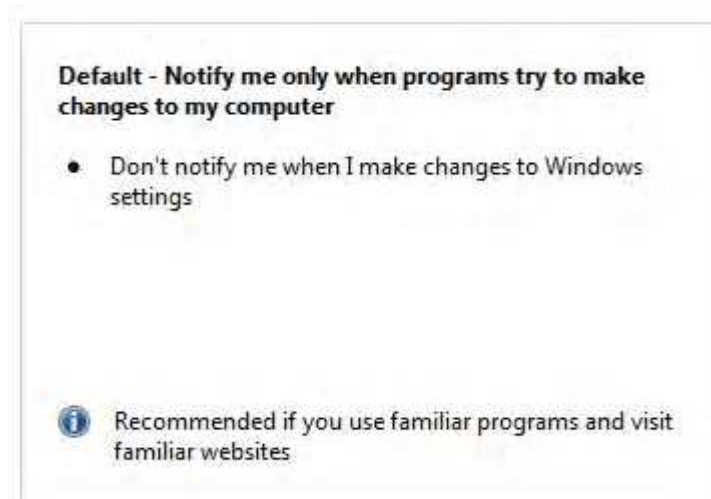


Figure 13: Default UAC Setting

To access UAC settings:

1. Click the Start button, type **UAC**, and click on *Change User Account Control Settings*.
2. Currently, there are four options are offered when deciding on the level of security set by UAC. These options are range from *Never notify* to *Always notify*.

Microsoft isn't the only one that made changes; other companies have built their software to work with UAC so there will be fewer compatibility issues as Windows 7 matures as an operating system.

4.5 BitLocker To Go and Biometric

BitLocker encrypts your drives so others cannot access them without a password. Two new and exciting features in Windows 7 are BitLocker To Go and BitLocker Biometric. The following is an explanation of both of these features:

4.5.1 BitLocker To Go

BitLocker To Go encrypts the data on your portable media. With an increasing number of key drives at our disposal, loss of sensitive data is becoming more of a threat. In this section, you'll learn how to encrypt your thumb (flash) drive with BitLocker To Go (Alternative: [Encrypt your USB Drive's Data](#)), how to verify that the data is encrypted, and how to remove encryption from your drive.

4.5.1.1 Encrypting Your Thumb Drive

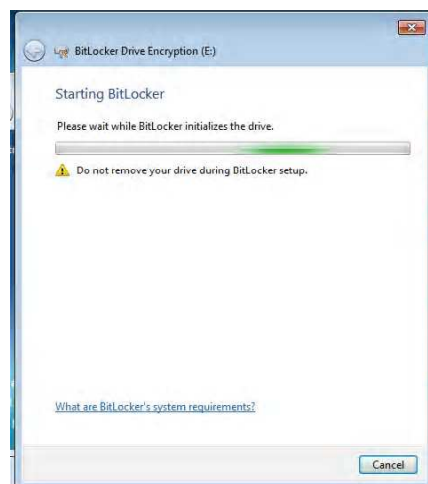
To encrypt your thumb drive:

1. Plug your thumb drive into a USB port.
2. Click the Start button, type **BitLocker**, and click on *BitLocker Drive Encryption*.

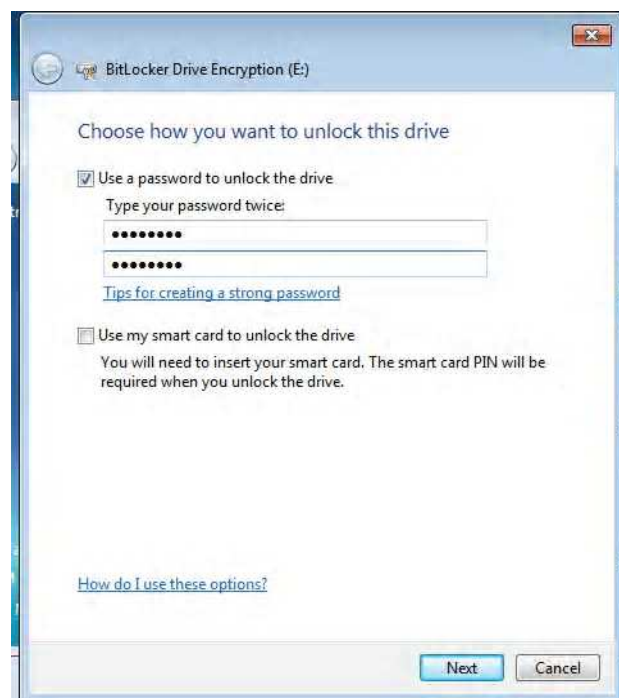
3. Next to your thumb drive icon, *click Turn on BitLocker.*



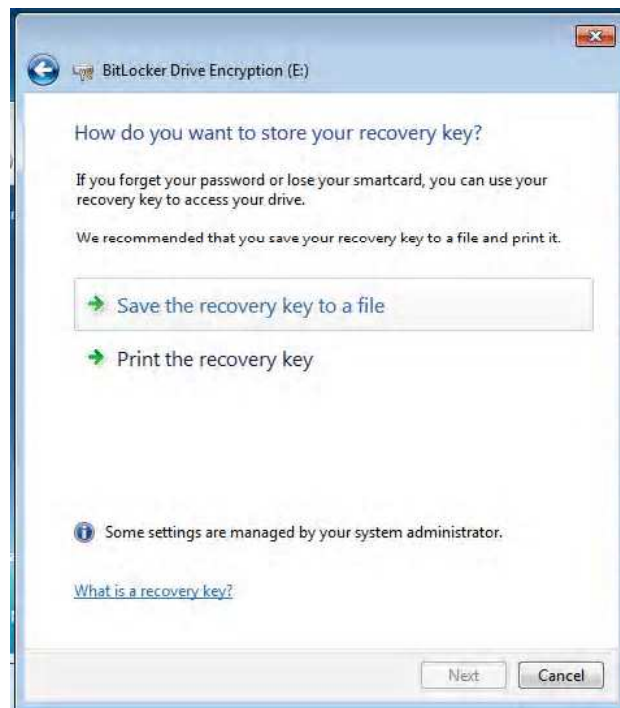
4. If your thumb drive is compatible, BitLocker will prepare it for encryption.



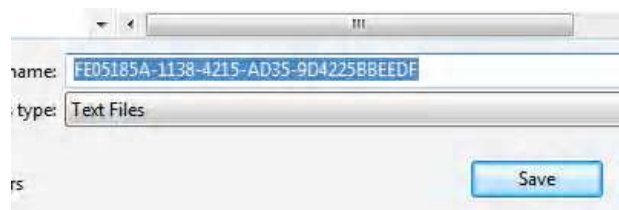
5. Choose a password and click *Continue*.



6. Either save your recovery key (used if you forget your password) or print a copy of it.



7. If you save the file, ensure the file is stored somewhere safe.



8. Click *Next*.



9. Confirm your chosen settings and password and click *Start Encrypting*.



10. Your drive will now be encrypted.



If you have a large thumb drive, this can take a long time.



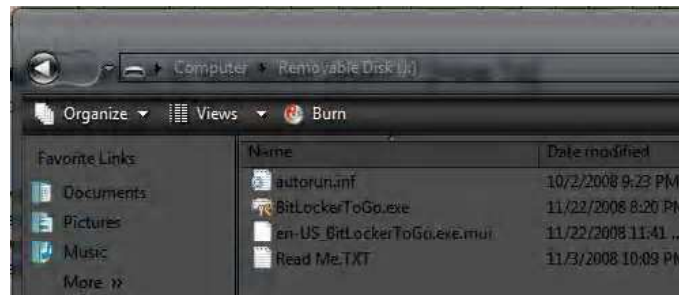
4.5.1.2 Verifying That Your Data is Encrypted

When protecting your data or anything you own, it is important to ensure the protection actually works. I took my thumb drive out of the Windows 7 machine and put it in a Vista machine. You should do the following too, to ensure your data is protected.

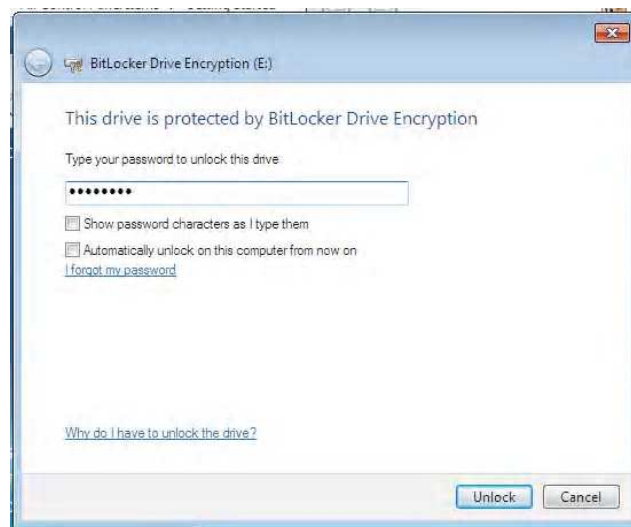
Please note: If you check the drive in an older version of Windows, you will need either XP SP3 or Vista SP1 (or above) to read the encrypted drive. Other operating systems will recognize the drive as an unformatted drive.

To verify that your data is protected:

1. Put your thumb drive in another PC and try to open the files. You should see a *BitLocker* setup file, which shows BitLocker is not installed on the computer you're testing on. If you have BitLocker installed on the machine, you will be prompted for a password (see the next step.)



2. If you have BitLocker installed on the PC you are testing on, you will be prompted for your password. If it's not installed, go ahead and install it.



3. Enter your password to get to your data.

4.5.1.3 Removing BitLocker Encryption

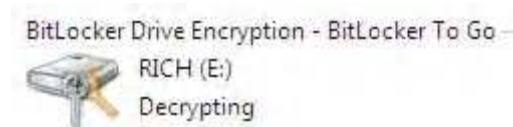
If you would like to decrypt your drive:

1. Plug your thumb drive into a USB port.
2. Click the Start button, type **BitLocker**, and click on *BitLocker Drive Encryption*.

3. Next to your thumb drive, click *Turn Off BitLocker*, and click *Decrypt Drive*.



4. You should be notified your data is decrypting (this will take some time.)



5. Your drive is no longer encrypted.

Now you are familiar with Windows 7's built-in feature, BitLocker To Go, which helps you protect your data.

4.5.2 BitLocker Biometric

BitLocker Biometric protects your computer by fingerprint credentials. If you don't have a fingerprint scanner on your laptop, I am sure, by now, you've seen someone with a laptop that has this functionality. BitLocker Biometric provides native support for logon authentication for Windows and also comes with an API software vendors can use to protect access to programs. Expect to see more and more programs using this feature. Figure 14 shows a list of biometric devices attached to your computer.



Figure 14: List of Biometric devices

You can assign any finger when enrolling a biometric device as shown in Figure 15.

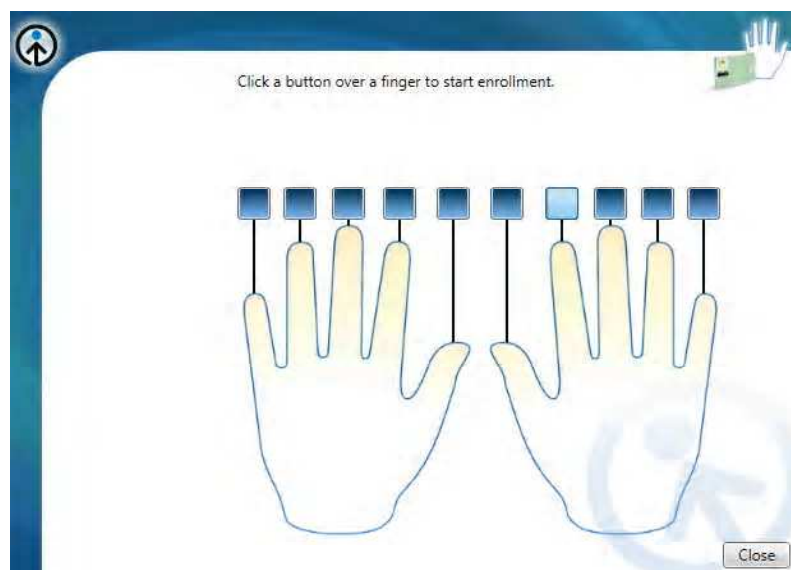


Figure 15: Assign a finger to your biometric device

BitLocker biometric looks to be an exciting feature that will become more integral to our computing habits in the near future.

4.6 The Windows HomeGroup

Setting up a home network can, at times, be complicated. In the past, Windows XP and Vista haven't done a great job

at guiding you through the setup process. As the average household has more than one computer these days (no source, but I'm just assuming this is the case), home networking is becoming more of a mainstream need. With PCs running Windows 7, a home network is easier to setup and a lot more useful. HomeGroup makes it easier to connect to other computers and devices on a wireless home network, so you can share files, photos, music, printers, and more throughout your home network. HomeGroup is strictly a feature of Windows 7, so you'll need to have at least two PCs running Windows 7. Once you've set up a HomeGroup, you can use the *Network and Sharing Center* to choose what you share with other HomeGroup members.

4.6.1 Set up Your HomeGroup

Figure 16 shows the location specification of the current network you are connected to. When you select *Home* as your network locationn (after connecting to your network), Windows will start modifying settings to enable resource sharing.

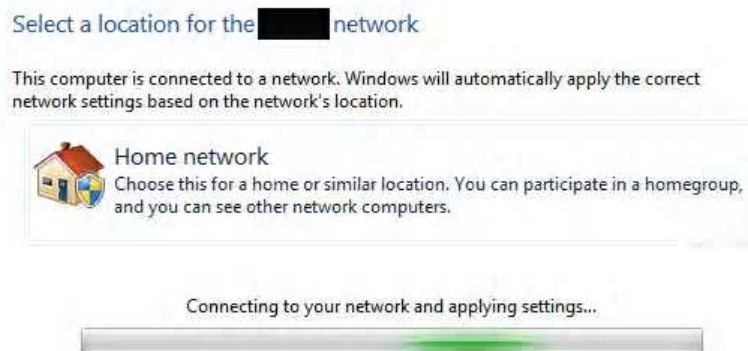


Figure 16: Selecting the location of your network

After Windows prepares your network, you will be asked to decide what you want to share on the network. Choose from Pictures, Documents, Printers, Music, and Videos (Figure 16.) When you click *Create Now*, your network will be set up with the choices you made (Figure 17.)



Figure 17: Selecting shared items for your HomeGroup

Now your HomeGroup is nearly set up. All you need is the password, which allows other computers, running Windows 7, to connect to your HomeGroup. Figure 18 shows the screen where you are given your password. You can view this password whenever you need by going to the *Network and Sharing Center*.

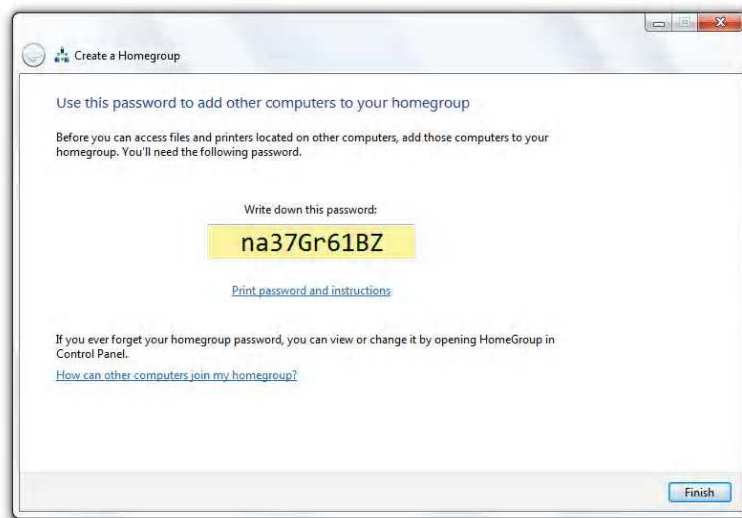


Figure 18: Your HomeGroup password

4.6.2 Joining Your HomeGroup with Another PC

Now you've set up your HomeGroup, you can join other computers to it. To join your current HomeGroup, go to your second PC and:

1. Connect to the same network (wireless or wired) on which the current Windows 7, HomeGroup- enabled PC is connected.

2. You will be prompted to join the HomeGroup. Click *Join Now*.



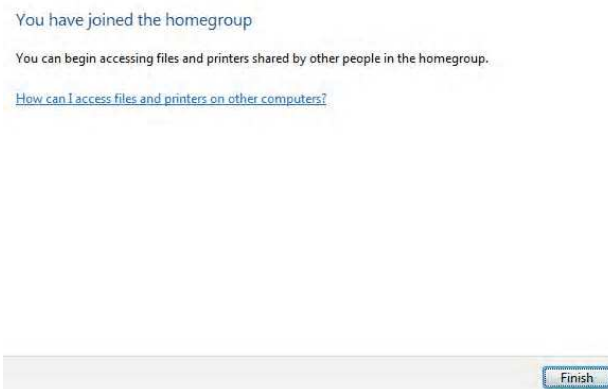
3. Type in your HomeGroup password



4. Now you can decide what you would like to share, from your PC, on the HomeGroup



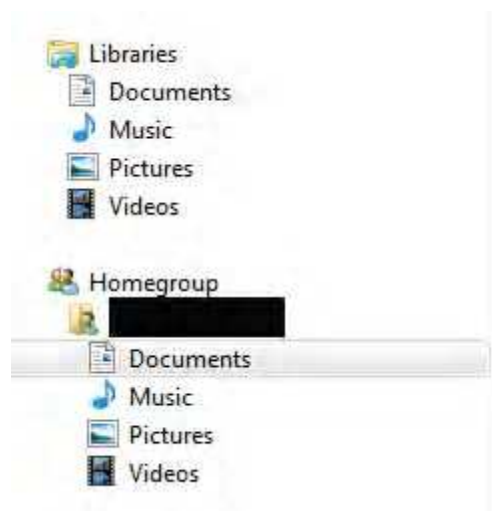
5. After sharing your files, your PC is now part of the HomeGroup.



4.6.3 Accessing Files Shared on the HomeGroup

To access files shared on your HomeGroup:

1. Open Windows Explorer (⊞+E.)
2. In the left-hand pane, you should now see your HomeGroup files. Click on the links to access the shared data.



4.7 Device Stage

Device Stage is a new technology that helps you interact with any compatible device connected to your computer. Device Stage lets you see device status and run common tasks. This a [current list of products that take advantage of Device Stage](#).

Device stage is designed to take the pain out of adding new devices to your computer and have them working almost instantly. Many people wonder why it is so hard to recognize a device plugged into a machine. Simply put, Windows cannot interact with all these devices instantly because they all work differently; Windows needs drivers for these devices to communicate with them properly. Device stage will install drivers when you plug a new device in or go out to Windows Update to get the necessary files. I am very impressed with Device stage. I plugged in my LG TV and not only did it recognize it as such, but it changed my PC's resolution to the TV's native resolution of 1920 x 1080 without me clicking the mouse once.

Essentially, device stage should alleviate the need for bulky third- party applications that were required, in the past, to access your devices.

4.8 Action Center

Windows Action Center is an improved version of Vista's Security Center. The action center alerts you to problems with your PC and lets you know how you can resolve them. Notifications are delivered through the notification area (Figure 19.)

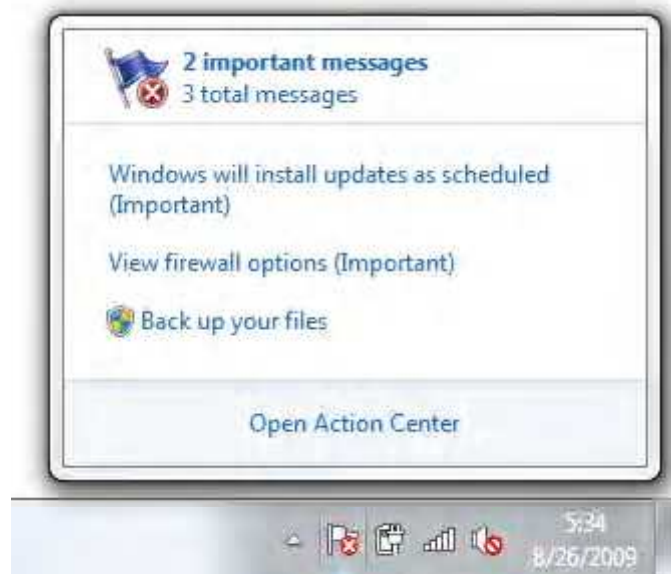


Figure 19: Action Center notifications

Figure 20 shows the action center, which gives you alerts about virus protection settings, Windows update, and more.

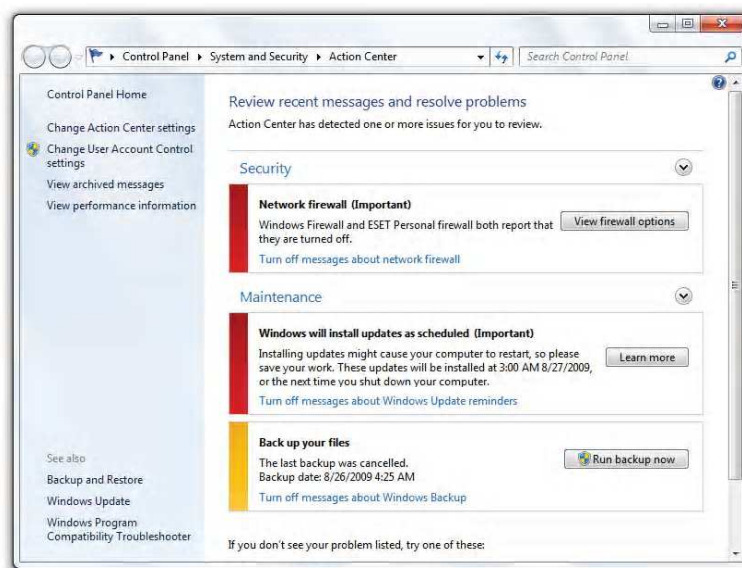


Figure 20: The Windows Action Center

The Action Center deals with both security and maintenance.

4.8.1 Action Center – Security

The security section of the Action Center deals with [anti-virus software](#) and [spyware protection](#), [firewall settings](#), [UAC](#), and more. This is your one- stop solution to ensuring

your computer is secure. Figure 21 shows the settings that are monitored.

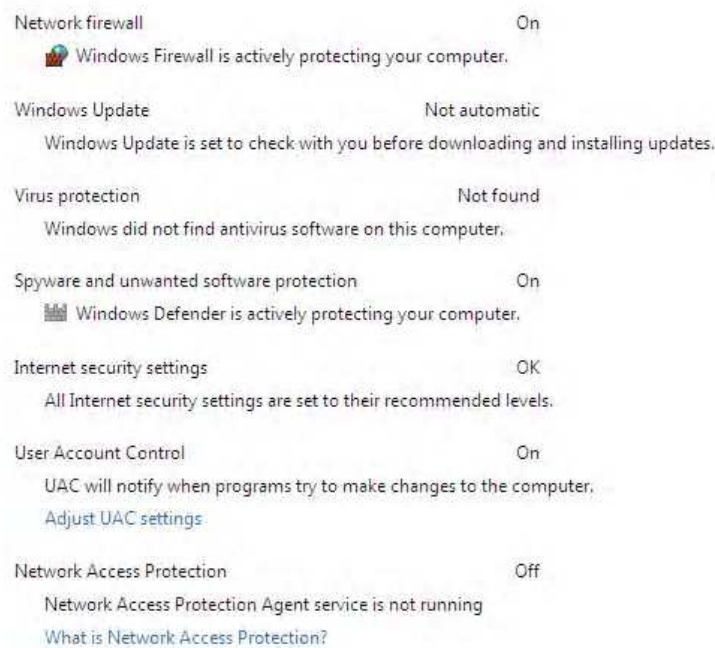


Figure 21: Action Center - Security alerts

4.8.2 Action Center – Maintenance

In a similar fashion to the [security section](#), the Action Center also ensures your computer is maintained and

deals with backup, updates, and more. Figure 22 shows the areas the Maintenance section is responsible for.

