

WHEN YOUR COMPUTER SLOWS TO A CRAWL

A Hands-On Class Featuring More Than a Dozen Individual Step-By-Step Ideas that You Can Use on Your Own

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1. Beware of Computer Repair Offers You See on the Internet or on TV

Does your computer seem to be slowing down? Does it freeze unexpectedly, or give you cryptic error messages? Do you suspect malware is hogging some of your Internet bandwidth? Computer repair software offered on many Web sites and in late-night TV commercials promises to fix some (or all) of these problems. Beware!

Beware of Software Advertised to Fix Your Computer Problems.

You've probably encountered commercials that promise to "double your speed" or repair common problems such as viruses, spam, popups or registry errors. Some of these software programs do the job for free and the rest for a price. The way many computer repair software sites work is this:

- They mention common symptoms of a poorly-maintained computer that you will identify as issues with your slow computer
- They will raise the fear of viruses, Trojans, and other malware infections
- They will offer a free scan of your computer to show you how badly you need computer repair software
- They will let you download a free program that fixes only a few of the diagnosed problems
- They will sell remedies to the other problems, one remedy at a time
- They will sell an expensive all-in-one computer repair software package
- They will sell a subscription to periodic updates to keep you protected against future threats

A few of these computer repair software offers are genuine, but more often than not they are wolves in sheep's clothing. You don't really know if the "free scan" report is showing actual problems on your computer or a completely fabricated report designed to inspire panic and a "need" for the company's product. Also, you

don't know if the free fix you download actually eliminates malware or infects your computer with even more viruses and spyware, disguised as something helpful.

Research the reputation of any computer repair software vendor you run across before accepting any free downloads from it, let alone giving them your credit card info. A quick search on Google or Bing may turn up red flags that should not be ignored.

Especially steer clear of the ones that advertise on radio or TV, for one simple reason. That kind of advertising is very expensive, so you can be sure those companies will do whatever they can to recoup their costs and make a tidy profit.

Trustworthy Solutions to Computer Problems

Why pay more than you should for software to fix your computer problems? Here are two solutions that are highly regarded and are **free**.

You may download and install either of these products. Just don't have them running in the background. Run each one of them **on demand**. The key is to run them manually, generally once a month for maintenance!

CCleaner (<http://www.piriform.com/ccleaner>) is a popular, tried-and-true computer repair/maintenance software package. It cleans and optimizes Windows registry entries to speed up operations and prevent system errors.

[Privazer](#) (this is a link). According to nationally recognized tech expert Bob Rankin, PrivaZer is a hard drive clean-up utility on steroids. It gets rid of junk files and wipes away traces of activity that could compromise your privacy. Maybe you think that sounds like some other program you've been using, but according to Rankin, PrivaZer does much more. This is definitely a product you can use with confidence.

2. Make Sure You Have the Latest Updates for Windows and Device Drivers

One the best ways to get the most from your computer is to make sure you have the latest version of Windows 10 installed. When you check for updates, your computer will also search for the latest device drivers, which can also help improve your computer's performance.

To check for updates

- a) Go to **Settings** (Windows key + I) > **Update & security** > **Windows Update** > **Check for updates**.
- b) Look under Update status and do one of the following:
 - a. If the status says Your device is up to date, go to the next topic.
 - b. If the status says Updates are available, select **Install now**, and go to the next step in this procedure.
- c) Select the updates you want to install, then select **Install**.
- d) Restart your computer, do what you were doing before, and then see if your computer is running better.

3. Restart Your Computer and Open Only the Apps You Need; be alert to earlier editions of programs.

Having more open apps, websites, and web browsers open can slow down your computer. If this is happening, restart your computer and don't open the apps, websites, and windows you're not using.

To restart your computer

1. Select the **Start** button > **Power** > **Restart**.
2. After your computer restarts, open just the apps you need; then close them when you're done.

Sometimes apps that were made for an earlier version of Windows will still run on Windows 10, but they might slow down your computer. If this happens after you open a certain program, check the software company's website for an updated version, or run the Program Compatibility Troubleshooter.

To run the Program Compatibility Troubleshooter

1. In the search box on the taskbar, type **troubleshoot**, and then select **Troubleshoot**, which has System settings listed underneath it.
2. In Troubleshoot, select **Program Compatibility Troubleshooter** (look far down the list of the middle column) > **Run the troubleshooter**.
3. Select the program that you're having problems with. Then select **Next** and continue through the troubleshooter.

