



PC Maintenance Handbook

Make Your PC Run Like new
& Keep it That Way



Rich Robinson — Microsoft MVP — <http://mintywhite.com>

If this guide is distributed it is furnished under license and may be used or copied only in accordance with the terms of such license. Except as permitted by any such license, no part of this guide may be reproduced. This guide may be stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, recording, or otherwise. Please note that the content in this guide is protected under copyright law.

Mintywhite will not be responsible for damages to your computer, software, or data resulting from use of information contained in this document.

The content of this guide is furnished for informational use only, is subject to change without notice, and should not be construed as a commitment by Windows Guides. Windows Guides nor Microsoft Corp assumes no responsibility or liability for any errors or inaccuracies that may appear in the informational content contained in this guide nor for any damages resulting from use of the information contained herein.

Please remember that existing artwork or images that you may want to include in your project may be protected under copyright law. The unauthorized incorporation of such material into your new work could be a violation of the rights of the copyright owner. Please be sure to obtain any permission required from the copyright owner.

mintywhite, Windows Guides, and the Windows Guides logo are trademarks of mintywhite.com

Microsoft, Windows and Office are trademarks of Microsoft Corporation. All other trademarks are the property of their respective owners.

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 7 –The Pocket Guide, 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.](#)

Contents

Introduction.....	2
Notational Conventions	2
Maintenance 101	2
Maintaining Your PC	3
Find and Remove Malware.....	4
AVG Internet Security	4
What Do I Get If I Use the Coupon?.....	4
ESET Smart Security	5
Uninstall Unnecessary Programs	9
Three Ways to Remove Programs	9
Use Windows' Add/Remove Programs	9
Use the PC Decrapifier	9
Use Revo Uninstaller	10
Uninstalling Programs with Revo	11
Delete Junk/Temporary Files & Optimize Your System	12
Advanced SystemCare Features	13
Advanced SystemCare Screenshots	13
Defragment Your Hard Drive	14
Use Windows' Built in Defragmentation Tool.....	14
Use Smart Defrag	15
Backup Your Data	16
Online Data Backup	16
MozyHome Features	17
Download Mozy for Free.....	17
What Next?	17
About this Handbook	18

Introduction

This handbook is designed to help you find ways to maintain your Windows XP/Vista/7 PC and ensure your PC remains clean and speedy throughout its life. Computers quickly get bogged down by junk files, invalid registry entries, a fragmented hard drive, spyware, adware, low disk space, and more. A speedy system is just a few clicks away, but sometimes it's hard to know where to start or even what to do.

I set up PCs for companies, friends, and family; the advice I give in this manual is what I use when maintaining any PC. My tips are tried and tested and have left hundreds of people satisfied with the way their computer works. I hope you too can follow these instructions and enjoy an error-free, clean, and speedy PC.

The purpose of this book is not to define the ultimate solution; its purpose is to give you simple, unbiased advice on what I've found to be the best options out there. In this handbook, I only give advice and share programs that I've used for at least a year. Some programs seem good when you first use them, but quickly annoy you or slow down your PC.

If you have any questions about PC maintenance or PCs in general, you can head to [Windows Forums](#) where you'll find friendly, knowledgeable members who are happy to assist in your learning. If you disagree with anything in this handbook, please join us also and share your solutions.

Notational Conventions

In this handbook, 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.

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.

Maintenance 101

Many terms in this handbook may be new to you; I make every effort to explain things in a simple manner that is easy to digest. Before we begin with solutions, I present some key terms and phrases that will assist you as you work your way through the rest of this handbook. These phrases are commonly thrown out in conversation and in online discussion forums, but it's hard to know exactly what they mean.

Uninstall – To remove a program from your computer so that it no longer occupies space on your hard drive and cannot be used anymore. Uninstallation includes deletion of program files, registry entries, associations, supporting libraries, user data, plugins, extensions, and other features specific to a program.

Defragment – 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.

Temporary Files – Files created by programs on your computer that are temporary. Thus, these files can safely be deleted after the program, which created them, is finished using them.

Junk Files – Similar to temporary files, but used to describe files left behind by programs—even after the program is uninstalled from your PC.

System Optimization – The act of cleaning your PC and making changes to gain the most performance.

Malware – The generic term used for all forms of software designed with malicious intent. Viruses, worms, spyware etc. are all forms of malware. The term *virus* is often used when malware should really be used as it describes all forms of malicious software.

Spyware – Spyware tracks a user's activity by monitoring browsing habits and key board activity and can even take screenshots while you use your PC. This information is sent back to the creator or beneficiary of the spyware. Signs of spyware include: modified browser homepages, slow internet, and suspicious looking sites in place of legitimate sites (usually banking sites.)

Registry – A control center for your computer. Windows settings, individual program settings, and other important configuration information are stored here.

Now you have your jargon set straight, you can begin cleaning your PC and forming good practices to keep it clean and running smoothly.

Maintaining Your PC

The internet is flooded with tips and advice on PC cleaning. Much of this advice urges you to buy useless programs that cost hundreds of [insert your currency here.] Look no further: you can follow this guide and get your PC clean without spending any money whatsoever. I do recommend programs, which have paid upgrades; however, I am confident these programs, when upgraded, are worth every penny and hundreds of Windows Guides readers (and I'm sure others) agree with me.

Let's get right into things; to clean and maintain your PC:

1. Find and remove malware.
2. Uninstall unnecessary programs.
3. Delete junk/temporary files.
4. Optimize your system.
5. Defragment your hard drive.
6. Backup your data.

By following these steps, you'll ensure your computer is performing at its best and is error free.

Because this book is designed for beginners, instructions on manually tweaking your PC are not included. Such optimization

tips are beyond the scope of this book and, in many cases, are unfounded and can compromise the stability of your system. Instead, I will focus on tried and tested tools, which are easy to use and make maintenance an easy task.

Find and Remove Malware

In this section, I recommend antimalware software that I've used for years. I highly recommend these programs and am confident they will protect your PC and minimize system slowdowns, which are an all-too-common side effect of security software.

The two programs I recommend are AVG Internet Security and ESET Smart Security. Both of these are paid programs; however, I really feel you get what you pay for and will not be disappointed by either choice. AVG also has a free version and ESET gives you a 30-day trial, which I recommend you take before paying for a license. I recommend either of the two different programs because they will both provide the level of protection you need, not bog down your computer, and are reasonably priced for the level of support included, which is absent with free alternatives.

