

CAUSES OF POOR PC PERFORMANCE

This chapter discusses the major causes of poor PC performance, such as “junk files” and other not so obvious contributors. In later chapters, after learning this background information, you’ll be shown exactly how to overcome these types of problems.

Temporary Files

Computers naturally create many different temporary files, which are typically stored for your advantage. However, these temporary files on your computer (as the following sections discuss) can stack up, which can contribute to poor PC performance.

Internet Cache

Web browsers (for example Internet Explorer) typically create temporary files, often referred to as Internet Cache, during web browsing. These temporary files usually aren’t needed after you are finished surfing the web, and can take up large amounts of space on your hard drive. Therefore these files, if not removed periodically, may contribute to poor PC performance.

If you are curious, you can view Internet Explorer’s cache:

1. Open Internet Explorer.
2. Open Internet Options from the Tools menu, as shown in Figure 1-1.



Figure 1-1: Opening Internet Options

3. Click Settings... under the Temporary Internet Files section, as pointed out in Figure 1-2.



Figure 1-2: Accessing the temporary Internet files settings

4. Click View Files..., as seen in Figure 1-3.

The Temporary Internet Files window will appear, as Figure 1-3 shows.



Figure 1-3: Viewing temporary Internet files

Recycle Bin

Remember, files are not actually removed from the hard drive when you delete them the first time. For instance, deleting files for the first time actually sends them to the Recycle Bin. Then from there you can either permanently remove them from your computer, or in case you figured out that they should not have been deleted, you can restore them.

You can easily view the content of your Recycle Bin:

1. Go to your desktop.
2. Double-click the Recycle Bin, as shown in Figure 1-4.



Figure 1-4: Opening the Recycle Bin

3. The Recycle Bin will appear, as shown in Figure 1-5.

Windows Temporary Files

The Windows operating system and other applications create temporary files for various reasons, such as during software installations.

These temporary files, however, are typically not needed after the application exits or when Windows is shut down. In many cases, the applications do not always clean up after themselves and leave behind a stack of files, which will use up some of your computer's valuable disk space.

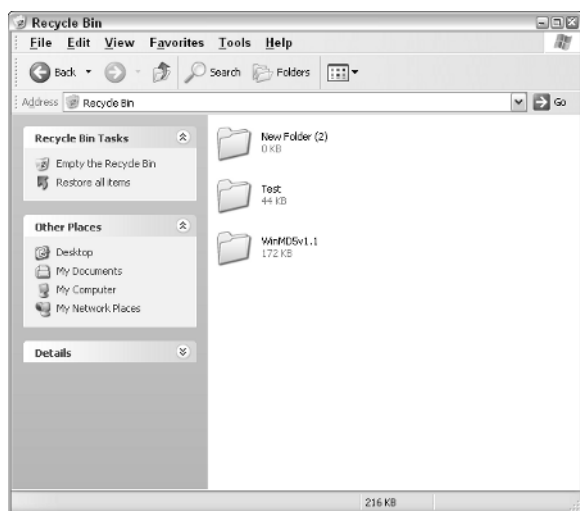


Figure 1-5: The Recycle Bin

Getting Out of Date

Microsoft releases periodic updates for Windows to ensure your PC is protected from the latest known security holes and programming bugs or errors. In addition, many of these updates will help increase your PC's performance.

Therefore you shouldn't let Windows get out of date; otherwise you'll compromise the security and performance of your PC.

Unused Files and Programs

Unused programs and files are one of the biggest contributors to wasted disk space and can cause a reduction in your PC's performance. As a general rule of thumb, the less disk space you use of your hard drive, the better overall PC performance you'll experience.

Therefore, it's best to remove software programs that aren't used and files that you don't need anymore.

Unnecessary Startup Programs

Many software programs may add themselves (with or without your knowledge) to your Startup folder, which may cause your PC to take longer to start up.

Additionally, these programs running in the background will steal computing power from other applications you are using and will overall bog down your PC.

Invalid Registry Entries

The registry contains information that Windows continually references during operation, such as profiles for each user, the applications installed on the computer and the types of documents that each can create, property sheet settings for folders and application icons, what hardware exists on the system, and the ports that are being used.

There are many specific registry keys that can slow a computer's performance. These are typically invalid keys containing information about COM and ActiveX objects. These objects are parts of programs, and when you remove the programs, these keys sometimes still exist. However, if these registry keys aren't removed they can contribute to slower PC performance.

Here are some common areas of the registry that may contain invalid keys:

- Invalid Class IDs (CLSID)
- Invalid Program Identifiers (ProgID)
- Invalid Type Libraries (TypeLib)
- Invalid Interfaces

Hard Drive Errors

Data in hard drives can become corrupt and contain errors, such as from the following situations:

- Improper shutdown from power outage
- Power surges
- PC suddenly resets (bad power connection or supply)
- PC crashes or locks up, so that shutdown is impossible

When there are errors in a hard drive, it can't work at its optimum performance. Typically, hard drive errors won't be noticeable to the PC user, which makes the situation even worse.

Fragmentation

Fragmentation is the condition in which files are divided into pieces scattered around a hard drive and can have a significant impact on PC performance. This is because it takes more time to access files on a hard drive if they are fragmented.

The following are causes of fragmentation:

- Installing software
- Uninstalling software
- Moving files
- Deleting files

Even though fragmentation is common and occurs naturally, there are ways to help the problem, which are discussed in a later chapter.