4. You May be Short on Memory (RAM).

With memory, one of the first things to do is find out how much memory (RAM) you have and how much of it is currently being used. You can find out these things and much more in Task Manager.

To check memory and memory usage

1. Right-click on the Taskbar, and then select **Task Manager**.
2. In Task Manager, select the **Performance** tab > **Memory**.

First, see how much total memory (RAM) you have, and then check the graph and see how much RAM is being used.

Here's some info about the minimum memory requirements for Windows 10:

1. Windows 10 (32-bit) can run on a computer with 1 GB of RAM, but it runs better with 2 GB. For best performance, add memory so you have 3 GB or more.
2. Windows 10 (64-bit) can run on a computer with 2 GB of RAM, but it runs better with 4 GB. For best performance, add memory so you have 6 GB or more.

Use ReadyBoost to help improve performance

Like earlier versions of Windows, Windows 10 has ReadyBoost. ReadyBoost lets you use a removable drive, like a USB flash drive, to improve your computer's performance without opening your computer and adding more memory (RAM). To use ReadyBoost, you'll need a USB flash drive or a memory card that has at least 500 MB free and a high data transfer rate.

To use ReadyBoost

1. Insert the USB flash drive into a USB port on your computer.
2. On the taskbar, select **File Explorer (or press Windows key + E)**.
3. Right-click on the USB flash drive (or SD card if you used one instead), then select **Properties**.

4. Select the **ReadyBoost** tab, then select **Use this device**. Windows determines if the device can use ReadyBoost. If it can't, a message appears to let you know.
5. After Windows determines how much free space to use to optimize memory, select **OK** to reserve this space, so ReadyBoost can use it.

When you look at the contents of the USB flash drive in File Explorer, you'll see a file named ReadyBoost.sfcache on the flash drive. This file shows how much space is reserved for ReadyBoost.

If Windows is installed on a solid state drive (SSD), ReadyBoost can't be used because the SSD drive is already fast and you won't get better performance by using ReadyBoost.

Change the paging file size to improve performance

The paging file is an area on your **hard disk** that Windows uses when it needs additional **memory (RAM)**. Increasing the paging file size can help improve your computer's performance.

1. In the search box on the taskbar, type **advanced system**, and then select **View advanced system settings**, which has Control panel listed underneath it.
2. *The System Properties icon will appear on the Taskbar.* Open it from there.
3. In System Properties, on the **Advanced** tab, select **Settings** in the Performance area.
4. In Performance Options, select the **Advanced** tab > **Change** in the Virtual memory area.
5. Uncheck the **Automatically manage paging file size for all drives** check box.
6. Select **Custom size**, then enter an initial size (in MB) and maximum size in the corresponding boxes.
7. Select **Set > OK**.
8. Restart your computer by selecting the **Start** button > **Power > Restart**.

5. Find Resource-Hungry Apps That Slow Down Your Computer

Your computer may be running slow because something is using up your CPU resources. If it's suddenly running slower, a runaway process might be using 99%

of your CPU resources, for example. Or, an application might be experiencing a memory leak and using a large amount of memory, causing your PC to swap to your hard disk. Alternately, an application might be using the disk a lot, causing other applications to slow down when they need to load data from or save it to the disk.

To find out, open the **Task Manager**: right-click your taskbar and select the *Task Manager* option.

This tool provides an interface that color-codes applications that are using a lot of resources.

Click the *CPU*, *Memory*, and *Disk* headers to sort the list by the applications using the most resources.

If any application is using too many resources, you might want to close it normally — if you can't, select it here and click “End Task” to force it to close.

6. Check for Low Disk Availability and Make Some Room

You may improve performance if you free some disk space on your computer.

To check for low disk space

1. Go to Settings (Windows + I) > System > Storage.
2. Under Storage Sense, select Change how we free up space.
3. On the next screen, place checkmarks in the three boxes that appear.
4. Under Free up space now, click on the *clean now* button.
5. Restart your computer and see if your computer is running better.

7. Try Uninstalling Apps You Don't Use Anymore.

To uninstall modern apps that you don't use anymore or have never used, or don't plan to use.

1. Right-click on the **Start** button, and then select **Apps & features**.
2. Search for a specific app or sort them to see which ones are using the most space.
3. When you find an app to remove, choose it from the list and select **Uninstall**. (Note that most Windows 10 apps cannot be uninstalled.)