You should give both programs a try if you are unsure which one to use. However, try them at different times and don't install both programs because the real-time scanners on both of these programs will conflict.

AVG Internet Security

I've used AVG for many years on my computers because I trust it and it has always protected my files from malicious

programs. AVG is now used by over 80 million users and remains one of the top security programs available today.

As this is your security 101 class, I won't bore you with the details—I'll get straight to the point. AVG protects you from:

- Web browsing threats.
- Targeted hacker attacks.
- Viruses and spyware.

From AVG's homepage:

AVG helps you **stay safe while you shop, bank online, watch videos, search or surf the web, download music, documents and pictures, and email or chat.** Every document or file you download, every web page or link you click on, is scanned by AVG before you open it. Unlike other security products, we stop the threats before they reach your hard drive and become a problem. Safe internet surfing is now possible.

AVG Internet Security also comes with a Firewall, which relies on existing data to determine whether a connection attempt is a threat.

I recommend try [AVG Free](#) to start with. If you are satisfied with how well AVG works, I have a [25% off 1 year subscription to AVG Internet Security](#) coupon for you to use.

What Do I Get If I Use the Coupon?

AVG Internet Security has the following features that don't come with AVG Free:

- Web Shield - Screens your downloads and prevents accidental infections through IM chats.

- Anti-Rootkit - Protection against hidden threats that deliver malicious content.
- Identity Protection - Prevents identity theft and new and unknown malware.
- Firewall - Stops hackers and viruses spread over the internet.
- Anti-Spam - Catches e-mail threats including phishing, fraud and spam.
- Free Support - Free support and service around the clock and across the globe.

Use [25% off coupon](#) for AVG Internet Security.

ESET Smart Security

I love ESET Smart Security and have been using it for over a year. If you ask anyone who is computer "savvy", they'll know about (and may already use) ESET.

I've reviewed ESET in great detail [here](#). For sake of brevity, I'll explain the best details in this handbook.

When you first start the program, you will be presented with the simple menu. You can enable the advanced menu by clicking at the bottom of the main menu. The interface for this program is simple and intuitive with a clean dashboard that shows you the most recent statistics from the program. From the main menu, you can see the status of the different modules of ESET Smart Security. If you are going to use this program, I highly recommend running all the modules together. This way, you do not need a separate firewall, anti-spam, or anti-spyware program running in the background.

Note: the screenshots I will show you are from the business edition. I will only cover features available in the home edition.



System Scanning

The system scanning is both quick and efficient and in, in my opinion, quicker than any other virus program I've ever used. You are shown a simple interface while the system scans your files, which is an improvement over many programs which show an elaborate display when checking your computer.



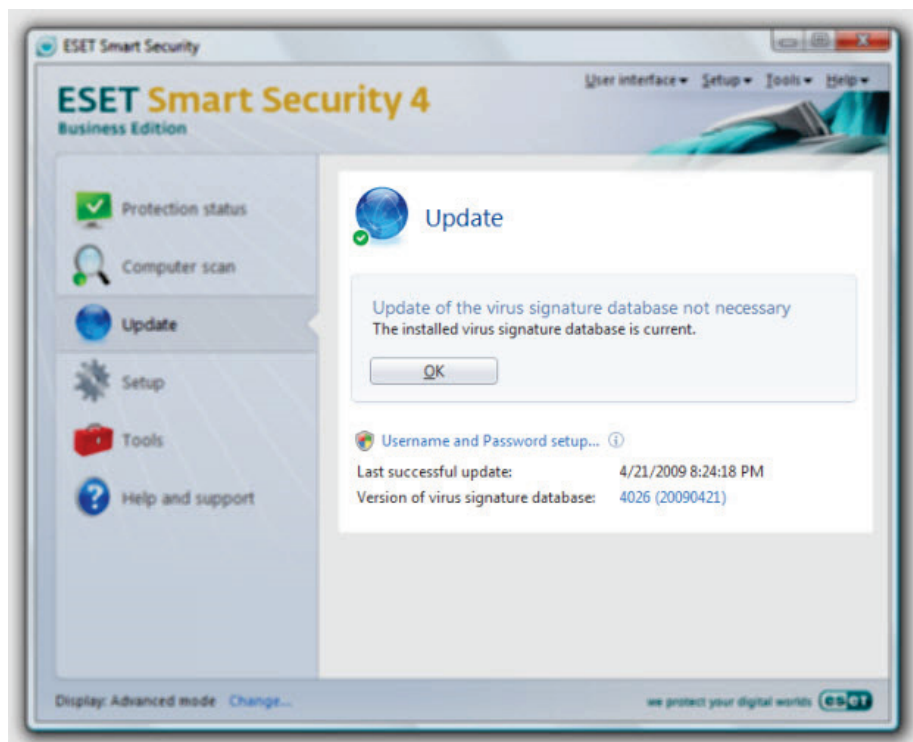
Scheduled Protection

I always like my computer to run a schedule so that tasks are taken care of without my intervention. Virus scanning is no exception to this rule and ESET comes with a built in scheduler so you don't have to worry about setting up a schedule tasks via Windows control panel.



Harm Prevention

Protection against viruses is great but prevention is even better and ESET constantly update their virus definitions to ensure that the even the newest viruses are well protected against. Virus updates do not consume unnecessary system resources and do not fail—other antivirus programs I have used have issues with updating and sometimes need a manual fix.