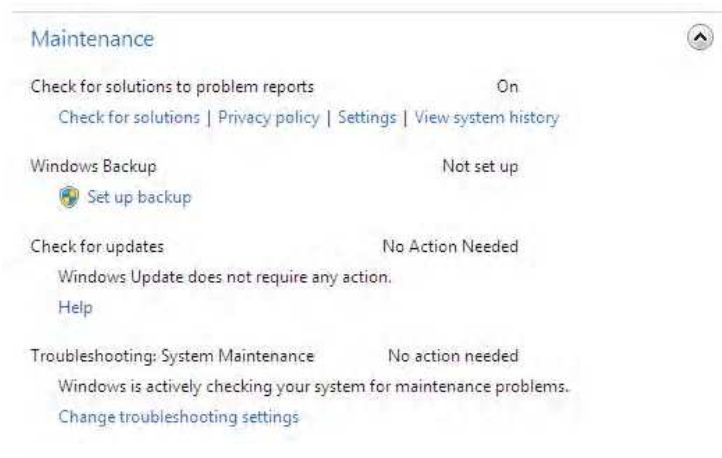


Figure 22: Action Center - Maintenance alerts

4.8.3 Action Center – Troubleshooting

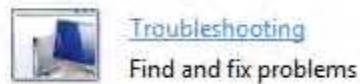
One great feature bundled with the Action Center is troubleshooting. If you are having problems with your computer, open the troubleshooting component and Windows will run tests to determine why the problem exists and how it can be fixed.

To test the troubleshooter, I decided to let Windows find out why I cannot run Aero in a [virtual environment](#). To troubleshoot a problem:

1. Click the Start button, type ***action***, and click on *Action Center*.



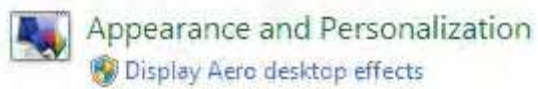
2. Scroll down and click on *Troubleshooting*.



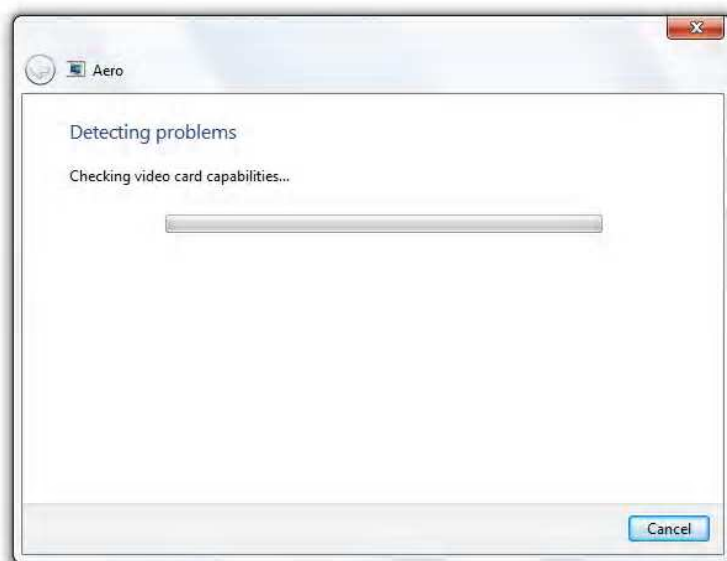
3. Click *Yes* if you would like to get the latest troubleshooting updates.



4. Locate the issue you are having (in this case:
Display Aero desktop effects.)



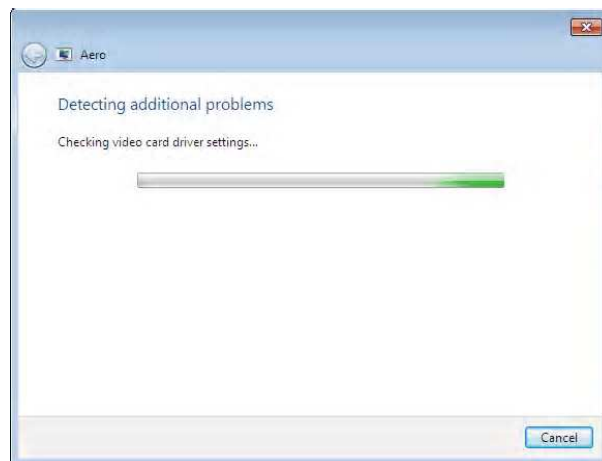
5. Windows will now determine why you are having the problem.



6. In this case, Windows determined I need to update my drivers.

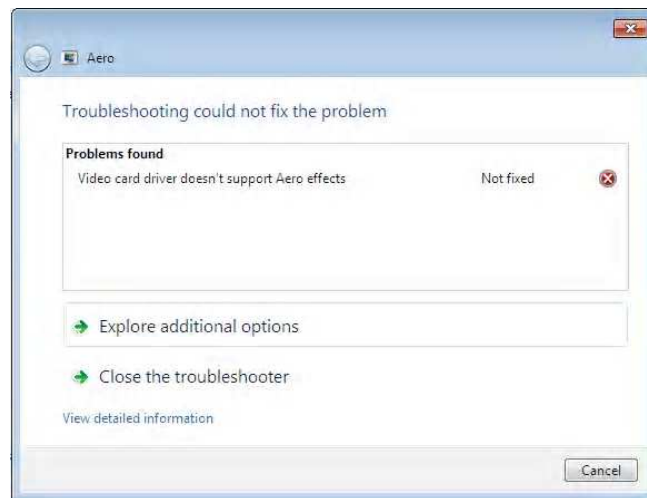


7. Windows may continue to detect problems.



8. Windows has found the exact problem: my graphics card (a generic VMware card) is not compatible with

Aero.



The Action Center is great and a move in the right direction. Computers will never completely fix themselves, but letting you know what the problem is helps greatly.

4.9 Internet Explorer 8

Internet Explorer 8 is Microsoft's latest web browser, which comes packed with many new features. Below is an explanation of how to get IE8 up and running and a breakdown of some of the best features.

4.9.1 Configuring IE8 for the First Time

When you first launch IE8, you are presented with some questions. I've put together a simple step by step and explanation of the initial setup:

1. Click on the IE8 icon on the Taskbar.
2. You will see the initial setup screen. Click *Next*.



3. Choose whether you want suggested sites or not.



4. I recommend choosing *Custom Settings*.



5. If you want a custom provider, *click Show me a webpage after setup to choose more search providers.*



6. If you want to set up more accelerators, *click Show me a webpage after setup to choose more Accelerators.*



7. *Smart Screen Filter* helps protect you from malicious websites.



8. You can choose to use compatibility updates.
These updates make websites, designed for older browsers, look better.



9. Click Finish and you are ready to go.

4.9.2 Web Slices

Web slices are used to save ‘snippets’ of your favorite web pages and show you just the parts you want to see. These can be really useful when you follow some websites that are updated frequently. See the [selection of Web Slices here](#).

An example of a Webslice: MSN News Slideshow:



4.9.3 Accelerators

Accelerators help you perform common tasks, such as online search and mapping, with ease. [Download](#)

[accelerators here](#) and install the ones you want to use.

Then, when you are browsing, simply highlight some text and click the accelerator arrow to perform a task.



Adding new accelerators is easy; click the accelerator you want and click *Add*.



4.9.4 Quick Tabs

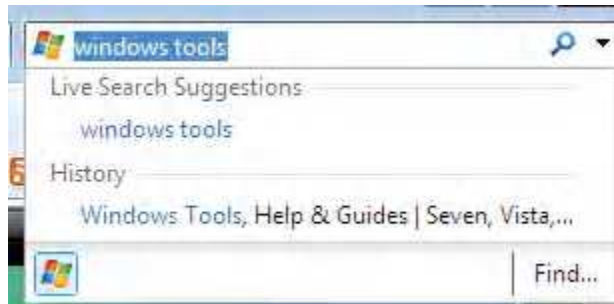
Quick tabs show you all currently open tabs at a glance to help you select the page you need.



4.9.5 Improved Search

Search has been greatly improved, with smart suggestions and even inline search (absence of a pop-up search window)—a feature I’ve taken for granted in Firefox.

Enter your query in the search bar and receive customized results and suggestions depending on the current search engine in use.



Inline search helps you find the key phrases you are looking for, without the hassle of a pop-up search box.



4.9.6 InPrivate Browsing

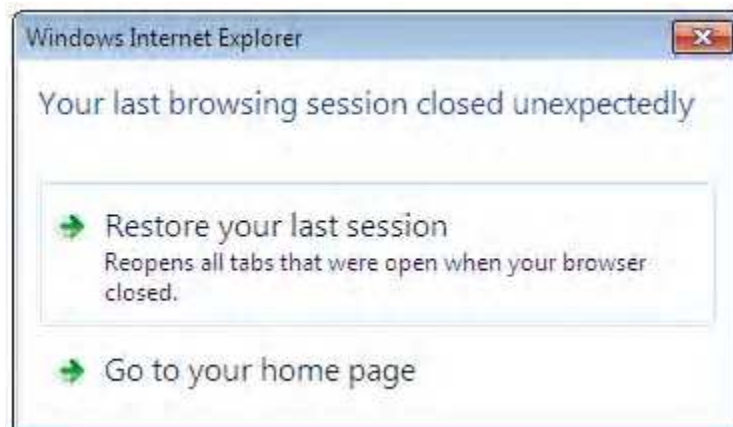
InPrivate Browsing helps prevent Internet Explorer from storing data about your browsing session. This includes cookies, temporary Internet files, history, and other data.

Toolbars and extensions are disabled by default.



4.9.7 Automatic Crash Recovery

If IE8 crashes while you are using it, you won't lose your current tabs; IE8 recovers your browsing session automatically.

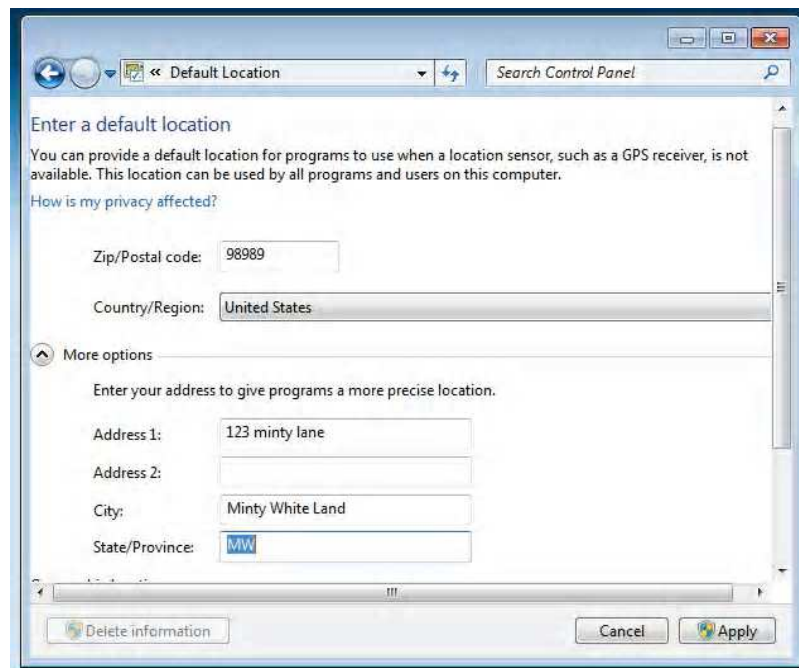


4.10 Geographic Location

Many programs in Windows 7, such as Firefox, will utilize your geographic location. This location will be used in a variety of ways including letting people know where you are when you send emails and take pictures, etc.

To set your default geographic location:

1. Click the Start button, type **loc**, and click on *Default Location*.
2. From this screen, you can set your default location settings.



3. When you are done, click Apply.

Now you are ready for maximum utilization as more location-aware programs and services are released.

4.11 Conclusion

Windows 7 has some excellent new features. Yes, there are even more new features than I previously listed in this chapter; however, I feel ones I've covered are the most exciting and useful.

Windows 7 is Microsoft's best operating system to date; I am in no doubt about this statement. The future is bright.

5 System Maintenance and Management

Just like any car, Windows needs to be maintained and cleaned frequently. Whenever I work on someone's computer, I have a check list of things I like to do to ensure I won't be working on the same computer anytime soon.

Anyone can maintain their computer; they just have to learn how. In this chapter you'll learn some basic tips and about some tools to use—to ensure your computer becomes/remains clutter free and does not get sluggish.

5.1 Automatically Delete Temporary Files

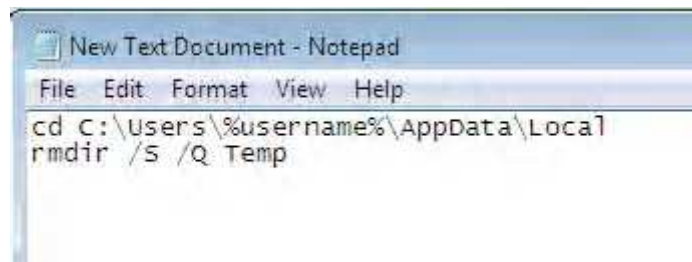
The Windows Disk Cleanup Wizard will delete your temporary files, but only if they are over a week old. To

create a simple batch script that will clean up your temporary directories:

5.1.1 Create the Batch File

Open Notepad and type (ensure you have two lines as shown below):

```
cd C:\Users\%username%\AppData\Local  
rmdir /S /Q Temp
```



Save the file as ***cleantemp.bat***



Now double click on the file, you created, to remove your temporary files and free up space on your computer.

If this doesn't work and gives an access error, try replacing %username% with you windows login username.

5.1.2 Automate the Process

To automate this process:

1. Right click on the batch file you created and click *create shortcut*.
2. Place the shortcut in your startup folder in the start menu ([Customize Your Start Menu.](#))
3. Now when you log in to Windows 7, your temporary files will be deleted.

5.2 Clean up Windows

Cleaning up Windows can be a tedious task as there are so many temporary and unused files stored everywhere. Manual cleaning may be more thorough, but would take hours. Luckily there are two programs suited to this job.

The first of these two programs is the well known [CCleaner](#). CCleaner is a freeware system optimization, privacy and cleaning tool. It removes unused files from your system—allowing Windows to run faster and freeing up valuable hard disk space. It also cleans traces of your online activities such as your Internet history. Additionally it contains a fully featured registry cleaner.

Another program I use frequently is [Advanced SystemCare Free](#) (ASC.) ASC is a comprehensive PC- care utility that has a one- click approach to helping protect, repair and optimize your PC.

I prefer ASC but CCleaner is great too. You do not need both of these programs; one of these programs is adequate.

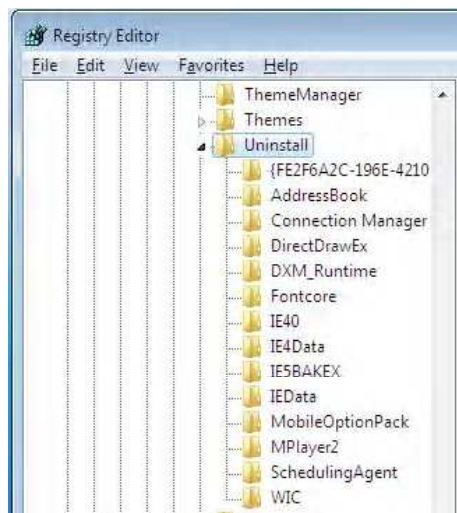
5.3 Remove Entries from Add/Remove Programs

There may be several reasons for removing certain programs from the add/remove programs list. One reason may be that you have no intention of removing some programs and they are cluttering the list—or you may want to remove that net monitoring program so your kids can't remove it. In this section you will learn how to remove these programs.

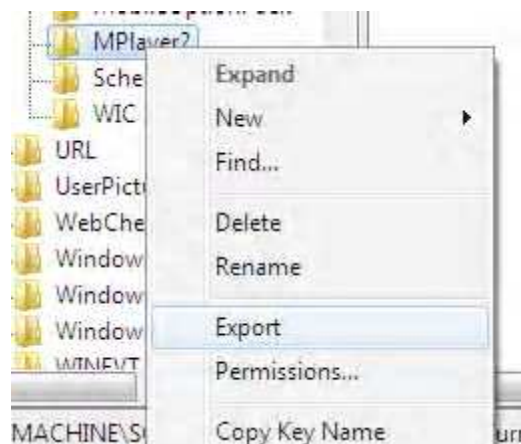
I recommend you [back up the Windows Registry](#) before doing this.

1. Open the Registry Editor ([Appendix D: Launch Windows Registry Editor.](#))
2. Scroll to the following entry:

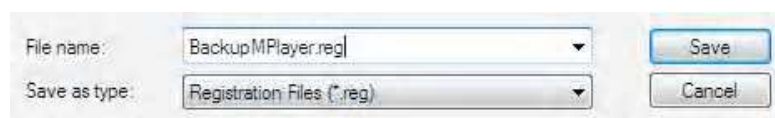
HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\Uninstall



3. In the left pane are the programs (some represented by numbers and letters, and some by their name) and in the right pane you can see the display name.
4. Find the key that corresponds to the program you want to hide. Click the key in the left pane and click *File > Export*.



5. Choose a name for the file and save it. (This will allow you to restore the key when you want to uninstall the program.)



6. Now the key is backed up, you can delete the key by right clicking on it and choosing *Delete*.
7. Restore the key by double clicking on the reg file you saved in step 5.

5.4 Remove Unwanted Software

I advise you to browse your add/remove programs list and weed out any software you do not use. This will free up hard drive space and cut down clutter on your PC.

If you have a newer PC, there may be a lot of trial software, coined “bloatware”. The [PC Decrapifier](#) is designed to remove a specific list unwanted software in an unattended fashion. The PC does not need to be new; however, the older the PC is, the less likely it will have any of the software it can detect.

Simply download [PC Decrapifier](#), and run the EXE. There is no installation necessary. If you have anti- virus software installed, it may complain about this program; these warnings can be safely ignored.

When it runs, you will be presented with a wizard- style dialog box that steps you through the entire process.

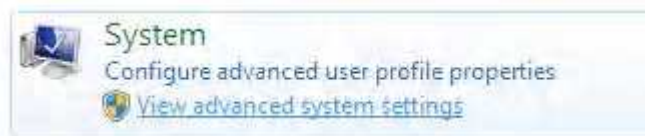
You will be able to pick and choose what programs you want to remove. The program will not remove anything, without prompting you first.

Click the *Next* button and it will begin cleaning your PC. If it does not find anything, a pop-up box will notify you of this and the program will exit and not modify your PC.

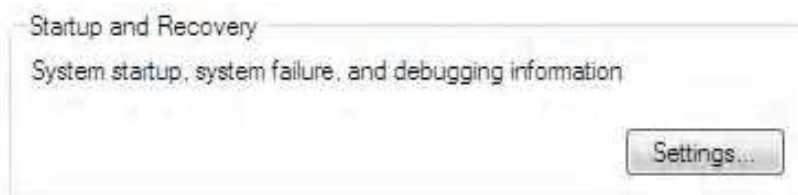
5.5 Disable Memory Dump Files and Save HDD Space

If your computer crashes, it will create a dump file. From this dump file you can diagnose the source of the problem. It is unlikely you will need this file; if you do, you can always turn the option back on. This section will show you how to save space by disabling memory dump files in Windows 7.

1. Click Start and click *Control Panel*.
2. Type **Advanced** in the search box.
3. Click on *View advanced system settings* in the search results.



4. Under *Startup and Recovery*, click *Settings*.



5. In the *Write debugging information* drop down, click *(none)* and click *OK*.

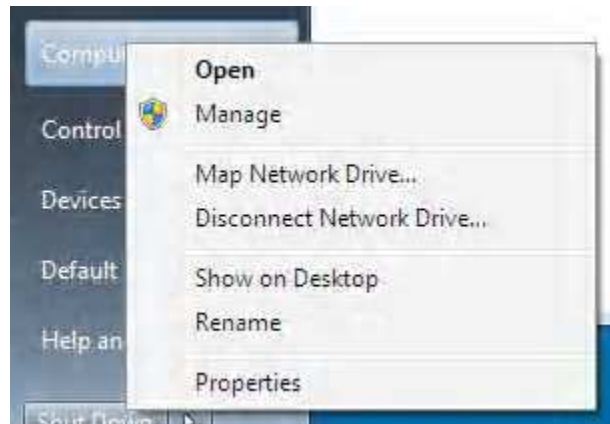


6. You will now save space and not store (possibly) useless information.

5.6 Shrink/Extend a Partition on Your Hard Drive

If you use multiple partitions on your hard drive, you may want to shrink or extend one of them—after realizing you want more space on another one of the partitions. ([Create a New Partition.](#))

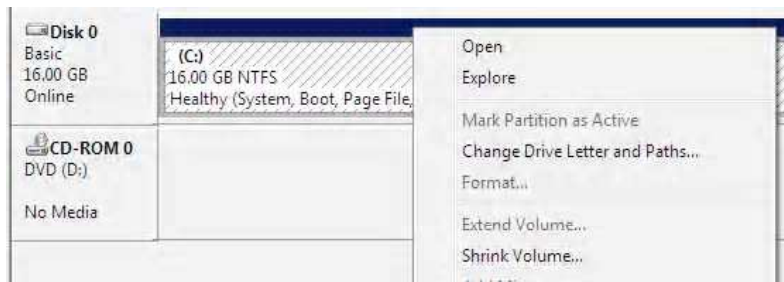
1. Click the Start button, right click on *Computer*, and click *Manage* (the Computer Management Console will load.)



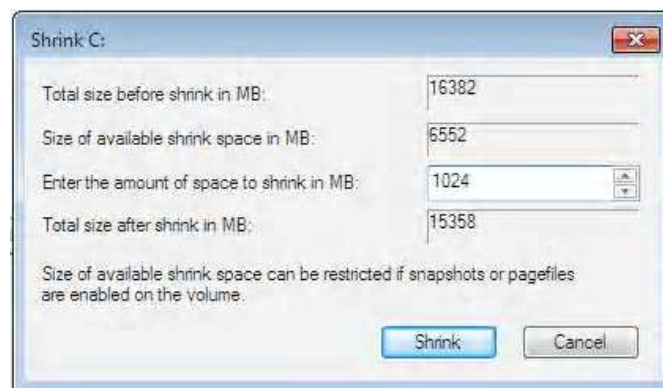
2. In the left pane, click *Storage > Disk Management*.