4. Restart your computer and see if your computer is running better.

To uninstall legacy apps that you don't use anymore, or have never used, or don't plan to use:

1. Right-click on the Start button, and then select **Apps & features**.
2. Move over to the far right column of the next page and click **Programs & Features**.
3. Click on the app that you want to remove and then click *remove* at the top of the column.

If your computer still runs slowly, try moving files to another drive.

To move files to another drive

If you have photos, music, or video files that you want to keep but don't use often, consider saving them to removable media, like a USB drive or external drive. You'll still be able to use them when the drive is connected, but they won't take up space on your computer.

1. Connect the removable media to your computer via a USB port.
2. Open **File Explorer** (Windows + E) and find the files you want to move.
3. Select the files, go to the Home tab, and then select **Move to > Choose location**.
4. Select your removable media from the location list, and then select **Move**.
5. Restart your computer and see if your computer is running better.

8. Restore Your Computer from a System Restore Point

Restoring your computer is a way to undo recent changes to your computer that might be causing problems. If you think an app, driver, or an update for Windows you recently installed might be causing problems, you might get things running normally again by restoring your computer to an earlier point. This is called a restore point.

Restoring from a restore point won't affect your personal files, but it will remove apps, drivers, and updates that were installed after the restore point was created.

To restore your computer from a restore point

1. In the search box on the taskbar, type **restore point**, then select **Create a restore point** from the list of results. The System Properties dialogue box will appear on the Taskbar where you can open it.
2. In the System Properties box, on the System Protection tab, select **System Restore**.
3. Select **Next**, then choose the restore point related to the app, driver, or update that might be causing the problem. Then select **Next > Finish**.
4. Restart your computer. Do what you were doing before to see if performance has improved.

If you don't see any restore points, it might be because system protection isn't turned on.

To turn on system protection

1. In the search box on the taskbar, type **restore point**, then select **Create a restore point** from the list of at the top of the column.
2. In the System Properties box, on the System Protection tab, select **Configure**.
3. In the Restore Settings area, select **Turn on system protection > OK**.

9. Disable Unnecessary Startup Applications

Many applications are designed to start automatically when Windows starts. Software manufacturers often set their applications to open in the background, so you don't see them running, but so they'll open quickly when you go to use them. This is helpful for applications you use a lot, but not for apps you don't use often because it slows down the time it takes Windows to start.

Find the applications that start automatically

Sometimes you can determine which applications start automatically by looking at the program icons in the notification area that's on the far right of the taskbar. Check there first to see if there are any applications running that you don't want to start automatically. To try to find out the name of the program, point to the icon with your mouse pointer. Make sure you select **Show hidden icons (an inverted V)**, so you don't miss any applications.

Even after you check the notification area, you might still miss some applications that run automatically at startup. Here's how you can find all the applications that start automatically and stop the ones that you don't want to start when Windows starts.

To stop an application from starting automatically

1. Right-click on the Taskbar, then select **Task Manager**.
2. In Task Manager, select **More details** in the lower-left corner, then select the **Startup** tab.
3. To stop a program from starting automatically, select the program, then select **Disable**.
If you have questions about a specific app or program, right-click on the program and then click **search online**.
4. Restart your computer. Do what you were doing before to see if you're still seeing the same performance problems.

Note:

If you disable a program and it continues to start automatically when Windows starts, you should scan for viruses and malware, which is explained in another section.

10. Check for and Remove Viruses and Malware

A virus, malware, or other malicious software could cause your computer to run slowly. Some other symptoms include unexpected pop-up messages, applications that unexpectedly start automatically, or the sound of your hard disk constantly working.

The best way to handle viruses and malicious software is to try to prevent them by running antivirus and anti-malware software and keeping them up to date. A highly regarded combination is **Windows Defender** and **Malwarebytes**.

You can scan your computer for viruses or other malicious software by using Windows Defender, which is included in Windows 10. If you have another antivirus program installed and turned on, Windows Defender will be turned off by default.

To scan for viruses using Windows Defender

1. Click the **Start** button > **Settings** > **Update & security** > **Windows Defender** > **Open Windows Defender Security Center**.
2. Select **Virus & threat protection**, then select **Protection updates** > **Check for updates** to make sure you have the latest definition file.
3. Select the **Virus & threat protection** tab and select **Quick scan**, then wait for Windows Defender Security Center to finish scanning for viruses and malware.
4. Run the recommended advanced scan. This scan takes longer but searches more extensively for threats on your computer.

Note:

If Windows Defender Security Center doesn't open, can't update the definition file, or can't finish scanning for viruses, try running **Windows Defender Offline Mode**, which is explained below.