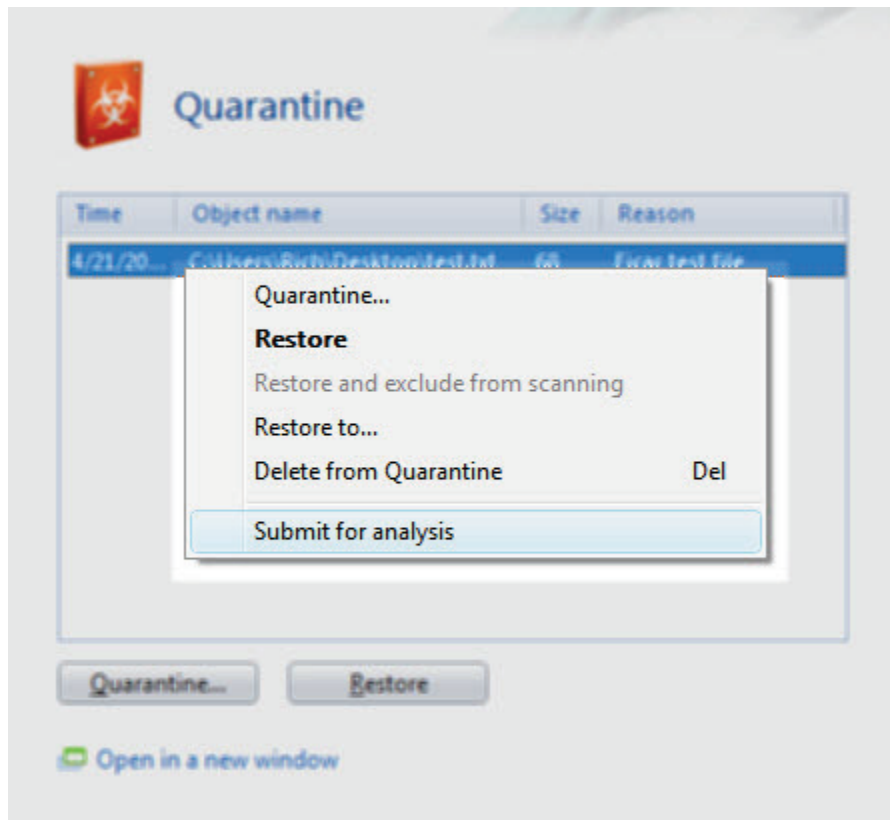


Harm Protection

Most viruses should not find their way on to your system, because of real-time protection, and should be caught immediately. However, if a virus is detected during a scan, it will also be quarantined where you can review it and delete it if necessary.

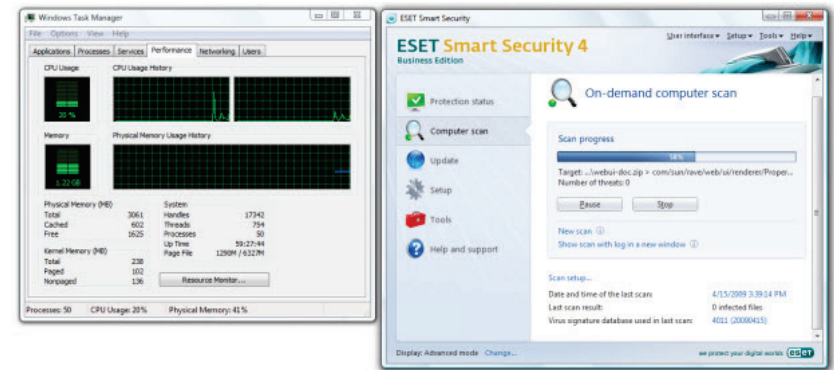


You can even submit the file to ESET for further analysis. This will help you identify if the file is malicious and also help ESET protect other users who may have the same file on their machine.



Resource Usage

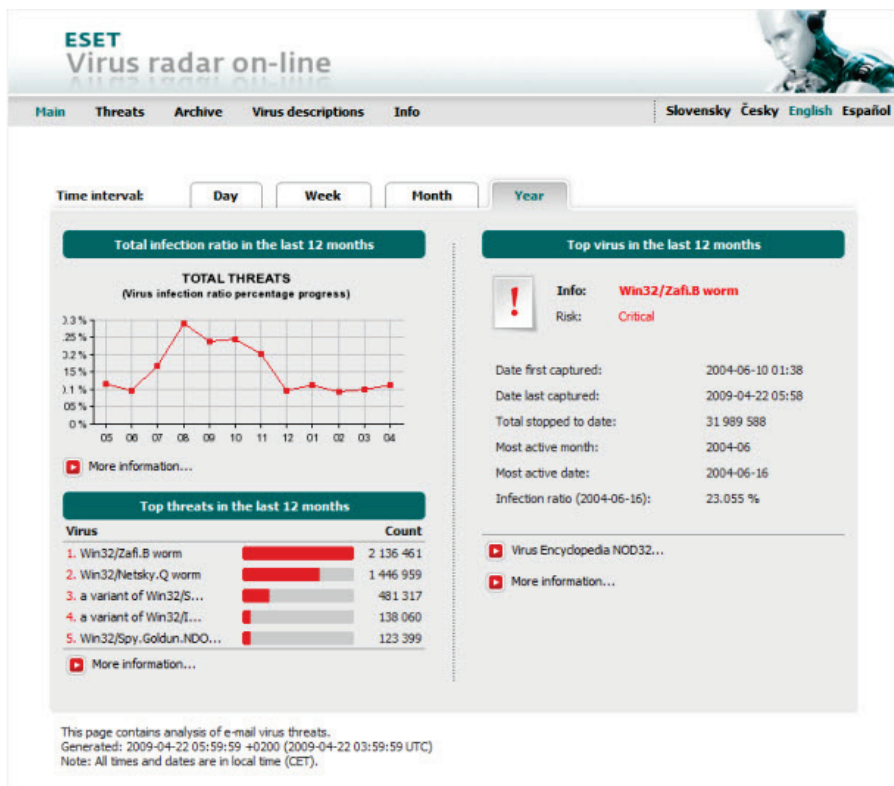
Virus checkers are a notoriously bloated and slow your system down to a halt when I running a scan. Many people who use ESET hold it high because it uses such low system resources. I've never completely tested this rely on the fact my computer still runs just fine when the scans are running. For this review, I decided to run a deep system scan and monitor system resources. The results of this experiment are shown below (click to enlarge):



As you can see from the enlarged screenshot, even with a full system scan running, system resources are at 22% on a 2 GHz dual core processor (T7250.) RAM usage is also very low but this is not usually a problem with most virus scanners.

Real-time Status

The final aspect of ESET I want to cover is the virus radar. While this may not be useful to you, it's nice to see that ESET are monitoring current threats and sharing them with you so you can keep an eye out for any suspicious activity on your PC.



In Conclusion

ESET Smart Security 4.0 is an excellent program and I recommend it to everyone. You can download a 30 day trial from ESET's website [here](#).