3. All disks and partitions will display. To shrink a partition, right click on the partition and choose *Shrink Volume*.



4. Enter the amount of space, to shrink by, in MB.



If you would like to extend a partition, you will need to make sure there is empty space available behind the partition. Then go back to step 4 and instead click *Extend Volume*.

5.7 Schedule Defragmentation

Defragmentation helps speed up access to data on your drive. In this section, you'll learn how to schedule defragmentation so you don't have to worry about ensuring your drive is defragmented.

5.9.1 What does “Defragment” mean?

When you constantly add and delete files on your hard drive, they become fragmented.

Think of this as follows: You have a library full of collections of books. Each of these collections represents a file on your hard drive. You take one book from the collection and put some sticky notes in the book and make it too big to fit back on the shelf—so you put it on the end. Every now and then you get a new book for a collection; these too need to go on the end of the shelf. You sell a collection and buy a bigger one to replace it.

Unfortunately, the whole collection doesn't fit in the recently made space so you put half in the space and half at the end of the shelf. You do this for years and you have

a mess on your hands. Defragmenting “re- orders your book collections” in terms of your data, and makes access to them a lot easier.

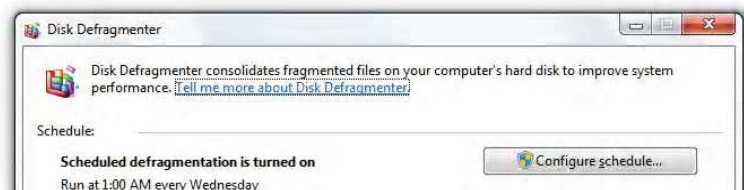
5.9.2 Setting up Scheduled Defragmentation

Setting up scheduled defrags is easy:

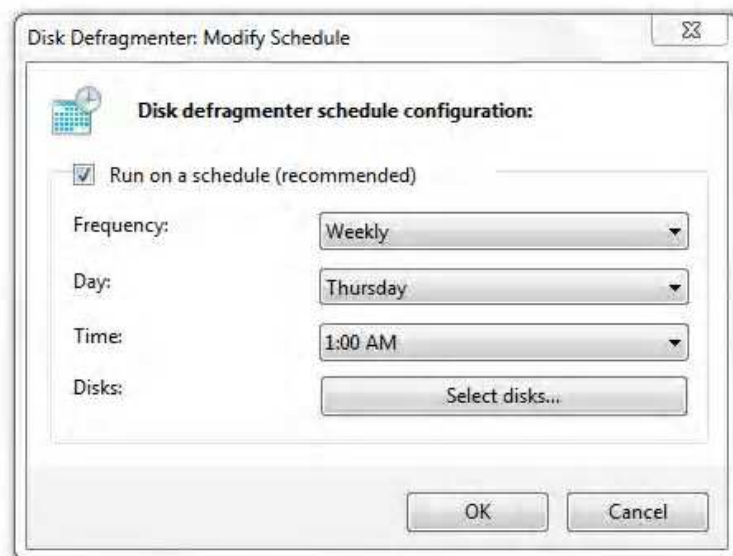
1. Click the Start button, type **defrag**, and click *Disk Defragmenter*.



2. Click *Configure schedule*.



3. Choose a time when your computer is turned on, but you are not using it.



4. Click *OK* and *Close* to save your settings

Your disk will now be defragmented regularly.

5.8 Take Charge of Automatic Updates

If you leave your computer on overnight, you may find you come back in the morning to find all your programs closed and that download, you were waiting for, canceled. Likely,

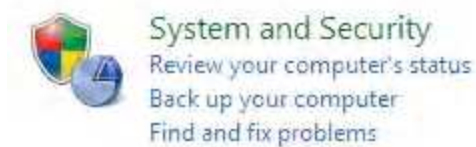
automatic updates restarted your computer or you had a short power outage. In this section, we'll blame automatic updates and learn how to disable automatic installation of the updates.

Automatic updates will let you choose different options:

- Install updates automatically.
- Download updates but let me choose whether to install them.
- Check for updates but let me choose whether to download and install them.
- Never check for updates.

To configure automatic updates:

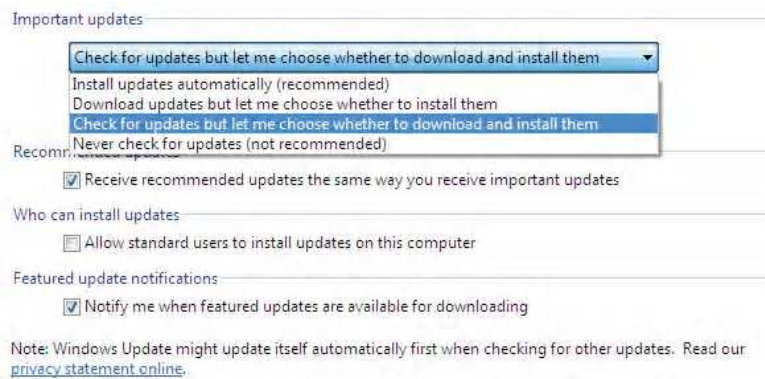
1. Click the Start button and click *Control Panel*.
2. Click *System and Security*.



3. Click *Turn automatic updating on or off*.



4. Choose your preferred method of updating your computer.



5. Click *OK*.

Now, when updates are available, you will not necessarily have to install them instantly.

6 Increase Performance

Windows runs pretty well on its own. I am very impressed by how well Windows 7 works out of the box, but there are still a few things you can do to improve performance.

I could write many books on all the tweaks you can apply; however, in this chapter I will focus on the key things you can do to get the most performance out of doing the least work.

As always, I recommend you make backups before making major changes to your system:

- [Appendix C: Create a System Restore Point](#)
- [Appendix E: Back up the Windows Registry](#)
- [Back up Your Data](#)

6.1 Reduce Boot Time

Does your computer boot slowly? If you shut your computer down regularly, this can be a real pain. Anything more than about 45 seconds tests my patience and I've used computers that take well over five minutes to boot (really, not kidding.)

There are three easy things you can do to improve boot time:

- Remove unnecessary startup programs.
- Delay non-essential programs on startup.
- [Remove Spyware.](#)

In this section, you will learn how to do the first two of these tasks.

6.1.1 Use Startup Delayer to Reduce Boot Time



Some programs need to start right away, like your dock or your antivirus

program. Some programs can wait; for example: Messenger programs, etc.

With [StartUp Delayer](#), you can set programs to start up in defined intervals, which will smooth the startup process considerably. The program also acts as a startup manager, allowing you to uncheck programs you don't want to run at all.

Figure 23 shows Startup delayer's interface, which lets you drag programs to the delay area. Once in the delay area, you can define how long to wait before these programs start.



Figure 23: Startup Delayer's interface

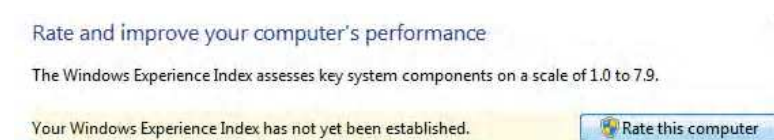
After testing this software on my Windows 7 Ultimate laptop (Core Duo 2 GHz, 3 GB ram), I managed to get a complete startup time (boot to functionality) in 28 seconds (originally 41)... not bad. I have done other things to tweak my laptop, but this is still a real improvement.

6.2 Rate and Improve Your Computer's Performance

Like Windows Vista, Windows 7 comes with a performance rating tool, which rates your system and then gives you tips on improving it. In this section, you'll learn how to use Windows 7's Performance Information Tools to rate your system.

To rate your system:

1. Click the Start button, type *perf*, and click on *Performance Information and Tools*.
2. Click on *Rate this computer* and let the tests run.



Windows will now rate your computer. This rating can take up to 20 minutes (Figure 24.)



Figure 24: Rating Computer Performance

After the test is complete, Windows will offer suggestions on how to improve your computer's performance (Figure 25.)

Rate and improve your computer's performance

The Windows Experience Index assesses key system components on a scale of 1.0 to 7.9.


Component	What is rated	Subscore	Base score
Processor:	Calculations per second	5.1	 Determined by lowest subscore
Memory (RAM):	Memory operations per second	5.1	
Graphics:	Desktop performance for Windows Aero	3.1	
Gaming graphics:	3D business and gaming graphics performance	3.0	
Primary hard disk:	Disk data transfer rate	5.2	

Figure 25: Windows Scores Your Computer Based on Performance

6.3 Enhance SATA Disk Performance

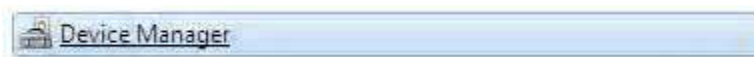
You can improve the performance of your SATA hard drive by enhancing write caching.

If you are not sure whether or not you have an SATA drive in your computer, please check with your manufacturer.

A quick warning: If you turn this setting on and your computer is not connected to a battery backup, losing power increases your risk of data loss or corruption. If you are using a laptop, the chances of this are unlikely as you have a battery in the laptop that will act as a power source if there is an outage.

To enhance SATA drive performance:

1. Click on the Start Button, type **dev** in the search box, and click *Device Manager*.



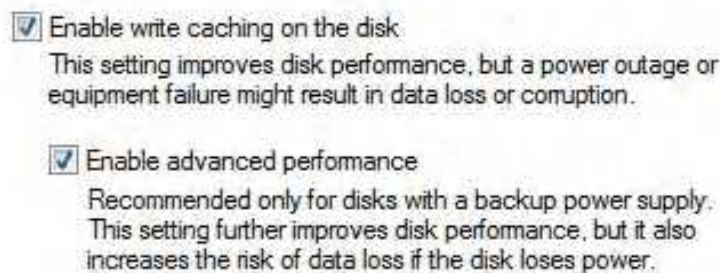
2. Click on the + Next to *Disk Drives*



3. Right click on your hard drive and click *Properties*.



4. Click the *Policies* tab and check *Enable advanced performance* (Note: this option may not be available for your drive.)



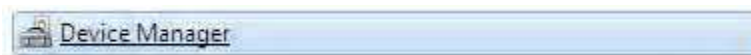
5. Now click *OK* and close Device Manager.

6.4 Speed up Your External Hard Drives

The default setting in Windows 7 disables write caching for external drives. This is done so that you can remove an external drive at any time without data loss. If you are willing to eject your drive each time using Safely Remove Hardware, you can increase the performance of your external hard drives by enabling write caching.

To turn write caching on and activate advanced performance:

1. Click on the Start Button, type *dev* in the search box, and click *Device Manager*.



2. Click on the + Next to Disk Drives.



3. Right click on your external hard drive and click *Properties*.



4. Click the *Policies* tab and click *Optimize for performance*.

- ☒ Enable write caching on the device
Improves system performance by enabling write caching on the device, but a power outage or equipment failure might result in data loss or corruption.
- ☒ Turn off Windows write-cache buffer flushing on the device
To prevent data loss, do not select this check box unless the device has a separate power supply that allows the device to flush its buffer in case of power failure.

5. If available, check: *Enable write caching on the device* and *Turn off Windows write-cache buffer flushing on the device*.
6. Click *OK*.
7. Reboot your computer to apply changes.

6.5 Use ReadyBoost to Speed up Programs

Using Windows ReadyBoost is a great way to improve the performance of your computer when doing your day-to-day tasks.

6.4.1 What is ReadyBoost?

ReadyBoost uses a USB thumb drive to create an extra cache of the most commonly used data, which is quickly accessible when needed. Microsoft's website states:

Windows ReadyBoost [is] a new concept in adding memory to a system. You can use non-volatile flash memory, such as that on a universal serial bus (USB) flash drive, to improve performance

without having to add additional memory "under the hood."

[Source](#)

6.4.2 How Does ReadyBoost Work?

Solid state memory (what your USB drive uses) has excellent transfer speeds; therefore, it can be used to store and access data that is needed quickly.

Windows 7 ReadyBoost uses the USB thumb drive as an extra cache between the processor and the hard disk. Unlike RAM, the data is stored on your thumb drive and can be used next time you use your computer—a great time saver if you use many different programs and run many of them simultaneously.

6.4.3 What are the Requirements for ReadyBoost?

For a USB thumb drive to be compatible, it needs to have a minimum of 256 MB free space. Most modern USB thumb

drives will meet the space and speed requirements of ReadyBoost.

6.4.4 How Can I get ReadyBoost Working for Me?

To enable ReadyBoost:

1. Put your USB thumb drive into a USB port on your computer.

2. When the *AutoPlay* menu appears, click *Speed up my System with Windows ReadyBoost*.



3. Select your device and specify how much of the drive you want to use for ReadyBoost. I recommend using a full USB drive. (TIP: match the size of your drive to the amount of RAM you have in your computer. i.e., With 4GB RAM, use a 4GB thumb

drive.)



4. Click *OK*. Don't expect miracles—but stick with it and your computer will begin to perform more efficiently.

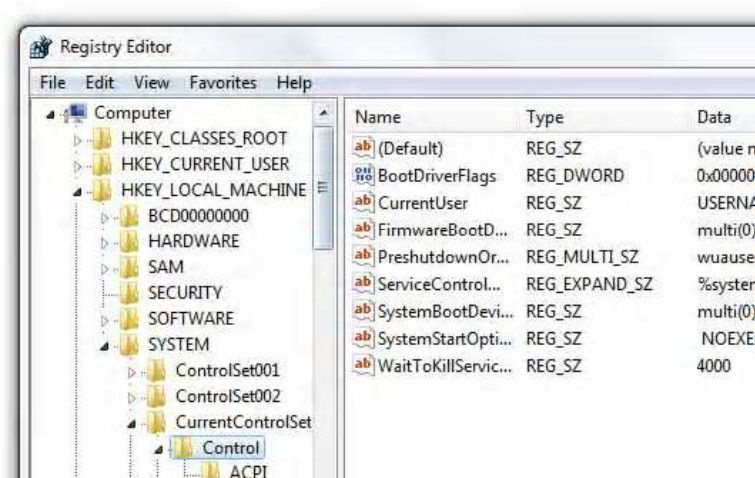
6.6 Make Windows Shut Down Faster

As you install programs on your computer, it slows down—we all know that. However, what you may not know is that the programs install services. Windows is “kind” enough to patiently wait for these services to stop when you shut down your computer; however, if you have all your work saved, there is no need to wait.

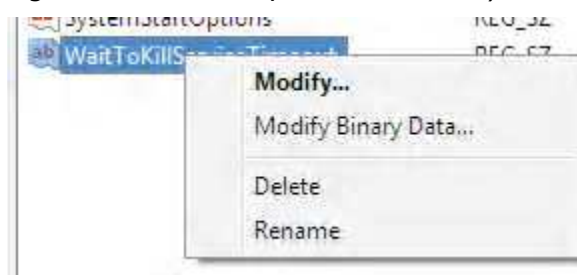
Decrease the time it takes for Windows to shut down by:

1. Open the Registry Editor ([Appendix D: Launch Windows Registry Editor.](#))
2. You will see a screen like the one below. In the left menu, navigate to:

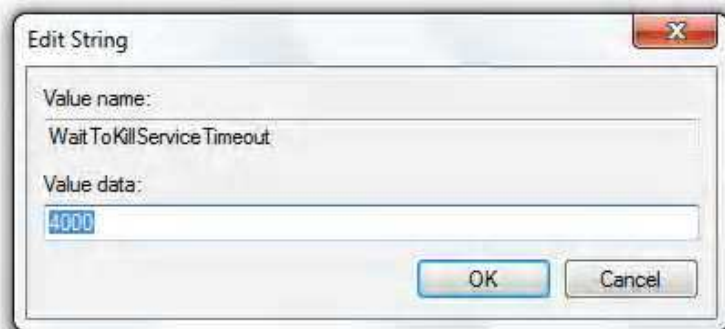
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control



3. In the right pane you will see a key called *WaitToKillServiceTimeout*, with a default value of *12000* (12 seconds.)
4. Right click on the key and click *Modify...*



5. Change the value from *12000* to **4000**.



6. This can potentially reduce your shut down time by 8 seconds.

Please note: I do not advise setting this value to less than four seconds because some programs need a few seconds to close and you increase the chance of data loss by setting this value any lower.

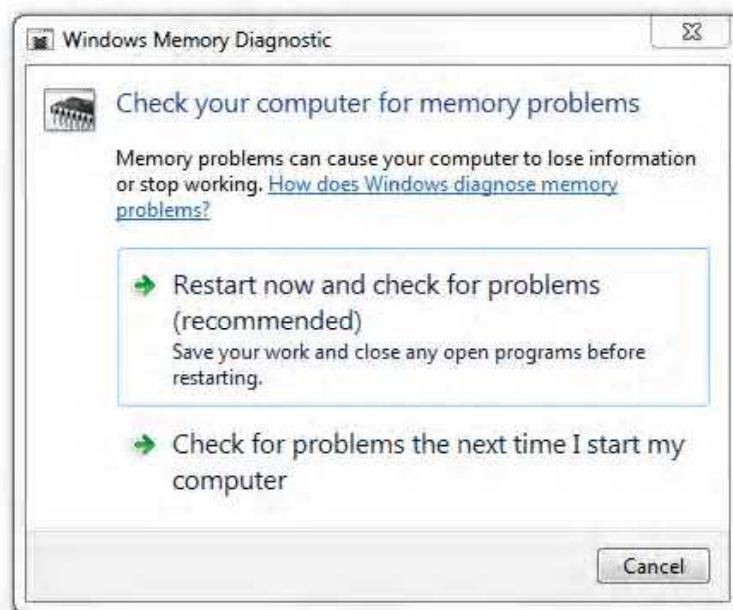
6.7 Run Memory Diagnostic Tool

Memory (RAM) can become corrupted and not work properly. Usually, a replacement is needed to fix the

problem, but before you replace your hardware, you should use the Windows Memory Diagnostic tool. This tool is available in both Windows Vista and 7.

To run Windows Memory Diagnostic:

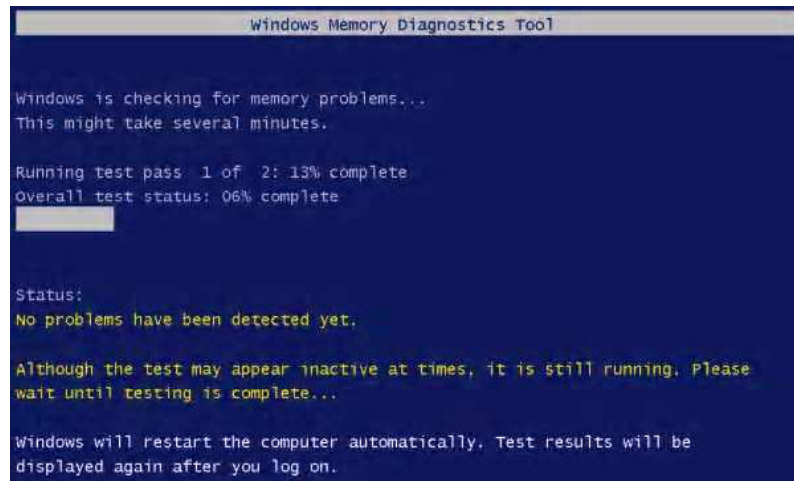
1. Click the Start button, type *mem*, and click on *Windows Memory Diagnostic*.
2. When the Windows Memory Diagnostic screen loads, click *Restart now and check for problems*.



3. Your computer will restart.



4. The memory diagnostic will run and can take some time (up to an hour.)



5. Windows will restart and report any errors to you.



After sharing this feature with Windows Vista users, many of them reported a more responsive system after the test and I expect the same results with Windows 7.

7 Customize Your Start Menu and Desktop

The start menu and your desktop are two of the most commonly used elements of Windows 7. Customizing both of them can make your computing experience more enjoyable and productive. In this chapter, you'll learn how to customize and improve your start menu; you'll also learn how to customize your taskbar, system tray, desktop icons, themes, and color scheme.

When you are done customizing, you can move to the next chapter and learn how to [save your settings as a theme](#). Remember, more is less with customization, so you don't need to follow this chapter completely. Use this chapter to inspire you to add the finishing touches to your system.

7.1 Customize Your Start Menu

The Windows Start Menu is notoriously bloated and often confusing—even in Windows 7. There are a couple of ways you can customize your start menu to restore order. The first is to customize the right-hand panel and the second is to organize the programs folder.

7.1.1 Customizing the Right-hand Panel

1. Right click on the Start button and click *Properties*.



2. On the Start Menu tab, click the *Customize...* button.



Here you can change what shows up in the right section of

the start menu (Figure 26.) If you don't use your Music folder, why have it linked there?

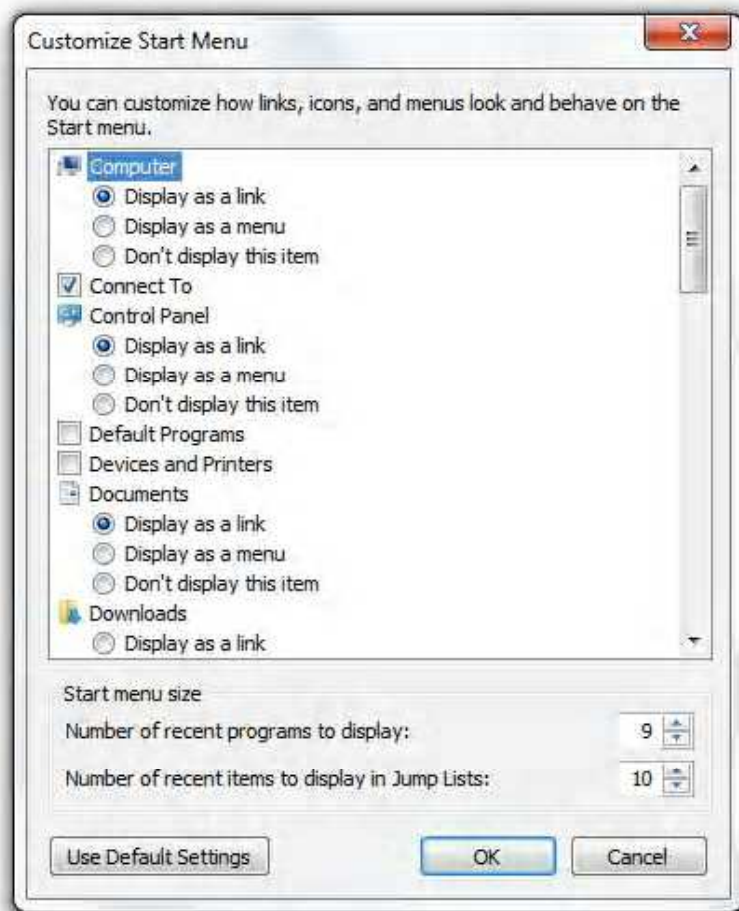
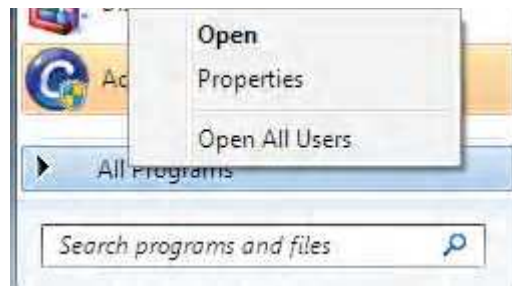


Figure 26: Customize the Right- Hand Panel

7.1.2 Customizing the Programs List

After installing a few programs, your start menu can get cluttered. To reduce the number of folders in the left part of the menu, consider using folders like 'Media', 'Internet' etc. To customize your Start Menu:
























































1. Click the Start button.
2. Right click on *Programs* and click *Open All Users / Open* (you'll need to edit both.)

















Once in the Windows Explorer window, you can rename folders and put links together as you please. I usually delete the shortcuts to readme files, help files, and uninstall links as these can all be accessed from other places and I rarely use them.