To scan for malware and viruses with Windows Defender Offline

1. Save any documents or anything else you might have open on your computer.
2. Click the **Start** button > **Settings** > **Update & security** > **Windows Defender** > **Open Windows Defender Security Center**.
3. Select **Virus & threat protection**, then select **Advanced scan** > **Windows Defender Offline scan** > **Scan now**.

Your computer will restart, and Windows Defender Offline will run and scan for viruses and malware. The scan might take 15 minutes or so, and your computer will restart again after that.

11. Check for Corrupted System Files

The System File Checker (SFC) can check the corrupted files, then download and replace the files through Windows Update.

To run System File Checker (SFC)

1. Right-click on the Windows button, then click on **Command Prompt (Admin)**.

2. Answer “yes” to the next prompt
3. At the command prompt, type **sfc /scannow** (note the space between "sfc" and the "/").
Scanning will take a few minutes.
4. If SFC finds corrupted files and replaces them, restart your computer and see if that improves your computer’s performance.

12. Adjust the Appearance and Performance of Windows

Windows 10 includes many visual effects, such as animations and shadow effects. These look great, but they can also use additional system resources and can slow down your computer—this is especially true if you have a computer with a smaller amount of memory (RAM).

To adjust the visual effects in Windows

1. In the search box on the taskbar, type **performance**, then select **Adjust the appearance and performance of Windows**. (The Performance Options icon will appear near the right side of the Taskbar; open it from there.)
2. In the **Performance Options** dialog box, on the **Visual Effects** tab, select **Adjust for best performance > Apply**.
3. Restart your computer and see if that speeds up your computer.

13. Delete Temporary Files

Why are Temp Files Created?

Programs create temporary files primarily for backup purposes. Many programs, such as those included with Microsoft Office, will save a temporary version of a file every few minutes while the original file is open. Then if you have not saved the file and the program unexpectedly crashes or the computer shuts down, there will be a temporary file that was recently saved. Temp files are typically deleted automatically when the program is closed normally, but if the program quits unexpectedly, the temp files are not deleted.

Some temp files are left behind even when a program is closed correctly. This may be due to programming errors that cause temporary files to not be correctly disposed of when an application is terminated. These files can accumulate on your hard drive without you even noticing.

Finally, Web browsers, such as Microsoft Edge, Internet Explorer, or Google Chrome, create "Temporary Internet Files" to store user data, including cookies, images from visited Web pages, and the user's browsing history.

These methods used in combination will locate and remove most temporary files.

Method 1:

1. Go to Settings (Windows + I)
2. Click on System
3. Click on Storage
4. Click on the This PC icon
5. Click on the Temporary Files icon
6. Click on the Temporary Files box
7. Click *remove files*

Method 2:

1. Type "Disk Cleanup" in the search box on the Taskbar.
2. Click on *disk cleanup* that appears at the top of the column.
3. Select the disk drive that you want to clean (usually Drive C).
4. Disk Cleanup utility will appear as a dialogue box.
5. Place checkmarks to clean up both temporary files and temporary internet files.
6. You can right-click on any of the other options in order to open its description at the bottom of the dialogue box.
7. Now click on *Cleanup System Files* and follow the same procedure.

Method 3:

1. Press Windows key + R (for run).
2. Type %temp% in the run box.
3. This action will take you to This PC> Drive C> Users> "owner"> AppData> Temp folder.
4. Delete all files in the Temp folder.

Method 4:

1. Type Windows + R
2. Type *Prefetch* in the Search box.
3. This action will take you to computer>Drive C>Windows>Prefetch.
4. Delete all the files in the Prefetch folder.

14. Adjust or Turn Off (Unlink) Onedrive

You can save files on your PC or to OneDrive by default and sync files between the two locations. This lets you get to your files from any device that can connect to the internet, and it helps to make sure your files are backed up in case your PC is ever damaged or lost. However, files must sync between your PC and OneDrive, and *syncing can slow down your PC*.

Unlink OneDrive (*you must be on a Microsoft account to synch/unsynch OneDrive.*)

1. Select the **OneDrive** cloud icon in the notification area, at the far right of the taskbar.

You might need to click the **Show hidden icons** arrow ^next to the notification area to see the **OneDrive** icon. If the icon still doesn't appear in the notification area, OneDrive might not be running. Select **Start**, type **OneDrive** in the search box, and then select **OneDrive** in the search results.

2. Click **Settings** and on the **Accounts** tab, click **Synch your settings**, then **turn synch off**.