Uninstall Unnecessary Programs

Many of us have programs on our PC that we'll never use i.e. a free trial of QuickBooks, Microsoft Money, or Microsoft Works etc. These programs can be safely uninstalled; thus, freeing up disk space and removing clutter from your PC's file system. If

you are unsure about a whether you need a program, I recommend you do not remove it from your PC. You should ask about such programs at [Windows Forums](#).

Three Ways to Remove Programs

I present three solutions to uninstall programs from your computer. You may use any of these methods to remove unwanted programs:

- Use Windows' add/remove programs (easiest.)
- Use the PC Decrapifier (quickest.)
- Use Revo Uninstaller (best.)

Using only one of these methods is sufficient.

Use Windows' Add/Remove Programs

The easiest way to remove programs is to use Windows' Add/Remove programs. While this method is the easiest, it is not the best because programs, even after removal, leave junk on your hard drive. I recommend Revo Uninstaller if you want to completely remove a program. To remove a program:

1. Click *Start > Run* (or use Winkey+R.)
2. Type ***appwiz.cpl*** and press **Enter**.
3. Click the program you want to remove.
4. Click Uninstall and follow the on-screen prompts.

Use the PC Decrapifier

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 of 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. Your anti-virus software may complain about this program; however, 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.

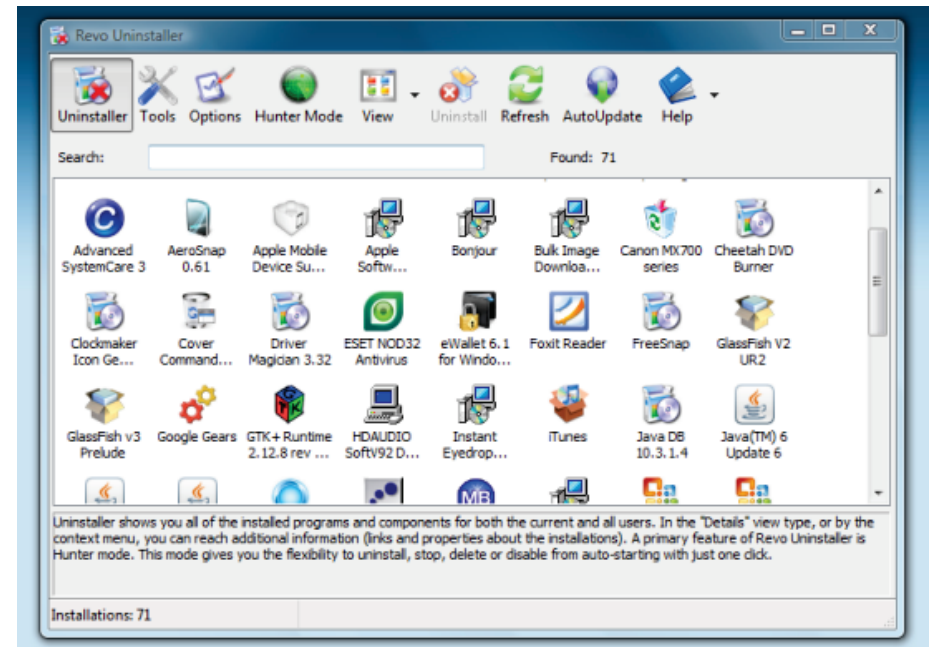
Click the *Next* button and it will begin cleaning your PC. If it does not find anything, a pop-up box will notify you of this and the program will exit and not modify your PC.

Use Revo Uninstaller

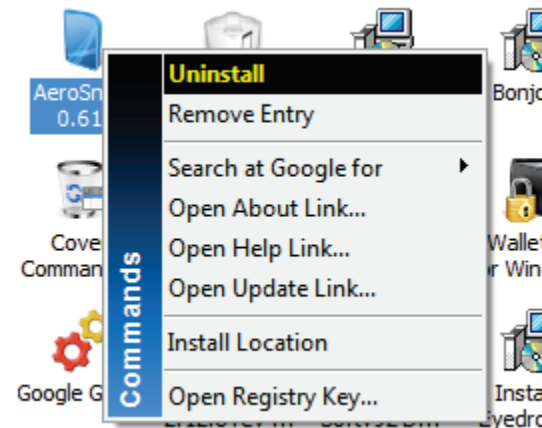
The final, and most thorough method, of software removal is to use Revo Uninstaller. Revo Uninstaller is primarily designed to ensure programs are properly removed from your computer. Revo is freeware and is available to all those who want to ensure their computer is clean and working at its best.

[Download Revo Uninstaller](#).

Installing Revo is as simple as any other program. Once you've installed and started Revo, you are presented with a list of currently installed programs:



From there, you can right click on a program and select uninstall:



You can also look the program up on Google if you are not sure where it came from or if you just need more information before making the decision to uninstall it.

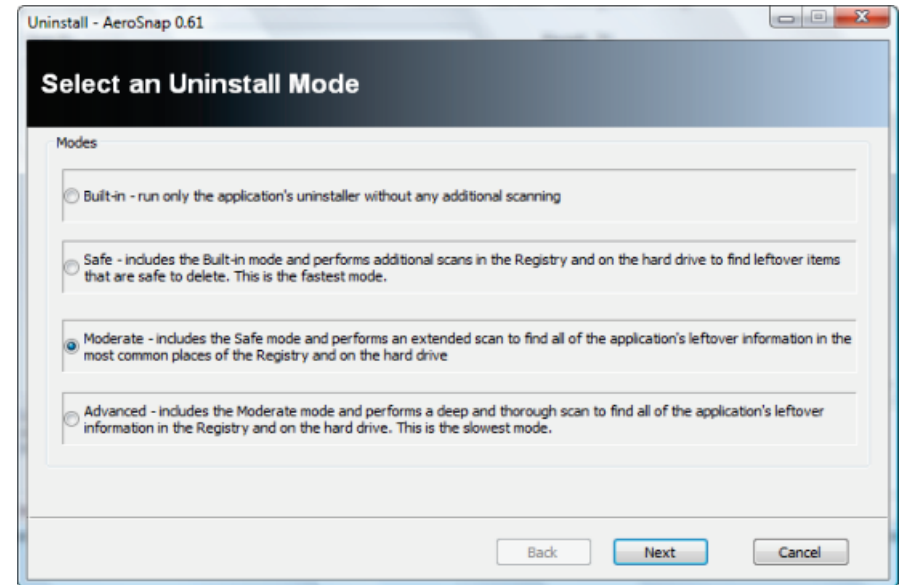
Revo also comes with other features, such as Hunter, which allows you to simply click on a running program and uninstall it. This is really useful if you find a program running, but have no idea how to get rid of it. Revo integrates many Windows tools and helps you maintain your system for error-free computing.