Before:

201 | 7 Customize Your Start Menu and Desktop

	7-Zip	2/7/2009 11:57 AM	File Folder	
	Accessories	2/24/2009 9:57 PM	File Folder	
	Acronis	2/7/2009 11:51 AM	File Folder	
	Administrative Tools	2/7/2009 12:03 PM	File Folder	
	Advanced SystemCare 3	2/7/2009 11:58 AM	File Folder	
	AeroSnap	2/19/2009 11:38 AM	File Folder	
	Broderbund	2/8/2009 1:07 AM	File Folder	
	Bulk Image Downloader	2/16/2009 9:32 AM	File Folder	
	Canon MX700 series	2/8/2009 12:17 AM	File Folder	
	Cheetah Burner	2/7/2009 11:59 AM	File Folder	
	ClockMaker	2/18/2009 8:09 PM	File Folder	
	Driver Magician	2/7/2009 12:15 PM	File Folder	
	Elaborate Bytes	2/7/2009 11:54 AM	File Folder	
	ESET	2/7/2009 12:40 PM	File Folder	
	Extras and Upgrades	1/20/2008 7:43 PM	File Folder	
	Foxit Reader	2/7/2009 12:04 PM	File Folder	
	Games	1/20/2008 7:43 PM	File Folder	
	Gtk+	2/7/2009 12:24 PM	File Folder	
	Ilium Software	2/7/2009 12:02 PM	File Folder	
	Insofta Cover Comma...	2/9/2009 4:16 PM	File Folder	
	Instant Eyedropper	2/7/2009 12:08 PM	File Folder	
	iTunes	2/7/2009 12:12 PM	File Folder	
	Maintenance	11/2/2006 5:56 AM	File Folder	
	Microsoft Office	2/7/2009 12:09 PM	File Folder	
	Microsoft Visual Studi...	2/7/2009 11:58 AM	File Folder	
	Mozilla Firefox	2/7/2009 12:04 PM	File Folder	
	MozyHome	2/11/2009 5:25 PM	File Folder	
	NetBeans	2/7/2009 12:24 PM	File Folder	
	PDF Split And Merge	2/17/2009 11:41 AM	File Folder	
	Pharos	2/20/2009 12:05 PM	File Folder	
	QuickMediaConverter	2/12/2009 4:35 PM	File Folder	
	QuickTime	2/7/2009 12:11 PM	File Folder	
	Smart Defrag	2/7/2009 12:00 PM	File Folder	
	Snagit 9	2/8/2009 9:13 AM	File Folder	
	Snatch Server	2/7/2009 12:30 PM	File Folder	
	SonicStage	2/11/2009 11:06 PM	File Folder	
	Startup	2/11/2009 5:25 PM	File Folder	
	Tablet PC	11/2/2006 5:37 AM	File Folder	
	Titan Backup	2/7/2009 12:31 PM	File Folder	
	VideoLAN	2/7/2009 12:32 PM	File Folder	
	VMware	2/7/2009 12:37 PM	File Folder	
	WinSCP	2/8/2009 4:33 PM	File Folder	
	Apple Software Update	2/7/2009 12:10 PM	Shortcut	2 KB
	LogMeIn	2/7/2009 4:57 PM	Shortcut	1 KB
	Pidgin	2/7/2009 12:24 PM	Shortcut	1 KB
	Safari	2/24/2009 9:36 PM	Shortcut	3 KB
	TweetDeck	2/13/2009 11:52 PM	Shortcut	1 KB
	Windows Calendar	11/2/2006 5:56 AM	Shortcut	2 KB
	Windows Contacts	11/2/2006 5:53 AM	Shortcut	2 KB
	Windows Defender	11/2/2006 5:56 AM	Shortcut	2 KB
	Windows Fax and Scan	11/2/2006 5:55 AM	Shortcut	2 KB
	Windows Live Messen...	11/2/2006 5:55 AM	Shortcut	1 KB
	Windows Mail	1/20/2008 7:43 PM	Shortcut	2 KB
	Windows Meeting Space	11/2/2006 5:56 AM	Shortcut	2 KB
	Windows Movie Maker	11/2/2006 5:55 AM	Shortcut	2 KB

After:

Name	Date modified	Type
 Accessories	2/24/2009 10:08 PM	File Folder
 Administrative Tools	2/7/2009 12:03 PM	File Folder
 Customization	2/24/2009 10:02 PM	File Folder
 File Tools	2/24/2009 10:07 PM	File Folder
 Games	1/20/2008 7:43 PM	File Folder
 Graphic	2/24/2009 10:04 PM	File Folder
 Internet	2/24/2009 10:09 PM	File Folder
 Life	2/24/2009 10:02 PM	File Folder
 Maintenance	11/2/2006 5:56 AM	File Folder
 Media	2/24/2009 10:07 PM	File Folder
 Office	2/24/2009 10:06 PM	File Folder
 Security	2/24/2009 10:06 PM	File Folder
 Startup	2/24/2009 10:07 PM	File Folder
 Web Development	2/24/2009 10:05 PM	File Folder

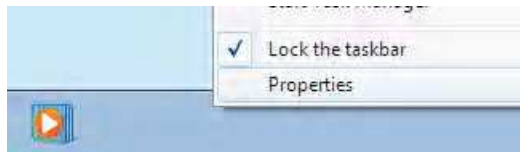
While the search function is great, it doesn't hurt to be organized. Please be aware that when you uninstall a program, it probably won't remove the link from the start menu because you've changed the location of the shortcut.

7.2 Change Start Menu Power Button Action

The start menu power option is set to *Shut Down*, by default, in Windows 7. In this section, you'll learn how to change this default option.

To change the default power option:

1. Right click on the Task Bar and click *Properties*.



2. Under the *Start Menu* tab, choose your desired power button action.



3. Click *OK* to save

Test the new setting by clicking the Start button and viewing the new option.

7.3 Change Your Account Picture

Your account picture is used for the login screen, your start menu, windows meeting space, and more. When you first set up your account, you can choose one of the default images. In this section, you'll learn how to

customize your account picture. Do this by following these steps:

1. Click the Start button.
2. Click your account picture at the top of the menu.



3. In the *User Accounts* window, choose *Change Your Picture*.



4. a. Either: click a picture you want to use.

- b. OR click *Browse For More Pictures*, locate your picture, and click *Open*.

Choose a new picture for your account



5. If you see any white space around your picture, edit it in paint or another editing program to make your image square.



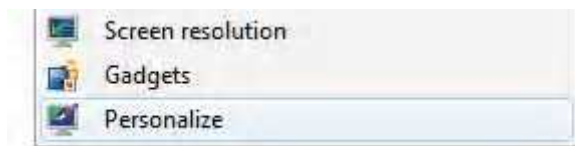
Now you have your own icon for your user account. This is really helpful when you have multiple users on your account.

7.4 Customize Desktop Icons

There are many ways you can customize your desktop icons: you can resize them, change them, or even remove them. Learn how to customize your icons in this section.

To customize your icons:

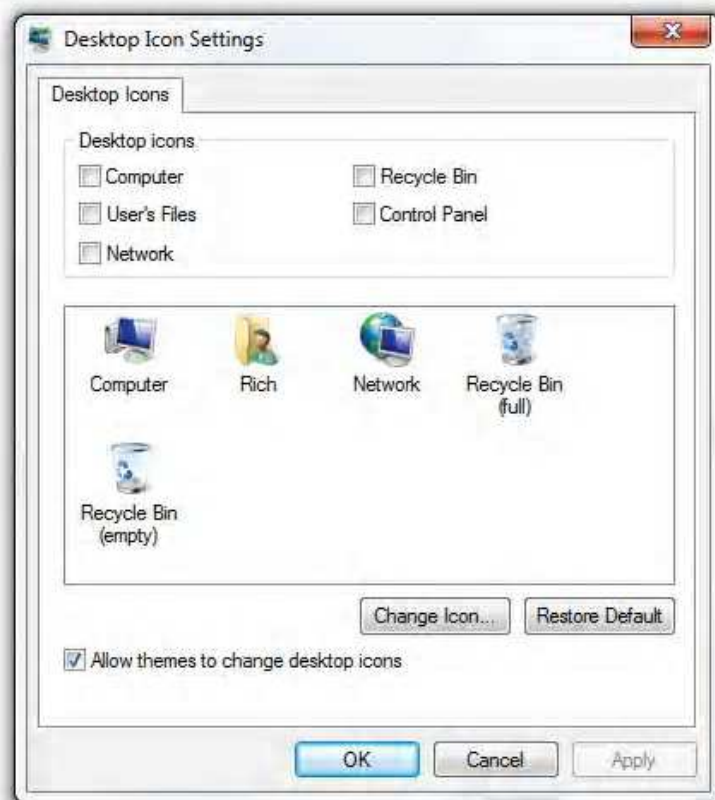
1. Right click the desktop and click *Personalize*.



2. Click *Change Desktop Icons*.



3. Here you can choose the icons you want to be shown on the Desktop.



To change the default icons:

1. Follow steps 1- 3 from above.

2. Click *Change Icon*.



3. In the *Change Icon* dialog box, click the image you want to replace the selected icon and click *OK*.

Note: You can [download custom icons here](#).



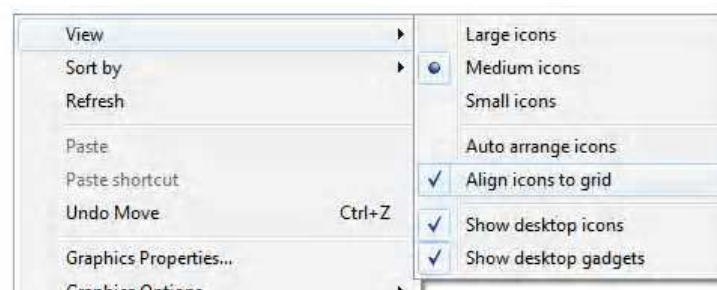
4. Check the icon is the one you want and click apply.

5. Go to your desktop to ensure the change took place.



To change the size, order, and alignment of your desktop icons:

1. Right click a blank spot on the Desktop, click *View*, and specify the size and alignment of the icons.



2. Choose whether you want the icons to be shown on the desktop or to be hidden.

You can also resize the icon size on the desktop by clicking a blank area on the desktop, holding the Ctrl key, and scrolling your mouse wheel.

7.5 Remove Shortcut Overlay Icon



To remove the shortcut overlay icon in Windows 7 and achieve results like the image above depicts:

1. Download [this zip file](#).
2. Extract the file and store *clear.ico* anywhere you like.
3. Open the registry editor ([Appendix D: Launch Windows Registry Editor](#).)
4. Navigate to:

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\explorer\Shell Icons

5. Create a new String value named **29** ([Add a New Value.](#))
6. Double click 29 and enter the path of the clear.ico file. i.e., **C:\Icons\clear.ico**.
7. Restart your computer to apply changes.

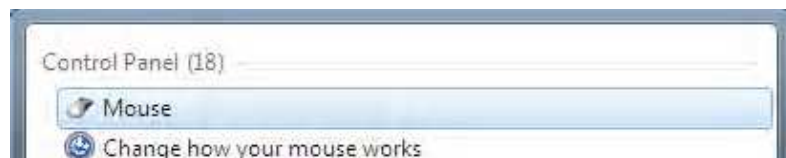
7.6 Customize Your Mouse

You're probably pretty happy with how your mouse works, but you can always make some changes, which may help you. I always turn the sensitivity of my mouse pad up to the maximum, which makes me move my fingers less to get around the screen. If I want precision, I am unlikely to get it with a laptop mouse pad anyway, so I plug in an external one. Learn how to customize your mouse in this section.

7.6.1 Set the Mouse Buttons

To change the behavior of your mouse buttons:

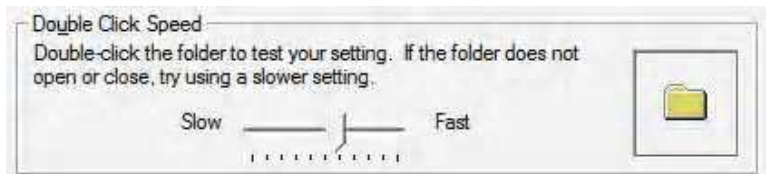
1. Click the Start button, type **mouse** in the search box, and click *Mouse* to display the *Mouse Properties* dialog box.



2. On the *Buttons* tab, you can switch the mouse for left or right-handed use.



3. Move the slider to set the speed at which you need to double click for Windows to recognize it.



4. When you finish changing the mouse settings, click the *OK* button to save changes.

7.6.2 Set Mouse Pointer Options

To change your mouse pointer options:

1. Click the Start button, type ***mouse*** in the search box, and click *Mouse* to display the *Mouse Properties* dialog box.
2. Click the *Pointer Options* tab.



3. Here you can set or change the following options:
 - The speed at which your cursor moves. (As you move the slider, you can test the effect of the change by moving your cursor.)

- Increase the precision of the pointer when you move short distances.
- Configure the mouse to automatically move to the default button in a dialog box to facilitate quick selection of the button.
- Set the length of the trails if you want to increase the cursor's visibility by temporarily showing its path.
- Remove the cursor's visibility when you're typing and not using the mouse.
- Locate the cursor on your screen by pressing the Ctrl key.

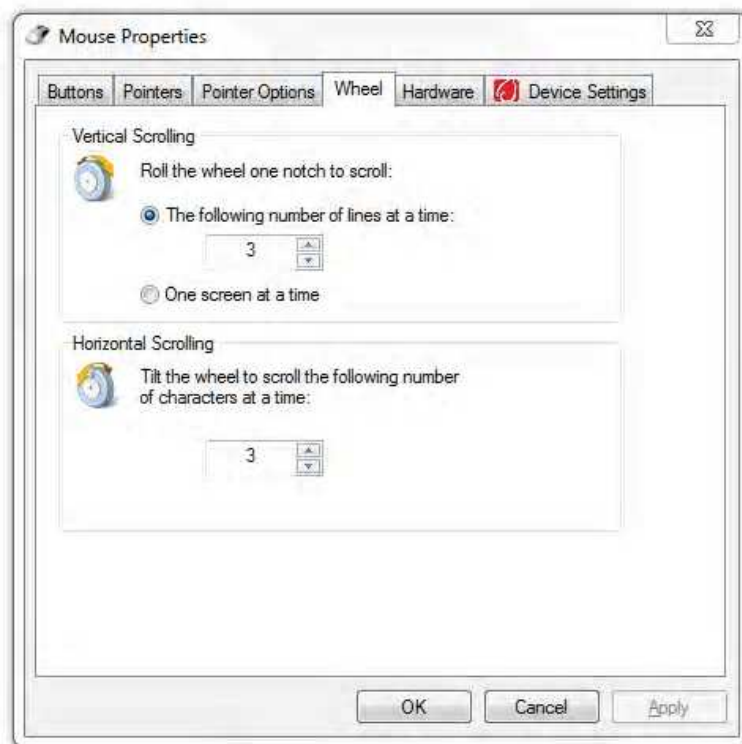
7.6.3 Set Scroll Wheel Options

Like in Windows Vista, you can configure the behavior of the mouse wheel in Windows 7. I use a mouse with a wheel most of the time and I frequently utilize the wheel. If you too use the wheel, you can find benefit in configuring the behavior of it.

To configure mouse wheel settings:

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1. Click the Start button, type **mouse** in the search box, and click *Mouse* to display the *Mouse Properties* dialog box.
2. Under the *Wheel*/tab, you can configure the vertical and horizontal scrolling setting



7.7 Add an OS X Style Dock to Your Desktop

Although OS X doesn't suit my computing needs, I do love the look of some of the features it has. One of the best features is the easy-to-use and customizable dock. You can put a dock in Windows 7 too. To install a dock:

1. [Download ObjectDock here](#) (Go to the page and click the “Free Download” button.)
2. Install ObjectDock on to your computer.
3. Once installed, launch ObjectDock (if it hasn't launched already.)
4. You can get thousands of icons for your dock [here](#).



ObjectDock is very easy to use and there is a lot of support out there for this free product; go to the [ObjectDock website](#) and click Forums.

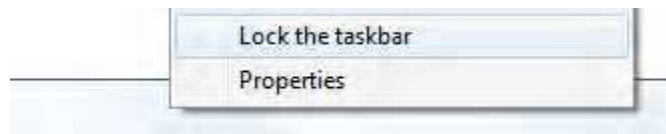
7.8 Customize the Taskbar

The Windows Taskbar can be customized to meet your needs; you can move it, resize it, hide it, and even add toolbars to it.

7.8.1 Move the Taskbar

By default, the taskbar resides at the bottom of your screen. You can move the taskbar to any side of the screen or even to another screen if you use more than one monitor. To move the taskbar:

1. Right click the taskbar and ensure *Lock the Taskbar* is unchecked.



2. Drag the taskbar to the side of the desktop where you want it.



7.8.2 Resize the Taskbar

By default, the taskbar is one “row” wide. You can resize the taskbar to any size you want (up to half the size of the screen!) To resize the taskbar:

1. Right click the taskbar and ensure *Lock the Taskbar* is unchecked.
2. Place the cursor on the outer edge of the taskbar until the pointer turns into a two-headed arrow.

3. Drag the border to change the size of the taskbar.



7.8.3 Auto- hide the Taskbar

You may find the taskbar gets in the way when you are using a program or when you are on working on your desktop. You can auto- hide the taskbar when it is not in focus.

To auto hide the taskbar:

1. Click the Start button, type **taskb** in the Search box, and click *Taskbar And Start Menu*.
2. Check *Auto- Hide The Taskbar* and click *OK*



To access the taskbar, simply move your cursor to the side of the screen the taskbar is located on and it will appear.

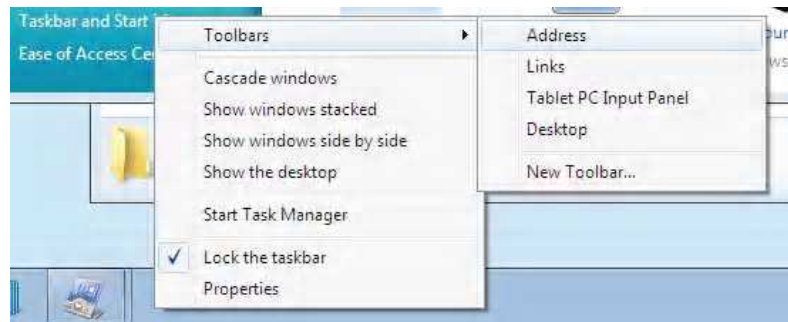
7.9 Restore the Quick Launch Toolbar

Remember the quick launch bar in Windows Vista? This is the toolbar with Flip- 3D, Show desktop, and IE shortcuts. You can have it in Windows 7 too; in this section, you'll learn how to restore this toolbar.



To enable the quick launch toolbar:

1. Right click the taskbar and click *Toolbars > New Toolbar...*

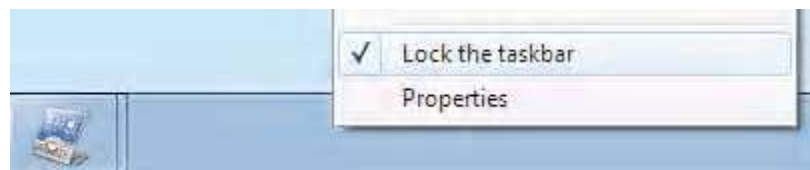


2. Paste the following into the folder field and click *Select Folder*.

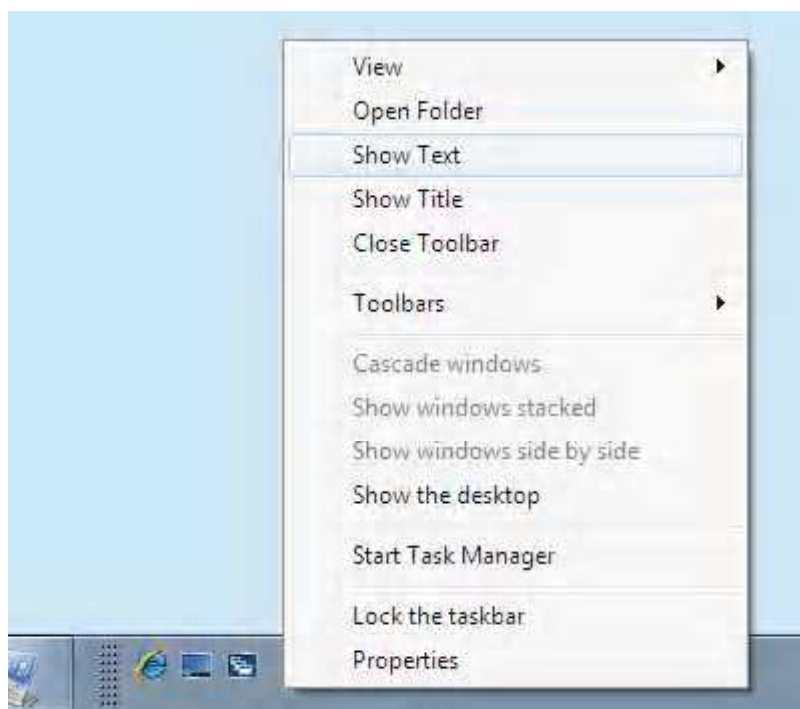
%AppData%\Microsoft\Internet Explorer\Quick Launch



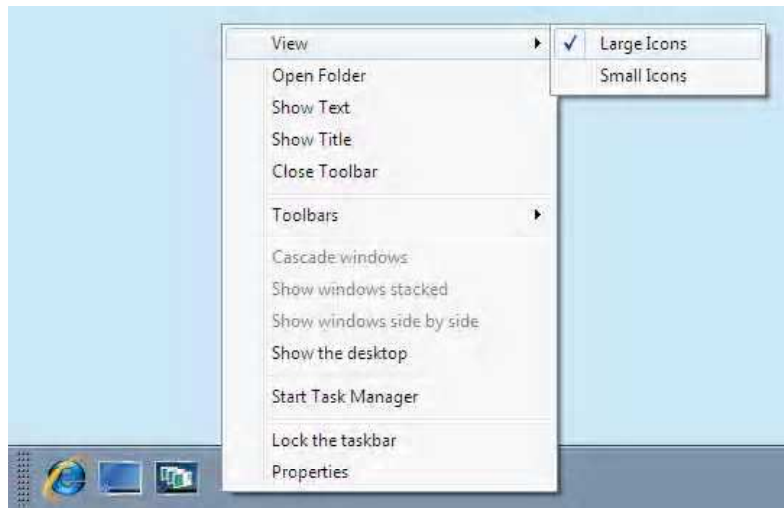
3. Right click the Taskbar and uncheck *Lock the taskbar*.



