

Hard Drive Analysis

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Level: Intermediate | **35 out of 40** users found this tip helpful

If you're like most people, your drive quickly fills up with music, images, and other personal data. And even if you're good about archiving content onto DVDs or external drives, your PC's hard disk is often still pushing full capacity. To keep your machine running at top speed, you have to perform regular maintenance. Here are steps you can take to optimize your hard drive:

Step 1: Analyze your drive

First, identify how much disk space you're using with [WinDirStat](#). This free software, based on the Linux application KDirStat, offers you an informative visual display of your hard-drive usage. It can also analyze your local devices, but let's for now stay focused on just your local drive. Depending on the size of your disk, the initial WinDirStat scan may take quite a while. Grab a cup of coffee and come back.

When you return, you'll see all of your files (for the drive or directory you decided to scan) displayed in a rainbow of colors. WinDirStat assigns colors to each file type, such as MP3, ZIP, EXE, JPG, and so on. By default, the files that take up the most space are colored blue, the second heftiest are red, and the third largest green. After the first 10 color-labeled file types, the rest appear in gray--but you can change these settings and colors through the Options menu.

Once you've identified where your disk space has gone, you can then more easily decide where you can save space. WinDirStat is loaded with features for managing your files, such as the ability to automatically delete files without even bothering with the Recycle Bin.

Step 2: Manage your files

After you've analyzed your usage with WinDirStat, it's time to quickly rid yourself of unnecessary files, such as application data for uninstalled software, temporary Internet files, and "recent document" lists. Enter [CCleaner](#).

This helpful, free utility separates its optimization process into two windows, one for Windows and one for third-party applications. Simply select the items that you'd like to clean, such as Windows log files, Chkdsk file fragments, or Flash player application data, and then hit "Analyze." Depending on how many items you're analyzing, you'll soon have a list of files that you can delete.

Even though we're talking about smaller items on your computer, the number of files quickly adds up. Don't be surprised if CCleaner ends up saving you a few gigabytes of disc space.

Step 3: Defrag your drive

So you've backed up and deleted the files you no longer need and cleaned your machine of unnecessary system and application files. If you've deleted enough, you'll immediately notice the extra room, but you might not see any improvement in your PC's performance. That's because you also need to defragment your disk.

When you save and delete files on your hard drive, you're sending different parts of the same disk file over different areas of the disk. Those parts, called fragments, make it harder for your system to quickly access them and can definitely degrade your disk performance in the long run.

Windows comes with a built-in disk defragmenter, but I find it to be rather slow and unfriendly. We recommend [Auslogics Disk Defrag](#), an excellent freeware program that offers one-click defragmenting and shows you information about the defragmentation process as it's happening with a helpful visual display.

Also, while both programs can't fully defragment your hard drive unless you have 15 percent of drive capacity available, Auslogics can still provide a partial defragmentation if you have less.

If you haven't defragmented your hard drive in a while, you should see a noticeable improvement in your system performance. For some people, the difference will be negligible, but for digital pack rats like me, a regular defrag is essential.

Let me know in the comments below if you're also a fan of any of these programs, or if you've a better method for keeping your hard drive optimized.