Uninstalling Programs with Revo

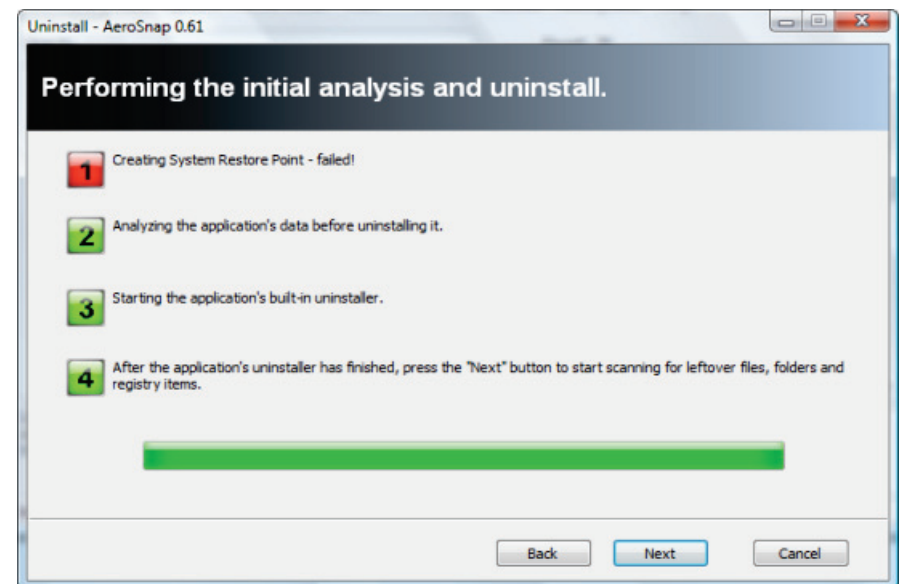
Uninstalling a program with Revo is a little more complicated than through the standard Add/Remove Programs interface; this is only because Revo gives you more options. When you choose to uninstall a program, you are given four options for uninstalling your program:

1. Built-in
2. Safe
3. Moderate
4. Advanced

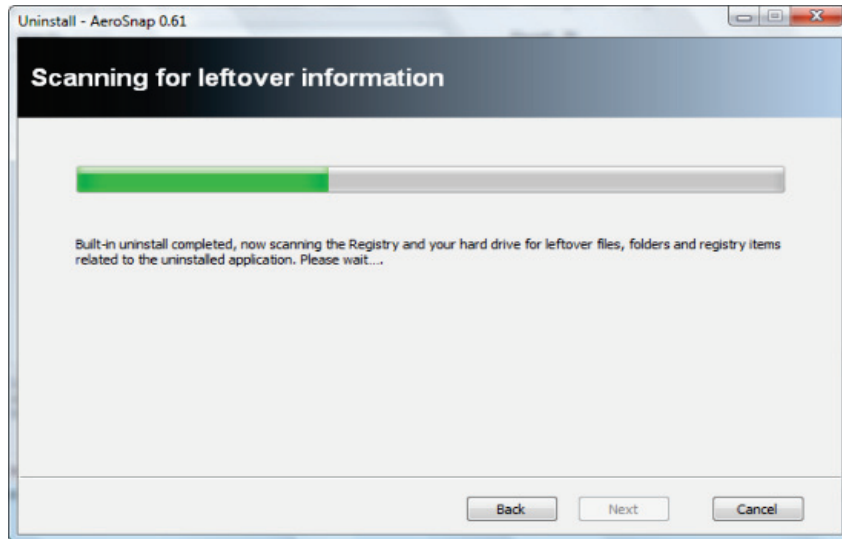
Moderate is generally the safe mode to go with. This mode uses the program's standard uninstaller and then scans your system for left over files.



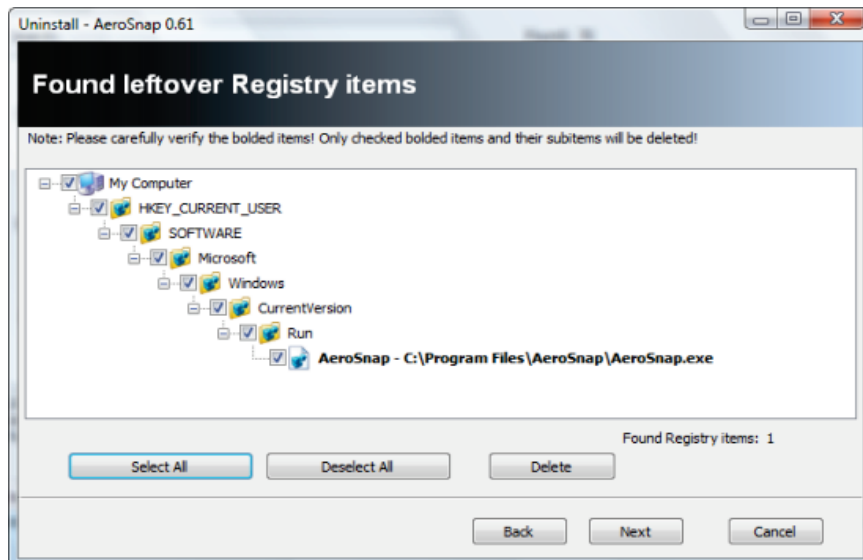
Revo then takes the first steps to uninstall your program by using the program's built in uninstaller:



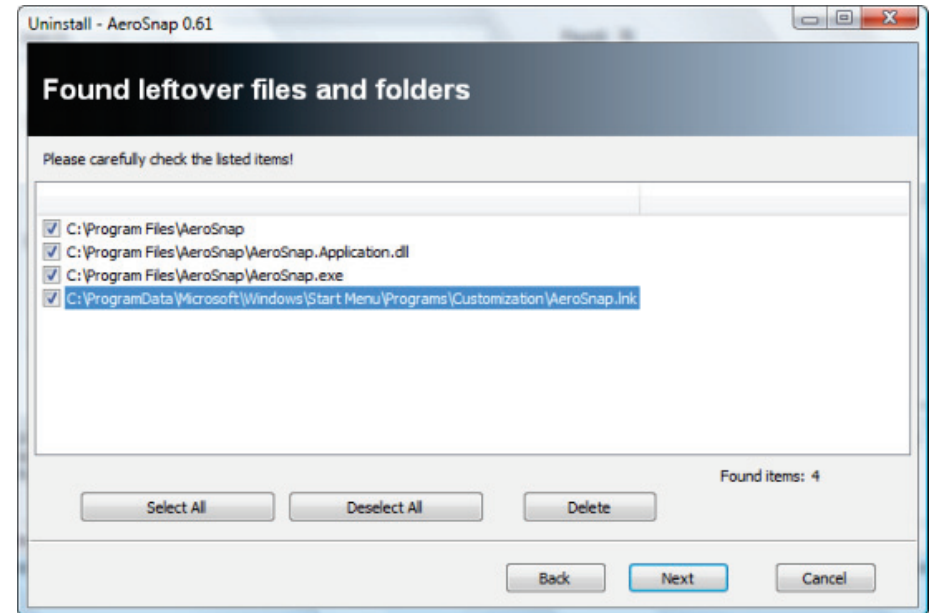
After running the program's built in uninstaller, Revo will then scan your drive for other left over traces:



Revo will then show you everything it finds and give you the option to remove the left-over registry keys:



Finally, Revo will show you any files that are left over and give you the option to remove them from your hard drive:



Overall, Revo works really well and it's a great program, which helps you keep your computer clean from left-over clutter.

[Download Revo Uninstaller.](#)

Delete Junk/Temporary Files & Optimize Your System

The best program for cleaning up and optimizing your system is [Advanced SystemCare](#). I use this program on every system I work with. If you want quick results and a more responsive system, this is the program for you. The interface is simple and the effects are powerful.

I use this program to help my computer and run it regularly. I love the free version so much that I had to try the [Pro version](#). I must say "I'm not disappointed at all—this program is amazing!" Advanced SystemCare PRO is a one click program, which helps you optimize and clean your PC.

Advanced SystemCare Features

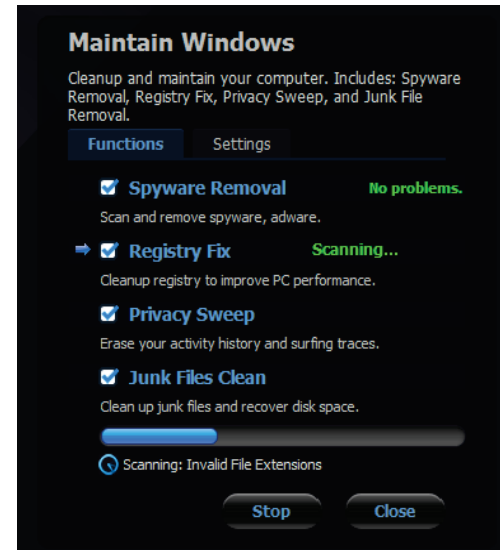
- Clean and optimize your PC with one click
- Defrag and optimize your hard drives
- Automate system clean up
- Protect your PC from spyware
- Free up RAM with one click
- Lots more!

Advanced SystemCare Screenshots

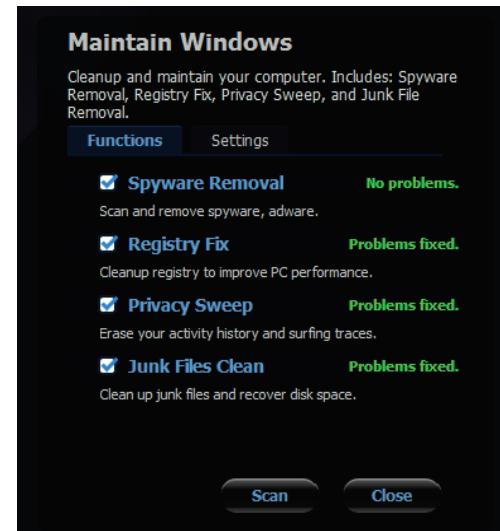
From the main screen, just click *Care!* and let the program take care of your computer:



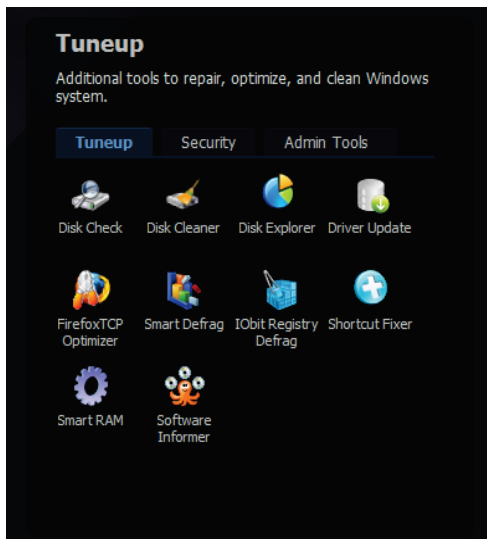
Advanced SystemCare runs through your computer and protects it for you:



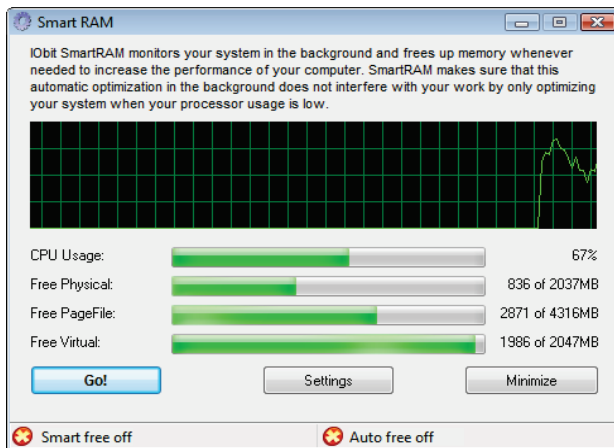
Problems are automatically fixed:



There are many manual tune up and security tools you can use:



Free up RAM with one click:



I highly recommend this program; this should be installed on every system.

[Download Advanced SystemCare Free](#) (Upgrade to the [Pro version](#).)