4. TIP: To remove the text, right click the toolbar and uncheck *Show Text and Show Title*.



5. To enable large icons, right click the toolbar and click *View > Large Icons*.



You now have your beloved quick launch toolbar back!

7.10 Add Extra Clocks

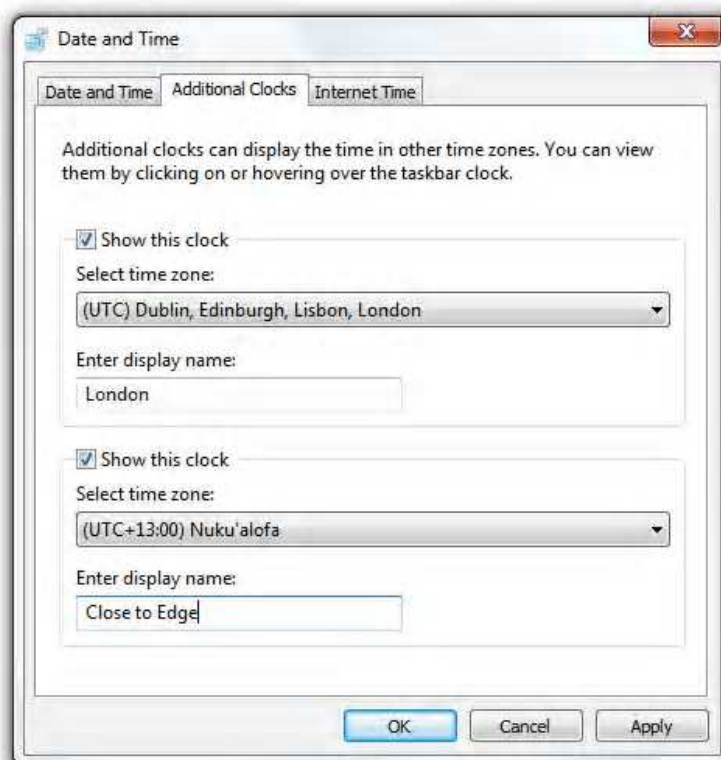
If you spend time in more than one time zone, have family around the world, or are really too lazy to work out what time it is in Japan, this section is for you.

To add multiple clocks in Windows 7:

1. Click the Clock (lower right- hand side of the screen in the notification area) and click *Change time and date settings...*



2. Under the *Additional Clocks* tab, select up to two more clocks. Click *OK* to save your settings.



Now you can see the time around the world:



8 Wallpapers, Themes, and Screensavers

One of the easiest ways to add a personal touch to your computer is to change your wallpaper or screensaver. If this concept is new to you, then this chapter is for you. If you are already familiar with changing your wallpaper and screensaver, you can skip these sections, and explore the rest of this chapter.

In this chapter, you will learn how to change your wallpaper and make it more functional. You'll also learn how to change your screensaver, and, I'll point you toward some good screensavers you can use on your computer. Finally, you'll learn how to save your settings as a theme so you can reuse your customization settings anytime.

8.1 Change Your Desktop Wallpaper

This section will teach you how to change your wallpaper. If you are already familiar with this, please move on to the rest of this chapter to find out what else you can do with your wallpaper and screensavers.

To change your desktop wallpaper, [download one](#), and:

1. Right click the desktop and click *Personalize*.



2. Click *Desktop Background*.

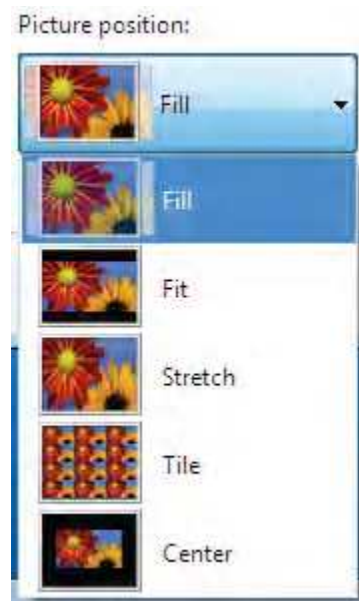


3. Choose the wallpaper picture or color you want, and specify its location. (Note: you can choose multiple wallpapers and shuffle them at time intervals.)



- *Windows Desktop Backgrounds*: to use one of the background patterns or pictures that came with Windows Vista.
 - *Pictures Library*: to use a picture from your pictures library.
 - *Top Rated Photos*: To pick your favorite pictures by rating.
 - *Solid Colors*: to use a single color.
4. Click if *Browse* you want to locate and use a picture from another location.

5. You can specify how your wallpaper will look:



- *Fill*: Fit to the screen (at the expense of some edges that might not fit.)
- *Fit*: Ensure the whole picture shows (may show black edges if the picture is out of proportion.)
- *Stretch*: Fits the screen, but may make your picture look bad.
- *Tile*: Repeat the image across the screen.

- *Center*. A normal sized picture in the center of the screen with a solid colored background behind it.

Experiment and see what looks good on your screen.

8.2 Make Your Wallpaper More Functional

When you think of desktop wallpaper, you probably think of a way to express yourself with a picture you really like. One suggestion I have, is to make your desktop wallpaper more functional by using it in a different way.

We speak of the main screen of your computer as a desktop, but it doesn't really look like a desktop. Download a [desktop- like image here](#) and organize your files accordingly—just like you would on a physical desktop.

See Figure 27 for a sample of what the wallpaper looks like.



Figure 27: Desk Wallpaper

8.3 Shuffle Desktop Backgrounds

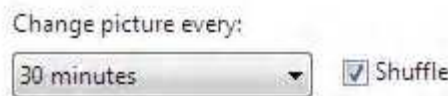
Windows 7 comes with native background shuffling functionality. To enable background shuffling:

1. Right click the desktop and click Personalize.

2. Click *Desktop Background*.



3. Specify the wallpapers you want to use.
4. Specify the time interval between transitions
(Optional: you can *Shuffle* the order of your
slideshow.)



5. Click *Save Changes* and enjoy the slideshow.

8.4 Activate Hidden Regional Themes

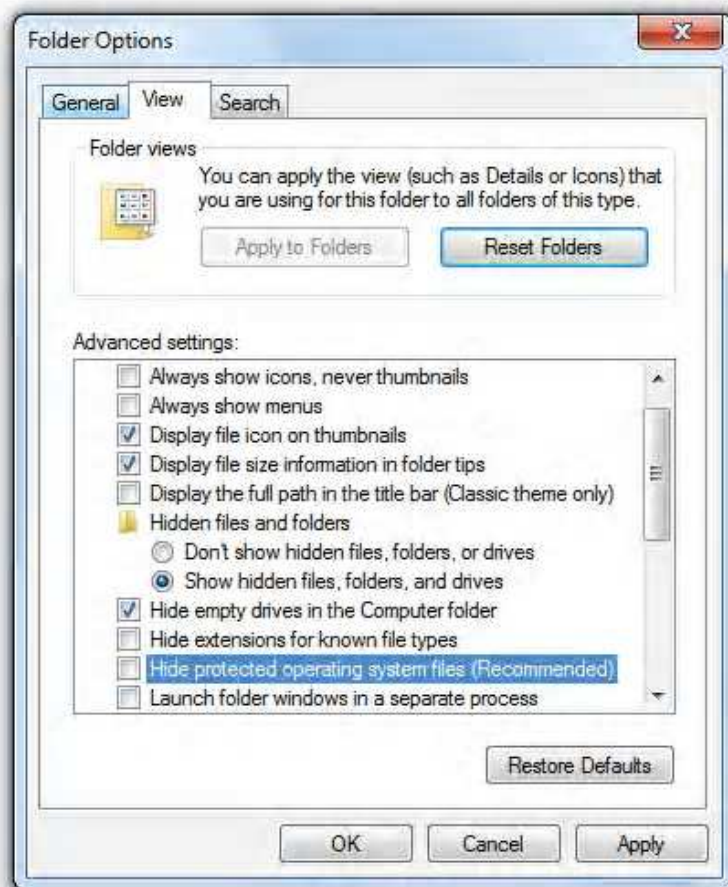
Windows 7 is a worldwide operating system and Microsoft made a really good move by adding regional wallpapers into the operating system. When you choose your region settings, the appropriate theme is displayed. In this section, you'll learn how to activate hidden regional settings in Windows 7.

To activate regional themes:

1. Open *Computer* (⊞+E), click *Organize*, and click *Folder and Search Options*.



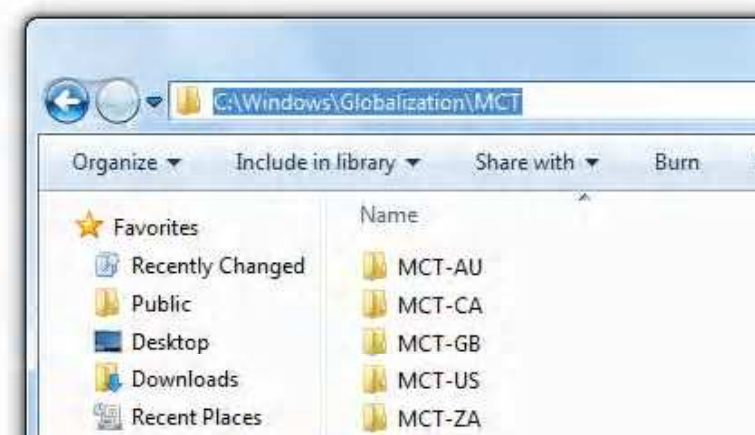
2. Under the View tab, check *Show hidden files, folders, and drives* and uncheck *Hide Protected operating system files*.



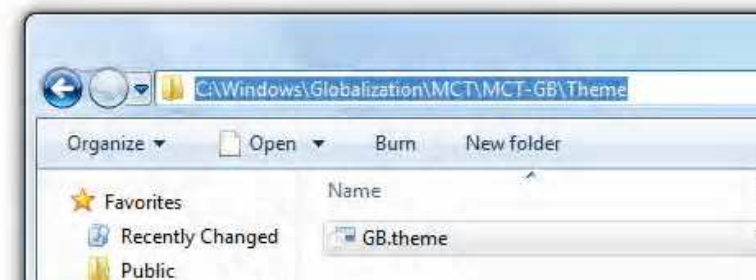
3. When prompted, click *Yes*. Click *OK*.



4. Navigate to `%systemroot%\Globalization\MCT\`



5. Select a region by opening its folder and double clicking on the theme file to activate the themes.



You can now use Windows 7's "hidden" regional themes (Figure 28), which will be available from the *Personalize* menu (right click the desktop and click *Personalize*.)



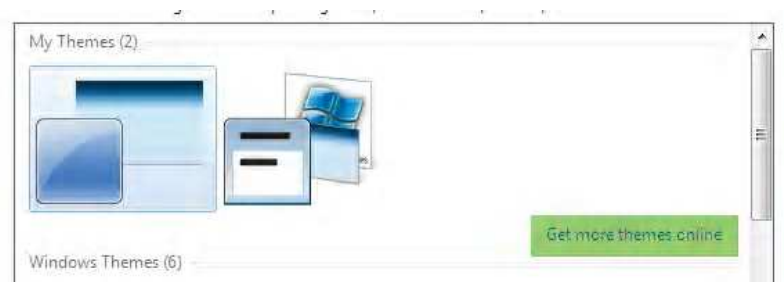
Figure 28: UK Regional Theme

8.5 Get More Themes

Microsoft has a site where you can get more themes. A theme can include: wallpaper, cursors, sounds, and screensavers.

To get more themes for Windows 7:

1. Right click the desktop, and click *Personalize*.
2. On the *Theme* screen, click *Get more themes online*.



You can now browse the website to find new themes.



Alternatively, you can go directly to the site [here](#).

8.6 Save Your Settings as a Theme

When you are satisfied with the appearance of your windows desktop, you can save the settings as a theme. A theme incorporates the following settings:

- Color and appearance choices.
- Color schemes.

- Sound schemes.
- Mouse pointer schemes.
- Advanced appearance settings.
- Screen saver choice.

These settings are all unique to your account, so things like screen resolution, which is a global setting, will need manual changing.

To save your settings as a theme:

1. Right click the desktop, and click *Personalize*.
2. Click *Save theme*.



3. Give your theme a name



You can restore a saved theme, by clicking on the theme name under *My themes*.

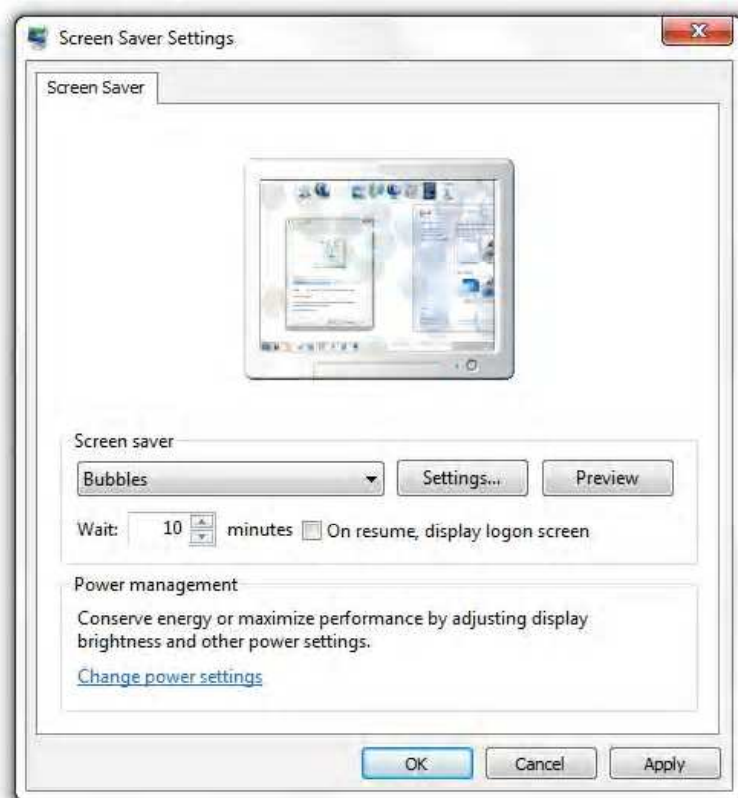
8.7 Choose a Screensaver

To change your screensaver:

1. Right click the desktop and click *Personalize*.
2. Click *Screen Saver*.



3. Choose a screensaver from the list ([download screensavers.](#))



4. Click Settings and specify the options you want for the screen saver.

From this screen, you can also:

- Preview the screen saver in full- screen view.
- Specify the length of time you want your computer to be inactive before the screen saver starts.
- Optionally require log on after you stop the screensaver running.

8.8 Recommended Screensavers

There are so many screensavers available and many are either resource intensive or packed with malware (or both.) Here is a list of some of the best screensavers that are low on resource consumption.

8.8.1 Photo/Video Slideshow Screensaver

To use your photos and videos as a slide show:

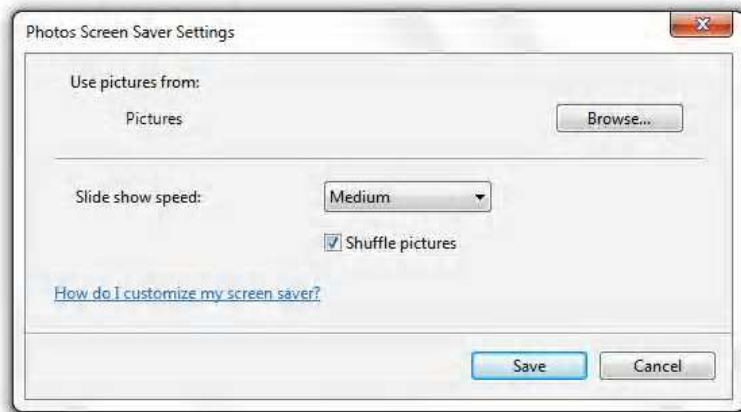
1. Right click the desktop and click *Personalize*.
2. Click *Screen Saver*.



3. Select *Photos* in the Screen Saver list.



4. Click *Settings*.



5.
 - a. Choose pictures from your photo folders (limit by tags or ratings.)
 - b. OR choose pictures from a specific folder (click Browse to specify the folder.)
6. Specify a theme for the display.
7. Specify the speed at which you want the pictures to change.
8. Specify whether or not you want your pictures appear in random order.
9. Click *Save* and click *OK*.

8.8.2 Other Recommended Screensavers

I have a [collection of screensavers here](#) that you can download and use.

9 Customize Windows Explorer

Windows Explorer is your main portal to all your files. You can greatly increase your efficiency by making some simple changes. You can also add a personal touch to your file structure.

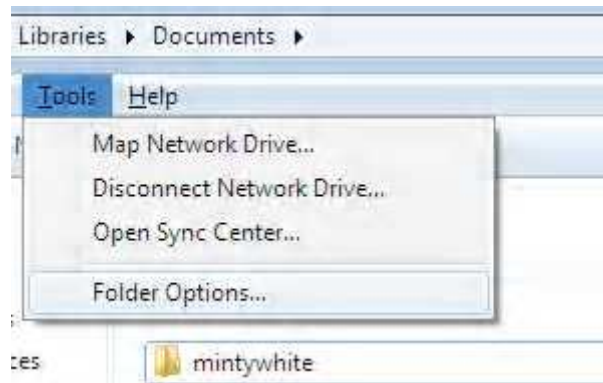
In this chapter, you'll learn how to standardize the view of Windows Explorer, set up quickly accessible shortcuts, improve the way you select files, and customize your folder icons.

9.1 Set Views for all Folders

Windows 7 does a pretty good job at analyzing the content of a folder to determine how it should display the files.

98% of the time I want to see the details of the files and I don't care for thumbnails, tags, ratings, etc. If you are like me and want to simplify Windows Explorer's view:

1. Open a folder and customize it in a way that you want reflected across all your folders.
2. Press the **Alt** key once and then click *Tools > Folder Options*.



3. Click the *View* tab and click *Apply to Folders*.



4. When prompted, click *Yes* and your settings will now be in effect.

Please Note: Any previous customization might be retained for specific folders you've already worked with—but don't count on it.

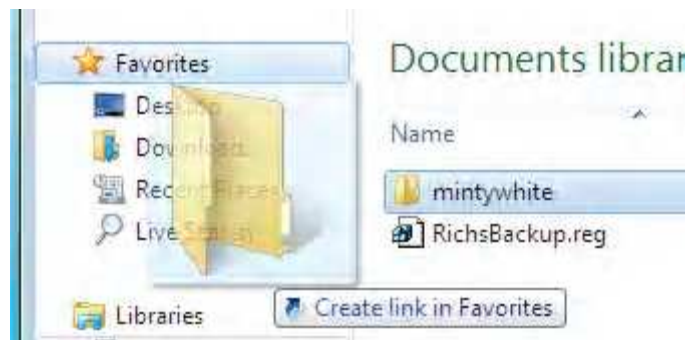
9.2 Set up Shortcuts to Common Folders

Explorer has a great feature in Windows 7: the shortcut menu, which is, by default, shown in the left-hand. This shortcut menu is customizable and can save you a lot of time if you frequently open and close files from specific locations.

9.2.1 Adding Shortcuts to the Shortcut Menu

To add a shortcut to the menu:

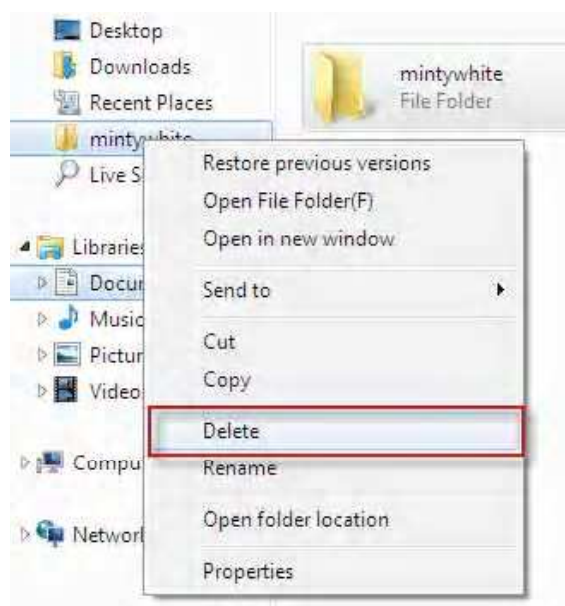
1. Locate the folder you want to add.
2. Click on it and drag it to the menu.



9.2.2 Remove Shortcuts from the Shortcut Menu

To remove a shortcut from the menu:

1. Right click on the shortcut.
2. Click *Delete*.

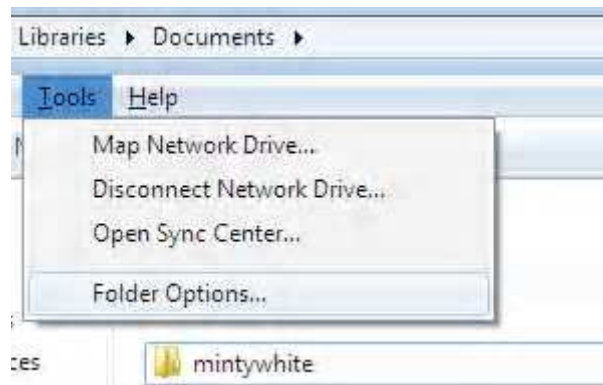


9.3 Select Multiple Files with Checkboxes

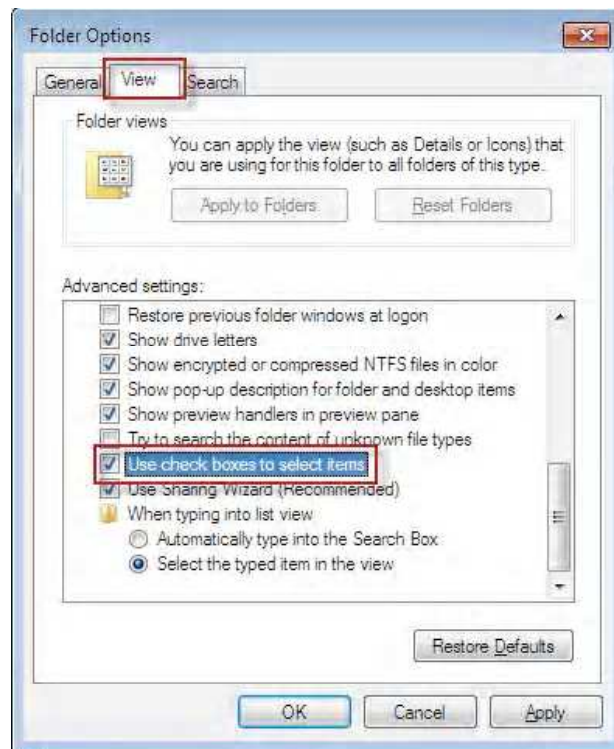
When you want to select multiple files, you need to hold the Ctrl key, while clicking on each file name; if you let go of the key before selecting another file, you lose your entire selection. Windows 7's solution to this is to allow you to select check boxes next to files, so you do not have to hold the Ctrl key.

To enable check box file selection:

1. Within the folder, press the Alt key once and then click Tools > Folder Options.



2. Click the View tab and under Advanced settings, locate and click Use check boxes to select items.



Now you can check the files you want to collectively select.

9.4 Customize Folder Icons

I use some folders as a dashboard to get to commonly used folders. A good example of this is my ‘Media’ partition. Here, I have my Music, Video, Pictures, and other folders. In this section, you’ll learn how to customize your folder icons to achieve something similar to Figure 29.



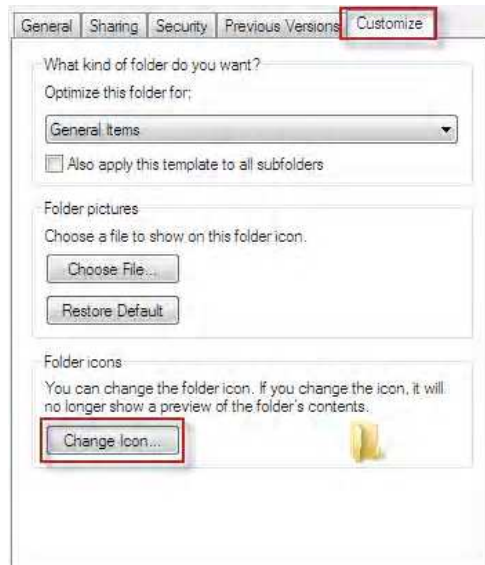
Figure 29: Customized Folder Icons

To change your folder icons:

1. Right click on the folder you want to customize the icon for and click *Properties*.



2. Click the *Customize* tab and click on *Change Icon...*



3. Click an Icon or browse for your own (get [thousands of icons here.](#))



4. Click *OK* on both screens and you are done

Note: To view larger icons in Windows Explorer, click the *Views* button, on the toolbar, until you get to large icons.

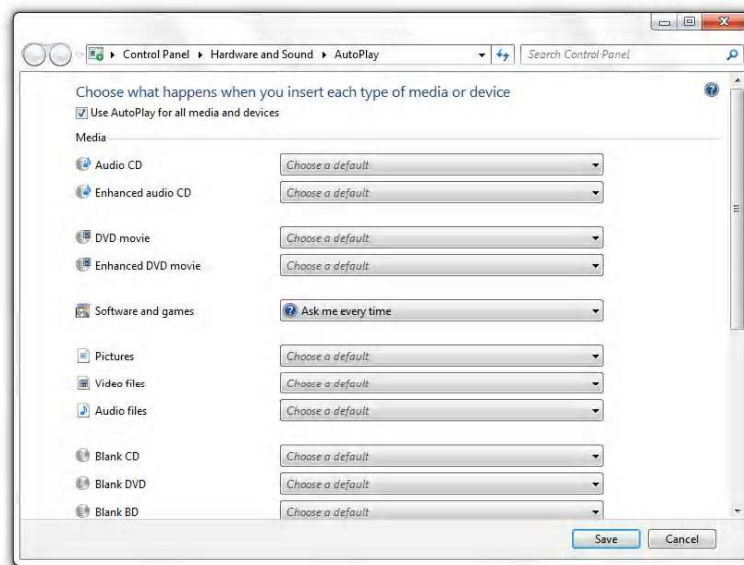
9.5 Set AutoPlay Defaults

Although I do not find Autoplay to be a useful feature, many do. In this section, you'll learn how to set Autoplay defaults in Windows 7.

The defaults will save you time as you use media with your PC. For example: you can set DVDs to play or rip CDs automatically.

To set Autoplay defaults in Windows7:

1. Click the Start button, type *auto*, and click on *Autoplay*.
2. When the *Autoplay* screen comes up, click which programs or actions you would like to take for each media type.



3. When you are finished, click Save.

Note: You can change your settings later if you change your mind.












10 Work Efficiently







There are many things we do on a day- to- day basis that become very repetitive. When we find a way to do these things more quickly, we save a lot of time. This chapter mainly consists of shortcut keys combinations, which perform a task with minimal effort. There is a reason for this: shortcut keys save you a lot of time!

I tried to count the number of times I used a shortcut key while writing this chapter. I'm sure I missed a lot because I automatically use them; however, I counted over one hundred times; that's a lot. I saved a lot of time while putting this chapter together.

10.1 Windows 7 Shortcut Keys

Combination	Result
-------------	--------

 +←	Dock window to the left- hand side of the screen
 +→	Dock window to the right- hand side of the screen
 +Shift+←	Move the current selected window one monitor to the left
 +Shift+→	Move the current selected window one monitor to the right
 +Shift+←	Expand non- maximized window to the left (or any arrow key direction)
 +Ctrl+←	Contract non- maximized window from the left (or any arrow key direction)
 +	Maximize current window
 +↓	Minimize current window
 + +,  + -	Zoom in and out
 +Home	Minimize/maximize non- active windows

 +1, 2, 3, 4, or 5	Launch programs from the taskbar
 +Space	Enable Aero Peek
 +G	Bring gadgets to the foreground
 +P	Open "projector" mode to change external display settings
 +T	Jump to the taskbar to select a new window with ← or → + Enter
 +X	Open Windows mobility center
Ctrl+Left Click	Use on taskbar items to switch between windows of that program only

10.2 General Windows Shortcut Keys

There are so many shortcut keys in Windows—here are the best of them:

10.2.1 Single Keys

Combination	Result
F2	Rename the selected item
F3	Search for a file or folder
F4	Display the address bar list in Windows Explorer
F5	Refresh the active window
F6	Cycle through screen elements in a window or on the desktop
F10	Activate the menu bar on the active program
Delete	Delete the selected item (and move it to the recycle bin)
Esc	Cancel the current task (close select windows)
Right Arrow	Open the next menu to the right or open a submenu

Left Arrow	Open the next menu to the left or open a submenu
------------	--

10.2.2 Ctrl- Key Shortcuts

Combination	Result
Ctrl+ A	Select all the items in a document or window
Ctrl+ C	Copy the selected item to the clipboard
Ctrl+ X	Cut the selected item
Ctrl+ V	Paste the current item in the clipboard
Ctrl+ Z	Undo an action
Ctrl+ Right Arrow	Move the cursor to the beginning of the next word
Ctrl+ Down Arrow	Move the cursor to the beginning of the next paragraph

Ctrl+ Left Arrow	Move the cursor to the beginning of the current word
Ctrl+ Up Arrow	Move the cursor to the beginning of the current paragraph
Ctrl+ Shift+ Arrow Key	Select a block of text
Ctrl+ F4	Close the active document (in programs that allow you to have multiple documents open simultaneously)
Ctrl+ F5	Refresh the current page in browsers (including refreshing cached files)
Ctrl+ Esc	Open the Start menu
Ctrl+ Shift+ Esc	Open Task Manager
Ctrl+ Alt+ Tab	Switch between windows using the arrow keys

10.2.3 Shift Key Shortcuts

Combination	Result
-------------	--------

Shift+ Delete	Delete the selected item without removing it to the recycle bin
Shift when inserting CD/DVD/Bluray	Prevent the media from automatically playing
Shift+ Arrow Key	Select more than one item within a window or on the desktop, or select blocks of text within a document
Shift+ F10	Display the shortcut (right click) menu for the selected item

10.2.4 Alt Key Shortcuts

Combination	Result
Alt+ Enter	Display properties of the selected item
Alt+ F4	Close the active item or exit the active program
Alt+ Space	Open the shortcut menu for the active window

Alt+ Tab	Switch between open items
Alt+ Esc	Cycle through items in the order in which they were opened
Alt+ Underlined letter	Display the corresponding menu or perform the menu/button command
Alt+ Up Arrow	View on folder up in Windows Explorer

10.3 Windows Photo Gallery Shortcut Keys

Use these shortcut keys when using Windows Photo Gallery.

10.3.1 General Shortcut Keys

Combination	Result
Ctrl+ B	Best fit

Ctrl+ E	Search for an item
Ctrl+ F	Open the fix pane
Ctrl+ I	Open or close the details pane
Ctrl+ P	Print the selected picture
Ctrl+ .	Rotate the picture clockwise
Ctrl+ ,	Rotate the picture counter/anti-clockwise
Alt+ ←	Go back
Alt+ Right Arrow	Go forward
F2	Rename the selected item
Enter	View the selected picture at a larger size
+	Zoom in
-	Zoom out
Right Arrow	Expand Node

Down Arrow	Select the next item or row
←	Collapse Node
Up Arrow	Select the previous item or row
Page Up	Previous Screen
Page Down	Next Screen
Home	Select the first item
End	Select the last item
Delete	Move the selected item to the recycle bin
Shift+ Delete	Permanently delete the selected item

10.3.2 Shortcut Keys When Working with Videos

Here are some Windows Photo Gallery shortcut keys you can use when working with videos:

Combination	Result
I	Set the start trim point
J	Move back one frame
K	Pause playback
L	Move forward one frame
M	Split a clip
O	Set the end trim point
Ctrl+ K	Stop and rewind playback
Ctrl+ P	Play from the current location
Alt+ Right Arrow	Advanced to the next frame
Alt+ Left Arrow	Go back to the previous frame
Home	Move to the start trim point
End	Move to the end trim point
Page Up	Seek to nearest split point before the current location

Page Down	Seek to nearest split point after the current location
-----------	--

10.4 Microsoft Word Shortcut Keys

Some of these shortcuts may not work in older versions of Word; however, they are tested and working in Word 2007.

Combination	Result
Ctrl + A	Select all contents of the page.
Ctrl + B	Bold highlighted selection.
Ctrl + C	Copy selected text.
Ctrl + D	Open the font dialogue box.
Ctrl + E	Aligns the line or selected text to the center of the screen.
Ctrl + F	Open find box.
Ctrl + G	Open find and replace box.

Ctrl + H	Also opens find and replace box.
Ctrl + I	Italicize highlighted selection.
Ctrl + J	Justify (spread) the text across the page.
Ctrl + K	Insert link.
Ctrl + L	Aligns the line or selected text to the left of the screen.
Ctrl + M	Indent the paragraph.
Ctrl + N	Open a new document.
Ctrl + O	Open a document stored on your hard drive.
Ctrl + P	Open the print window.
Ctrl + R	Aligns the line or selected text to the right of the screen.
Ctrl + S	Saves the current document.
Ctrl + U	Underline highlighted selection.

Ctrl + V	Paste contents of clipboard.
Ctrl + W	Closes the current document.
Ctrl + X	Cut selected text.
Ctrl + Y	Redo the last action performed.
Ctrl + Z	Undo last action.
Ctrl + Shift + F	Change the font.
Ctrl + Shift + >	Increase selected font + 1 pts up to 12pt and then increases font + 2pts.
Ctrl +]	Increase selected font + 1 pts.
Ctrl + Shift + <	Decrease selected font - 1 pts if 12pt or lower, if above 12 decreases font by + 2pt.
Ctrl + [Decrease selected font - 1 pts.
Ctrl + Shift + *	View or hide non printing characters.
Ctrl + < left arrow>	Moves one word to the left.

Ctrl + <right arrow>	Moves one word to the right.
Ctrl + <up arrow>	Moves to the beginning of the line or paragraph.
Ctrl + <down arrow>	Moves to the end of the paragraph.
Ctrl + Del	Deletes word to right of cursor.
Ctrl + Backspace	Deletes word to left of cursor.
Ctrl + End	Moves the cursor to the end of the document.
Ctrl + Home	Moves the cursor to the beginning of the document.
Ctrl + Spacebar	Reset highlighted text to the default font.
Ctrl + 1	Single- space lines.
Ctrl + 2	Double- space lines.
Ctrl + 5	1.5- line spacing.
Ctrl + Alt + 1	Changes text to heading 1.


Ctrl + Alt + 2	Changes text to heading 2.
Ctrl + Alt + 3	Changes text to heading 3.
Ctrl + F1	Open the Task Pane.
F1	Open Help.
Alt + Ctrl + F2	Open new document.
Ctrl + F2	Display the print preview.
Shift + F3	Change the text from upper to lower case or a capital letter at the beginning of every word.
Shift + Insert	Paste.
F4	Repeat the last action performed.
F5	Open the find, replace, and go to window in Microsoft Word.
Ctrl + Shift + F6	Opens to another open Microsoft Word document.
F7	Spell and grammar check

	selected text and/or document.
Shift + F7	Runs a Thesaurus check on the word highlighted.
F12	Save as.
Shift + F12	Save.
Ctrl + Shift + F12	Prints the document.
Alt + Shift + D	Insert the current date.
Alt + Shift + T	Insert the current time.

10.5 Remote Desktop Shortcut Keys

Use these shortcut key combinations, as replacements to their equivalent, in remote desktop.


Combination	Effect	Equivalent
Ctrl+ Alt+ End	Interrupt keys	Ctrl+ Alt+ Del

Alt+ Home	Displays the Windows start menu	
Alt+ Page Up	Switch between programs to the left	Alt+ Tab+ Left Arrow
Alt+ Page Down	Switch between programs to the right	Alt+ Tab+ Right Arrow
Alt+ Insert	Switch between programs in most recently used order	Alt+ Tab
Alt+ Del	Window (context) menu	Alt+ Space
Ctrl+ Alt+ Break	Changes remote window to full screen and back	Alt, Space, X
Ctrl+ Alt+ Left Arrow	Switches you to host computer	-
Ctrl+ Alt+ Right Arrow	Switches you back to remote computer	-
Ctrl+ Alt+ Plus(+)	Screen shot of the whole screen	Prnt Scrn

Ctrl+ Alt+ Minus (-)	Screen shot of the active window	ALT+ Prnt Scrn
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10.6 Useful Windows Commands

By using Windows commands, you can have quick access to tools to configure and fix your computer. They also allow you quick access to Microsoft software embedded within your operating system. Some of these commands can be very useful. Some are not so useful but can be fun to try.

Open the *Run* dialogue, by pressing +R

Now type in one of the following commands to open a program. (Note: Some of these programs may not be available in your Windows 7 editions.)

10.6.1 Windows Environment Controls

Command	Result
---------	--------

%ALLUSERSPROFILE%	Open the All User's Profile
%HomeDrive%	Opens your home drive e.g. C:\
%UserProfile%	Opens your User's Profile
%temp%	Opens the temporary file Folder
%systemroot%	Opens Windows folder

10.6.2 Consoles, Programs etc.

Command	Result
access.cpl	Accessibility Controls
hdwwiz.cpl	Add Hardware Wizard
appwiz.cpl	Add/Remove Programs
control admintools	Administrative Tools
wuauclpl.cpl	Automatic Updates

fsquirt	Bluetooth Transfer Wizard
calc	Calculator
certmgr.msc	Certificate Manager
charmap	Character Map
chkdsk	Check Disk Utility
clipbrd	Clipboard Viewer
cmd	Command Prompt
dcomcnfg	Component Services
compmgmt.msc	Computer Management
control panel	Control Panel
timedate.cpl	Date and Time Properties
ddeshare	DDE Share
devmgmt.msc	Device Manager
directx.cpl	Direct X Control Panel

dxdiag	Direct X Troubleshooter
cleanmgr	Disk Cleanup Utility
dfrg.msc	Disk Defragment
diskmgmt.msc	Disk Management
diskpart	Disk Partition Manager
control desktop	Display Properties
desk.cpl	Display Properties
control color	Display Properties
drwtsn32	Dr. Watson System Troubleshooting Utility
verifier	Driver Verifier Utility
eventvwr.msc	Event Viewer
sigverif	File Signature Verification Tool
findfast.cpl	Findfast
control folders	Folders Properties

control fonts	Fonts
fonts	Fonts Folder
freecell	Free Cell Card Game
joy.cpl	Game Controllers
gpedit.msc	Group Policy Editor (XP Prof)
mshearts	Hearts Card Game
ieexpress	ieexpress Wizard
ciadv.msc	Indexing Service
inetcpl.cpl	Internet Properties
ieexplore	Internet Explorer
ipconfig /all	IP Configuration (Connection Configuration)
ipconfig /displaydns	IP Config (DNS Cache Contents)
ipconfig /flushdns	IP Config (Delete DNS Cache Contents)

ipconfig /release	IP Config (Release All Connections)
ipconfig /renew	IP Config (Renew All Connections)
ipconfig /registerdns	IP Config (Refresh DHCP & Re-Registers DNS)
ipconfig /showclassid	IP Config (Display DHCP Class ID)
ipconfig /setclassid	IP Config (Modifies DHCP Class ID)
jp132.cpl	Java Control Panel (If Installed)
javaws	Java Control Panel (If Installed)
toy.cpl	Joystick Properties
control keyboard	Keyboard Properties
main.cpl keyboard	Keyboard Properties
secpol.msc	Local Security Settings
lusrmgr.msc	Local Users and Groups

logoff	Logs You Out Of Windows
winchat	Microsoft Chat
winmine	Minesweeper Game
control mouse	Mouse Properties
main.cpl	Mouse Properties
control netconnections	Network Connections
ncpa.cpl	Network Connections
netsetup.cpl	Network Setup Wizard
notepad	Notepad
nvtuicpl.cpl	Nview Desktop Manager (If Installed)
packager	Object Packager
odbccp32.cpl	ODBC Data Source Administrator
osk	On Screen Keyboard


ac3filter.cpl	Opens AC3 Filter (If Installed)
password.cpl	Password Properties
perfmon.msc	Performance Monitor
perfmon	Performance Monitor
telephon.cpl	Phone and Modem Options
powercfg.cpl	Power Management
control printers	Printers and Faxes
printers	Printers Folder
eudcedit	Private Character Editor
QuickTime.cpl	Quicktime (If Installed)
intl.cpl	Regional Settings
regedit	Registry Editor
regedit32	Registry Editor
mstsc	Remote Desktop

ntmsmgr.msc	Removable Storage
ntmsoprq.msc	Removable Storage Operator Requests
rsop.msc	Resultant Set of Policy (XP Prof)
sticpl.cpl	Scanners and Cameras
control schedtasks	Scheduled Tasks
wscui.cpl	Security Center
services.msc	Services
fsmgmt.msc	Shared Folders
shutdown	Shuts Down Windows
mmsys.cpl	Sounds and Audio
spider	Spider Solitaire Card Game
cliconfg	SQL Client Configuration
sysedit	System Configuration Editor
msconfig	System Configuration Utility

sfc /scannow	System File Checker (Scan Immediately)
sfc /scanonce	System FC (Scan Once At Next Boot)
sfc /scanboot	System FC (Scan On Every Boot)
sfc /revert	System FC (Return to Default Setting)
sfc /purgecache	System FC (Purge File Cache)
sfc /cachesize= x	System FC (Set Cache Size to size x)
sysdm.cpl	System Properties
Taskmgr	Task Manager
nusrmgr.cpl	User Account Management
utilman	Utility Manager
explorer	Windows Explorer
firewall.cpl	Windows Firewall

magnify	Windows Magnifier
wmimgmt.msc	Windows Management Infrastructure
syskey	Windows System Security Tool
wupdmgr	Windows Update Launches
winver	Windows Version
tourstart	Windows XP Tour Wizard
Write	WordPad

10.7 Windows Shell Folder Commands

Open the run dialogue by pressing +R

Now type in one of the following commands to open a folder. (Note: Some of these programs/folders may not be available in your edition of Windows 7.)

10.7.1 Personal Folders

Command	Result
shell:Personal	Shows the user Documents folder
shell:My Music	Opens your Music folder
shell:CommonMusic	Opens the public Music Folder
shell:Playlists	Shows the user \Music\Playlists folder
shell:SamplePlaylists	Opens the playlists folder
shell:My Video	Opens your Video folder
shell:CommonVideo	Opens the public Video Folder
shell:My Pictures	Opens your Pictures folder
shell:CommonPictures	Opens the public Pictures Folder
shell:Original Images	Opens the original images edited By Windows Photo Gallery
shell:SamplePictures	Opens the sample pictures folder

shell:PhotoAlbums	Opens the slideshows folder
-------------------	-----------------------------

10.7.2 User Folders

Command	Result
shell:AppData	Shows the user Application Data folder
shell:CD Burning	Shows the folder where files are stored before being burned to disc
shell:Contacts	Shows the user Windows Contacts folder
shell:CredentialManager	Shows the user Credentials folder
shell:Cryptokeys	Shows the user encryption keys folder
shell:Desktop	Shows the user desktop folder
shell:Downloads	Shows the user downloads folder

shell:Gadgets	Shows the user folder of downloaded Sidebar Gadgets
shell:GameTasks	Shows the user Game Explorer folder
shell:History	Shows the user History folder
shell:Links	Shows the user Links folder
shell:Local AppData	Shows the user Application Data folder
shell:Local AppDataLow	Shows the user Application Data (Low Integrity) folder
shell:NetHood	Shows the user Network Places folder
shell:PrintHood	Shows the user printer shortcuts folder
shell:Profile	Shows the user profile folder
shell:Programs	Shows the user Start Menu Programs folder
shell:Quick Launch	Shows the Quick Launch folder

shell:Recent	Shows the user's Recent Documents folder
shell:SavedGames	Shows the Saved Games folder
shell:Searches	Shows the saved searches folder
shell:SendTo	Shows the user Send To folder
shell:Start Menu	Shows the user Start Menu folder
shell:Startup	Shows the user Startup folder
shell:SystemCertificates	Shows the user certificates folder
shell:Templates	Shows the user Templates folder

10.7.3 System Folders

Command	Result
shell:AppUpdatesFolder	Shows installed Windows

	Updates
shell:Common AppData	Shows the Public Application Data folder
shell:Common Desktop	Shows the Public Desktop
shell:Common Documents	Shows the Public Documents folder
shell:CommonDownloads	Shows the Public Downloads folder
shell:Common Programs	Shows the Public Start Menu Programs folder
shell:Common Start Menu	Shows the Public Start Menu folder
shell:Common Startup	Shows the Public Startup folder
shell:Common Templates	Shows the Public Templates folder
shell:Default Gadgets	Shows the default Sidebar Gadgets folder
shell:Fonts	Shows the Fonts folder

shell:Games	Shows the Games folder
shell:MyComputerFolder	Shows the Computer folder
shell:OEM Links	Shows links provided by your PC manufacturer
shell:NetworkPlacesFolder	Shows the Network Places folder
shell:PrintersFolder	Shows the Printers folder
shell:ProgramFiles	Shows the Program Files folder
shell:ProgramFilesCommon	Shows the Program Files\Common Files folder
shell:Public	Shows the Public folder
shell:PublicGameTasks	Shows the Public Game Explorer folder
shell:ResourceDir	Shows the Windows Resources folder
shell:RecycleBinFolder	Shows the Recycle Bin

shell:System	Shows the Windows System folder
shell:UserProfiles	Shows the folder holding all user profiles
shell:Windows	Shows the Windows installation folder

10.7.4 Applications

Command	Result
shell:Administrative Tools	Shortcuts to applets in Administrative Tools folder
shell:Common Administrative Tools	Shortcuts to Public applets in Administrative Tools
shell:AddNewProgramsFolder	Control Panel's Install a program from the network applet

shell:ChangeRemoveProgramsFolder	Control Panel's Uninstall or change a program applet
shell:ConnectionsFolder	Shows the list of Network Connections
shell:ControlPanelFolder	Shows Control Panel
shell:SearchHomeFolder	Shows the Windows Search tool

10.7.5 Internet Explorer

Command	Result
shell:InternetFolder	Opens IE
shell:Favorites	Opens IE favorites
shell:Cache	Opens IE cache
shell:Cookies	Opens IE cookies

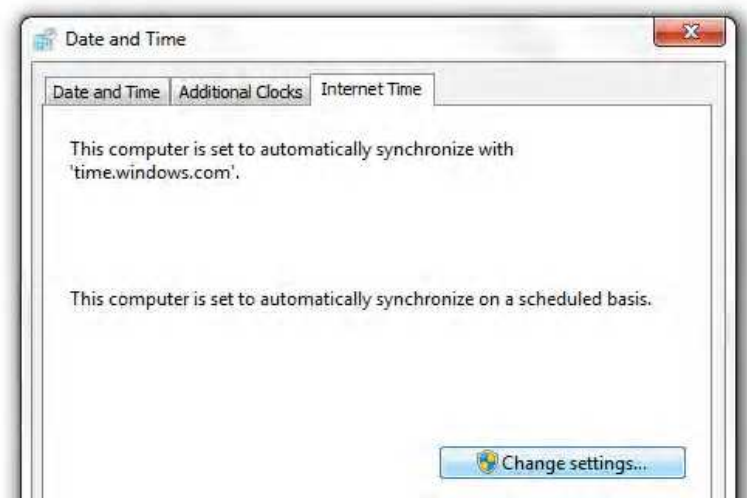
10.8 Sync System Clock with Internet Time

Just as in Vista, you can synchronize your clock with an internet-based server. This will ensure that your computer date and time is always correct. Having the correct time is essential, especially when you want to search for files modified on a specified date; if the date is incorrect, you will have trouble finding your files.