Defragment Your Hard Drive

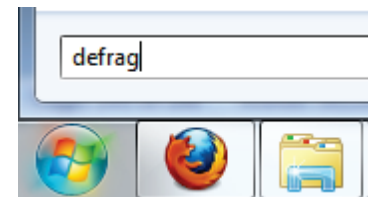
Defragmentation helps speed up access to data on your drive. In this section, you'll learn how to schedule defragmentation so you don't have to worry about ensuring your drive is defragmented.

Windows XP, Vista, and 7 all come with a built-in disk defragmenting tool. I'll show you how to use this and set up a schedule; however, I recommend a free program called [Smart Defrag](#), which is explained below, because it keeps your files defragmented more frequently and optimizes the file storage on your drive.

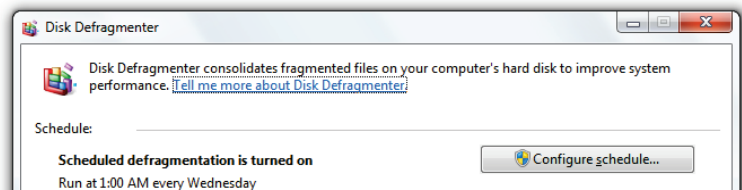
Use Windows' Built in Defragmentation Tool

Setting up scheduled defrags is easy:

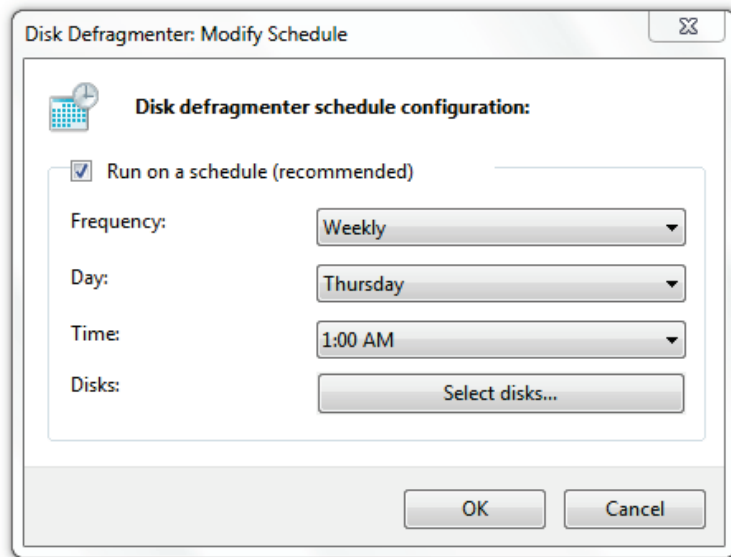
1. Click the Start button, type *defrag*, and click *Disk Defragmenter*.



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.

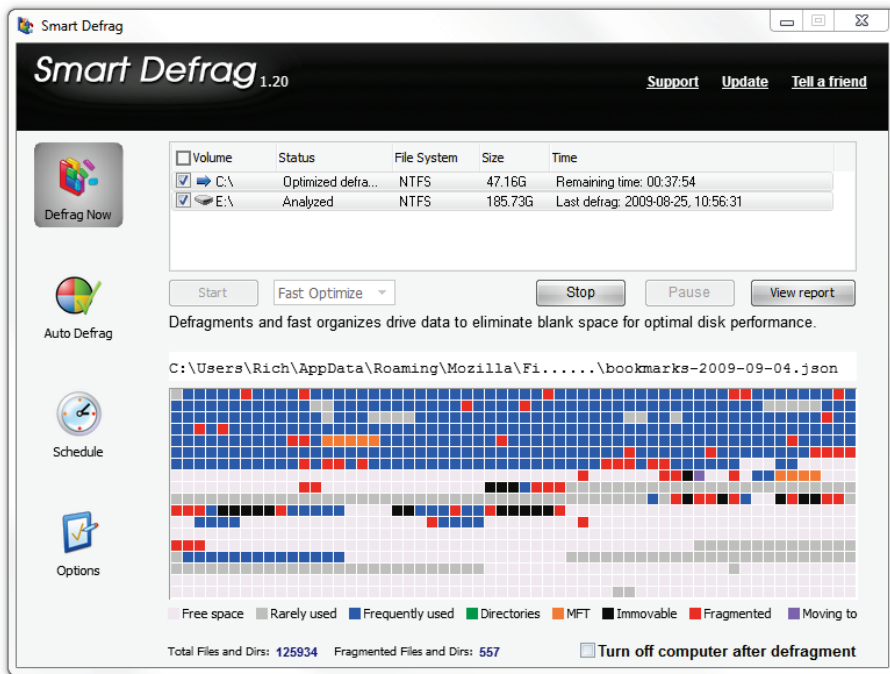
Use Smart Defrag

I've used [Smart Defrag](#) for as long as it's been available and I've always found it a great program to use. This program is one of my [essential programs](#) on a computer.

Here are smart defrags features:

- **Extremely Easy to Use** - Install it and forget it. This powerful, free defragmenter works continuously, automatically and quietly in the background on your PC. Its intuitive interface makes Smart Defrag the ideal utility for complete computer dummies.
- **Exceptionally Efficient Defragmentation** - Smart Defrag has the world's fastest defragmenting engine. It's been specially designed for modern, large hard drives, so it eliminates long waiting times.
- **Optimize Disk Performance** - Smart Defrag doesn't just use simple defragmentation. It also streamlines your file system, places the frequently used files and directories into the fastest area of the disk, enabling your computer to run at top speed with the most stability.
- **Always-on to Work Automatically** - Smart Defrag works automatically and quietly in the background, so it continually and constantly keeps your computer fragment-free.
- **Data Safe and Reliability Guaranteed** - Smart Defrag uses the commercial-level standard to move data and does not damage any file in your disk. Besides, unlike other "Automated" Defragmenters, Smart Defrag does NOT constantly perform analysis and defragment, which does damage your hard drive and shorten its life. Smart Defrag has a "Safe Intelligence" technology that can assure the health of your disk by deciding When and How to start defragmentation.
- **Free Defragmenter Forever** - Smart Defrag is 100% freeware. Download, use, and update it absolutely free for your personal computers, business or enterprise servers — it won't cost you a penny.

Here's smart defrag running on my computer:



I highly recommend this program because you can just install it and let it go to work. If you want to take control over when (time of day/day of week) or how (fast optimize/defrag only/deep optimize) files are defragmented, you can—through the options screen.

[Download Smart Defrag](#)

Backup Your Data

Data backup is essential. If you'd like to explore local backup options, download my [Windows pocket guides](#). I strongly recommend using online (off-site) backups. Backing up your

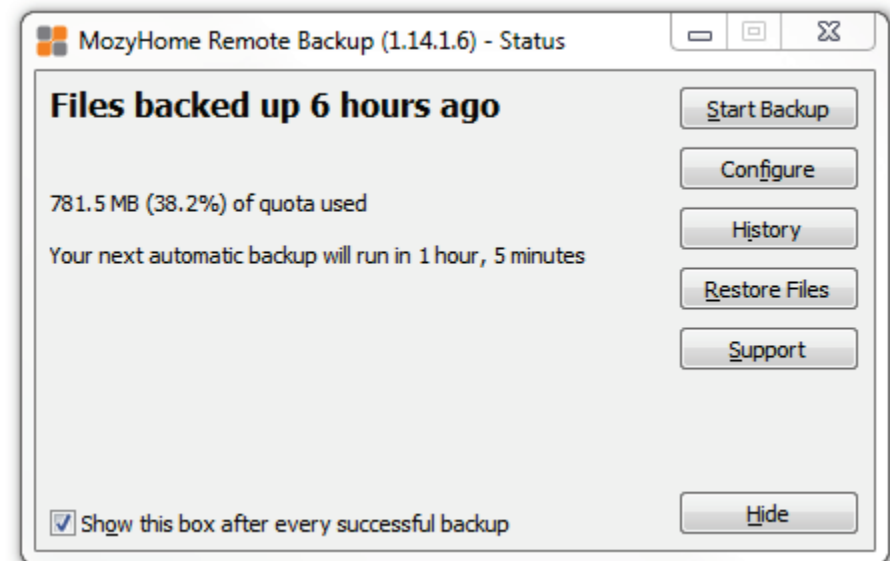
data online prevents data loss if your computer is damaged or stolen—or if your data is wiped by malware. Backing up your data is an essential part of any optimization plan as it ensures that you won't lose any data—no matter what happens.

Online Data Backup

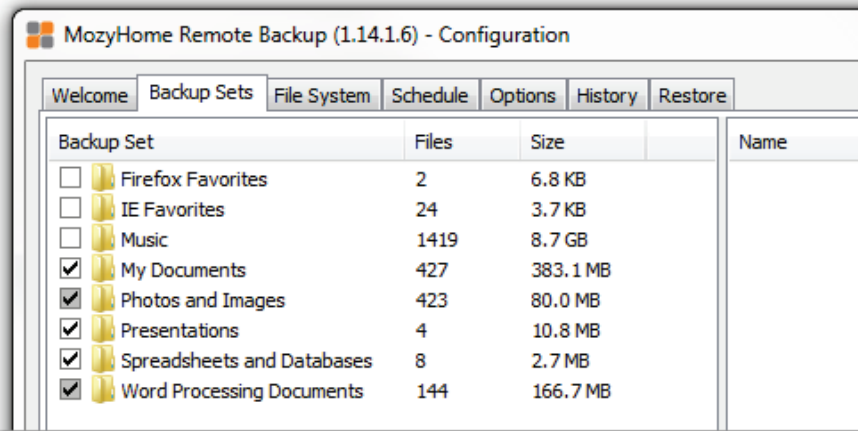
By far my favorite solution for online backup is Mozy. Mozy offers free online storage (up to 2GB for free with paid options too.) I've had Mozy installed on my laptop for over two years and it has saved me on more than a handful of occasions.

Setup is simple and after [downloading Mozy](#), you can specify what you want to back up and when. Mozy will automate your backups and let you decide when it backs up (specific times), what causes it to back up (low CPU usage), and how often (one, two, three etc. times a day.)

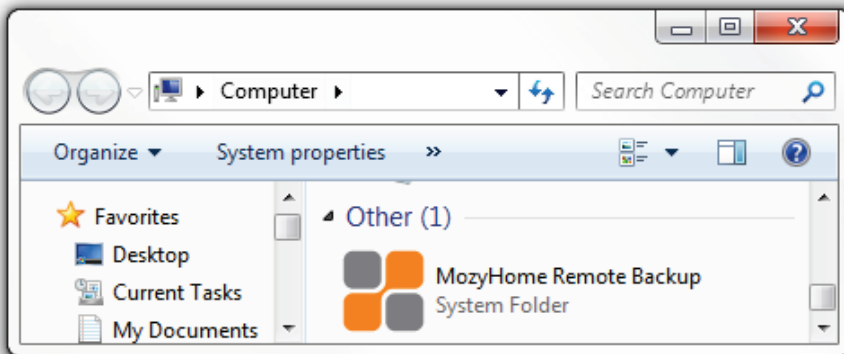
I just let Mozy run and it alerts me after a successful backup:



You can specify what types of files to backup or specify folders— it's up to you:



Mozy even integrates into *My Computer* so you can browse and restore your backed up files (even ones you've deleted from your computer):



MozyHome Features

- Open/locked file support: Mozy will back up your documents whether they're open or closed.
- 128-bit SSL encryption: The same technology used by banks secures your data during the backup process.
- 448-bit Blowfish encryption: Secures your files while in storage, providing peace of mind that your private data is safe from hackers.
- Automatic: Schedule the times to back up and MozyHome does the rest.
- New and changed file detection: MozyHome finds and saves the smallest changes.
- Backs up Outlook files: Disaster-proof email protection.
- Block-level incremental backup: After the initial backup, MozyHome only backs up files that have been added or changed, making subsequent backups lightning fast.

Download Mozy for Free

Download [MozyHome free](#).

What Next?

Now you've read this book, I recommend you ensure you've made changes to ensure your system is optimized. Refer to this book frequently for reminders of what to do when cleaning your PC; you will soon find PC optimization is a habit and you are familiar enough with it to help friends and family with their PCs. After you've done this, I encourage you to visit [Windows Guides](#) and learn other ways to improve your PC.

About this Handbook

This handbook is delivered free by [Windows Guides](#).

The author, Rich Robinson, is a [Microsoft MVP](#) in the Desktop Experience category; this book is not affiliated with Microsoft. [Get more books](#).