In this section, you'll learn how to sync your clock's time with time.windows.com's time.

To synchronize your clock:

1. Click the Clock and click *Change time and date settings...*
2. Under the *Internet Time* tab, click *Change Settings*.



3. Check *Synchronize time with an Internet time server.*

I chose to use the default windows.time.com and chose *Update now*. Then click *OK*.



Now your PC will maintain the correct time and resynchronize frequently (requires an internet connection.)

11 Organize Your Files

There are many ways to organize your files; an in- depth organization solution is beyond the scope of this book. However, this chapter offers a few tips to help you keep on top of your files.

In this chapter, you'll learn how to automatically move files from your desktop, use naming conventions, batch rename your files, and relocate your personal document folders from the default locations set in Windows 7.

11.1 Automatically Move Files from Your Desktop

Do you have a cluttered desktop? Do you spend time looking for the documents and pictures you've saved recently and then move them to different folders? If this is the case, or if you just like a clean desktop, this section is for you. Desktop teleporter is a great utility that moves

files and folders that are newly created on your desktop to pre-determined folders.

To automate the process of organizing your desktop:

1. [Download](#) Desktop Teleporter.
2. Set up rules to help manage images, music, documents etc.
3. Set exceptions to your rules if you need them.

[\[Click to see an image of my clutter-free desktop\]](#)

11.2 Use Naming Conventions to Organize Your Data

[Here](#) you can see the naming conventions I use for my files. This is just a guide to get you started on your own system. I set many of these conventions many years ago, but they work. Experience has given me newer ideas, some of which I am currently using.

Photo Files

I archive my photos in the following way (Refer to Figure 30):

Photo > %Year% > %Date% Title

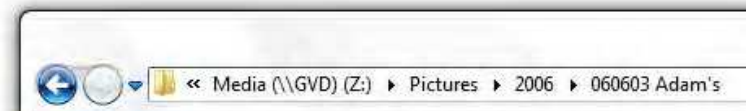


Figure 30: Photo Folder Organization

Documents

Even though you can sort files by date in all popular OSs, I still prepend a date to the front of a file. This helps me with versioning. Also, I usually remember when I wrote something, and not what I called it. Figure 31 shows how I organize documents.

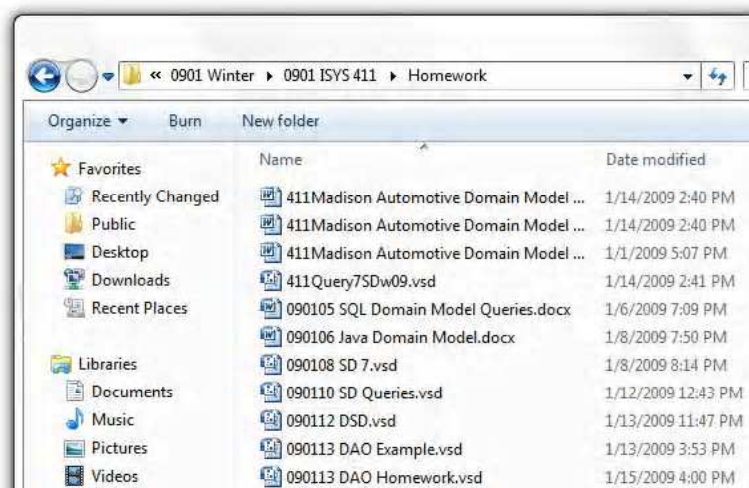


Figure 31: Document Organization

Music

Everyone names their music differently; this is my way. I'm not an MP3 tag person, so I would probably use this for inspiration and not instruction.

I name my music files:

Music > %genre% > %album_title%

All individual songs that I buy separately go into a genre folder, along with any albums that are in their own folders.

Tags essentially do the same thing, but when you have over 100 albums (or 1000s as can be the case) it helps to do some organization within your file structure (see Figure 32.)

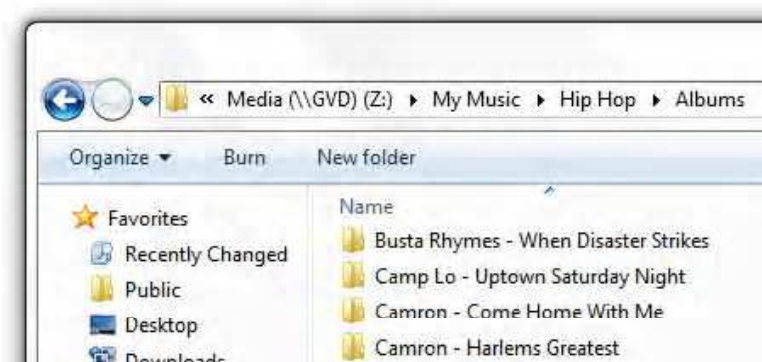


Figure 32: Music Organization

Please visit [this page](#), for screenshots of my file system.

11.3 Batch Rename Your Files

I don't remember when I first started using D- File Mu, but it is an invaluable tool for me. I use it all the time and I recommend it to anyone. It can take a little getting used to, but it's not too complicated and works very well.

[Download D- FileMU](#)

11.3.1 D- FileMU Features

D- File MU performs the following changes:

- Adding strings to the beginning and end of the filenames.
- Deleting specified number of characters from beginning or end of the filenames.
- Adding numbers in sequence to the beginning or end of the filenames.
- Changing to upper or lowercase.
- Replacing strings with specified string.
- Changing the file extension of filenames.
- Capitalizing words and more.

11.4 Relocate Personal Data Folders

I don't like having my personal files on the system drive. If you get a virus or reinstall your operating system, you stand a higher chance of losing your files. I always keep my personal files on a separate partition or drive. Windows

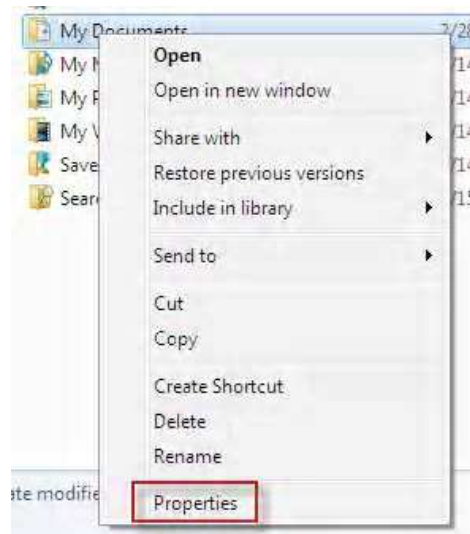
likes to store your saved videos, music, pictures, etc, in your Personal folder. In this section, you'll learn how to relocate your personal folders and files.

To relocate your personal folders and files:

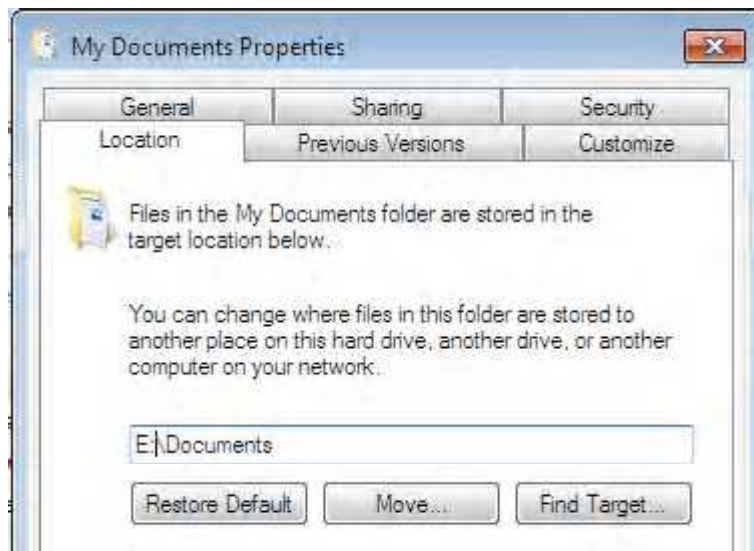
1. Open Windows Explorer and navigate to your personal folders (Usually **C:\Users\[your account name]\.**)



2. Right click a personal folder that you want to relocate and click *Properties*.



3. On the *Location* tab of the properties dialog box, enter the address to which you want to relocate the folder.



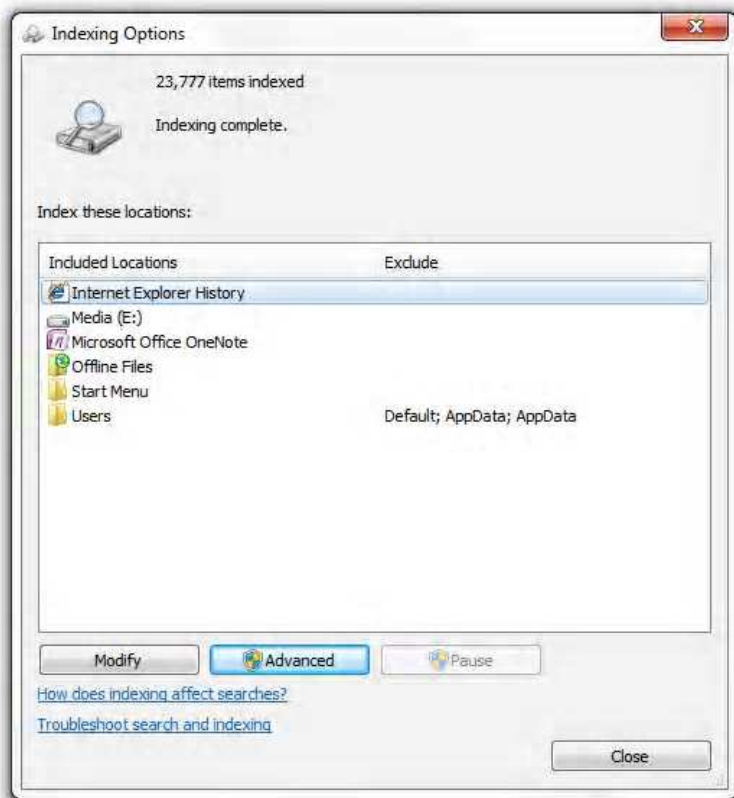
4. Click *OK*.
5. Windows will ask permission to create the target folder if it doesn't already exist, so click *Yes*. I advise moving all the original files to the new location, unless you see a reason not to.
6. Now you may add your new files to the search index. An explanation of how to do this is found later in this chapter.

11.5 Organize the Search Index

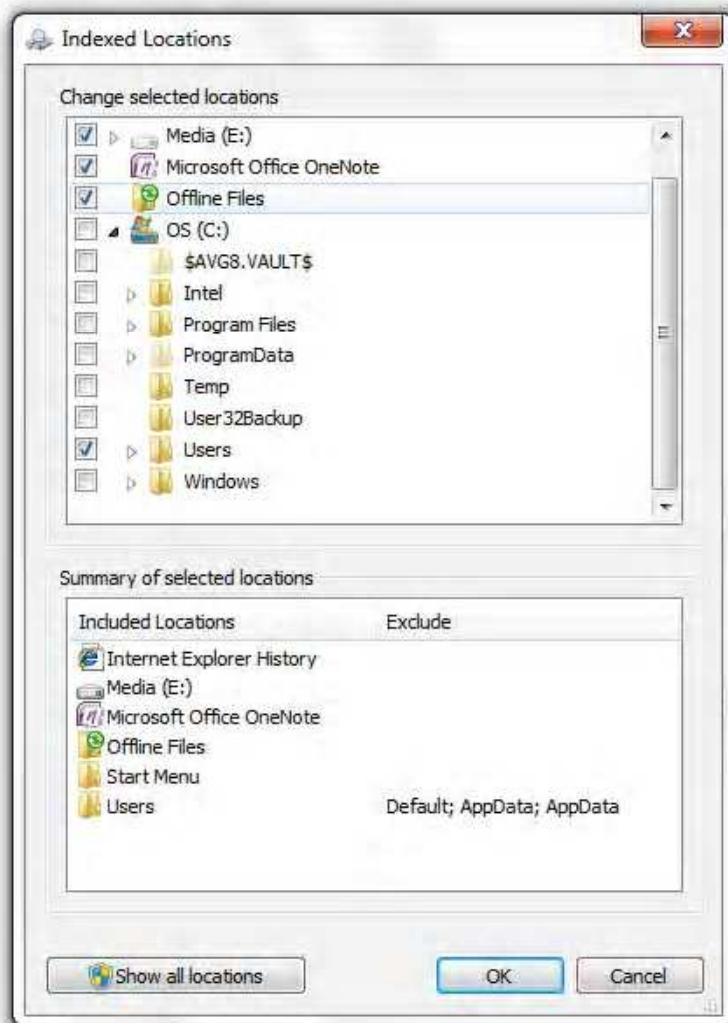
The search index is a powerful tool that helps you locate your files very quickly. However, the search indexing service can be very resource intensive (usually when you're not using your PC) and also takes up hard drive space. I customize the search index to suit my needs.

To customize the search index:

1. Click Start, type **search**, and click *Change how Windows searches*.
2. You will now see which files are indexed. Because I don't store personal files on the C partition ([Relocate Personal Data Folders](#)), I've removed it completely from the search index.



3. Click *Modify* to change which locations are indexed.



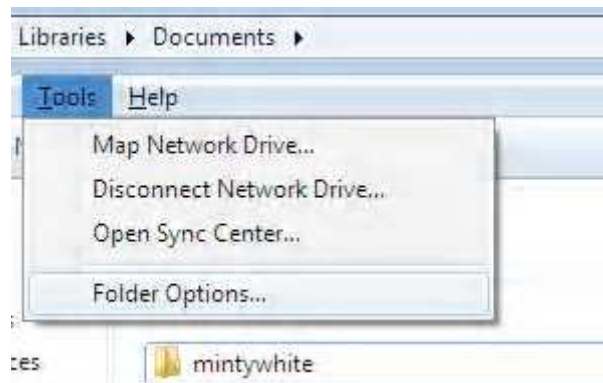
4. Press OK and then Close to save your preferences.

Windows will now get to work as it adds and removes data from the search index.

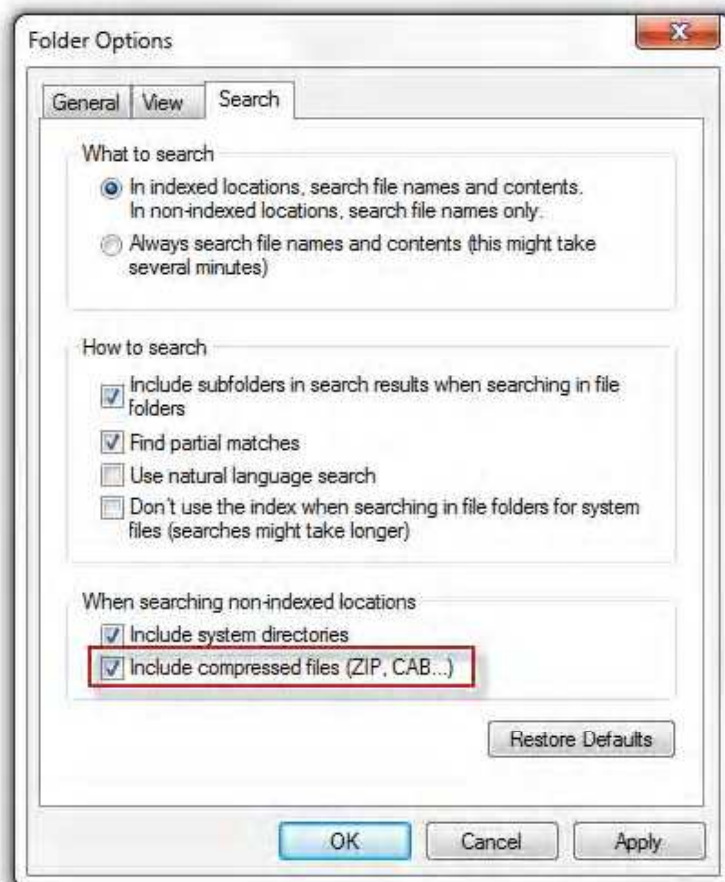
11.6 Index Zip File Contents for Searching

As hard drive capacities increase, the search function is a necessity when trying to access your files. To include zip file contents when searching in Windows 7:

1. Click the Start button and click on *Computer*.
2. Press the **Alt** key and click *Tools > Folder Options*.



3. Under the *Search* tab, check *Include compressed files*, and click *OK*.



Now, when you search, you'll be able to find data in compressed files.

11.7 Scan Your Drive for Duplicate Files

Do you have thousands of photos, documents, songs, etc, on your hard drive? If you do, you'll likely have duplicates all over the place. In this section, you'll learn how to search for duplicates and delete them.

[Download Easy Duplicate Finder](#)

11.7.1 Easy Duplicate Finder Features

- Search for true duplicates (files with same contents.)
- Powerful search engine with fast files check.
- Full binary (byte- by- byte) comparison.
- Flexible Scan settings.
- Search files by “masks”.
- Size criteria & skip zero- length files option.
- Find duplicates from selected folders or drives.
- Select multiple folders/drives for scanning.

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- Protect system files and folders.
- Move files to Recycle Bin or delete duplicate files permanently.
- Mark selected duplicates by renaming them with adding prefix to file names—to test what files are safe to delete.
- Much more.

Glossary

Coming soon...

Appendices

Appendix A: Version History

Version	Date	Revisions
0.1	14 Feb '09	First edition prepared
0.1.1	28 Feb '09	Grammatical changes
0.1.2	24 March '09	Finalized "RC1" Edition for preview by readers
0.1.3	25 March '09	Fixed some consistency issues
0.1.4	30 June '09	Updated for Windows 7 RC Consistency
0.2	17 July '09	Major rework of book: New guides, formatting, grammatical changes, style changes etc.
0.2.1	24 August '09	<ul style="list-style-type: none">• Updated book for consistency with Windows 7 RTM• Added more guides• Added appendicies• New cover page
0.2.2	30 August '09	<ul style="list-style-type: none">• Grammar update• Preparation for translation

Get the [latest version of the book here](#)

Appendix B: Contact Me

You may have questions as you read this book—please don't keep them to yourself—ask me them anytime. There are a number of ways you can contact me:

 Website: <http://mintywhite.com>

 Email: rich@mintywhite.com

 Twitter: <http://twitter.com/mintywhite>

 Digg: <http://digg.com/users/mintywhite>

 Plurk: <http://www.plurk.com/user/mintywhite>

 StumbleUpon: <http://mintywhite.stumbleupon.com>

AIM: mintywhitecom

 MSN: mintywhitecom@hotmail.com

 Yahoo: mintywhitecom

Appendix C: Create a System Restore Point

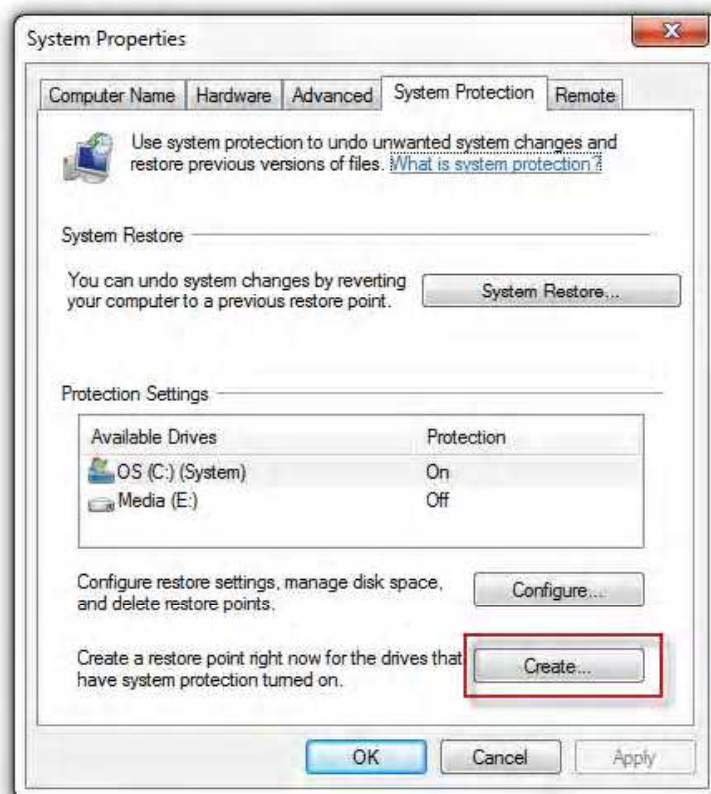
A system restore point is a snapshot of your PC and its settings. This is useful if anything goes wrong and you want to roll back your system to a previous, working state.

As you work through this book, you may be required to make significant system changes. In these cases, create a restore point before you make changes.

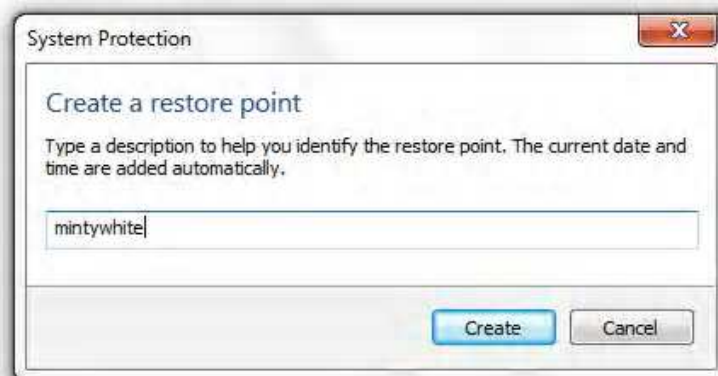
Create a System Restore Point

To create a system restore point:

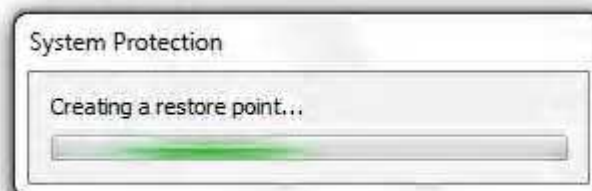
1. Click Start, type ***protection***, and click Create a *restore point*.
2. On the *System Properties* dialogue, click *Create*.



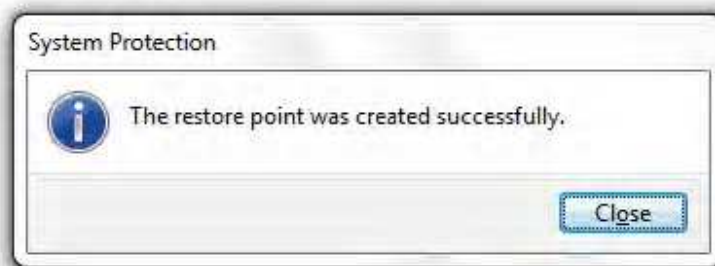
3. Give your restore point a name.



4. Wait as your system restore point is created.



5. Your restore point is ready to use when you need it.



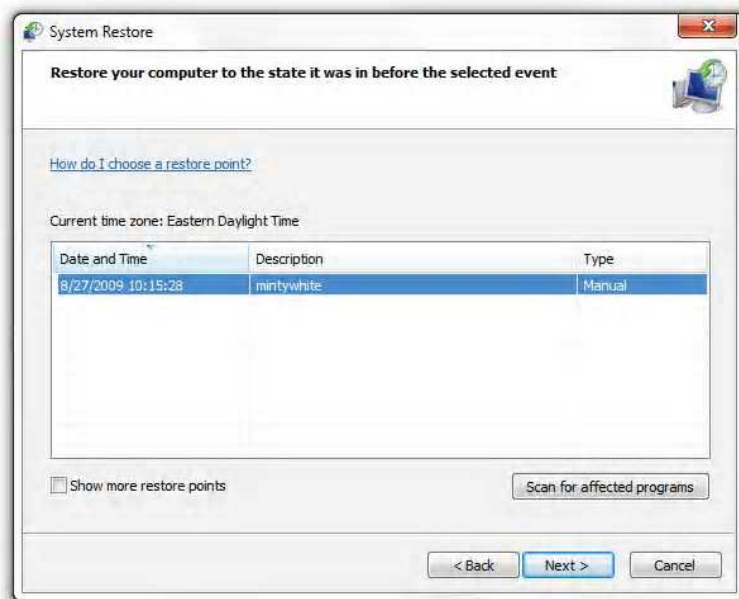
Restore to a Previous Restore Point

To restore to a previous point:

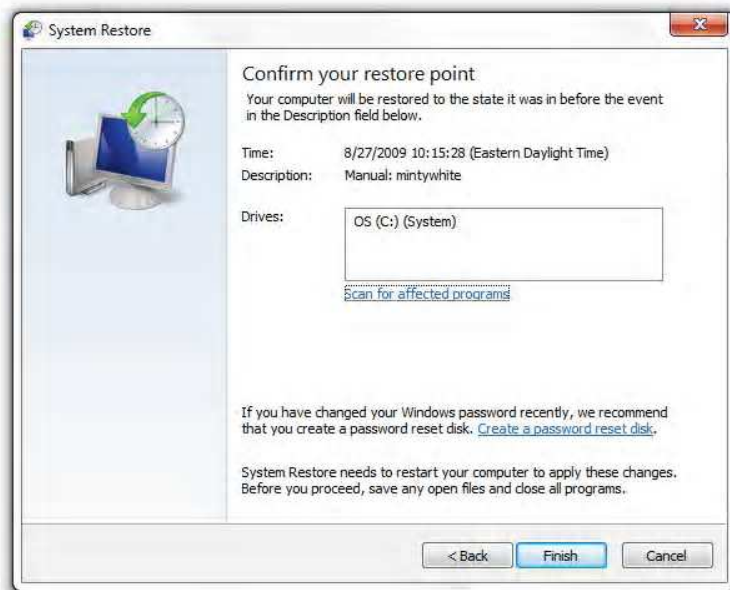
1. Click Start, type ***restore***, and click *System Restore*.
2. If you followed the previous part of this section, you'll already have a restore point to work with. Some programs ([Advanced SystemCare](#) and [Windows Update](#)) create restore points too, so you should have a few by now. Click *Next*.



3. Select your restore point and *Next*.



4. Click *Finish*.



5. System restore may take some time (up to an hour), so enjoy the break from your PC.

Appendix D: Launch Windows Registry Editor

To access the Windows Registry:

1. Click the Start button, type ***regedit***, and press **Enter**



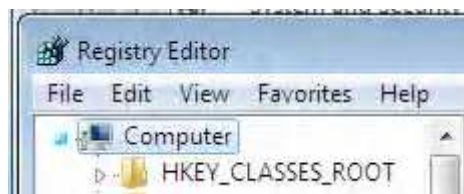
2. When prompted, click *Yes*



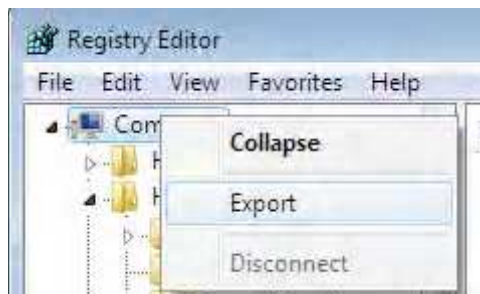
Appendix E: Back up the Windows Registry

To back up the Windows registry:

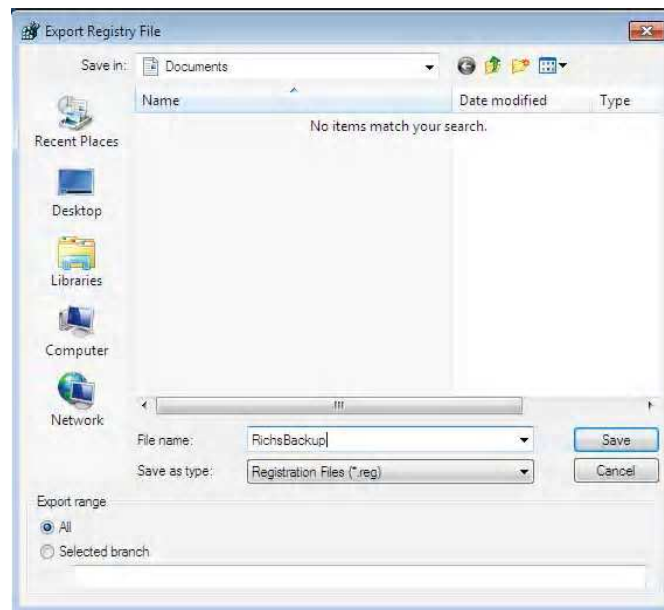
1. Click the Start button and type ***regedit***.
2. Left click *Computer* in the left pane.



3. Go to *File > Export*.



4. Save the file (for extra precaution, save the file to a USB thumb drive.)



Appendix F: Burn Data to CD/DVD/Bluray

To burn files to you disc:

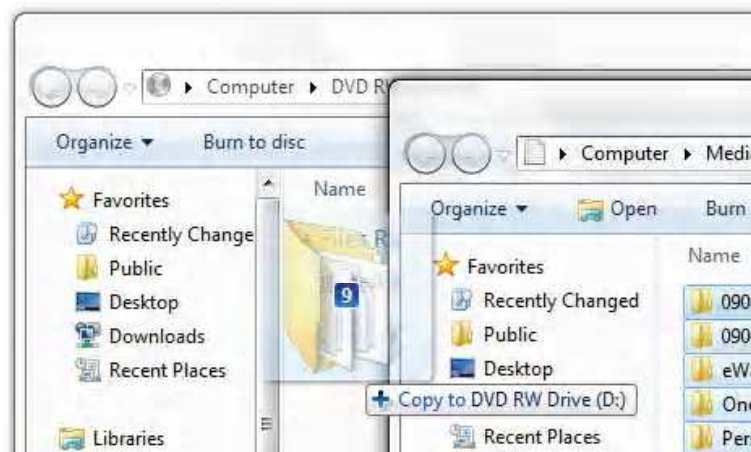
1. Put a blank or rewriteable disc in your optical media drive.
2. When Autoplay loads, click *Burn files to disc*.



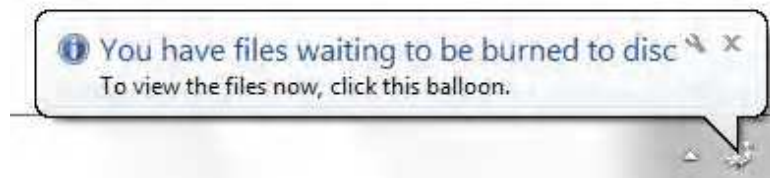
3. Give your disc a title and choose which type of disc you'd like to create. I chose to write only once to the disc, but you can write multiple times (and rewrite if you are using a rewritable disc.)



4. Drag and drop files to the burn folder.



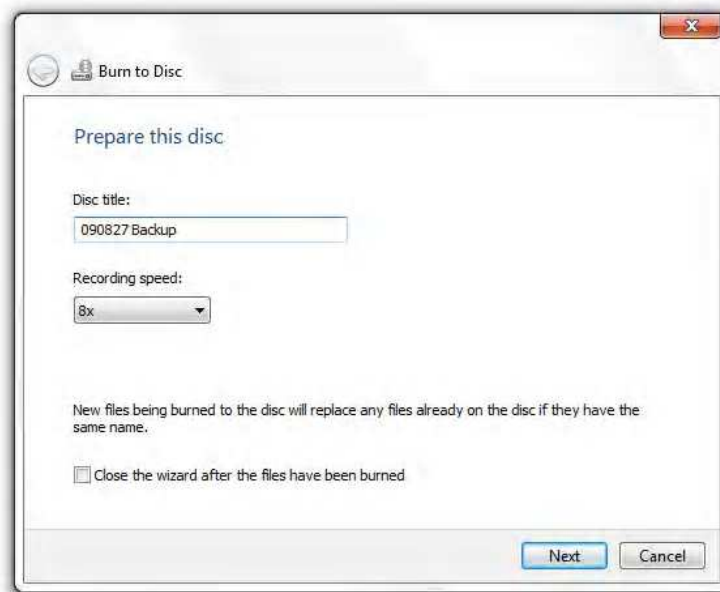
5. Your files are now ready to be burned to your disc.



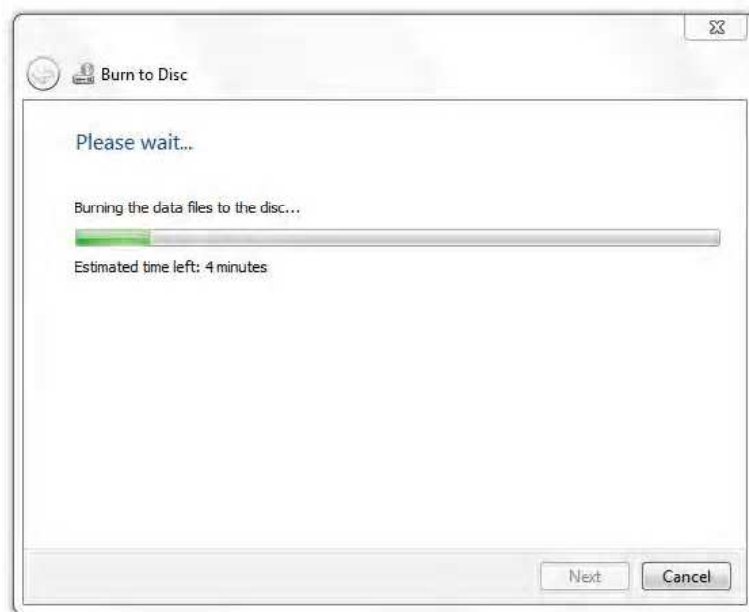
6. When you've copied all your files, click *Burn to disc*.



7. Verify your disc name and click *Next*.



8. Your data will now be copied to your disc.



9. Verify your disc works by accessing it through *Computer* (⌘+E) or using it in another computer.

Appendix G: Burn an ISO Image to a Disc

Windows 7 burns ISO images natively; however, Windows XP and Vista do not. Learn, in this section, how to burn and ISO to a disc in Windows XP or Vista and how to do this in Windows 7.

Burn an ISO to Disc in Windows XP or Vista

To burn an ISO image to a disc in Windows XP or Vista:

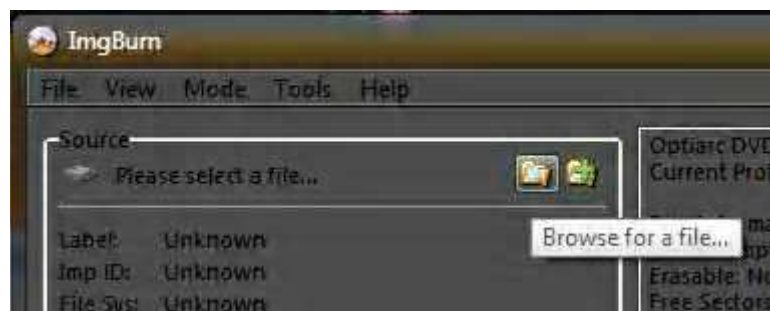
1. Download [ImgBurn](#).
2. Install ImgBurn on your PC.



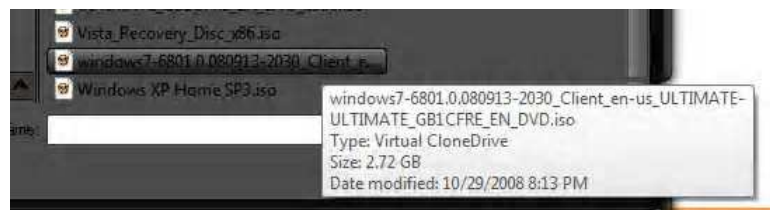
3. Open ImgBurn and click *Write image* file to a disc.



4. Click the *Browse for file* icon.



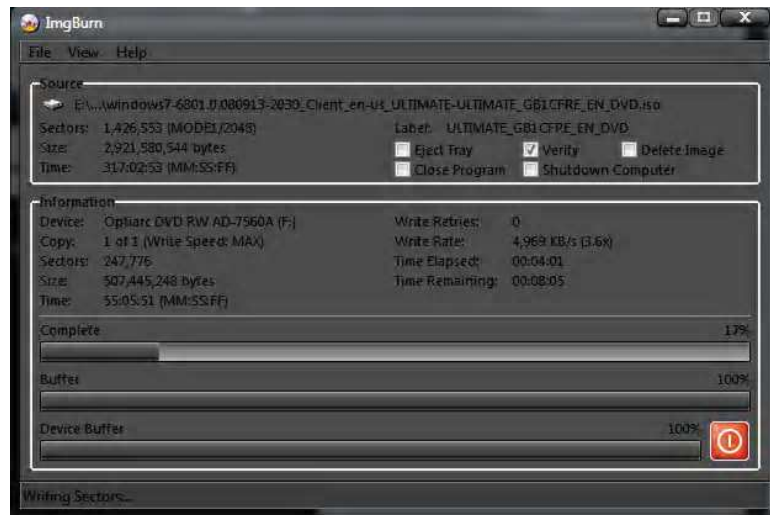
5. Locate the ISO image and click *Open*.



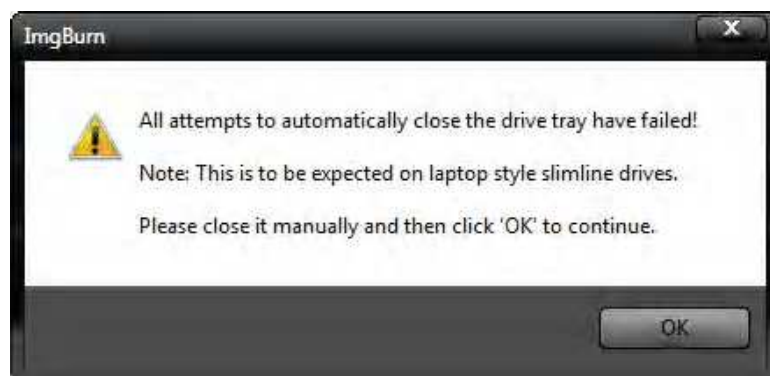
6. Click *Write*.



7. ImgBurn will now create your DVD (I strongly recommend verifying the disc with ImgBurn by checking *Verify*.)



8. If you get the following error and are using a laptop, don't worry: this is normal.



9. ImgBurn will notify you when the disc is successfully burned and verified.



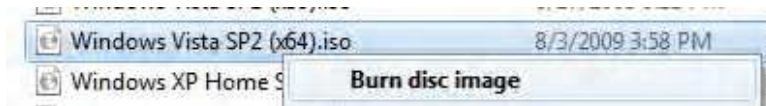
10. Verify your disc works by opening in Computer or checking it on another PC. i.e., if you are burning the Windows 7 DVD: go to *Computer* (⌘+E), double click on your optical drive's icon, and double click on *setup.exe*. The Windows 7 install tool should load.



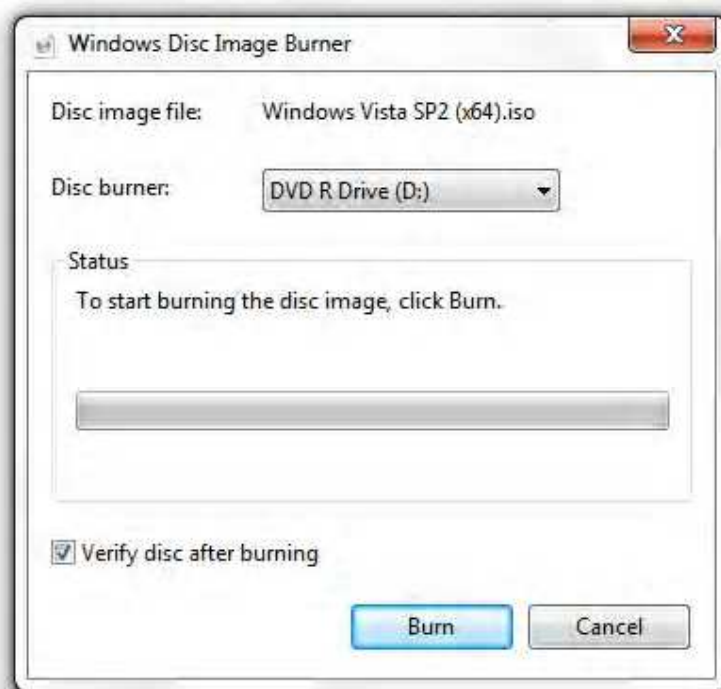
Burn an ISO to Disc in Windows 7

To burn an ISO image to a disc in Windows 7:

1. Put a blank or rewriteable disc in your disc drive.
2. Locate your ISO file, right click in and click Burn disc image. Note: if another program has assumed responsibility for ISO files, you'll need to change the default program ([Appendix J: Change the Default Program to Handle a File Type .](#))



3. I encourage you to verify the disc. Click *Burn*.



4. Verify your disc works by opening in Computer or checking it on another PC. i.e., if you are burning the Windows 7 DVD: go to *Computer* (⌘+E), double click on your optical drive's icon, and double click on *setup.exe*. The Windows 7 install tool should load.

Appendix H: Boot from a CD or DVD

When you first boot your PC, you are not in Windows yet; you are booting from BIOS, which means there are no standards and each computer differs.

Due to the number of computer brands and BIOS versions, a comprehensive guide is not provided here. However, I do provide some quick tips:

- Have the disc in the drive as the computer is turned on.
- Wait and you may be prompted to press any key to boot from the disc.
- Look out for something like *F12 Boot Menu* when your computer is starting.
- When the boot menu loads, select optical disc drive (or equivalent) and hit enter.
- Ask [the experts](#).

Appendix I: Create a Partition with GParted

Note: If you are using Windows Vista or 7, you should use the built in disk management tool ([Create a New Partition using Vista.](#)) Windows XP disc management tool is not adequate and you should use something free like GParted.

To create a partition with GParted:

1. Download the GParted live CD [here](#).
2. Burn the image to a CD ([Appendix G: Burn an ISO Image to a Disc](#)), reboot your computer, and boot from the CD ([Appendix H: Boot from a CD or DVD.](#))
3. Press **Enter** at the boot prompt; choose your language, keymap, and screen resolution.



4. You will now see your disks and partitions.
5. Select the partition you want to resize and click *Resize/Move*.



6. Drag the partition to the desired size and click *Resize/Move*.

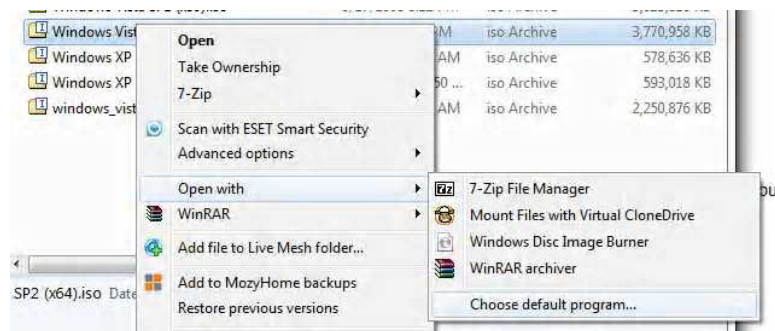


7. Now exit GParted and either boot back into Windows or boot from your operating system installation disc.

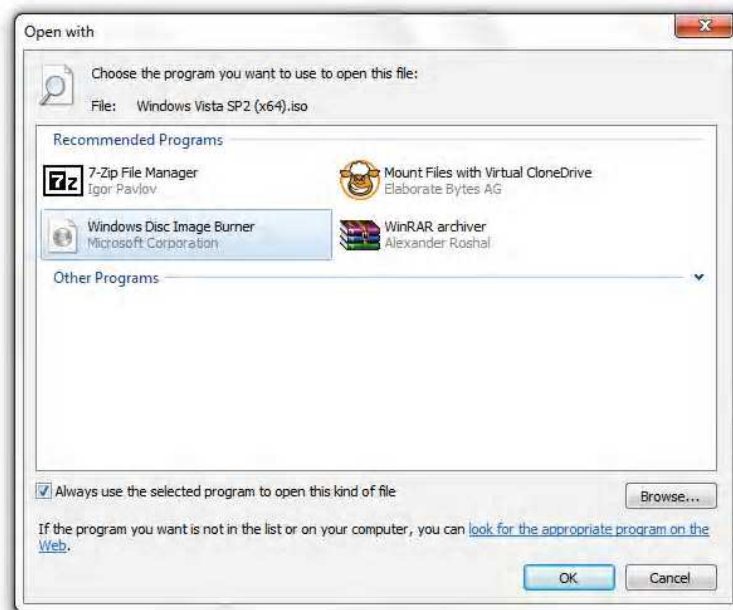
Appendix J: Change the Default Program to Handle a File Type

If you want to open a file type in another program, do the following:

1. Right click on the file and click *Open with > Choose default program...*



2. Select the program you would like to open the file with and check *Always use selected program to open this kind of file*. Click *OK*.



3. Your files will now open in the new program by default.

Index

Coming soon...



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